

# RESPONSE TO INTERVENTION

**An alternative to traditional  
eligibility criteria for  
students with disabilities**

*The latest in a series of reports on the  
changing face of public education*

**July 2005**

 **education|evolving**

*A joint venture of the Center for  
Policy Studies and Hamline University*

## ABOUT THE CONCEPT OF AN 'OPEN SECTOR' IN EDUCATION

Much of the work being done by Education!Evolving is to help create and sustain an “Open Sector” in public education – in Minnesota and elsewhere in the country. By “Open Sector,” we mean a “space” in public education that is open to new entrants – new schools that are started from scratch by teachers, parents, community organizations and multi-school networks. The “Open Sector” is also open to new authorizers or sponsors – entities other than school districts that oversee schools. The “Open Sector” is open to new learning programs and to new ways of governing and managing schools. And, as part of a broadening definition of public education, the “Open Sector” is open to all students who choose to attend schools in that sector.

The “Open Sector” is based on the premise that we cannot get the degree of change and improvement we need in education by relying only on fixing the schools we now have. And, to get enough new schools that are fundamentally different, we need a combination of public policies and private actions that will allow new schools to emerge and that will create an environment in which they can succeed. This kind of positive environment for creating and sustaining new schools can be established on a state-level through actions led by state policy makers. It can also be done – and is certainly needed – in major urban communities all across America.



Though chartered schools may be the most visible part of the “Open Sector” today, this concept of a positive environment for creating and sustaining successful new schools is not limited to charters. The “Open Sector” can also include schools operating within a district or state on some kind of contract other than a charter – as long as they are truly autonomous, accountable and open to all students who chose them.

There is also no prescribed or uniform learning program presumed by this vision for creating many more schools new. In fact, there’s an urgent need to better understand, respect and address the individual differences in students. It’s likely, however, that successful new schools in the “Open Sector” will be smaller and that they will make it possible for all students to take a more active role in their learning and to develop more direct and nurturing relationships with adults.

## ABOUT THIS REPORT AND ITS AUTHOR

This publication is the latest EIE report on the changing face of public education, both nationally and in Minnesota. The report describes and provides a review of the research on an alternative learning model called Response to Intervention (RTI). This model may be used for any student experiencing difficulty in school, but has particular application in the Special Education environment.

Under this model, student performance data are gathered frequently and are immediately available to teachers, psychologists and others. The data are then available to help evaluate that effectiveness of the instruction strategies being used and, when warranted, spur modifications in teaching and learning models that can produce better results.

Research and writing for this publication was done by EIE associate **Robert J. Wedl**. Wedl, who directs EIE’s sponsorship initiatives, is a former Minnesota Commissioner of Education and former senior executive in the Minneapolis Public Schools, including service as the district’s director of special education. Final editing and production supervision was provided by EIE’s coordinator, **Jon Schroeder**.

# Response to Intervention

An Alternative to Traditional Eligibility Criteria for Students with Disabilities

The latest in a series of reports on the changing face of public education

July 2005

**RTI MODEL IS BASED ON RESEARCH BY NATION'S LEADING EDUCATORS**

## Preface

Since the publication of *A Nation at Risk* in 1983, states, local districts and the federal government have been focused on how to change our public schools to improve student performance. Numerous programs have been initiated and billions of dollars have been expended.

While many of these initiatives have focused on students considered to be “at risk,” little change in state or federal policy has occurred regarding the identification and evaluation of children and youth with disabilities. The basic standards currently in place regarding the identification and evaluation of these students have remained relatively unchanged since the late 1970’s.

Much has been learned the past 35 years regarding the assessment and evaluation of student performance and the use of scientifically based instructional practices. As educators, we must embrace this new work and move forward with its implementation because improved practices will be positive for children and youth. Fortunately both the research and emerging federal policy are providing the needed direction for this change especially with academic based disabilities such as the classification of learning disabilities.

The *Individuals with Disabilities Education Act (IDEA – 97)* significantly changed the interaction of the regular classroom and special education into more of a single system. In

November 2004, *IDEA* was again re-authorized and renamed the *Individuals with Disabilities Education Improvement Act (IDEIA)*.

The reauthorized law expands on the positive changes started with *IDEA-97* in terms of the focus on bringing the regular classroom and the special education program together. *IDEIA* addressed what many education leaders have been recommending for some time...that being the reliance on I.Q. testing as a required component of the identification of children with learning disabilities needed to be removed.

*IDEIA* removes the requirements of the “significant discrepancy” formula for learning disabilities classification based on I.Q. tests and requires that states must permit districts to instead adopt alternative models including the “Response to Intervention (RTI)” model.

The RTI model is based on research conducted by some of this nation’s leading educators and researchers. While the RTI model provides a valid means for identifying students, another benefit of RTI is that it merges special education into the overall policies of *No Child Left Behind (NCLB)* such as having clear standards, useful measurement and sound instructional practices. It clearly lays the groundwork for bringing a new focus on enhancing the performance of all students including those with disabilities through a common system in which

## RESPONSE TO INTERVENTION

---

classroom teachers, special education teachers and other specialists can work together.

The results of implementing an RTI model will not only be reduced paperwork and Individual Education Plans (IEP's) more focused on the attainment of learning standards, but it also provides a new focus on improving student performance in collaboration with all of those delivering educational services for these children.

While procedural compliance must always be achieved, in many districts, "being in compliance" has unfortunately become special education's primary goal. The goal to improve student learning has been the "forgotten goal." RTI helps to make student learning the renewed focus.

Perhaps this is RTI's most powerful benefit. Students can no longer just be referred out of the classroom. Sound evidence that research-based instructional interventions have been initiated and data verifying the impact of these interventions are key components to the RTI evaluation and decision-making model.

Student performance data are gathered frequently and are immediately available to teachers, psychologists and others. They provide information to those delivering instruction as to the effectiveness of that instruction. Based on these data, instruction must be modified or changed. Students do not continue in programs that are not working for them.

The frequent collection of data, aligned to state, local and IEP standards, tells the teachers whether the student is on track to meet these standards. If the student is not progressing, teachers must change what they are doing because the instructional strategies being implemented are not working with the student.

While educators suggest that "this is what we do," in reality, instructional modification does not occur frequently and typically is not done systematically or based on performance data. At times we try to make students change when it is our instruction that must change.

The use of the RTI model is not unique to special education nor does this paper suggest that it is. It can and should be used for any student that is experiencing difficulty in our

schools. This paper provides a review of the research regarding RTI and the practical implementation model suggested provides a starting point for sites to change their current practices to this exciting new model.

*Robert J. Wedl*

## ***I. Introduction***

This paper describes the Response to Intervention (RTI) model that gained credibility in recent years as an alternative to traditional special education criteria for students with high-incidence disabilities.

RTI, however, is more than a part of an eligibility model for special education services. The model is a useful approach to providing data-based decision-making for any students who may be in need of extra interventions for improving their performance.

This paper addresses the following topics: history of learning disabilities, eligibility issues, the reauthorization of IDEA 97, the RTI model, RTI research, and model implementation.

## ***II. History of How Public Policy has Defined Learning Disabilities***

### **Public Law 94-142**

Federal support for special education services in this country became a reality in 1976 with the passage of the Education for All Handicapped Children Act of 1975 (Public Law 94-142).

Hailed as one of the most influential federal laws affecting the delivery of education services to students with disabilities, this historic legislation contained several mandates, including: a free and appropriate public education for students with disabilities, an education in the least restrictive environment, due process rights for parents, access to technically adequate and nondiscriminatory evaluation procedures as well as other provisions.

This legislation was renewed with the passage of the Individuals with Disabilities Act of 1990 (101-476, IDEA) and again reauthorized in 1997 (IDEA, 1997).

IDEA 97 identifies thirteen categories of disability. By far the largest category is Learning Disabilities, which includes almost 52% of the students served in special education in this country (Gresham, 2001). It is also the disability category that

has created the most controversy over the past thirty years. Much of the concern is related to definition and eligibility.

### **Definitional Issues**

The definition of learning disabilities has changed very little since the 1960s. According to the Learning Disabilities Association of America's website ([www.Idanatl.org](http://www.Idanatl.org)), Samuel Kirk initially used the term "learning disability" at a national conference in 1963 to describe students having difficulty learning. In his work, Kirk described learning disabilities as follows:

*Children with specific learning disabilities means those children who have a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. Such disorders include such conditions as perceptual handicaps brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Such term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage (p. 65803).*

The definition has changed very little since then (Ysseldyke and Marston, 1999). In Public Law 94-142, specific learning disability is defined as:

*...a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or to do mathematical calculations. [P.L. 94-142, 121a. 5b(9)]*

### **IDEA 97**

While continuing to reinforce important concepts outlined in previous special education legislation, the passage of IDEA 97 also recognized the significance of new issues, such as the importance of regular education interventions and the use of

## RESPONSE TO INTERVENTION

problem solving models for serving students with disabilities (Prasse, 2002). IDEA 97 states:

*Over 20 years of research and experience has demonstrated that the education of children with disabilities can be made more effective...(F) providing incentives for whole-school approaches and pre-referral interventions to reduce the need to label children as disabled in order to address their learning needs; and (G) focusing resources on teaching and learning while reducing paperwork and requirements that do not assist in improving educational results (Section 601(c)(5), IDEA).*

Prasse (2002) also observed that IDEA 97 contained several provisions that reinforced the coordination of general and special education. He noted extensive research and experience had, “demonstrated that the education of children with disabilities can be made more effective by (a) having high expectations for such children and ensuring their access to the general curriculum to the maximum extent possible; (b) strengthening the role of parents and ensuring families have meaningful opportunities to participate...(p.72).

Despite the emergence of these new concepts in IDEA 97, a traditional definition of learning disabilities remained. The final regulations of IDEA 97 – 300.541 define the criteria for determining the existence of a specific learning disability in this way:

- (a) A team may determine that a child has a specific learning disability if –
- (1) The child does not achieve commensurate with his or her age and ability levels in one or more of the areas listed in paragraph (a) (2) of this section, if provided with learning experiences appropriate for the child’s age and ability levels; and
  - (2) The team finds that a child has a severe discrepancy between achievement and intellectual ability in one or more of the following areas:
    - (i) Oral expression.
    - (ii) Listening comprehension.
    - (iii) Written expression.
    - (iv) Basic reading skill.
    - (v) Reading comprehension.

- (vi) Mathematics calculation.
- (vii) Mathematics reasoning.

(b) The team may not identify a child as having a specific disability if the severe discrepancy between ability and achievement is primarily the result of –

- (1) A visual, hearing, or motor impairment;
- (2) Mental retardation;
- (3) Emotional disturbance; or
- (4) Environmental, cultural or economic disadvantage.

Because of this broad definition and lack of clarity regarding what constitutes a learning disability, the category has become a “catch-all” label. Gresham (2001) refers to a suggestion by G. Reid Lyon of the National Institute of Child and Human Development that “learning disabilities have become a sociological sponge to wipe up the spills of general education” (p. 1).

In part, this is due to inconsistent application of the definition. Gresham goes on to point out, “Findings over the past 15 years have pointed out the lack of consistent definition in policy or practice in the identification of LD students. Research findings indicate that substantial proportions of school-identified LD students – from 52 to 70 percent – fail to meet state or federal eligibility criteria” (p. 1).

Fletcher, et al. (1998) raise the issue that the current model for identification is a “wait to fail” approach that does not get needed education services to students with disabilities until 3<sup>rd</sup> or 4<sup>th</sup> grade. Often the initial referral is made as early as first grade when the teacher recognizes the student is having significant difficulty in learning to read.

However, the ability-achievement discrepancy model tends not to identify these students as needing the intensive instruction found in special education. “For treatment, the use of the discrepancy models forces identification to an older age when interventions are demonstrably less effective” (Fletcher et al., 1998, p. 201).

### **III. Eligibility Issues**

There are many issues regarding the criteria for eligibility for learning disabilities which include both technical and conceptual problems. A critical problem is the lack of professional agreement on what constitutes a learning disability.

Naturally this results in significant inconsistencies for LD eligibility across the nation (Ysseldyke, Algozzine, & Epps, 1983). Macmillan et al. (1998) found similar results. Reschly and Tilly (2000) report the prevalence figures for learning disabilities across fifty states range from 2.73% to 9.43%. They conclude, “these variations in prevalence are more likely to be related to unique state-by-state practices regarding how children and youth with mild disabilities are identified as disabled than to real differences in student populations.”

Some of these inconsistencies may be attributed to technical issues related to the ability-achievement discrepancy score. Reschly and Ysseldyke (2002) note discrepancy scores may contain considerable measurement error. These authors stated, “the exact size of ability-achievement discrepancy is significantly less reliable than either of the tests used to determine the discrepancy” (p. 8).

Another difficulty is related to the use of IQ tests as a measure of ability (Siegal, 1989) and its potential for discrimination (Larry P. v. Riles, 1977, 1984; Galagan, 1985). If there is bias in these instruments for some populations of students, it raises the question as to whether they can be used in the eligibility process.

For disabilities, such as developmental cognitive disabilities, where the IQ score is an important element of the criteria, one might see “over-representation” of certain groups. In fact, the National Academy of Sciences concluded, “The balance that is struck between IQ and other measures is likely to have significant consequences for the proportion of minority children placed in educable mentally retarded (EMR) classes, since minority children consistently score lower on standardized tests of ability than do white children” (Heller, Holtzman, and Messick, 1982).

For the learning disabilities category, the ability-achievement discrepancy formula may contribute to under-representation. Since the “ability” part of this equation is measured by IQ, a student who performs poorly on the IQ test will have difficulty demonstrating a significant discrepancy between ability and achievement, and therefore not be found eligible for services to which they are entitled (Ysseldyke & Marston, 1999).

Just as problematic is the lack of research demonstrating a connection between assessment and instruction for students found eligible through the discrepancy process.

Gresham (2001) writes, “The most serious flaw in the current process is the absence of a direct link between assessment procedures used for identification and subsequent interventions that might be prescribed on the basis of these assessment procedures. What appears to be needed is an approach to defining LD that is based on how students respond to instructional interventions rather than on some arbitrarily defined discrepancy between ability and achievement” (page 3).

Finally, researchers have noted that differentiating between LD, MR, and low achieving has always been problematic. Gresham, MacMillan, and Bocian (1996), showed considerable overlap among these groups on a variety of educational variables.

The Algozzine, Ysseldyke and McGue (1995) research also revealed few differences between low achieving and learning disabled students. Vellutino et al. (2000) also addressed the problems of using a discrepancy formula to differentiate the needs of students who need help in reading.

### **IV. Most Recent Reauthorization of IDEA-97 -- to IDEIA**

The reauthorization of the Individual Disabilities Education Act (IDEA 1997) occurred in November 2004. Both the House version (H.R. 1350) and the Senate version (S. 1248) acknowledged the difficulties with the traditional IQ-achievement discrepancy. The “House Committee on Education

## RESPONSE TO INTERVENTION

and the Workforce” Report 108-077 quotes Dr. Robert Pasternack, former Assistant Secretary for Special Education and Rehabilitative Services:

*“The convergence of scientific research about LD [“Learning Disabled”], especially reading difficulties associated with LD, has placed us on the edge of new knowledge that we did not have even a few short years ago. We now know, for example, that the way we have traditionally looked at assessment of learning disabilities needs to be re-thought based on recent research in the use and role of IQ test in assessments for eligibility. We know that using IQ discrepancy between the test and performance is not always an indicator of a learning disability. Indeed, some research indicates that if a child who reads slowly has IQ scores that are above average, that child might receive services under IDEA based on the discrepancy between the IQ scores and the reading ability. On the other hand, another child who also reads slowly but has IQ scores that are average may not receive any services because of the lack of a significant discrepancy. Such approaches to assessment may clearly result in some children who need services not getting them while other who do not need them will receive them.”*

In response to these criticisms the Committee recommended that LEAs be permitted (not required) to utilize Response to Intervention (RTI) procedures. Doug Carnine, director of the National Center to Improve the Tools of Educators at the University of Oregon testified before the House Committee on Education and the Workplace, Subcommittee on Education Reform as follows:

*“Given the converging evidence and agreement in the field that we must do something better for our children, the following model is recommended as the basis to improve how we provide early intervention and identification: Response to Intervention Model (RTI). An RTI model would be designed to ensure that children who are indicating a likelihood of failing in the early grades receive scientifically based instruction as soon as possible. The eligibility for special education services would focus on the children who,*

*even with these services, are not able to be successful. The focus of RTI is on responding to the instructional challenges caused by the disability not on giving tests to document the failure of the student.” (Testimony provided on March 13, 2003)*

The reauthorized IDEA recognized these problems and now includes the following provision at Section 614 (a) (6) Specific Learning Disabilities:

- (A) IN GENERAL. Notwithstanding section 607 (b), when determining whether a child has a specific learning disability as defined in section 602, a local educational agency shall not be required to take into consideration whether a child has a severe discrepancy between achievement and intellectual ability in oral expression, listening comprehension, written expression, basic reading skill, reading comprehension, mathematical calculation or mathematical reasoning.
- (B) ADDITIONAL AUTHORITY. In determining whether a child has a specific learning disability, a local education agency may use a process that determines if the child responds to scientific, research-based interventions as a part of the evaluation procedures described in paragraphs (2) and (3).

The above language was supported by the President’s Commission on Excellence in Special Education. The Commission recommended simplifying the identification process and stated “that assessments that reflect learning and behavior in the classroom be encouraged and that “a student’s response to scientifically based instruction become part of the criteria for SLD identification.”

During the spring of 2004 both versions passed in their legislative body, HR 1350 passed in April and S. 1248 passed in May with Congress taking final action on November 19, 2004 followed by the President’s signing the bill into law. The National Association of School Psychologists (NASP) developed a side by side comparison that can be found at <http://www.nasponline.org/advocacy/04LDRoundtableRefMat.pdf>. A summary of testimony for H. R. 1350 and S. 1248 can also be found at this site.



In summary, there are a variety of technical and conceptual issues that spark the debate over eligibility criteria for students with high incidence disabilities. The issues addressed to this point include lack of professional agreement on definitions, inconsistencies in implementation of criteria around the country, unreliability of discrepancy scores, the relevance of IQ tests as measures of ability, potential for bias, and lack of a researched base connecting the assessment model to better interventions for students with disabilities.

From this debate has emerged an alternative to the traditional assessment approaches to eligibility and the delivery of special education services. This alternative approach focuses on evaluating how well the student is responding to the instruction offered in their education setting.

### ***V. The Response to Intervention Model***

The Response to Intervention Model (RTI) is also known as the Problem Solving Model (PSM). Both Response to Intervention and Problem Solving Models are essentially a variation of the Scientific Method, which is used to study natural phenomena.

The Scientific Method involves (1) the description of the phenomenon, (2) development of a hypothesis, (3) implementing the procedure for study and prediction, (4) collection of data and analysis, and (5) interpretation of the data and conclusion.

An application of the scientific method can be found in the work of Bransford and Stein (1984) who developed the IDEAL model for finding solutions to educational problems. Deno (2002) explains the acronym IDEAL represents: Identify the problem, Define the problem, Explore alternative solutions, Apply a solution, and Look at the effects of the application.

Tilley et al. (1998) have implemented the Problem Solving Model in Iowa for a number of years. In their implementation, the key to successfully helping students is answering the following questions, which are described in detail in Table 1.

1. What is the problem?

2. Why does the problem exist?
3. What should be done to address the problem?
4. Did the intervention work and what's next?

Table 1. Critical Procedural Components of Problem Solving Systems (Tilly, Reschly, & Grimes, 1999)

#### **What is the problem?**

- All appropriate team members participate, including parents and the student as appropriate.
- All relevant existing information is considered during problem identification.
- The problem is clearly defined directly and environmentally (typically as the difference between environmental expectations and current performance) in addition to factoring in relevant characteristics about the individual student.
- An appropriate level of resources and precision is chosen for the assessment based on the intensity, severity, and durability of the problem.

#### **Why does the problem exist?**

- A multi-method, multi-informant assessment is completed that results in the development of plausible hypotheses regarding (1) whether the problem represents a skill or performance problem (2) why the problem is occurring in measurable and observable terms and (3) the circumstances and factors that are associated with both the occurrence and nonoccurrence of the problem.
- Testable hypotheses are written regarding problem etiology.

#### **What should be done to address the problem?**

- A intervention plan is written that:
- Is goal directed and focused on measurable objectives;
- Is based directly on the results of the assessment and the hypotheses regarding problem etiology;
- Identifies who will do what, when, and how;
- Contains specific methodologies for monitoring the effectiveness of the supports and interventions attempted;

- Contains all specific forms, documents, and personnel support that will be required for implementation of the plan;
- Fits the resources, values, and skills of the people in the setting.

### **Did the intervention work and what's next?**

- Progress is monitored frequently and repeatedly across time.
- Trends in performance are used to gauge the effectiveness of the supports and interventions.
- Ineffective intervention plans are changed in a timely manner.
- Intervention plans are modified as appropriate to address emerging needs.

*Adapted from Tilly, Knoster, Koveleski, Bambara, Dunlap, and Kinkaid (1998). Functional behavior assessment: Policy development in light of emerging research and practice. National Association of State Directors of Special Education: Alexandria, VA.*

An important point to be made about the Response to Intervention approach is that it is not specifically a special education eligibility tool, rather it is a data-based decision-making system that can be used for all students within the school.

In addressing how school psychologists might use the model, Deno (2002) explains "...problem solving is not a term reserved for activities that focus only on atypical development. Instead, problem solving is defined as the approach to intervention rather than by a focus on failure or deviance.

Problem solving is the effort to eliminate the difference between "what is" and "what should be" with respect to student development. Such a difference exists, for example, whenever we consider a student's current level of development relative to a desirable goal.

Any discrepancy between where a student is currently functioning and how we might like that student to function at some point in the future automatically provides a focus for problem solving and can be adopted as the purpose of school psychology" (p. 38).

Deno (2002) reduces the major phases in the Problem Solving process to three; identifying and defining the problem,

developing and selecting alternative solutions, and progress evaluation.

### **Identifying and defining the problem**

The first step in the Problem Solving cycle is clearly defining the difficulties experienced by the student. Clarity and precision in this description is essential for developing hypotheses about interventions to try with the student. Too often referrals can be vague and ambiguous.

For example a referral identifying a student as "having reading problems" offers little information for staff to use in developing alternative solutions. A description such as "student knows letter sounds and some consonant blends, but can not decode words with long vowel sounds or read with fluency," however tells a more complete story. In the latter case, staff can begin to generate ideas that are specific to the student's difficulty.

How can we add clarity to the process of problem definition? Relying on observable events helps lend validity and objectivity to the process. Maynard Reynolds, Professor Emeritus in Special Education at the University of Minnesota writes, "In general, behavioral assessments should be based heavily on direct observations rather than on presumed pre-dispositional or underlying traits."

An important point to make is that the reliability of assessments of underlying or unseen behaviors is typically low. However, observable events have a tendency to be perceived more accurately. A further point that Reynolds makes that highlights the importance of linking assessment to instruction is, "Assessments of school progress should be highly specific to the domains of instruction and so designed that individuals have clear opportunities to become aware of their own progress..."

### **Developing and selecting alternative solutions**

Once the student's problem area is identified and defined the teacher needs to alter the current instructional intervention. Changes in interventions can take many forms,

including curriculum, grouping, allocated time, and motivation. In the area of reading, a good place to start is the findings of the National Reading Panel, which reviewed current research on effective reading instruction.

The National Reading Panel website states, “In 1997, Congress asked the Director of the National Institute of Child Health and Human Development (NICHD) at the National Institutes of Health, in consultation with the Secretary of Education, to convene a national panel to assess the effectiveness of different approaches used to teach children to read.”

The report addresses five important areas of reading instruction: alphabetic understanding, phonics and phonemic awareness, fluency, vocabulary and comprehension. To view the National Reading Panel report refer to its website: [www.nationalreadingpanel.org](http://www.nationalreadingpanel.org).

Another site that addresses scientifically based interventions in this area sponsored by the Partnership for Reading. This group, which is a coalition of national groups focused on better reading instruction in this country, has set the four goals:

- To increase access to evidence-based reading research by providing information in non-technical language that is easily understood by non-researchers, including educators, parents, and policymakers.
- To improve professional development for reading instruction by providing teachers and others with tools that help them translate research into practice.
- To assist families in providing home environments that support children’s learning to read and encourage parents to strengthen their own literacy skills.
- To promote replication of evidence-based reading programs and tutorial services that have been evaluated and found to be effective.

The website for the National Institute for Literacy is, [www.nifl.gov/nifl/pfr.html](http://www.nifl.gov/nifl/pfr.html). As part of the website the Partnership provides a summary of teaching activities that address the critical elements of beginning reading (see The Research Building Blocks for Teaching Children to Read). In addition, there is a link to activities that parents can use at home

for improving the reading skills of their children (see Helping Your Child Learn to Read).

Another resource is the What Works Clearinghouse. This organization is sponsored by the U. S. Department of Education and addresses effective interventions across academic domains. According to its website, “On an ongoing basis, the What Works Clearinghouse (WWC) gathers studies of the effectiveness of educational interventions (programs, products, practices, and policies).

We review the studies that have the strongest design, and report on the strengths and weaknesses of those studies against the WWC Evidence Standards so that you know what the best scientific evidence has to say.” This site is at [www.WhatWorks.ed.gov](http://www.WhatWorks.ed.gov).

There are many books addressing reading instruction that should be consulted. Preventing Reading Difficulties in Young Children edited by Catherine E. Snow, Susan Burns and Peg Griffin, and published in 1998 by the National Research Council is an excellent resource. Another important book is Marilyn Adams’ Beginning to Read: Thinking and Learning about Print which was published by MIT Press in 1990.

### **Progress evaluation**

One of the most important components of the Response to Intervention model is the collection of data that allows staff to evaluate whether the treatment is effective. As Dr. Maynard Reynolds wrote, “In general, assessment processes in the schools should be oriented to instructional decisions: that is, the assessments should help to design appropriate instructional programs for students.”

For the most part, norm-referenced (NRT) standardized tests are not helpful in this regard. NRTs are problematic for several reasons.

First, many of the NRTs we use do not provide adequate information that informs instruction (Thurlow and Ysseldyke, 1980).

Second, most NRTs are not sensitive to measuring change over a short period of time. Carver (1974) makes the distinction between psychometric and edumetric tests.

## RESPONSE TO INTERVENTION

Psychometric assessments, which are the NRTs, are not designed to measure growth but to instead measure individual differences. These tests are good for peer comparisons, but may not be helpful for measuring change. Carver argues that educators also need edumetric tests, or assessments that are valid for monitoring student growth.

A third problem is that NRTs typically can only be administered once, or at most, perhaps twice a year. However, teachers need more immediate feedback than waiting several months to evaluate student growth. What is needed is an approach that can be used to measure pupil progress over a few days or weeks, not months.

Finally, NRT's are costly to administer frequently and take considerable amounts of time.

It would appear that the progress evaluation requirements of the Response to Intervention model cannot be fulfilled by the NRT approach. Fortunately, there exists a measurement model that can provide educators with a means of evaluating the effectiveness of instruction. That model is known as the Curriculum-Based Measurement model (CBM).

Curriculum-Based Measurement (Deno, 1986) was designed specifically to measure student growth. The studies have documented the validity of the measures (Deno et. 1983; Fuchs et. al. 1986; Tindal & Marston, 1996), their reliability (Marston, 1989), and their utility in evaluating student growth and making instructional changes (Fuchs, Deno, & Mirkin, 1984), setting goals for students (Deno et al., 2002), and predicting performance on high stakes tests (Fuchs, et al. 1997; Muyskens et al., 2004).

Over the past 25 years, more than 400 studies have been published on the technical adequacy and use of Curriculum-Based Measurement (Espin & Wallace, 2004).

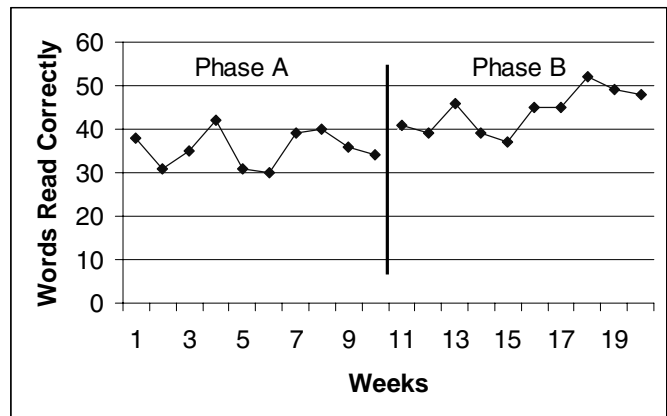
The CBM model has three major characteristics: direct measurement, repeated measurement, and time series analysis. Direct measurement refers to observation of specific student skills and behavior.

In the area of reading the teacher listens to the student read a passage and counts the number of words read correctly and incorrectly. The teacher may also rate the student's reading

expression and ask follow-up comprehension questions. A variety of early literacy skills can be measured including letter sound fluency and phoneme segmentation fluency.

Repeated measurement is a mainstay of the CBM model. Materials are typically designed so that students may be able to read equivalent passages on a frequent basis throughout the school year. Repeated measurement involves monitoring students anywhere from three times per week to three times per year.

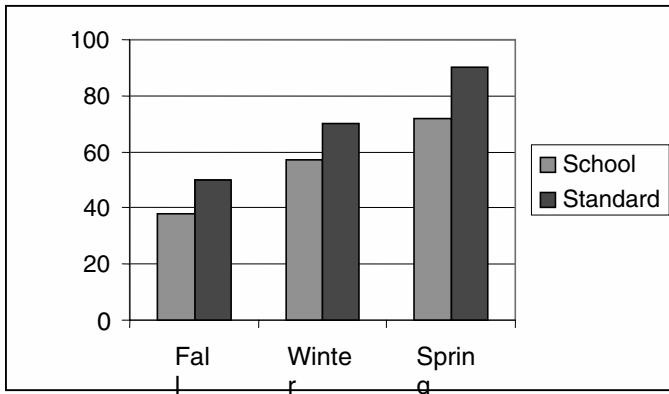
Time series analysis involves graphing the direct, repeated measurement data, recording instructional interventions on the graph, and looking at the students response to instruction. An example of this is shown in the figure below. As can be seen, the student learning rate, or response to instruction, is minimal in Phase A. However, an instructional change is made and in Phase B the student's growth rate increases.



An example of school-wide Curriculum-Based Measurement monitoring is shown in the figure below. In this model, all students are measured in the fall, winter, and spring at each grade level.

The figure below shows an example of how CBM data can be reported at a grade level and compared to oral reading standards. When disaggregating these data to the individual student level, those students not making adequate growth toward reading standards may be candidates for the Response to Intervention model.

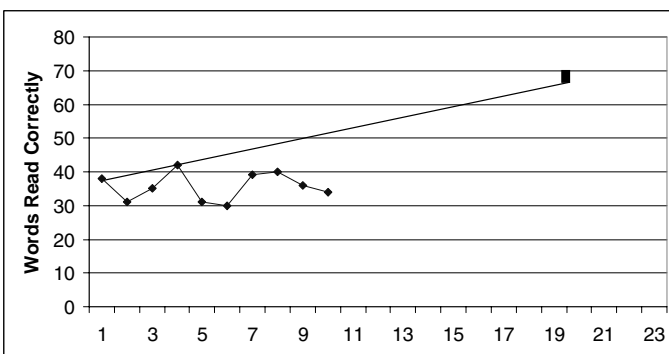
## RESPONSE TO INTERVENTION



Important elements of the curriculum-based measurement approach to progress evaluation are the setting of student goals, graphing student data and reviewing progress toward pupil goals. Research on typical growth of students in general education shows that students in grades 1 and 2 average a growth rate increase of about 2.5 words correct per week. For general education students in grades 3 to 6 the average gain is 1.5 correct words per week (Marston & Magnusson, 1985).

Using these data teachers can set goal lines for students. As shown in the figure below, student baseline data is 38 words read correct during the first week. For the purposes of illustration, the figure below sets a goal for a twenty week interval.

If we choose a 1.5 word gain per week over a 20 week period we intend to make a goal of 68 words correct. The accelerating goal line in the figure below represents growth of 1.5 words per week and a 68 words correct goal at the end of this period. A review of the data shows the student is not on course to make the necessary gains.



For students not making adequate progress a change in intervention is recommended. By cycling through the process of problem definition, selecting interventions, evaluating response to interventions, the educator will either find an effective approach for the student or has built a strong case for providing more intensive instructional services found in special education.

### ***VI. RTI Research***

#### **Model Implementation Research**

**University of Texas Model.** A three-tier RTI model that was used for primary students struggling in reading was researched by Sharon Vaughn at the University of Texas (Vaughn, 2003). Her study focused on the performance of 45 second grade students who reached the second tier of the RTI model. These students, who did not respond to reading instruction in Tier I, received intensive reading interventions that addressed the five major areas delineated in the National Reading Panel.

After ten weeks of instruction 10 students had improved enough to gain “early exit,” at the 20 weeks another 14 students were exited, at 30 weeks ten more students had improved enough for returning to Tier I. Vaughn concluded most students who reach Tier II need a minimum of 20 weeks of intervention for determining if a Tier III intervention is necessary.

**University of Pittsburgh Model.** O’Connor (2003) also studied the three-tier RTI model. In the control group of this study 15% of the students were identified as needing special education. However, at the experimental schools using a 3 Tier RTI model, only 8% of the students were later identified as needing special education.

**Iowa Model.** David Tilley of the Iowa State Department of Special Education examined the implementation of the Problem Solving Model across a large number of school districts in the state. The Iowa model has four levels of Problem Solving where there is an increase in the intensity of the problem and the amount of resources needed to address the problem with each level.

## RESPONSE TO INTERVENTION

Level I involves consultation between teachers and parents to address the concerns for the student. At Level II there is consultation with other resources that exist in the school environment. Consultation with an extended Problem Solving Team is the focus of Level III. Level IV involves IEP consideration and eligibility for special education. In Tilly's (2003) research the frequency of students identified for special education was reduced by 39% in kindergarten, 32% in the first grade, 21% in the second grade, and 19% in the third grade.

**Minneapolis Model.** The Minneapolis Public Schools have used an RTI model for the last ten years (Marston, 2001; Marston, Muyskens, Lau, and Canter, 2003). In their three stage process student interventions are monitored and response to intervention data is used to determine whether students are eligible for special education.

At Stage I Classroom Interventions are implemented. At this stage the classroom teacher, after determining that the pupil is struggling, begins to collect frequent data and implements a change in teaching strategy. The change could be curricular, motivational, organizational, or modification of other instructional variables. Certainly, another key variable is the amount of time provided the student. If the child does not respond to this intervention he or she moves to Stage 2.

At Stage 2 the school's Problem Solving Team reviews the case. The Problem Solving Team, ideally, is composed of general education teachers, Title I staff, Special Education staff, and other specialists in the building. The goal of this team is identify resources and interventions available in the building, but not part of special education, that can be implemented for the struggling student. Data is collected and the response to intervention cycle continues.

If the student does not respond to the intervention at this stage, he or she moves to Stage 3, which is special education evaluation. At this stage, in addition to continued monitoring of response to intervention, the formal due process activities required for special education evaluation are conducted, including: parent notification, evaluation planning, and evaluation reports.

The approach is also non-categorical in that students are not labeled as "learning disabled" or "mild mentally impaired" but instead "students needing alternative programming" (SNAP).

Program evaluation data reported shows that even though the student demographics in the district changed significantly during this time period in terms of race and ethnicity, increased poverty, and increased percentages of English Language Learners, the percentages of students with mild/moderate academic based disabilities did not change.

In other words, the RTI model did not significantly increase or reduce the numbers of students with high incidence disabilities found eligible for special education. The "flood gates" did not open allowing high numbers of students to access academic-based special education programs which is sometimes a concern regarding the RTI model.

- Marston, Muyskens, Lau and Canter (2003) report that before implementation of the Problem Solving Model in 1992, the percentage of the enrollment that was Learning Disabled or Mild Mentally Impaired was 7.13%. In 1997, the percentage of students that were Learning Disabled, Mild Mentally Impaired or Students Needing Alternative Placement (SNAP) was approximately the same at 6.91%. In 2001, the percentage again did not change significantly with 7.12% of the population identified as Learning Disabled, Mild Mentally Impaired, or Student Needing Alternative Placement (SNAP).

In addition, an independent evaluation of the Minneapolis model by Iowa State University staff and funded by the Minnesota Department of Children, Families and Learning (Reschly & Starkweather, 1997), showed the following:

- In the RTI model, pre-referral interventions were better than those interventions used with the traditional approach.
- Students needing special education services were provided these interventions earlier than with the traditional approach.
- A review of the students found eligible for special education using RTI and then compared to traditional special education criteria showed an overlap of 75%.

## RESPONSE TO INTERVENTION

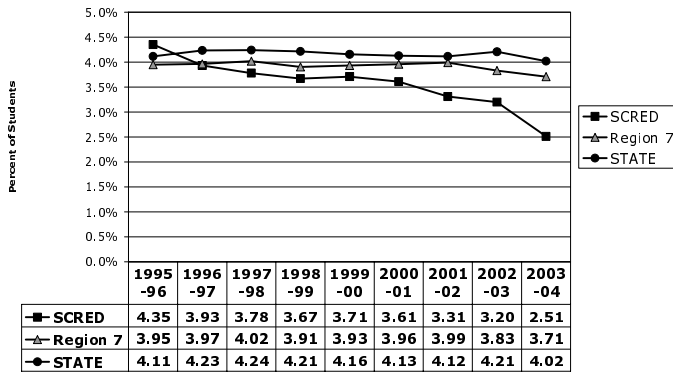
- In the RTI model “an equal treatment conception of non-discrimination” was evident in comparisons of African American and White American students
- Attitudes of teachers, administrators, social workers, and school psychologists using RTI were typically supportive.

In Minnesota’s St. Croix River Education District (SCRED), implementation of a Response to Intervention model produced a decrease in the number of students identified as learning disabled (McHugh, 2004).

As shown in the figure below, over a nine year period the percentage of LD students dropped from about 4.4% to 2.5%. Meanwhile, state LD percentages remained constant at approximately 4%.

Therefore, when this model is adopted as whole school reform such as it was in the SCRED districts, the percentages of students identified in the category of “learning disabilities” is significantly reduced.

**Percentage of Students Receiving Services for a Specific Learning Disability - St. Croix Education District (SCRED) vs. Region and MN State Totals**



The model used by SCRED is based on the Schoolwide Beginning Reading Model written about by Kame’enui and Simmons et.al. (2003). The Schoolwide Model helps schools translate scientifically-based reading research into effective practices. Its main tenet is that the unit for instructional change is the school. An effective school is organized to deliver powerful instruction to all of its students.

### Non-discriminatory assessment

Reschly, Kinglighter and McKee (1988) addressed issues of over-representation in special education and made the

point that assessments, in order to be nondiscriminatory, must be linked to instruction if they are to be justified.

Ortiz (2002) concludes nondiscriminatory assessments “should be multifaceted and guided by a comprehensive framework that integrates efforts to reduce bias in a cohesive and systematic manner. Such a system contains many best practice features, including:

- Evaluate, revise, and re-test hypotheses.
- Reduce bias in traditional testing practices.
- Utilize authentic and alternative assessment procedures.
- Evaluate and interpret all data within the context of the learning ecology.
- Link assessment to intervention.

The response to intervention model is consistent with many of these features. Data provided by Marston et al. (2003) show “odds ratios” (a measure of disproportion) for Minneapolis were below reported statewide ratios.

### Common Ground Report

The Common Ground Report reflects the results of eight professional organizations working together to address the essential components of an RTI model for this model to be considered as a viable alternative to traditional LD criteria (National Research Center for Learning Disabilities, 2002). From that conference fourteen statements emerged to form a consensus on what an effective RTI model would look like.

These statements were clustered by Identification, Eligibility and Intervention and are presented in Table 2. A careful reading of these statements shows that the elements of the RTI model presented in this paper are consistent with the Common Ground Report. (Table 2. Fourteen consensus statements from Common Ground Report regarding Identification, Eligibility and Interventions in RTI model.)

### Identification

1. “Identification should include a student-centered, comprehensive evaluation and problem-solving approach that ensures students who have a specific learning disability are efficiently identified.”

2. “Regular education must assume active responsibility for delivery of high-quality instruction, research-based interventions, and prompt identification of individuals at risk while collaborating with special education and related services personnel.”

### **Eligibility**

3. “The ability-achievement discrepancy formula should not be used for determining eligibility.”
4. “Decisions regarding eligibility for special education services must draw from information collected from a comprehensive individual evaluation using multiple methods and sources of relevant information.”
5. “Decisions on eligibility must be made through an interdisciplinary team, using informed clinical judgment, directed by relevant data, and based on student needs and strengths.”
6. “Decisions on eligibility must be made in a timely manner.”
7. “Based on an individualized evaluation and continuous progress monitoring, a student who has been identified as having a specific learning disability may need different levels of special education and related services under IDEA at various times during the school experience.”

### **Intervention**

8. “The field should continue to advocate for the use of scientifically based practices. However, in areas where an adequate research base does not exist, data should be gathered on the success of promising practices.”
9. “Schools and educators must have access to information about scientifically based practices and promising practices that have been validated in the settings where they are to be implemented.”
10. “Students with specific learning disabilities require intensive, iterative (recursive), explicit scientifically based instruction that is monitored on an ongoing basis to achieve academic success.”

11. “Students with specific learning disabilities require a continuum of intervention options through regular and special education across all grades and ages.”
12. “Interventions must be timely and matched to the specific learning and behavioral needs of the student.”
13. “An intervention is most effective when it is implemented consistently, with fidelity to its design, and at a sufficient level of intensity and duration.”
14. “Regular and special education must be coordinated as part of a coherent system which is held accountable for the educational outcomes of students with specific learning disabilities.”

## ***VII. Implementation of the Response to Intervention (RTI) Model***

This section of the report describes how staff can implement the Response to Intervention Model. A Response to Intervention Documentation form used for describing student data and response to intervention is in Appendix A.

Typically, later interventions are more intensive than initial interventions and often involve a building team where several school staff discuss the student and generate ideas for effective school interventions. In this section we explain how staff would utilize this form to help guide their use of the model.

### **Identifying and defining the student’s problem**

The first part of the form provides staff with prompts for describing the student’s needs and baseline data.

#### **1. Description of the problem**

In this section the teacher describes the difficulties the student is having. This information should be specific in nature. For example, “Student is reading poorly” is too general and vague.

A better example would be “Student has difficulty decoding words in second grade text and retelling the events that occurred in the story. The student reads 27 words correct in a



one minute sample from a second grade passage and answers only one of five questions correctly about the story.”

In this section the teacher should also include other data such as state test scores, local achievement test data, attendance information and other relevant academic data. The teacher should also keep in mind that baseline information is recorded here.

## **2. Student strengths and weaknesses**

A review of the student’s difficulties is not enough for making a decision about how to intervene with the student. By describing the child’s strengths and weaknesses, not necessarily linked directly to the academic problem, the teacher may be able to identify skills (or lack of skills) that will enable the student to improve.

For example, knowing the child is highly motivated is a strength the teacher can build upon in designing the intervention. Similarly, knowing the student has low self-confidence should signal the teacher to create instructional situations where the child experiences success and minimizes failure.

## **3. Relevant health or other issues**

Often there are physical or health concerns that impede learning. Visual difficulties, chronic fatigue, hearing problems all contribute to student academic problems. Such issues need to be addressed and can be as much a part of the intervention strategy as the reading curriculum.

## **Developing alternative interventions for the student**

The second part of the intervention form guides staff through the process of selecting an intervention for the student.

## **4. Hypothesis regarding student needs**

Once the first section is completed the teacher has a good idea of what the specific problem is for the student and has some type of data to back up this description. In addition, other non-academic variables that may be contributing to the academic difficulties have been considered.

The teacher may now begin generating ideas on why the student isn’t learning and possible solutions. This is the

hypothesis and it should help us identify an intervention that specifically addresses our concern.

For example, we might hypothesize that a student who is having trouble decoding may need a reading program that provides more explicit instruction on alphabetic understanding and phonemic awareness.

## **5. Type of intervention selected**

The hypothesis helps guide the selection of an intervention. In the previous example we hypothesized the student needs more explicit instruction and practice with phonemic awareness. The teacher must now find reading interventions that fit these characteristics.

## **6. Length of time of intervention**

In this section, staff report the length of time that the intervention will be implemented. Intervention length can vary due to publisher recommendations, research data, student scheduling factors, availability of resources and student attendance.

While evidence on what constitutes optimal intervention length is not available, it is fair to say that staff will need to assure that interventions are neither too short nor too long. Either circumstance creates an obvious downside. Interventions that are not implemented for a sufficient period of time will of course have minimal impact on student learning.

Conversely, interventions carried out for too long, without student gains, will only delay effective instruction being provided to the pupil. The absence of hard data on length of intervention reinforces the importance of collecting frequent data on the student.

By continually reviewing student progress in response to the intervention, the teacher will improve his or her understanding of whether the treatment is succeeding.

## **7. Student goal**

Setting a goal for the student to achieve is critical to the Response to Intervention process. For setting goals in reading staff should refer to research by Fuchs (2002). University of Oregon researchers also provide data that can be used for goal setting.

These researchers observed that for oral reading fluency first grade students who do well on state-wide assessments are reading approximately 60 words correct by the end of 1<sup>st</sup> grade, 90 words correct by the end of 2<sup>nd</sup> grade, and 110 words correct by the end of 3<sup>rd</sup> grade. Muyskens et al. (2004) have shown that 7<sup>th</sup> graders who read approximately 150 words correct have about an 85% chance of passing Minnesota statewide reading assessments at 8<sup>th</sup> grade.

### **Evaluation of response to intervention**

#### **8. Measures used for progress monitoring and decision rules**

The Curriculum-Based Measurement model is very useful to help educators evaluate the effectiveness of instruction and student growth (Deno, 1986, Fuchs & Shinn, 1989).

As shown earlier in this paper, in the area of reading, graphing the number of words read correctly on a repeated basis provides educators with a way of determining whether the student is responding to intervention (Fuchs, Deno, & Mirkin, 1984).

As Deno has described the approach, CBM procedures provide educators with “vital signs” of education health of the student.

#### **9. Evidence of response or non-response to intervention**

The teacher or team now reviews the data to determine response or lack of response. Once a goal and goal line have been established on the student’s reading graph it is fairly easy to ascertain whether the pupil is making sufficient progress to judge the intervention as effective or not effective. This evidence becomes critical to making the decision to continue or modify instruction.

#### **10. Decision**

Finally, after all data and interventions are considered a decision about the effectiveness is provided. The teacher or team summarizes the interventions that were implemented and the extent to which the student made gains on the CBM procedures.

For students showing improvement toward the stated goal the decision would be to continue with implementation of

the instructional change in the current school environment.

However, for students who show a trend that is not high enough to attain the goal, the teacher or team should try an intervention of high intensity. In those cases where several general education interventions have not been effective, there is evidence the student needs more intensive service in special education.

### ***VIII. Conclusions***

Educators have long known that there are no “silver bullets” when it comes to teaching...but there are some “silver tools” which educators simply cannot ignore. The sound research in support of Response to Intervention (RTI) and Curriculum Based Measurement (CBM), in addition to other scientifically based strategies must be acknowledged and put to widespread use.

Educators have long complained about the onerous special education procedures required by law and those complaints are indeed meritorious. These required procedures are not only time consuming and immensely expensive but they provide minimal information that is actually useful for instructional decision-making which should be the real purpose of initiating these processes in the first place.

The reauthorized IDEIA goes a long way to address many of these issues. With RTI, the requirement to have

“regular class interventions” which must consist of research based interventions rather than the “refer out” process is a huge improvement.

In some cases, because of the success of these interventions verified with data, the child will not need special education services at all. The use of the regular classroom data coupled with additional observation information, CBM data and other data determined to be necessary provides a clear and nondiscriminatory picture of “present levels of performance.” Goals for students using CBM are clear and rational and easily measured for progress reports and IEP modification purposes.

With the reauthorized IDEIA and the use of RTI will come a new relationship between classroom teachers and special education teachers, between NCLB and IDEIA and most important, will result in improved learning for children and youth with disabilities.

## References

- Adams, M. (1994). Beginning to Read: Thinking and Learning about Print. Boston: MIT Press.
- Algozzine, B., Ysseldyke, J. E., & McGue, M. (1995). Differentiating low achieving students: Thoughts on setting the record straight. Learning Disabilities Research and Practice, 10 (3), 140-145.
- Bransford, J. D., & Stein, B. S. (1984). The IDEAL problem solver. New York: W. H. Freeman.
- Carver, R. P. (1974). Two dimensions of tests: Psychometric and edumetric. American Psychologist.
- Deno, S. L., Mirkin, P., & Chiang, B. (1982). Identifying valid measures of reading. Exceptional Children, 49, 36-45.
- Deno, S. L. (1985). Curriculum-based measurement: The emerging alternative. Exceptional Children, 52 (3) 219-232.
- Deno, S. L., Fuchs, L. S., Marston, D., & Shinn, M. (2001). Using curriculum-based measurement to establish growth standards for students with learning disabilities. School Psychology Review, 30(4), 507-524.
- Deno, S. L. (2002). Problem Solving as "Best Practice." In A. Thomas & J. Grimes (Eds.), Best Practices in School Psychology IV, Vol. 1, 37-56. Washington, DC: National Association of School Psychologists.
- Education for All Handicapped Children Act of 1975, 20 U. S. C. Sec. 401 (1975).
- Espin, C. & Wallace, T. (2004). Research Institute for Progress Monitoring. Minneapolis, MN: University of Minnesota.
- Fletcher, J. M., Francis, D. J., Shaywitz, S. E., Lyon, G. R., Foorman, B. R., Stuebing, K. K., & Shaywitz, B. A. (1998). Intelligent testing and the discrepancy model for children with learning disabilities. Learning Disabilities Research and Practice, 13, 186-203.
- Fuchs, L. (2002). Best practices in defining student goals and outcomes. In A. Thomas & J. Grimes (Eds.), Best practices in school psychology IV. Vol. 1, 553-564. Washington, DC: National Association of School Psychologists.
- Fuchs, L., & Fuchs, D. (1986). Effects of systematic formative evaluation: A meta-analysis. Exceptional Children, 53, 199-208.
- Fuchs, L., Deno, S. L., & Marston, D. (1997). Alternative measures of student progress and state standards testing. Pacific Coast Research Conference, February 7, 1997.
- Fuchs, L., Deno, S. L., & Mirkin, P. K. (1984). The effects of frequent Curriculum-Based Measurement and evaluation on pedagogy, student achievement and student awareness of learning. American Education Research Journal, 21, 449-460.
- Fuchs, L. S., & Shinn, M. R. (1989). Writing CBM IEP objectives. In M. R. Shinn (Ed.), Curriculum-based measurement: Assessing special children (pp. 130-152). New York: Guilford Press.
- Galagan, J. E. (1985) Psychoeducational testing: Turn out the lights, the party's over. Exceptional Children, 52 (3), 288-299.
- Gresham, F. (2001, August). Response to Intervention: An Alternative Approach to the Identification of Learning Disabilities. Paper presented at the Learning Disabilities Summit: Building a Foundation for the Future (Washington, DC, August 27-28, 2001).
- Gresham, F. H., MacMillan, D. L., & Bocian, K. M. (1996). Learning disabilities, low achievement, and mild mental retardation: More alike than different? Journal of Learning Disabilities, 29 (6), 570-581.
- Heller, K., Holtzman, W., & Messick, S. (1982). National Research Council Special Task Force Report. Washington, DC: National Academy Press.
- House Committee on Education and the Workforce (Report 108-077) To accompany H. R. 1350, Filed April 29, 2003. Pages 107-108.
- Individuals with Disabilities Act, 20 U. S. C. Sec. 1400 (1990).
- Individuals with Disabilities Act, 20 U. S. C. Ch. 33, Sec. 1400 (1997).
- Iowa Department of Education. (1992). Renewed Service Delivery System Des Moines, IA: Department of Education.
- Larry P. v. Riles. (1984). Supra, 495 F. Supp. at 951-52, aff'd 83-84 EHLR 555:304, 307 (CA9 1984).
- MacMillan, D. L., Gresham, F. M., & Bocian, K. L. (1998). Discrepancy between definitions and school practices: An empirical investigation. Journal of Learning Disabilities, 31(4), 314-326.
- Marston, D., Muyskens, P., Lau, M., & Canter, A. (2003). Problem- Solving Model for Decision Making with High-Incidence Disabilities: The Minneapolis Experience Learning Disabilities Research and Practice, 18 (3), 187-200.

## RESPONSE TO INTERVENTION

- Marston, D. (2001). A functional and intervention-based assessment approach to establishing discrepancy for students with learning disabilities. Paper presented at LD Summit, Washington DC, August 28, 2001.
- Marston, D. (1989). Curriculum-based measurement: What it is and why do it? In M. R. Shinn (Eds), Curriculum-based measurement: Assessing special children (pp. 18-78. New York: Guilford.
- Marston, D., & Magnusson, D. (1988). Curriculum-based assessment: District level implementation. In J. Graden, J. Zins, & M. Curtis (Eds.), Alternative educational delivery systems: Enhancing instructional options for all students (pp. 137-172). Washington, DC: National Association of School Psychologists.
- McHugh, C. (2004). Personal communication.
- National Academy of Sciences (2002). Minority Students in Special and Gifted Education. Washington, DC: National Academy Press.
- NRCLD Learning Disability Policy Roundtable. (2002). Specific learning disabilities: Finding common ground.
- O'Connor, R. (2003). Tiers of Intervention in Kindergarten Through Third Grade. Presented at National Research Center on Learning Disabilities RTI Symposium, Kansas City, MO, December 5, 2003.
- Ortiz, S. O. (2002). Best practices in nondiscriminatory assessment. In A. Thomas and J. Grimes (Eds.), Best Practices in School Psychology IV. Bethesda, MD: National Association of School Psychologists. Pages 1321-1336.
- Prasse, D. P. (2002). Best practices; in school psychology and the law. In A. Thomas and J. Grimes (Eds.), Best Practices in School Psychology IV. Bethesda, MD: National Association of School Psychologists.
- Public Law 94-142, Education of the Handicapped Act of 1975, Federal Register, 42, 163, (August 23, 1977).
- Reschly, D. J. & Ysseldyke, J. E. (2002). Paradigm shift: The past is not the future. In A. Thomas & J. Grimes (Eds.), Best practices in school psychology IV. Bethesda, MD: National Association of School Psychologists.
- Reschly, D. J., Kicklighter, R., and McKee, P. (1988). Recent placement litigation part II, minority EMR overrepresentation: Comparison of Larry P. with Marshall and S-1. School Psychology Review, 17, 22-38.
- Reschly, D. & Starkweather, A. (1997). Evaluation of an alternative special education assessment and classification program in the Minneapolis Public Schools. Ames, IA: Iowa State University.
- Senate HELP Committee, Report 108-185). To accompany S. 1248, Filed November 3, 2003, Pages 26-28.
- Siegal, L. S. (1989). IQ is irrelevant to the definition of learning disabilities. Journal of Learning Disabilities, 22 (8), 469-486.
- Snow, C. E., Burns, S., & Griffin, P. (1998). Preventing reading difficulties in Young children. Washington, DC: National Research Council.
- Thurlow, M. & Ysseldyke, J. E. (1980). Instructional planning: Information collected by school psychologists vs. information considered useful by teachers. Journal of School Psychology, 20, (1), 3-10.
- Tilly, W.D., Reschly, D. J., & Grimes, J. (1999). Disability determination in problem-solving systems: Conceptual foundations and critical components. In Reschly, D., Tilly, W., & J. Grimes (Eds.) Special Education in Transition (Chapter 12). Longmont, CO: Sopris West.
- Tilly, D. (2003). How Many Tiers Are Needed for Successful Prevention and Early Intervention?: Heartland Area Education Agency's Evolution from Four to Three Tiers. Presented at National Research Center on Learning Disabilities RTI Symposium, Kansas City, MO, December 5, 2003.
- Vaughn, S. (2003). How Many Tiers Are Needed for Response to Intervention to Achieve Acceptable Prevention Outcomes. Presented at National Research Center on Learning Disabilities RTI Symposium, Kansas City, MO, December 5, 2003.
- Vellutino, F. R., Scanlon, D. M., & Lyon, G. R. (2000). Differentiating between Difficult-to-Remediate and Readily Remediated Poor Readers: More Evidence against the IQ-Achievement Discrepancy Definition of Reading Disability. Journal of Learning Disabilities, (33)3, 223-238.
- Ysseldyke, Algozzine, B., & Epps, S. (1983). A logical and empirical analysis of current practice in classifying students as handicapped. Exceptional Children, 67, 295-309.
- Ysseldyke, J. E. & Marston, D. (1999). Origins of categorical special Education services in schools and a rationale for changing them. In Reschly, D., Tilly, W., & J. Grimes (Eds.) Special Education in Transition (Chapter 1). Longmont, CO: Sopris West.



## ABOUT EDUCATION|EVOLVING

Millions of America's students head off to school each morning sporting brightly colored backpacks and determined to make this their "best school year yet." At the same time, federal and state policymakers are making tough new demands that our schools change and improve – so that "All students learn at high levels." New standards, tests, timelines and consequences are all being put in place to make sure that "No child is left behind."

Yet, all across the country, many policymakers, journalists, teachers, parents and students themselves are troubled by a haunting feeling that all this effort may not really produce the degree of change and improvement that we need. At a minimum, we are now taking a series of risks that are neither wise nor necessary to be making with other people's children. These are, after all, demands and results well-beyond what we've ever expected of American public education – all at a time of severe budgetary pressures on states, districts and individual public schools.

That, at least is the serious concern of a small group of Minnesota-based public policy veterans who have come together as Education|Evolving... a joint venture of the Center for Policy Studies and Hamline University. The individuals behind this initiative believe...

... it's an unwise and unnecessary risk for the state and nation to be trying to get the results we need solely by changing the schools we now have...

... the issues about teachers and teaching should not be debated only in the old employer/worker framework...

... the solution to maintaining financially viable public education in rural areas may not lie in the three old 'solutions' of excess levies, consolidation and state aid...

... today's schools should not go on largely failing to take advantage of new electronic technologies and other substantially different ways of teaching and learning...

... and the critical discussion about the future of K-12 education in Minnesota and nationally must not proceed solely as a discussion among adults, with students largely left on the outside looking in.

Education|Evolving is undertaking a number of initiatives during the current year. They include a national initiative to convince policy makers, education reform leaders, journalists and others that *creating new schools* should be an essential element in achieving needed changes and improvements in teaching and learning – at least equal in importance to *changing the schools we now have*.

One focus of this initiative is to introduce the concept of an "Open Sector" – to help create the kind of legal and political environments in which new schools can be created and succeed. Another is designed to challenge the fundamental premise that teachers in schools must always be "employees." Another initiative is looking at the premises used in asking the critical question, "How are chartered schools doing?" Other ongoing Education|Evolving projects focus on strengthening and enhancing the role of the agencies and organizations that sponsor chartered schools – and on how policymakers, journalists and others can more routinely and substantively tap into the experiences and perspectives of students and of young people not now attending school.

Education|Evolving's leadership is provided by two Minnesota public policy veterans: **Ted Kolderie**, senior associate at the Center for Policy Studies, and **Joe Graba**, a senior policy fellow at Hamline University. Its coordinator is **Jon Schroeder**, former director of Charter Friends National Network. Education|Evolving's activities are regularly updated on the initiative's unique and continually refreshed web site [www.educationevolving.org](http://www.educationevolving.org). To receive print and electronic updates of Education|Evolving initiatives, contact [info@educationevolving.org](mailto:info@educationevolving.org).



# education | evolving

*A joint venture of the Center for  
Policy Studies and Hamline University*

1295 Bandana Boulevard / Suite 165  
Saint Paul, Minnesota 55108

telephone: 651-644-6115  
e-mail: [info@educationevolving.org](mailto:info@educationevolving.org)  
web site: [www.educationevolving.org](http://www.educationevolving.org)

Nonprofit organization  
U.S. Postage  
**PAID**  
Saint Paul, MN  
Permit No. 5242