Why RTI? Enhanced Outcomes for all Students

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Newly arrived at a school near you: IDEA 2004 is here

• 2004 House and Senate bills concurred in significant changes in approaches to LD identification
• No mandates
• Many misunderstandings

Overview of Research Findings Supporting the Need for RTI

1. Learning disabilities are common and real
2. Status models (e.g., IQ/Achievement discrepancy), lack reliability and validity; testing is not the answer
3. The neural systems are malleable
4. Instructional factors can cause disability
5. Special Education does not close the achievement gap; remediation is not a solution
6. Prevention and early intervention are effective
7. RTI makes the concept of LD valid

IDEA 2004 is Here

Four related changes
1. States cannot require districts to use IQ tests to identify students as LD
2. States are encouraged to implement Response to Intervention models as a component of LD identification
3. Students cannot be identified for special education without documentation that low achievement is not due to lack of appropriate instruction
4. Prevent disabilities whenever possible

Learning Disabilities are Common in Special Education

• Number of children identified as LD in special education has increased dramatically since 1975
• Represents about half of the 6.2M children identified for special education- 6% of all children in US schools
• Number of students is too large to implement intensive intervention

Why Care About Reading?

Special Education Commission: 2/5 children in special ed because they can’t read adequately: 80-90% of students with LD identified for reading disabilities.

Improve reading and all students benefit—reduces LD and reserves sp ed for students who are difficult to teach

Special Education can’t “fix” reading problems and schools won’t make AYP if the only intervention is to wait for special education services
LD is a Valid Classification

Learning disabilities are real! Stands up across definitional variation (doesn’t help identify individuals)

Children and adults with different forms of LD can be reliably and validly differentiated from each other, typical achievers, and other disabilities on cognitive correlates, response to intervention, and neural correlates

What happens when we apply these criteria to different classifications?

US Federal Regulatory Definition of LD (1977) is Not Aligned with Research

A severe discrepancy between achievement and intellectual ability in one or more of the areas: (1) oral expression; (2) listening comprehension; (3) written expression; (4) basic reading skill; (5) reading comprehension; (6) mathematics calculation; or (7) mathematic reasoning. The child may not be identified as having a specific learning disability if the discrepancy between ability and achievement is primarily the result of: (1) a visual, hearing, or motor handicap; (2) mental retardation; (3) emotional disturbance; or (4) environmental, cultural, or economic disadvantage (USOE, 1977).

IDEA 2004: RTI or Discrepancy?

• (2)(i) The child does not make sufficient progress to meet age or State-approved grade-level standards in one or more of the [8 domains of achievement] when using a process based on the child’s response to scientific, research-based intervention; or
• (ii) The child exhibits a pattern of strengths and weaknesses in performance, achievement, or both, relative to age, State-approved grade-level standards, or intellectual development, that is determined by the group to be relevant to the identification of a specific learning disability, using appropriate assessments, consistent with §§300.304 and 300.305;

What’s Wrong With IQ-Discrepancy?

• IQ- discrepant and non- discrepant low achievers do not differ significantly in behavior, achievement, cognitive skills, response to instruction, and neurobiological correlates once definitional variability accounted (Siegel, 1992; Stuebing et al., 2002)
• Status models cannot be reliable based on a single assessment (Francis et al., 2005)

Low Achievement Model

• Designate a cut point on the achievement dimension
• Strengths: Strong validity, linked to intervention, easy to implement
• Weaknesses: Cut point, does not measure the underlying construct (can’t differentiate subgroups of poor readers when the cause is known to be related to emotional difficulty, economic disadvantage, and inadequate instruction)
• Necessary but not sufficient: Status models based on a single assessment will never be reliable
There is no need to assess cognitive processes

- Processing subtypes weakly related to intervention outcomes; NO evidence that knowledge of cognitive strengths and weaknesses facilitates intervention
- No additional information not found in achievement profiles
- Cognitive deficits DO NOT reliably indicate biological causation
- Not sure of what cognitive processes to measure outside word recognition
- Perpetuates status model that has not been effective in enhancing outcomes

Neural Response to Intervention

Does the pattern of brain activation change in response to intervention?
8 children with severe dyslexia
8 week intense phonologically-based intervention (2 hours a day = up to 80 hours of instruction)
Simos et al., *Neurology*, 2002

Center for Clinical Neuroscience-Papanicolaou

Neural Signature of Reading Disability (Papanicolaou)

Intervention Normalizes Brain Function (Simos et al., 2002)

Quality instruction is Directly Linked to Reading Problems and Learning Disabilities

*Instructional factors are underestimated as a cause of LD (Fletcher et al., 2001)*

- Skills that prevent LD can be taught—they must be taught early in school
- Some children placed in special education may be instructional casualties because they did not get adequate instruction when it would be most effective

Research Bases
IDEA 2004: Inadequate instruction is an exclusion

To ensure that underachievement... is not due to lack of appropriate instruction in reading or math, the group must consider, as part of the evaluation described in §§300.304 through 300.306—

(1) Data that demonstrate that prior to, or as a part of, the referral process, the child was provided appropriate instruction in regular education settings, delivered by qualified personnel; and

(2) Data-based documentation of repeated assessments of achievement at reasonable intervals, reflecting formal assessment of student progress during instruction, which was provided to the child’s parents.

A new IDEA?

Traditional Definition of Dyslexia

A disorder manifested by difficulties in learning to read despite conventional instruction, adequate intelligence, and socio-economic opportunity. It is dependent upon fundamental cognitive disabilities which are frequently of constitutional origin.

Critchley, 1970, p.11

IDA DEFINITION OF DYSLEXIA

Dyslexia is a specific learning disability that is neurological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede the growth of vocabulary and background knowledge.

Adopted by the Board of Directors: November 12, 2002

Special Education Cannot Close the Gap

Identification based on failure-underlying model (IQ discrepancy) has no scientific basis

- System oriented to procedural compliance, not services and outcomes
- Wait to Fail model that sometimes stabilizes but rarely remediates
- Remediation is not a solution to acceleration

More Bad News

- Resource rooms: Bentum & Aaron (1997): 4 years in resource room placement associated with no growth in reading and decline in IQ; Foorman et al. (1997): no acceleration relative to original status even with reading support
- Inclusion: Vaughn and colleagues: 70% of students with LD show no growth in reading in supported inclusion classrooms (similar findings by Zigmond)
- Where’s the intensity and differentiation?
### Remediation is an incomplete solution!

Reading rate is limited because the proportion of words in grade level passages that children can read “by sight” is less than for average readers (Torgesen et al., 2001).

Fluency depends on practice (repeated exposure to letter patterns).

How do you close the gap when the student is already 3-5 years behind?

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### Early Intervention is Possible

- Risk characteristics present in Kindergarten and G1
- Letter sound knowledge, phonological awareness, oral language development
- Assess all children and INTERVENE-first in the classroom and then through supplemental instruction

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### Early Intervention is Effective (Fletcher et al., 2007)

- Prevention studies in reading (and behavior) commonly show that 70-90% of at risk children (bottom 20%) in K-2 can learn to read in average range

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### Differences in Outcomes for Basic Reading Skills and Rate in Prevention vs. Remediation Studies
### New Alternatives: Response to Instruction (Intervention)

- Universal screening and serial curriculum-based assessments of learning in relation to instruction
- Identification is more reliable than when based on a single assessment
- As one criterion, student may be LD if they do not respond to instruction that works with most students (i.e., unexpected underachievement)
- May identify a unique subgroup of underachievers that reflects an underlying classification that can be validated (Al- Otaiba & Fuchs, 2002; Vellutino et al., 2003)
- Implemented with a multi-tiered intervention model that integrates general and special ed
- School-wide change - not just enhanced pre-referral services

### Linking Prevention and Remediation: A 3-Tier Model

#### Tier 1: Primary Intervention
Enhanced general education classroom instruction for all students.

#### Tier 2: Secondary Intervention
More intense intervention in general education, usually in small groups.

#### Tier 3: Tertiary Intervention
Intervention increases in intensity and duration. Child could be considered for special education

http://www.texasreading.org/3tier/

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### Primary: Core Reading Instruction (Sharon Vaughn)

<table>
<thead>
<tr>
<th>Focus</th>
<th>For all students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program</td>
<td>Scientific-based reading instruction and curriculum emphasizing the five critical elements of beginning reading</td>
</tr>
<tr>
<td>Grouping</td>
<td>Flexible grouping</td>
</tr>
<tr>
<td>Time</td>
<td>90 minutes or more per day</td>
</tr>
<tr>
<td>Assessment</td>
<td>Screening assessment at beginning, middle, and end of the academic year</td>
</tr>
<tr>
<td>Interventionist</td>
<td>General education teacher</td>
</tr>
<tr>
<td>Setting</td>
<td>General education classroom</td>
</tr>
</tbody>
</table>

### Secondary: Intervention (Sharon Vaughn)

<table>
<thead>
<tr>
<th>Focus</th>
<th>For students identified as at-risk for reading difficulties, and who have not responded to Primary intervention efforts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program</td>
<td>Specialized, research-based interventions</td>
</tr>
<tr>
<td>Grouping</td>
<td>Homogeneous small group or one-on-one instruction</td>
</tr>
<tr>
<td>Time</td>
<td>20-40 minutes per day in addition to 90 minutes of core reading instruction</td>
</tr>
<tr>
<td>Assessment</td>
<td>Progress monitoring twice a month on target skill(s)</td>
</tr>
<tr>
<td>Interventionist</td>
<td>Personnel determined by the school (e.g., classroom teacher, a specialized reading teacher, an external interventionist)</td>
</tr>
<tr>
<td>Setting</td>
<td>Appropriate setting designated by the school</td>
</tr>
</tbody>
</table>

### Tertiary: Intensive Intervention (Sharon Vaughn)

<table>
<thead>
<tr>
<th>Focus</th>
<th>For students with marked difficulties in reading or reading disabilities and who have not responded adequately to Primary and Secondary efforts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program</td>
<td>Sustained, intensive, scientifically based reading program(s)</td>
</tr>
<tr>
<td>Grouping</td>
<td>Homogeneous small group or one-on-one instruction</td>
</tr>
<tr>
<td>Time</td>
<td>45 minutes or longer sessions per day tailored to students’ individual needs</td>
</tr>
<tr>
<td>Assessment</td>
<td>Progress monitoring twice a month on target skill to ensure adequate progress and learning</td>
</tr>
<tr>
<td>Interventionist</td>
<td>Personnel determined by the school (e.g., a classroom teacher, a specialized reading teacher, an external interventionist)</td>
</tr>
<tr>
<td>Setting</td>
<td>Appropriate setting designated by the school</td>
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</tbody>
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### REFERRAL SCRENNING NEW MODEL

- ELIGIBILITY TESTING
  - Not Eligible
  - Eligible

- TREATMENT 1-3
  - Responders
  - Non-Responders

- ELIGIBILITY TESTING
  - Not Eligible
  - Eligible

- TREATMENT 4-6
  - Responders
  - Non-Responders
Decisions

- How to screen and monitor progress?
- Criteria for inadequate response
- How to target professional development?
- Instructional strategies at each tier
- Standard protocol vs. problem solving model
- How many tiers?
- Role of special education and assessment professionals
- What constitutes the comprehensive evaluation?

How to start: universal screening, progress monitoring, PD for enhanced classroom instruction, supplemental intervention, intense intervention- seed elementary schools in K-2 and grow

We Have the Tools!

There is a wealth of evidence-based programs and strategies for students with LD and those poorly prepared for academic learning (Swanson et al., Handbook of LD, Guilford, 2003; Fletcher et al., Guilford, 2007)

We don’t apply them in schools!

Who is LD?

- The student who does not respond to quality instruction: hard to teach, not unable to learn
- Discrepancy relative to the expectation that ALL children can learn
- Requires closer integration of general education and special education
- One system, not two- all students are general education students first!

Process becomes less important if there is accountability for results: Prevent disabilities through effective instruction

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