DOINGWHATWORKS

SAMPLE MATERIAL

Schoolwide Screening: Guidelines, Resources, Example

The National Research Center on Learning Disabilities

Topic: Response to Intervention in Primary Grade Reading

Practice: Universal Screening

The National Research Center on Learning Disabilities (NRCLD) developed *Responsiveness to Intervention (RtI): How to Do It*[1] as a manual to help schools and districts understand, design, and evaluate RtI components. It is divided into five sections: schoolwide screening, progress monitoring, tiered service delivery, fidelity of implementation, and school, student case study, and research examples.

The schoolwide screening section outlines the universal screening process, describes its role and significance within an RtI model, and provides detailed implementation information, evaluation and planning tools, and resources for further information. This section includes three activities to help schools think about implementing schoolwide screening: Essential Task List for Schoolwide Screening; Standards to Judge High-Quality Schoolwide Screening; and Internal Resources Needed to Implement Schoolwide Screening.

1 Johnson, E., Mellard, D.F., Fuchs, D., & McKnight, M.A. (2006). *Responsiveness to intervention (RtI): How to do it*. Lawrence, KS: National Research Center on Learning Disabilities.

This project has been funded at least in part with Federal funds from the U.S. Department of Education under contract number ED-PEP-11-C-0068. The content of this publication does not necessarily reflect the views or policies of the U.S. Department of Education nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

The manual's Jefferson Elementary School example includes a description of the school's universal screening implementation, as well as a PowerPoint presentation providing additional information about the screening process. Jefferson Elementary is a member school receiving services from the Heartland Area Education Agency (AEA) 11.

Section 1

School-Wide Screening

National Research Center on Learning Disabilities
www.nrcld.org

August 2006

• *Definition and Features, page 1.2*

• *Changing Structures, Roles, and Responsibilities, page 1.5*

• *Methods and Procedures (Activities/Tools), page 1.7*

• *Activity 1.1: Essential Task List for School-Wide Screening, page 1.8*

• *Activity 1.2: Standards for Judging High-Quality School-Wide Screening, page 1.9*

• *Activity 1.3: Internal Resources Needed to Implement School-Wide Screening, page 1.10*

• *Resources, page 1.11*

• *References, page 1.19*

Overview

Patterned on public-health models, responsiveness to intervention (RTI) is a multitiered instructional delivery and intervention process frequently used to prevent chronic learning problems. An important first step in any prevention approach is the school-wide (also known as universal) screening of students to accurately identify those who are at risk for learning difficulties. In this section, we define school-wide screening, outline important features of a screening process, describe the role screening plays within an RTI model and its significance, provide detailed information about implementation, and list resources for obtaining further information.

NRCLD is a joint project of researchers at Vanderbilt University and the University of Kansas. This document was produced under U.S. Department of Education Grant No. H324U010004. Renee Bradley served as the project officer. The views expressed herein do not necessarily represent the positions or policies of the Department of Education. No official endorsement by the U.S. Department of Education of any product, commodity, service or enterprise mentioned in this publication is intended or should be inferred.

IDEAs that Work
U.S. Office of Special Education Programs

RTI Manual

Features
Definition and Features

Screening is a type of assessment that is characterized by providing quick, low-cost, repeatable testing of age-appropriate critical skills (e.g., identifying letters of the alphabet or reading a list of high frequency words) or behaviors (e.g., tardiness, aggression, or hyperactivity).

The basic question in a screening measure is whether or not the student should be judged as "at risk." For example, the school nurse who uses the Snellen eye chart (Snellen, 1862) wants a quick indicator of students who might have difficulty seeing from a distance. If a student has difficulty reading the eye chart, a referral is made for a more in-depth assessment. In a similar way, the classroom teacher uses a screening measure to identify students who meet the screening criteria for possible at-risk status. These students are then considered for a more in-depth assessment, such as monitoring their progress during the next six weeks with specific assessments.

For a screening measure to be useful, it should satisfy three criteria (Jenkins, 2003):

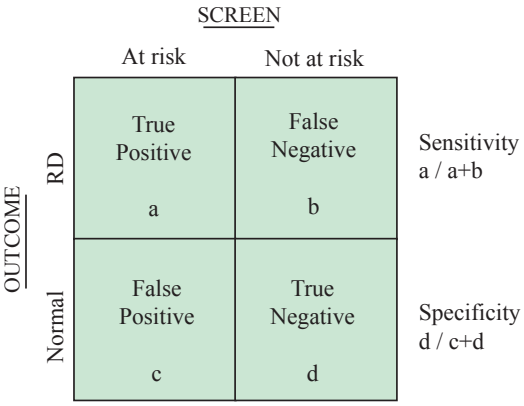
1. It needs to identify students who require further assessment
2. It needs to be practical
3. It needs to generate positive outcomes (accurately identifies students without consuming resources that could be put to better use)

For each of these criteria, several considerations are part of the selection of appropriate screening measures. These considerations are described below and the reader is referred to a paper presented by Joseph Jenkins at the 2003 RTI Symposium and accessible on the National Research Center on Learning Disabilities' web site (http://www.nrcld.org/symposium2003/jenkins/index.html) for more detailed information about these considerations.

Accuracy. The main purpose of a screening instrument is to identify students whose performance on the measure warrants further investigation. Because screening does not directly result in diagnosis, it is better for a screening instrument to err on the side of false positives (students identified as at risk, who through more intense assessment are found to have been misidentified) than on the side of false negatives (students not identified through screening who later turn out to be at risk). Therefore, a wider net with which to capture potentially at-risk students can be cast with screening measures. A potential drawback of having more false positives is the added expense of the additional testing and the provisions of services to more students, while a drawback of having more false negatives is that those students miss the opportunity to benefit from early intervention services. Ultimately, however, a school will want to find a measure that reaches an acceptable balance of efficiency and accuracy. To do this, schools will need to maintain data on how well the measure identifies students as at risk (e.g., track the number of false positives and false negatives). Such fine-tuning can help save resources.

One way to attempt to establish an acceptable balance is to use a decision-making model, which displays the distribution of true positives and true negatives, as well as the false positives and false negatives. A decision-making model also provides a mechanism for calculating the sensitivity and specificity of your screening tool. Sensitivity is the probability that the screening tool identifies those students who do have SLD, and specificity is the probability

Figure 1.1. Clinical Decision-Making Model



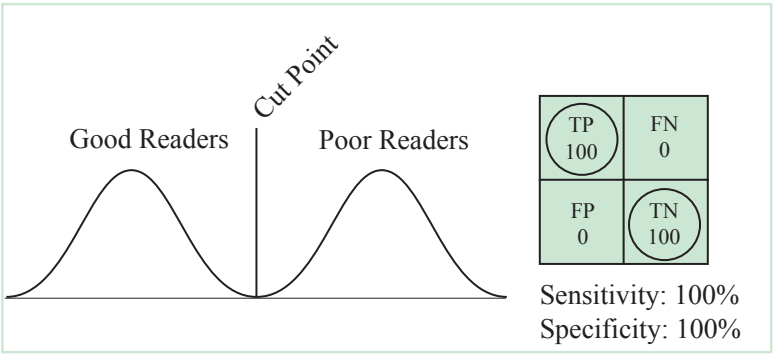
(Catts, 2006)

that the tool does not incorrectly identify those students who do not have SLD. See Figure 1.1 for an example of a decision-making table.

Cut score. Accuracy of screening also is determined by what cut scores are used. A cut score, also called cut point, is the score that represents the dividing line between students who are not at risk and those who are potentially at risk. The goal of school-wide screening is to identify those students who may be at risk for not acquiring the relevant skill and who may require further intervention. Schools will need to consider the emphasis given to particular levels of criteria performance when establishing cut scores. Additionally, some students perform on the "edge" of either side of the cut score, and guidelines will need to be established for determining when a student's performance warrants further investigation.

Adjusting cut scores directly affects the distribution of true positives, true negatives, false positives, and false negatives. Figures 1.2, 1.3, and 1.4 provide examples of changes in this distribution resulting from changes in the cut score.

Figure 1.2. The Ultimate Screen



(Catts, 2006)

Figure 1.3. Typical Screen

(Catts, 2006)

Figure 1.4. Typical Screen (Change in Cut Score)

(Catts, 2006)

Criterion versus norm referenced. Screening measures can use either a criterion referenced or normative comparison standard of performance. In the former, a specific criterion level of skills is specified as indicating an acceptable level of proficiency or mastery. In the normative comparison, the screening results are compared to an appropriate peer group (e.g., other students in first grade). Criterion measures are preferred because they give more accurate information about performance on relevant skills. In selecting an appropriate criterion measure, the school should attempt to link the measures at each grade level to appropriate existing performance measures, including existing performance standards in the school's curriculum. The content will need to be relevant to age/grade level and the skill in question.

Efficiency. A screening procedure must be brief as well as simple enough to be implemented reliably by teachers. Teachers must view the procedures as reasonable and important, or they may not reliably implement them (Jenkins, 2003). School-wide train-

RTI Manual

ing on implementation and school-wide scheduling of screening procedures may be helpful in ensuring they are completed reliably.

School-Wide Screening Within an RTI Model

In the RTI model, screening is used to designate students who might be in need of closer monitoring in their general education curriculum or of a more intense intervention.

Screening is important as it represents the first gate or point of entry into subsequent tiers of RTI instruction. Screening is not a one-time process but an iterative system during the school year and across grade levels. During the course of primary instruction (Tier 1), the school uses school-wide screening (consistency) in essential academic areas to identify each student's level of proficiency (usually three times per year). The screening data are organized to allow for comparison of both group and individual performance on specific skills (National Association of State Directors of Special Education [NASDSE], 2005). In this way, the screening can serve three purposes:

1. Identify individuals in need of further assessment and possible movement to Tier 2 intervention
2. Provide feedback about class performance to help school leadership identify when a teacher might require support
3. If implemented on a regular basis across grade levels, identify false negatives, students who slip through the screening at one level but are then identified at later points in their school years.

The following excerpt from Fuchs & Fuchs (2006) summarizes the recommendations for best practice of school-wide screening within an RTI model:

> *How to target students for preventative intervention.* Regardless of the number of tiers employed within the RTI system, a second procedural dimension concerns how students are targeted to enter the RTI process and receive preventative intervention. Some RTI systems employ one-time school-wide screening, whereby all children in a school are assessed on a brief measure at the beginning of the school year. Students who score below a norm-referenced cut point (e.g., less than 25th percentile on the Woodcock Reading Mastery Tests – Word Identification) or below a performance benchmark associated with poor long-term outcome (e.g., less than 15 on curriculum-based measurement word identification fluency at the beginning of first grade) enter preventative intervention. In systems that rely on one-time school-wide screening to identify students who enter preventative intervention, the assumption is that low performance relative to the normative cut point or the performance benchmark at the beginning of a school year constitutes evidence that the child has failed to respond to Tier 1 general education during previous school years and therefore requires preventative intervention.
>
> In other versions of RTI, school-wide screening is conducted to identify a subset of students whose response to Tier 1 general education is then monitored for a relatively short period of time to (dis)confirm the risk status indicated via school-wide screening. Only the subset of students who (a) first meet the school-wide screening cut point and (b) then evidence poor rates of improvement over five to eight weeks of Tier 1 general education are deemed in need of a preventative intervention.
>
> Our *recommendation* is that schools use school-wide screening in combination with at least five weeks of weekly progress monitoring in response to general education to identify students who require preventative intervention. Our *rationale* is that one-time universal screening at the beginning of the year can over-identify students who require preventative intervention. For example, in our research (Compton, Fuchs, Fuchs & Bryant, 2006), conducted in reading at first grade, 50 percent of students identified on the basis of one-time screening spontaneously "recovered," i.e., made good progress over the course of first grade without preventative intervention. Identifying students for preventative intervention based on one-time screening means that schools are pressed to deliver costly preventative intervention to large numbers of students who do not need those services, thereby watering down the nature of preventative intervention. By contrast, our research (Compton et al., 2006) shows that five weeks of weekly progress monitoring can reduce or even eliminate the provision of preventative intervention to these "false positives"; hence, our recommendation to incorporate short-term progress monitoring in response to general education for determining students who require preventative intervention. (pages 39-40)

Changing Structures, Roles, and Responsibilities

As with most elements within the RTI model, the implementation of school-wide screening procedures necessitates a closer collaboration among general education and specialist staff. School leaders will need to effectively plan for the implementation of school-wide screening to include both the acquisition of resources and the time (scheduling) needed to administer screening. Schools will need to identify a standard procedure for identifying students as at risk (e.g., create a table of cut points or patterns of performance). Finally, schools will need to review screening results to inform the process of selection and cut-point determination—this is an iterative, continual process. Table 1.1 divides school personnel into three main areas and describes some of the responsibilities that personnel within these areas may be expected to undertake in school-wide screening.

RTI Manual

Table 1.1: Changing Structures/Responsibilities

General Education*	Specialist/Support Staff*	Administration*
Administer school-wide screening measurements across content (reading, writing, math) areas according to schedule. Administer assessments, chart results, and evaluate results. Identify students for further monitoring for intervention by comparing results to predetermined cut points. Provide information to parents if using the results for reporting student progress.	Assist general education teachers in implementation efforts. Collect data on a screening tool and associated cut points to help inform the process. Collaborate with the general education teacher to assist in determination of students for further assessment. Present students identified as at risk during screening to school teams as candidates for more intensive progress monitoring at Tier 1 and possible entry to Tier 2 and beyond.	Lead effort to create infrastructure for school-wide screening. Provide necessary technology, materials, resources, and professional development to staff. Provide initial and continuing professional development opportunities for new staff and refresher training. Ensure fidelity of implementation through routine, periodic observation and discussions with staff. Research the availability of screening tool options with staff committee (or entire staff) to select appropriate tools/methods. Coordinate this system so that it meets multiple requirements, including determination of adequate yearly progress reports for the No Child Left Behind Act of 2001 (P.L. 107-110) (NCLB 2001). Determine when/whether classroom performance warrants intervention (e.g., entire class performance is considerably lower than other classes in the same grade level). Provide aggregated data from school-wide screening results to teachers and district personnel.

* General Education includes the general education teacher
* Specialist/Support Staff includes the special education teacher, reading or learning specialists, related services personnel, paraprofessionals
* Administration includes building principals and assistants as well as curriculum or assessment specialists at building or district levels

Activities/Tools

Methods and Procedures

The following three activities (*Activity 1.1: Essential Task List for School-Wide Screening*, *Activity 1.2: Standards to Judge High-Quality School-Wide Screening*, and *Activity 1.3: Internal Resources Needed to Implement School-Wide Screening*) provide a way for your school to think about implementing school-wide screening.

RTI Manual

Activity 1.1

Essential Task List for School-Wide Screening

Directions: In the second column, write the name(s) of the individual or team who will assume responsibility for the task identified in the first column. In the third column, write the deadline for or status of the task.

Task	Responsible Individual/Team	Timeline/Status
Review your screening instrument's items to be certain that content is aligned with the curriculum for each grade level.		
Once a tool has been selected, determine and secure the resources required to implement it.		
Determine initial professional development needs and continuing professional development support.		
Administer the screening measure three times a year (e.g., early fall, mid-term, and late spring).		
Create a database that aligns with the screening instrument to hold student information and scores.		
Organize the screening results (e.g., graphs and tables) to provide a profile of all students and their comparisons with each other.		
Monitor results at the classroom level and make decisions about when teachers/instructional programs require more scrutiny and support.		
Add screening results to a database so that students' performance can be monitored over time.		
Specify written steps to follow when further scrutiny is needed for students judged to be at risk.		

Activity 1.2

Standards for Judging High-Quality School-Wide Screening

Directions: Read each of the standards for judging high-quality school-wide screening. The checklist is formatted so that you can indicate current and planned implementation.
- If the practice has been implemented, indicate that with a checkmark (√).
- If the practice is being developed, rank its priority: 1 = highest priority through 3 = lowest priority.

Standard	Status	
	In Place (√)	Priority (1-2-3)
Screening is school-wide, meets accepted psychometric standards[1], and has evidence of documented reliability[2] and concurrent[3] and predictive validity[4] within the particular school setting.		
Individuals involved in the screening measures' administration, scoring, and interpretation are appropriately trained.		
The site obtains reading screening data or information about reading skills following a designated fixed schedule.		
At least 95 percent of the students participate in the school-wide screening. Reasons for excluding students from the school-wide screening are reasonable and appropriate (e.g., severe/profound disabilities).		
Alternative methods to obtain information about reading skills for students excluded from reading assessments have individual curricular relevance and allow students' achievement to be measured and evaluated.		

[1] Psychometric standards are the theoretical approaches and procedures used to measure the difference between individuals' knowledge, attitudes, abilities, and personality traits.

[2] Documented reliability is the extent to which a measurement yields consistent results over repeated testing of the same measure under identical conditions.

[3] Concurrent validity occurs when a new measurement or test correlates well with a previously validated measure. These two concurrent measures may be for the same construct or for different but related constructs.

[4] Predictive validity is the extent to which quantitative attributes predict scores on some criterion measure where one measure occurs earlier and is meant to predict some later measure.

RTI Manual

Activity 1.3

Internal Resources Needed to Implement School-Wide Screening

Directions: In *Activity 1.2: Standards for Judging High-Quality School-Wide Screening,* you identified which school-wide screening standards had been implemented in your school and which standards still need attention. In the space below, list the resources (material, curriculum, space, equipment, and people) your school will need to effectively implement school-wide screening.

Material/Curriculum	Space/Equipment	People

Resources

Resources

The following five tables (1.2 to 1.6) list measures that hold potential as screening tools for reading ability (Jenkins, 2003).

Table 1.2. Early and Mid-kindergarten Screens

Measure/Study	Sample	Type of Evidence	Result			
Letter Identification (Scanlon & Vellutino, 1996)	1407 Early-Mid K	Classification	At Risk	Sensitivity	Specificity	Criterion
			10%	32%	95%	Severe reading difficulty grade 1 (teacher-identified)
Letter Identification (Scanlon & Vellutino, 1996)	1407 Early-Mid K	Classification	At-Risk	Sensitivity	Specificity	Criterion
			35%	75%	75%	Severe reading difficulty grade 1 (teacher-identified)
Combination of: Phoneme Segmentation Letter Naming Fluency Syllable Elision (O'Connor & Jenkins, 1999)	129 Nov. K	Classification	At-Risk	Sensitivity	Specificity	Criterion
			18 %	100%	88%	Below 8th percentile Woodcock Reading Mastery Test (WRMT Basic Rd.) Scale Grade 1
Same combination with revised cut scores	101 Nov. K	Classification	At-Risk	Sensitivity	Specificity	Criterion
			20%	100%	86%	Same
Same combination with revised cut scores	215 Nov. K		At-Risk	Sensitivity	Specificity	Criterion
			18 %	91%	86%	Same

(Continued on page 1.12)

RTI Manual

Table 1.2. Early and Mid-kindergarten Screens (Continued)

Measure/Study	Sample	Type of Evidence	Result			
Texas Primary Reading Inventory (TPRI) Combination of: Letter Sound Identification Blend Onset-Rimes and Phonemes (Foorman, Fletcher, et al., 1998)	421 December K	Classification	At-Risk	Sensitivity	Specificity	Criterion
			56%	95%	56%	Below 23rd percentile Woodcock Johnson (WJ) Broad Reading Spring Grade 1
DIBELS-Oral Reading Fluency (OnRF) (Good, Simmons, & Kame'enui, 2001)	353 Winter K	Concurrent Validity	.36 WJ-R Reading Readiness Cluster			
		Predictive Validity	.36 WJ-R Reading Cluster			
	378 Winter K	(Mid K - Spring Grade 1)	.45 CBM-ORF			

Table 1.3. Late Kindergarten

Measure/Study	Sample	Type of Evidence	Result			
Dynamic Assessment Combination of: (1) Letter Naming Fluency (LSF) (2) Phoneme Segmentation (3) Sound Repetition (O'Connor & Jenkins, 1999)	129 April K	Classification	At Risk	Sensitivity	Specificity	Criterion
			19%	100%	87%	Below 8th percentile WRMT Basic Reading - Spring Grade 1
Same combination with revised cut-scores (O'Connor & Jenkins, 1999)	101 April K		At-Risk	Sensitivity	Specificity	Criterion
			17%	100%	91%	Same
TPRI (1) Letter Sound Identification (LSI) (2) Blending Phonemes (Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998)	421 April K	Classification	At-Risk	Sensitivity	Specificity	Criterion
			50%	90%	62%	Below 23rd percentile WJ-Broad Reading Grade 1
Composite of CTOPP-Blending and Elision (Speece, Mills, Ritchey, & Hillman, 2003)	39 Spring K	Classification	At-Risk	Sensitivity	Specificity	Criterion
			25%	66.7%	81.8%	Below 26th percentile
				42.9%	78.1%	WJ-R Word Attack CBM-ORF
		Concurrent Validity	.68 WJ-R Letter-Word ID			
		Predictive Validity	.73 WJ-R Letter-Word ID			
		Spring Grade 1	.73 WJ-R Word Attack .62 CBM-ORF			
DIBELS-Phoneme Segmentation Fluency (PSF) (Good et al., 2001)	353 Spring K	Concurrent Validity	.62 NWF			
		Predictive Validity	.68 WJ-R Reading Cluster			
		Spring K-Winter Grade 1	.62 CBM-ORF			
		Spring K-Winter Grade 1	.54 WJ-R Reading Readiness Cluster			

(Continued on page 1.14)

RTI Manual

Table 1.3. Late Kindergarten (Continued)

Measure/ Study	Sample	Type of Evidence	Result			
Letter Name Fluency (LNF) (Speece et al., 2003)	39 Spring K	Classification	At-Risk	Sensitivity	Specificity	Criterion Measure
			25%	50.0	78.8	WJ-R Word Attack
				87.5	87.5	CBM-ORF
		Concurrent Validity	.55 WJ-R Letter-Word ID			
		Predictive Validity Spring Grade 1	.55 WJ-R Letter-Word ID .44 WJ-R Word Attack .69 CBM-ORF			
		Other Predictions Spring Grade 1	(1) LNF accounted for no unique variances in Letter Word ID, Word Attack, or CBM-ORF, after controlling for Phonological Awareness and NWF.			
DIBELS-Nonsense Word Fluency (NWF) (Speece et al., 2003)	39 Spring K	Classification	At-Risk	Sensitivity	Specificity	Criterion
			(Lowest 25% of sample on NWF in Spring K)	50.0	72.7	Below 26th percentile
				85.7	81.3	WJ-R Word Attack
						CBM-ORF
		Concurrent Validity	.91 WJ-R Letter-Word ID			
		Predictive Validity Spring K-Spring Grade 1	.59 WJ-R Letter-Word ID .59 WJ-R Word Attack .71 CBM-ORF			
		Other Prediction Spring Grade 1	(1) NWF did not account for significant variances in WJ-R Letter-Word ID once phonology awareness was controlled. (2) NWF accounted for significant variance in WJ-R Word Attack and CBM-ORF, after Phonological Awareness was controlled. (3) NWF accounted for significantly more variance than LNF in Word Attack and CBM-ORF.			

Table 1.4. Early First Grade

Measure/Study	Sample	Type of Evidence	Result			
Letter-Sound Fluency (LSF) (Speece & Case, 2001)	142 Fall Grade 1	Classification	At-Risk	Sensitivity	Specificity	Criterion Measure
			25% on LNF	55.9	83.7	Dually (Level and Slope) Discrepant (-1 Standard Deviation) on CBM-ORF
Combination of: (1) Letter Naming Fluency (2) Phoneme Segmentation (3) Sound Repetition (O'Connor & Jenkins, 1999)	215 Oct. Grade 1		At-Risk	Sensitivity	Specificity	Criterion Measure
			17%	100%	87%	Same
TPRI Combination of: (1) Word Reading (2) Blending Phonemes	599 Fall Grade 1	Classification	At-Risk	Sensitivity	Specificity	Criterion
			48%	93%	63%	WJ-Broad Reading Grade 1
DIBELS-NWF (Fuchs, Fuchs, & Compton, 2003)	151 Fall and Spring Grade 1 at-risk (defined by Letter Naming Fluency)	Concurrent Validity				
		Fall Grade 1	.58 WRMT-R Word ID .50 WRMT-R Word Attack			
		Spring Grade 1	.64 WRMT-R Word ID .51 WRMT-R Word Attack .80 CRAB Fluency			
		Predictive Validity				
		Fall-Spring Grade 1	.57 WRMT-R Word ID .46 WRMT-R Word Attack .64 CRAB Fluency			

(Continued on page 1.16)

RTI Manual

Table 1.4. Early First Grade (Continued)

Measure/ Study	Sample	Type of Evidence	Result
DIBELS-NWF (Good et al., 2001)	342 Winter Grade 1	Concurent Validity	.36-.59 WJ-R Reading Readiness
		Predictive Validity	
		Spring Grade 1	.82 CBM-ORF
		Spring Grade 2	.60 CBM-ORF
		Spring Grade 2 (?)	.66 WJ-Reading Cluster
Word Identification Fluency (WIF) (Fuchs et al., 2003)	151 Fall and Spring Grade 1 at-risk	Concurrent Validity	
		Fall Grade 1	.77 WRMT-R Word ID .59 WRMT-R Word Attack
		Spring Grade 1	.82 WRMT-R .52 WRMT-R .93 Comprehensive Reading Assessment Battery (CRAB) Fluency
		Predictive Validity	
		Spring Grade 1	.63 WRMT-R Word ID .45 WRMT-R Word Attack .80 CRAB Fluency

Table 1.5. Late First Grade and Early Second Grade

Measure/Study	Sample	Type of Evidence	Result			
TPRI Combination of: (1) Word Reading (2) Blending Phonemes (Foorman et al., 1998)	376 Spring Grade 1	Classification	At-Risk	Sensitivity	Specificity	Criterion
			38%	92%	77%	Below 36th percentile WJ Broad Reading - Spring Grade 2
TPRI Word Reading (Foorman et al., 1998)	537 Fall Grade 2	Classification	At-Risk	Sensitivity	Specificity	Criterion
			29%	91%	85%	Below 36th percentile WJ Broad Reading Spring Grade 2
CBM-ORF (Speece & Case, 2001)	144 Fall Grade 2	Classification	At-Risk	Sensitivity	Specificity	Criterion
			25% on CBM-ORF	77%	80%	Dually (Level and Slope) Discrepant (-1 Standard Deviation) on CBM-ORF

Table 1.6. CBM-ORF and MAZE

Measure/Study	Sample	Type of Evidence	Result			
CBM-ORF (Stage & Jacobson, 2001)	173 Sept Grade 4	Classification	At-Risk	Sensitivity	Specificity	Criterion
			32%	66%	76%	Not meeting standard on state test
Basic Academic Skills Samples (BASS)-Maze (Jenkins & Jewell, 1991)	322 Fall Grades 2–6	Concurrent Validity	Gates-McGinitie Total Reading			
			.65	Grade 2		
			.63	Grade 3		
			.75	Grade 4		
			.76	Grade 5		
			.72	Grade 6		
	374 Spring Grades 1–6	Concurrent Validity	Metropolitan Achievement Test Total Reading			
			.78	Grade 1		
			.76	Grade 2		
			.66	Grade 3		
			.72	Grade 4		
			.72	Grade 5		
			.67	Grade 6		
	322 Fall Grades 2–6	Concurrent	Bottom 15% of students on BASS-MAZE			
		Percent Overlap	and Gates-McGinitie Total Reading			
			57%	Grade 2		
			75%	Grade 3		
			54%	Grade 4		
			50%	Grade 5		
			65%	Grade 6		
	374 Spring Grades 1–6	Concurrent	Bottom 15% of students on BASS-Maze and			
		Percent Overlap	Metropolitan Achievement Test Total Reading			
			38%	Grade 1		
			57%	Grade 2		
			62%	Grade 3		
			54%	Grade 4		
			62%	Grade 5		
			60%	Grade 6		

RTI Manual

Web

The following web-based resources may be helpful in researching, selecting, and implementing school-wide screening. NRCLD does not endorse these products; these resources are intended to be a source of information about programs and publications that will help teachers, principals, and district personnel in their choice of materials that can be used by skilled teachers to provide effective instruction and successfully implement an RTI program. Whether or not a program or publication has been listed does not constitute endorsement or lack of endorsement by NRCLD. These resources do not constitute an "approved" or "required" list. Also, many potentially useful programs or publications may not be listed here. We hope that readers will complete careful reviews of available alternatives.

Edcheckup
http://www.edcheckup.com/

The site offers an assessment system for screening student performance and measuring student progress toward goals in reading. Generic passages, which are independent from any particular basal reading series, also may be used to evaluate the effectiveness of reading instruction through the graphing of student reading data. Browsers must pay to view materials from this site.

EdProgress
http://www.edprogress.com/index.htm

EdProgress focuses on assessment, large-scale testing and accountability, and systemic reform. With research-proven training materials, measurement tools, reporting systems, and teacher training interventions, EdProgress helps teachers become more focused on teaching and learning for all students. Browsers must pay to view materials from this site.

Evidence-Based Progress Monitoring and Improvement System
http://www.aimsweb.com

AIMSweb® is a formative assessment system that informs the teaching and learning process by providing continuous student performance data and reporting improvement to students, parents, teachers, and administrators to enable evidence-based evaluation and data-driven instruction. Browsers must pay to view materials from this site.

Intervention Central
http://www.interventioncentral.org

This web site offers free tools and resources to help school staff and parents promote positive classroom behaviors and foster effective learning for all children and youth. The web site was created by Jim Wright, a school psychologist from Syracuse, N.Y.

Monitoring Basic Skills Progress (MBSP)
http://www.proedinc.com/store/index.php?mode=product_detail&id=0840

Developed by Lynn Fuchs, Carol Hamlett, and Douglas Fuchs, MBSP is a computer program for automatically conducting curriculum-based measurement and for monitoring student progress in reading, math computation, and math concepts and applications. The computer program provides immediate feedback to students about their progress and provides individual and class-wide reports to teachers to help them plan more effective instruction. Browsers must order and pay for materials from this site.

National Center for Learning Disabilities
http://www.ncld.org/index.php?option=content&task=view&id=571

NCLD works to ensure that the nation's 15 million children, adolescents, and adults with learning disabilities have every opportunity to succeed in school, work, and life. Materials on this site are free.

National Center on Student Progress Monitoring
http://www.studentprogress.org

This center's mission is to provide technical assistance to states and districts and to disseminate information about progress monitoring practices proven to work in different academic content areas (grades K–5). Materials on this site are free.

National Consortium on Oral Reading Fluency
http://nc-orf.uoregon.edu/orflinks.html

The purpose of this web site is to help integrate measurement within the decision-making process. Site developers believe that the profession needs to have immediate access to data, as primary information from research studies, as participants in research and development efforts to collect such data, and as end users who would like to upload or download normative performance levels. This web site is designed to serve all three purposes. Materials on this site are free.

Reading Success Lab
http://www.readingsuccesslab.com

The Reading Success Lab provides software solutions for identifying reading problems and improving reading skills. Some screening materials on this site are free, but browsers must order and pay for other materials from this site.

References

Catts, H. (2006, April). *School-wide screening.* Presentation at the National SEA Conference on Responsiveness to Intervention: Integrating RTI within the SLD Determination Process, Kansas City, MO. Retrieved July 12, 2006, from http://www.nrcld.org/sea/presentations_worksheets/screening/Catts_screening.pdf

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,* 394-409.

Foorman, B.R., Fletcher, J.M., Frances, D.J. Carlson, C.D., Chen, D., Mouzaki, A., Schatschneider, C., Wristers, K., & Taylor, R. (1998). *Technical report: Texas primary reading inventory technical 1998 ed.* Houston, TX: Center for Academic and Reading Skills and University of Houston.

Foorman, B.R., Francis, D.J., Fletcher, J.M., Schatschneider, C., & Mehta, P. (1998). The role of instruction in learning to read: Preventing reading failure in at-risk children. *Journal of Educational Psychology, 90,* 37–55.

Fuchs, L.S., & Fuchs, D. (2006). Implementing responsiveness-to-intervention to identify learning disabilities. *Perspectives on Dyslexia, 32*(1), 39-43.

Fuchs, L.S., Fuchs, D., & Compton, D. (2003). Longitudinal study of alternative methods of LD identification. Paper presented at the Annual International Conference of the Learning Disabilities Association, Chicago, IL.

Good, R.H., Simmons, D., & Kame'enui, E. (2001). The importance and decision-making utility of a continuum of fluency-based indicators of foundational reading skills for third-grade high-stakes outcomes. *Scientific Studies of Reading, 5,* 257–288.

RTI Manual

Jenkins, J.R. (2003, December). Candidate measures for screening at-risk students. Paper presented at the NRCLD Responsiveness-to-Intervention Symposium, Kansas City, MO. Retrieved April 3, 2006, from http://www.nrcld.org/symposium2003/jenkins/index.html.

Jenkins, J.R., & Jewell, M. (1992). An examination of the concurrent validity of the Basic Academic Skills Samples (BASS). *Diagnostique, 17*(4), 273–288.

National Association of State Directors of Special Education, Inc. (2005). *Response to intervention: Policy considerations and implementation.* Alexandria, VA: Author.

O'Connor, R.E., & Jenkins, J.R. (1999). The prediction of reading disabilities in kindergarten and first grade. *Scientific Studies of Reading, 3,* 159–197.

Scanlon, D.M., & Vellutino, F.R. (1996). Prerequisite skills, early instruction, and success in first grade reading: Selected results from a longitudinal study. *Mental Retardation and Development Disabilities, 2,* 54–63.

Snellen, H. (1862). Eye examination chart originally created by Dutch ophthalmologist Hermann Snellen, M.D., in 1862.

Speece, D., & Case, L. (2001). Classification in context: An alternative approach to identifying early reading disability. *Journal of Educational Psychology, 93,* 735–749.

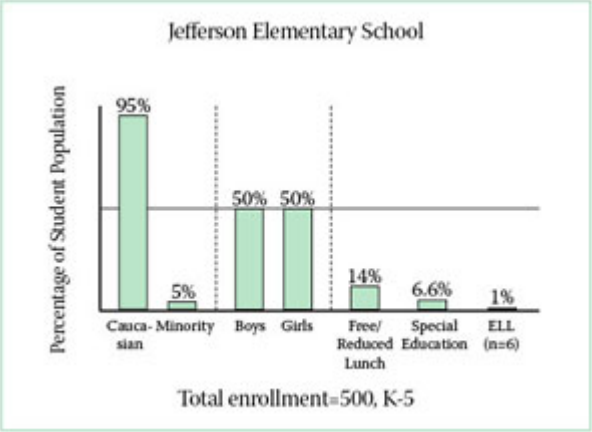
Speece, D., Mills, C., Ritchey, K., & Hillman, E. (2003). Initial evidence that letter fluency tasks are valid indicators of early reading skill. *Journal of Special Education, 36,* 223–233.

Stage, S.A., & Jacobsen, D.M. (2001). Predicting student success on a state-mandated performance-based assessment using oral reading fluency. *School Psychology Review, 30,* 407–419.

School-Wide Screening School Example - Jefferson Elementary School

Jefferson Elementary School, Pella, Iowa (Spring 2006)

Heartland Area Education Agency (AEA) 11



Overview and demographics

Jefferson Elementary School has a total enrollment of 500 students, with two sections each of kindergarten through third grade and six sections each of fourth and fifth grades. Nearly equal numbers of girls and boys attend the school. About 14 percent of the students are eligible for free or reduced lunch, and about 6.6 percent are served in special education. Five percent of the students are minority students, 95 percent are Caucasian, and six students are English language learners. Jefferson Elementary's responsiveness-to-intervention model uses the following structure: Tier 1, Tier 2, Tier 3, Tier 4, and special education.

Screening in reading

Kindergartners and first-graders are screened using Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessments in the fall, winter, and spring. The school also uses DIBELS fluency and accuracy assessments for students in the second and third grades and Fuchs' fluency and accuracy assessments for students in the fourth and fifth grades. In addition to the fluency and accuracy measures, students in the second through fifth grades are assessed with the Iowa Test of Basic Skills (ITBS) in November and the Gates-McGinitie assessment in April. (Second graders are also given the Gates-McGinitie in October.) Jefferson Elementary also uses a variety of assessments to measure specific district benchmarks.

Screening data and reference points

When analyzing students' screening data, the school uses reference points, not specific cut scores. The reference points are used to indicate whether a student is performing below expectations and to guide school staff members as they determine appropriate interventions for students. The reference points, or scores, match up with proficiency scores of standardized tests.

No single score stands alone in determining interventions for students, but rather data from multiple sources (benchmark scores, fluency screenings, DIBELS, ITBS, Gates-McGinitie) are

used to determine which students need instruction beyond Tier 1 and which interventions will be most effective in meeting student needs.

Progress monitoring data also guide the determination of the effectiveness of the interventions.

Fluency norms

Fluency norms are based on norms set by Houghton Mifflin, Jefferson's reading series. DIBELS probes are used for students in kindergarten through third grades, and Letter Sound Fluency Tests are used for students in fourth and fifth grades. To be considered to be making satisfactory progress, students at all grade levels must have 95 percent accuracy (total words correct/total words read) on the fluency probes. Charts are used to indicate words correct per minute on a one-minute timed reading.

Literacy day sessions and data

The Literacy Team--which includes general and special education teachers, Reading Plus teachers, Area Educational Agency staff, the curriculum director, and the principal--meets three times a year for Literacy Day sessions. These sessions occur just after district-wide student screenings and allow team members to review the district-wide screening data as well as data from the other school-wide screening measures. Data are then used to make necessary changes to current student interventions and to identify students who require more individualized and more intensive interventions.

For example, a Literacy Day Data sheet for a fifth-grade class would include the names of the students in the left-hand column and scores earned by each of those students on September fluency and accuracy measures and the Gates-McGinitie comprehension and vocabulary tests. A companion sheet, Literacy Day Notes, would also be used during meeting discussions. Again, student names would be in the left-hand column with adjacent columns for noting the student's areas of need, current interventions, and comments. As discussion progresses during the sessions, changes are made based on student data, students with skill deficits are considered for services, and students with extension needs are considered for gifted and talented placement.

RTI screening challenges

Time. Time is a big issue when conducting school-wide screenings. Jefferson Elementary staff members have trained a group of volunteers to administer fluency and accuracy screenings to reduce the time teachers spend on assessments. They also use associates and Central College students to help in various ways.

Appropriate screening materials. School staff members also appreciate the challenge of determining appropriate screening materials. They agree that some choices (e.g., ITBS) are easy; more difficult to find are screening assessments to match the skills for which they want to screen. Another challenge is to acquire and use multiple sources of data to help validate skill deficits.

Data-based decision making. Using the data to make appropriate decisions regarding interventions has also been a challenge for Jefferson Elementary staff. After being collected, data must be stored and sorted so they can be easily analyzed. While analyzing the data, decisions must be made about how to provide interventions to students when no current program matches their need.

School-wide Reading Screening

Jefferson Elementary School
Pella, Iowa

National SEA Conference on SLD Determination
Kansas City, MO
April 19-21, 2006

Jefferson Elementary Overview

- 2 sections of kindergarten
- 2 sections of first grade
- 2 sections of second grade
- 2 sections of third grade
- 6 sections of fourth grade
- 6 sections of fifth grade
- Total enrollment of 500 students

2

National SEA Conference on SLD Determination

Demographics

- 71 students (14.2%) on free or reduced lunch
- 6 students in ESL/ELL
- 33 students (6.6%) served in Special Education
- 255 females
- 245 males
- 5% minority students
- 95% Caucasian students

3

National SEA Conference on SLD Determination

Screening Data

- When analyzing student data we use reference points not specific cut-off scores. These reference points are guidelines to help us in determining interventions for students.
- A reference point is a score that indicates a student is performing at a level below expectations. These scores match up with the expected proficiency scores of the standardized tests.
- No single score stands alone in determining interventions for students.
- We gather and analyze data from multiple sources(benchmark scores, fluency screenings, DIBELS, ITBS, Gates-McGinitie) to determine which students need instruction beyond Tier 1 and the intervention that will be most effective in meeting student needs.
- Our collection of progress monitoring data helps guide the determination of the effectiveness of the intervention.

4

National SEA Conference on SLD Determination

School-wide Screening Data Reference Points

Grade	Screening Instrument	Frequency	Reference Point
K	DIBELS – phoneme segmentation	fall, winter, spring	winter–28 phonemes/min spring–35 phonemes/min
1	DIBELS – oral reading fluency	fall, winter, spring	winter–20 correct wds/min spring–40 correct wds/min
2	Gates-McGinitie ITBS Benchmark Attainment Data (Variety of assessments to measure specific district benchmarks) DIBELS Fluency & Accuracy	October and April November	40th percentile on national norms 40th percentile on national norms 75% correct (Reference points on next slide)
3	Gates-McGinitie ITBS Benchmark Attainment Data (Variety of assessments to measure specific district benchmarks) DIBELS Fluency & Accuracy	April November	40th percentile on national norms 40th percentile on national norms 75% correct (Reference points on next slide)
4	Gates-McGinitie ITBS Benchmark Attainment Data (Variety of assessments to measure specific district benchmarks) Fuchs' Fluency & Accuracy*	April November	40th percentile on national norms 40th percentile on national norms 75% correct (Reference points on next slide)
5	Gates-McGinitie ITBS Benchmark Attainment Data (Variety of assessments to measure specific district benchmarks) Fuchs' Fluency & Accuracy*	April November	40th percentile on national norms 40th percentile on national norms 75% correct (Reference points on next slide)

* We will be discontinuing the Fuchs' probes as the current third grade students move through the grade levels.

5

National SEA Conference on SLD Determination

Fluency and Accuracy Screening Reference Points

- Fluency norms based on norms set by Houghton Mifflin (Jefferson's reading series)
- DIBELS probes used for students in 2nd & 3rd grades.
- Fuchs' probes used for students in 4th & 5th grades.
- We expect students at all grade levels to be at 95% accuracy on the fluency probes to be satisfactory (total words correct divided by total words read).
- The chart indicates words correct per minute on a one minute timed reading.
- The levels of performance correlate to our standards based report card system.
- NT=Needs time
- SP=Satisfactory progress
- AP=Advanced progress

September Fluency Norms in Levels of Performance

Grade	NT	SP	AP
2nd	52 and below	53-82	83 and above
3rd	78 and below	79-110	111 and above
4th	98 and below	99-125	126 and above
5th	105 and below	106-132	133 and above

December Fluency Norms in Levels of Performance

Grade	NT	SP	AP
2nd	66 and below	67-96	97 and above
3rd	85 and below	86-117	118 and above
4th	104 and below	105-129	130 and above
5th	112 and below	113-138	139 and above

February Fluency Norms in Levels of Performance

Grade	NT	SP	AP
2nd	78 and below	78-106	107 and above
3rd	92 and below	93-123	124 and above
4th	111 and below	112-133	134 and above
5th	117 and below	118-151	152 and above

May Fluency Norms in Levels of Performance

Grade	NT	SP	AP
2nd	93 and below	94-124	125 and above
3rd	113 and below	114-142	143 and above
4th	117 and below	118-145	146 and above
5th	127 and below	128-151	152 and above

6

National SEA Conference on SLD Determination

Literacy Day

- The Literacy Team includes the general education teachers, special education teachers, Reading Plus teachers, AEA staff, curriculum director, and principal.
- Literacy Day sessions are held three times a year (September, January, May) and follow district-wide screenings.
- In addition to district-wide screenings data, the following data are reviewed
  - K-1: DIBELS, benchmark assessments, classroom data, progress monitoring
  - 2-5: Fluency/Accuracy, ITBS, Gates-MacGinitie, Benchmark Assessments, classroom data, progress monitoring
- Data are used to make any necessary changes to current student interventions and to identify students that require more individualized intensive level interventions.

7

National SEA Conference on SLD Determination

Literacy Day Data

•Numbers in **boldface** indicate areas of concerns.

•Numbers in *italics* indicate areas of advanced skills.

•The fluency scores are words correct per minute on a one minute timed reading.

•The accuracy scores are calculated by taking total words correct and dividing by total words read.

•We use the Fourth Edition Gates-MacGinitie assessment.

•The Gates-MacGinitie scores indicated are the national percentile ranks for both comprehension and vocabulary.

Name	Grade	Sept '05 Fluency	Sept '05 Accuracy	4th Gates Comp Scores	4th Gates Vocab Scores
Megan	5	*184*	99.46	56	*99*
Adam	5			*97*	*98*
Kylee	5	*140*	98.59	**28**	44
Ashley	5	*260*	99.62	*91*	*93*
Sam	5	*178*	99.44	*91*	63
Michael	5	*237*	99.58	58	*93*
Jordan	5	*195*	99.49	78	*98*
Brooke	5	*160*	99.38	88	85
Ann	5	*176*	100	71	67
Derek	5	*222*	99.55	*75*	*98*
Ann	5	*179*	99.44	78	53
Zach	5	**85**	100	44	63
Lindy	5	*197*	98.99	65	85
Emma	5	*192*	100	*91*	*95*
Jake	5	*191*	99.48	*75*	*95*
Will	5	114	99.13	68	74
Lydia	5	*178*	99.44	85	88
Justin	5	*147*	99.32	78	*98*
Charlie	5	121	99.18	**7**	56
Kate	5	*177*	99.44	85	60
Brad	5	**93**	97.89	**33**	46
Nathan	5	116	97.48	68	85
Fiona	5	*188*	100	85	*95*

8

National SEA Conference on SLD Determination

Literacy Day Notes

•Information was gathered prior to the meeting to indicate any interventions students were receiving.

•During the meeting changes were made based on current student data.

•Students with skill deficits are considered for a variety of services including Title I, Central Teacher Academy, Literacy Army, after school assistance.

•Students with extension needs are either in our current gifted and talented program (GATE) or may be screened for inclusion in the program.

Name	Need Area	Current Intervention	Comments
Megan	Extension	GATE	
Adam			
Kylee	Extension		Gate testing
Ashley	Comprehension		Soar to Success
Sam	Extension		Gate testing
Michael			
Jordan			
Brooke			
Ann			
Derek			
Anne			
Zach	Fluency	Corrective Reading B2	Drop CR/Add Quick Reads
Lindy			
Emma			
Jake	Extension	GATE 3	
Will	Fluency		Retest/Quick Reads?
Lydia			
Justin	Extension	GATE 3	
Charlie	Comprehension	Soar to Success	
Kate			
Brad			
Nathan	Fluency	Corrective Reading B2	Drop CR/Add Quick Reads
Fiona		Soar to Success	Drop Soar to Success

9

National SEA Conference on SLD Determination

RTI Screening Challenges

- TIME
  Time is a big issue when doing school wide screenings. We have trained a group of volunteers to administer fluency and accuracy screenings to reduce the time teachers spend on assessments. We also use associates and Central College students to help in various ways.

- DETERMINATION OF APPROPRIATE SCREENING MATERIALS
  It was a challenge to determine appropriate screening materials. While some were easy choices such as ITBS, other screening assessments needed to be found to match the skills we wanted to screen. We also wanted to find multiple sources of data to help validate any skill deficits that we found.

- DATA-BASED DECISION MAKING
  Using the data to make appropriate decisions regarding interventions has also been a challenge. After the data is collected it must be stored and sorted so it can be easily analyzed. While analyzing the data decisions must be made on how to provide interventions to students when there is no current program matching their need.

10

National SEA Conference on SLD Determination