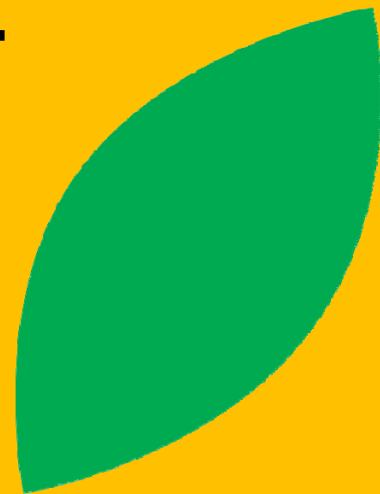


Reading First and Response to Intervention: Implementing the Model in the “Real World”

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Children Do NOT Outgrow Reading Difficulties

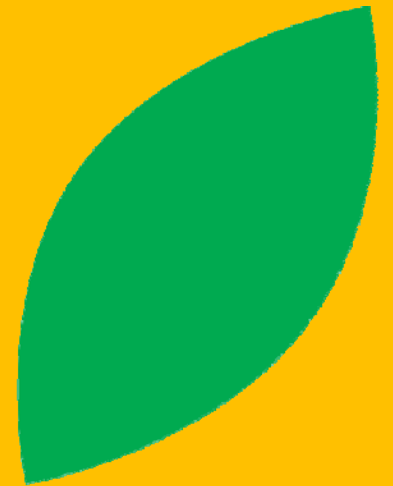
A child who is a poor reader at the end of first grade has an almost 90% chance of remaining a poor reader at the end of Grade 4 (Juel, 1988) and at least a 75% chance of being a poor reader at the end of Grade 12 (Francis et al., 1995)

....unless we provide quality intervention!

Keep in Mind...

*Students who are performing below grade level will only close the gap with their classmates if they learn **FASTER** than other students.*

***More Instruction**
Efficient Instruction
More Practice*



Critical Understanding Related to Reading Intervention

The Power of
Instruction!



Reading difficulty and disability

- *Is variation on normal development*
- Can be caused and influenced by several different factors

Reading failure is caused by the *interaction* between features of instruction, the materials used, and student characteristics.

Causes of Reading Difficulties and Disabilities

- Genetic: *A Genetic Predisposition*
- Neurological
- Environmental: Economic disadvantage (health care, preschool education opportunities, etc.); print exposure, parental literacy, oral language usage in the home and community, “lap time” reading to the child
- Environmental: *Not receiving appropriate instruction*

What is Response to Intervention?

Response to intervention (RTI) is the degree to which a student who has been identified as at-risk for academic or behavior problems by screening measures has benefited from intervention designed to reduce risk.

Linan-Thompson, Vaughn, Prater, & Cirino, 2005

Identification of Specific Learning Disabilities: IDEA 2004

- “...a local education agency (school district) **shall not be required to take into consideration whether a child has a severe discrepancy** between achievement and intellectual ability...”
- LEA “... **may use a process that determines if the child responds to scientific, research-based intervention**” as a part of the required evaluation procedures

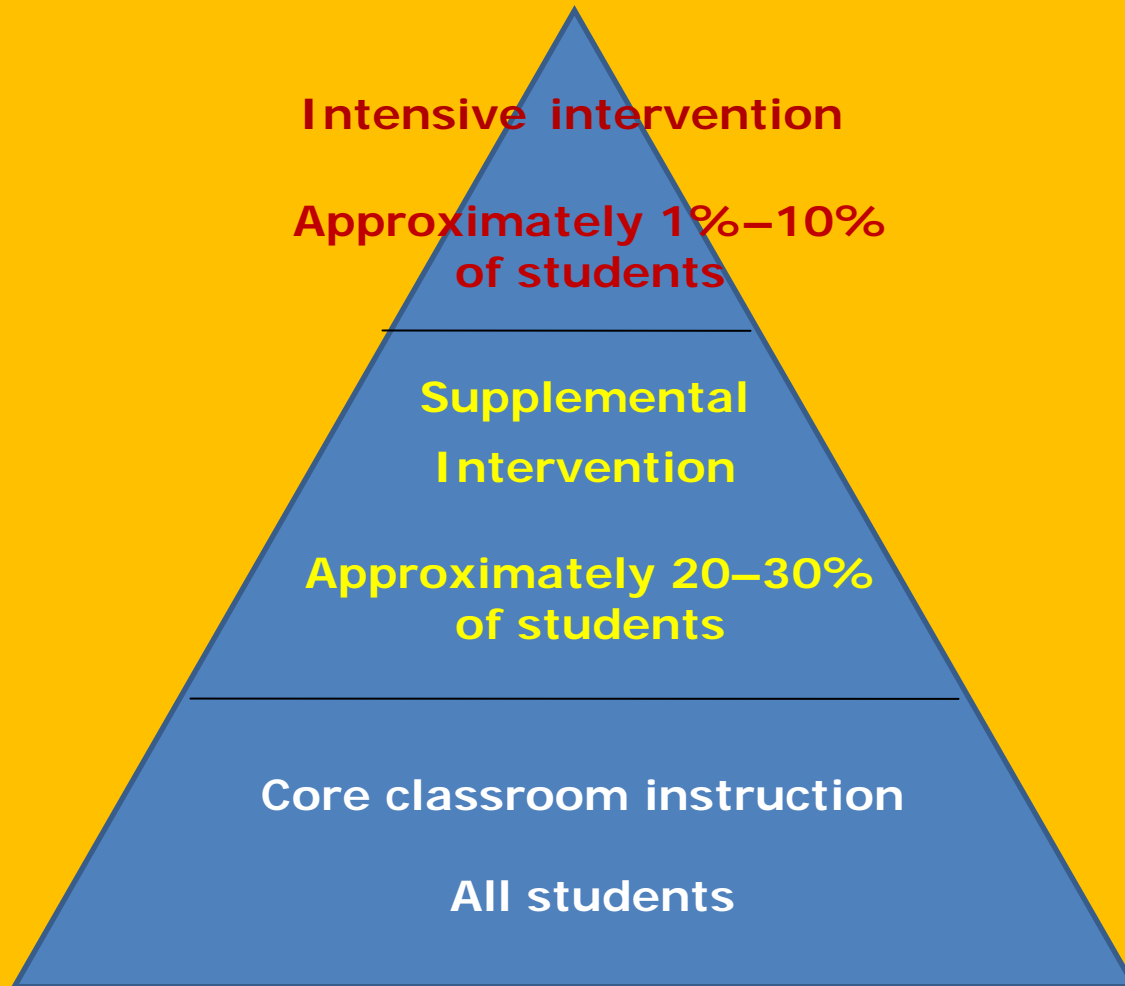
It is critical that educators view RTI as a school-wide, multi-tiered prevention/intervention approach that is **aimed at meeting the learning needs of ALL students**, not just as part of the identification process for students with learning disabilities as referenced in IDEA 2004.

CDE Exceptional Student Services Unit, 2006

Components of RTI

- **Assessing** students to determine risk
- Providing **quality, research-validated instruction and intervention**
- On-going **progress monitoring** to determine response

3-Tier Intervention Model

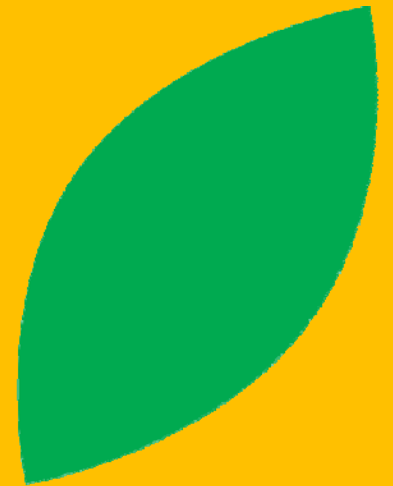


Response to Intervention (RTI)

- Even when Tier 1 instruction and Tier 2 intervention are of high quality, some students do not have adequate response
- In research projects, between $< 1\%$ and about 10% of students needed Tier 3 intervention
- This depends on the quality of Tier 1 and the quality, intensity, and availability of Tier 2

What Does **Intensive Reading Intervention** Look Like?

- **Small groups**
- **Increased dosage**
- **Appropriate curriculum**
- **Effective instruction**
- **Frequent monitoring**
- **A sense of urgency**
- **Collaboration among teachers**



The Possibilities: Tier 1 Intervention



Foorman et al., 1998

- Classroom reading instruction that includes explicit instruction in phonemic awareness and the alphabetic principle in a print-rich environment can help most at-risk readers achieve success
- 75% **of the lowest-performing 20%** of first graders met standards with *quality classroom instruction alone*

The Possibilities: Tier 2 Intervention



Mathes, Denton, Fletcher, Anthony, Francis, &
Schatschneider (2005).

*Reading Research Quarterly (40), 148-182.**

Research supported by Grant # NSF 9979968:
*Early Development of Reading Skills: A Cognitive
Neuroscience Approach* from the National
Institutes of Child Health and Human
Development, National Science Foundation, and
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*Awarded the 2006 Albert J. Harris Award by the International Reading Association for a recently published journal article or monograph that makes an outstanding contribution to our understanding of prevention or assessment of reading or learning disabilities.

Study of First Grade Reading Intervention

- Proactive Early Reading Instruction and Responsive Reading Instruction
- 40 minutes, 5 days per week, Oct.-April
- Groups of 3 or 4
- Taught by certified teachers
- Provided in addition to quality classroom instruction in a “pull-out” format
- 2 years, 6 schools

Student Selection and Assignment

- Screened all students at the end of K, and new students at the beginning of G1
- **All at-risk students randomly assigned (within each school) to:**
 - Quality Classroom + Proactive Reading (n*=80)
 - Quality Classroom + Responsive Reading (n*=83)
 - Quality Classroom/Typical School Practice (no researcher-provided intervention) (n*=92)
- Sample of normally developing students randomly selected from the same classrooms (n*=98)

* After attrition

Proactive Intervention

- Direct Instruction model
- Explicit instruction in phonemic awareness and synthetic phonics, with emphasis on fluency and comprehension strategies.
- Carefully constructed scope and sequence designed to prevent possible confusions
- Daily Lessons are highly prescriptive (scripted)
- Much practice of skills in isolation, followed by application in fully decodable text



Responsive Reading Instruction

- Integrated instruction in phonemic awareness, phonics, fluency, and comprehension
- Explicit, systematic phonemic awareness and phonics instruction
- Extended engaged practice in reading and writing
- Teachers plan lessons based on assessments
- Used leveled text (not decodable) in research
- “Sounding out” is the primary strategy for word identification



Three-Step Strategy for Reading Words



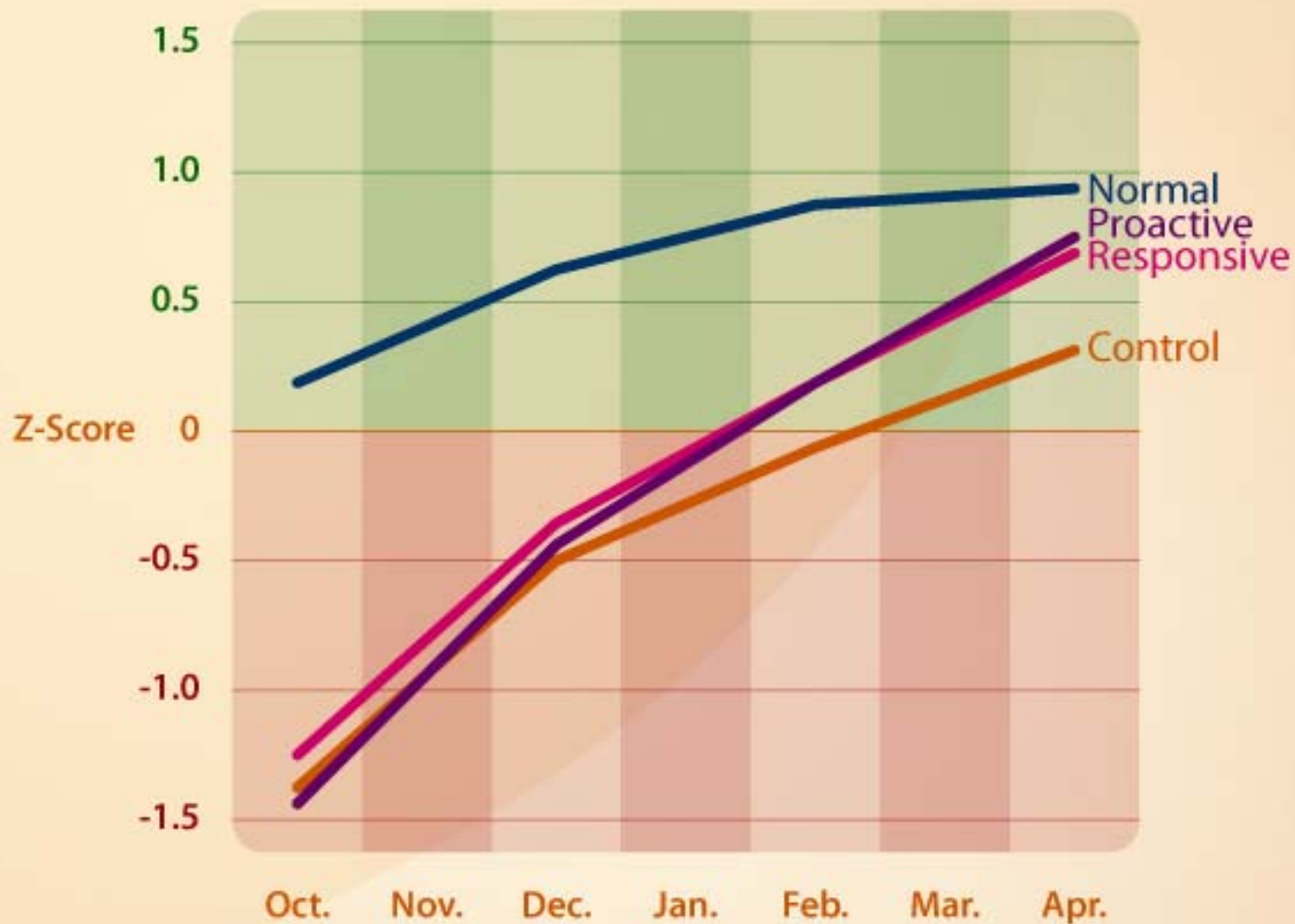
- Look for parts you know.
- Sound it out.
- Check it.

Discourage the habit of guessing words!

Research Results

- Students in both Proactive and Responsive groups performed significantly better than at-risk students in the same schools who did not receive the researcher-provided interventions in *phonological awareness, word reading (timed and untimed), spelling, and oral reading fluency*
- Proactive did better than Responsive in *Word Attack* (reading nonsense words)
- Responsive did better than comparison students in *comprehension* (but not statistically significant; $p = .06$)

Growth in Word Reading by Intervention Group



What percentage of children did not respond adequately to intervention?
(Woodcock Basic Reading < 30th percentile)

Quality Classroom (Tier 1 Only):

16% (3% of school 1st grade population)

Classroom + Supplemental Research Intervention:

- **Proactive: $1/80 = < 1\%$ (< .2% of school population)**
- **Responsive: $6/83 = 7\%$ (< 1.5% of school population)**

**Mathes, Denton, Fletcher, Anthony, Francis, &
Schatschneider (2005)**

Common to Both Interventions

- Integrated instruction in key areas of reading: phonemic awareness, phonics, fluency, comprehension
- Explicit instruction in PA and phonics
- Systematic instruction (purposeful planning, step-by-step, easy to hard)
- Intensive small-group instruction with active engagement and little “down time”
- Extended opportunities to practice with feedback
- Continuous progress monitoring and use of data to inform instruction

Study of Scaling Up Effective Reading Intervention

- Responsive Reading Instruction in 32 schools (urban, suburban, rural; high, medium, low-SES) from 16 districts, with 42 intervention teachers
- Students randomly assigned within school to RRI (n = 188) or typical practice (n = 242); 109 of typical practice students received alternate school-provided intervention
- Greatly reduced researcher control: provided training, some materials, and some coaching
- Schools selected teachers and were in charge of implementation
- Attendance and fidelity of implementation varied widely

Study of Scaling Up Effective Reading Intervention: Results

- RRI group had significantly better outcomes than Typical Practice group on
 - Word Reading (timed and untimed)
 - Phonemic Decoding (reading nonwords)
 - Spelling
 - Oral Reading Fluency
 - Reading Comprehension

The Possibilities: Tier 3 Intervention



Denton, Fletcher, Anthony, & Francis
(2006), *Journal of Learning Disabilities*

- Tier III intervention delivered to 27 students with severe reading difficulties
- Grades 1 (all repeating) – 3
- 16 weeks of intensive “Tier 3” intervention
- 5 days per week in groups of 2 students
- Taught by certified teachers or experienced reading clinicians
- 8 weeks of Phono-Graphix for 2 hours per day (decoding intervention) followed by 8 weeks of Read Naturally (fluency intervention) for 1 hour per day.

After 8 weeks of *Phonemic Awareness and Decoding Intervention*

- Significant growth in **decoding** (basic skills)
- Significant growth in **comprehension**
- Significant growth in **decoding speed**
- No significant growth in fluency of text reading

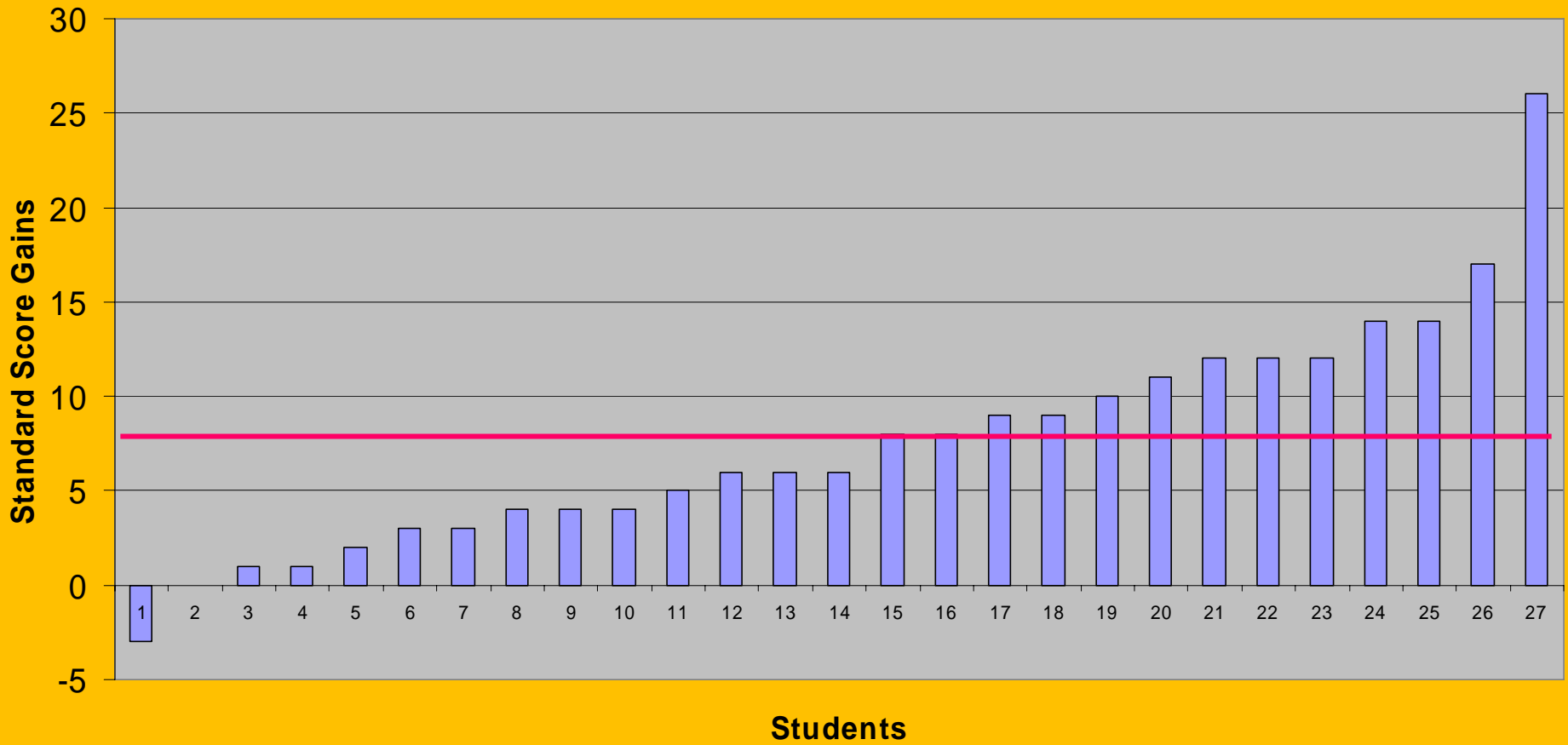
After 8 weeks of *Fluency Intervention*

- Significant growth in **word and text reading fluency**
- No significant growth in decoding
- No significant growth in comprehension

Individual Response to Intervention Varied

- **12 of the 27 students had a strong response** (gain of at least 8 standard score points over the 16-week period: progress toward “closing the gap”)
- Students who had previously received Tier I + Tier II were more likely to respond well to Tier III than students who had received only Tier I or no Tiered Intervention
- Younger students (repeating Grade 1; Grade 2) were more likely to respond well than those in Grade 3

Gains in Basic Skills Standard Score Points During 16-Week Intervention



What can we conclude about RTI from research?

- Many struggling readers respond well to quality classroom reading instruction (about 75%)
- Some students need supplemental small-group targeted intervention. Many students with a genetic pre-disposition to reading disability respond well to Tier 1 + Tier 2 intervention.
- *Instruction changes the way the brain functions.*
- Some students who do not respond adequately to Tier 2 need even more intensive intervention (Tier 3).
- Some students need this intensive Tier 3 instruction for a long period of time or need a different approach. These students may have learning disabilities.
 - IDEA 2004 states that documentation of inadequate response to quality intervention (RTI) may be considered as a factor in the identification of LDs.

Implementing a School-Wide RTI Approach in the “Real World”

There is never enough

TIME

There is never enough

MONEY

There are never enough

TRAINED PERSONNEL



IDEA 2004 and Early Intervening Services


- Up to 15% of LEA's new IDEA funds can be used for early intervening services
- K- 12 students (especially K-3)
 - Pre-evaluation / not yet identified as having disabilities
 - Who need extra academic or behavioral support
 - Allows for creative blending of funding (Title 1, IDEA, etc.)
- Does not create right to Free Appropriate Public Education & due process protections that accompany special education

Leadership in Effective Schools

- Provide *vision, guidance & support* to ensure that effective reading instruction and interventions designed to meet standards are implemented for *ALL* students
- **Prioritize reading instruction and intervention when making decisions related to budget, scheduling, and hiring**

Denton, Foorman, & Mathes (2003)

Essential Components of School-Wide RTI Reading Models

- **Small group instruction (Differentiated at Tier 1)**
 - **Increased dosage (at Tier 1 and intervention)**
 - **Appropriate research-validated curriculum**
 - **Effective instruction**
 - **Effective use of data from progress monitoring, screening, diagnostic, and outcome assessments**
 - **Sustained professional development**
 - **Time for collaboration among teachers**
 - **A sense of urgency**
- 
- A decorative graphic on the right side of the slide. It features a large green leaf shape pointing upwards and to the right, and a red circle at the bottom right corner.

Tier 2 & 3 Implementation: What Can We Learn from Research?

- **Intervention “dosage”:** How much time should students spend in intervention?
- **Group size:** What is the ideal group size for implementing intervention at Tiers 2 and 3?
- **Interventionists:** Who can provide intervention?
- **Professional development and coaching:** How can limited resources be maximized?

Time in Tier 2 Intervention: Vaughn & Linan-Thompson, 2003

- Provided intervention to 45 2nd grade struggling readers, outside of regular classroom, groups of 3, 30 min. daily
- Established criteria for exiting intervention
 - Fluency above 55 wcpm on a 2nd grade TORF passage
 - Fluency at least 50 wcpm on 2nd grade passages for 3 consecutive weeks
 - Passing the Texas Primary Reading Inventory 2nd grade screen
- Exited students who met criteria after 10, 20, and 30 weeks
- Examined continued growth without intervention (defined as gaining at least 1 wcpm per week after exit)

Time in Tier 2 Intervention (Grade 2)

Vaughn & Linan-Thompson, 2003

Assessment Points	% Meeting Exit Criteria	Baseline Mean ORF (sd)	Number Making Continued Growth After Exit
10 weeks	22%	32.5 (7.18)	<u>After 10 more weeks</u> : All 10 <u>After 20 weeks</u> : 7 of 10; 2 made minimal gains and 1 declined
20 weeks	31%	19.80 (9.99)	8 of 14; 2 made minimal gains and 3 declined
30 weeks	22%	13.40 (5.48)	
Never Met Criteria	24%	10.55 (4.76)	

Time in Tier 2 Intervention (Grade 1)

Denton & Mathes, 2003

- Provided intervention to 163 first graders at-risk for reading difficulties
- Intervention provided daily for 40 minutes over 30 weeks in groups of 3-4 students
- Monitored ORF every 3 weeks
- Did not exit students from intervention but analyzed the percentage of students that met benchmarks at different points

Time in Tier 2 Intervention (Grade 1)

Denton & Mathes, 2003

Percentage of Students Meeting Benchmark of 35 WCPM* at Each Assessment Point

Assessment Points	Proactive Intervention (n = 80)	Responsive Intervention (n = 83)
9 weeks	2 %	0 %
21 weeks	35 %	46 %
30 weeks	45 %	31 %
Never Met Criteria	18 %	23 %

*35 WCPM = 30th percentile for first grade, according to Good et al., 2002

Scheduling Supplemental Intervention

- The amount of flexibility needed is related to the severity of the need
- Beginning of the day
- Science/social studies
- “Specials”
- Extended day model
- After school?
- Summer school?
- Other ideas?

A Sense of Urgency

*“If (there is) a very at-risk child, ...we adjust the schedule of the child. If he needs extra help, that next day he will have a reading specialist work with him. If that’s not enough, then we have tutorials, and another teacher will work with him. We’ve built all of these safety nets to protect children who are at-risk. **A child who is very at-risk will have a schedule that is very different from other students.**”*

...A school principal in Denton, Foorman, & Mathes (2003)

Suggested Intervention “Dosage”

TIER	LENGTH	DURATION
1	60-90 minutes uninterrupted <i>instruction</i> every day	All school year
2	30-40 minutes 4-5 days per week (research in progress)	Probably at least 20 weeks; (research in progress)
3	50-60 minutes (or more?) every day	All school year, possibly over several years

Group Size

Tier 2 (based on direct research)

- 1:3 has comparable outcomes to 1:1 for most students
- 1:3 is better than 1:10
- Based on effective interventions: 1:3 to 1:5

Tier 3 (based on effective interventions in research)

- 1:2 or 1:1 (possibly 1:3)

Elbaum, Vaughn, Hughes & Moody, 2000;
Vaughn & Linan-Thompson, 2003

Who Can Provide Intervention?

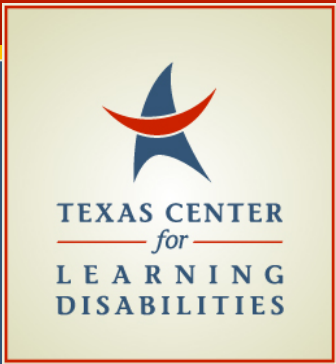
Tier 2

- Reading Specialists
- Paraprofessionals and other teachers, under certain conditions
- Classroom Teachers, under certain conditions
 - Consider scheduling and other demands
 - Cross-classroom collaboration?
 - Extended day or after school?

Tier 3: Highly qualified and well-trained teachers with coaching support

Paraprofessionals and Tutors

- Tier 2 intervention provided by non-certified paraprofessionals or tutors can result in improved outcomes for students (Denton, Anthony, & Hasbrouck, ; Elbaum, Vaughn, Hughes, & Moody, 2000; Grek, Mathes, & Torgesen, 2003).
- Important considerations
 - Carefully selected (must have adequate PA, be able to learn letter-sounds, etc.)
 - Well-trained
 - Supervised and coached closely *by a well-qualified teacher*
 - Implement a well-articulated program
 - Keep group sizes small (e.g., 3 students)
- Research in progress. See www.texasldcenter.org



Learning for SUCCESS
www.texasldcenter.org

Jack Fletcher and David Francis, University of
Houston

Sharon Vaughn, University of Texas at Austin
Carolyn Denton and Andrew Papanicolaou,
University of Texas Health Science Center
Houston

The Texas Center for
Learning Disabilities
(TCLD) investigates
the classification, early
intervention, and
remediation of learning
disabilities.

Funded by the National Institute of Child
Health and Human Development (NICHD).



Planning for Sustaining or Implementing School-Wide Intervention Have an Honest Discussion!

- What are our goals in reading? What do we want our school to “look like”?
- Are we happy with our current student outcomes?
- What do we want our students’ reading performance to be at the end of the current school year...at the end of 3-5 years?
- Do we have this goal for *all* students or *some* students?

Planning for Sustaining or Implementing School-Wide Intervention

- What are the key components we are already implementing effectively?
- Systematically examine **assessment, instruction, intervention, professional development and coaching support, collaboration, and the level of commitment of all parties.**
- How can we assure these components continue?
- What needs to change?

The Bottom Line

“I wish my teacher would help me learn to read. Sit down and read with me after school or during school...I’d learn to read then.”

...Middle School Student in
McCray, Vaughn, & Neal, 2001



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