

Two Perspectives on RTI: Implications for Instruction

Response to Intervention and Reading
First Connections Conference

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*This presentation may be requested
from Flora Murray (see below)

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Two Perspectives on RTI: Overview

- IDEA and NCLB perspectives and implications for instruction
- IDEA view: Evidence-based, standardized, top-down, and time-sensitive
- NCLB view: Bottom-up, problem-solving, and recursive as necessary
- Which perspective bodes better for most difficult-to-teach students?

Touchstone of the IDEA View

- “In determining whether a child has a specific learning disability, a local ed agency may use a process that determines if [he or she] responds to scientific, research-based intervention as part of the evaluation process” (P.L. 108-446(b) (6) (A and B).

IDEA View of RTI’s Purpose

- RTI should promote both early intervention and more valid methods of disability identification. These two aims are inextricably connected.

IDEA View of GE Instruction

- Evidence-based, explicit, and top-down.
- Primary prevention: “research principled” core curricula and evidence-based class-wide instructional programs (e.g., DI, PALS, CIRC).
- Secondary prevention: Small-group tutoring with standard instructional protocols.

IDEA View of Secondary Prevention: Instruction is the “Test”

- Secondary prevention (like primary prevention) should accelerate the progress of at-risk students as well as identify candidates for multi-disciplinary team evaluation for special education.
- Like all tests, the tutoring protocol should be standard, replicable, implemented with fidelity, and time sensitive.

Standard Protocols: Advantages, Disadvantages, Limitations

- Advantages: Research-based (Gersten et al.'s review); relatively easy to take to scale.
- Disadvantages: A limited number of standard protocols; may insult teachers' and specialists' sense of professionalism.
- Limitations: 2% to 6% do not respond in researcher-conducted studies.

NCLB View: Standards-Driven Instruction

- Uniformly challenging standards for all.
- Assessments are aligned with the standards.
- Virtually all (incl most SWD) participate in the assessments.
- Student performance is the basis of accountability.
- Standards will close the achievement gap and eliminate nearly all high-incidence SWD.

NCLB View: Early Intervention and the Unification of GE and SE

- NADSE, CASE, NASP, etc. see RTI as an operationalization of standards-driven education to close the achievement gap involving disenfranchised groups.
- RTI signifies a reformed GE: early intervention, the unification of GE and SE (i.e., “blurring” of SE in GE) that will promote accountability for all.

“Problem Solving” is to Standard Protocols as NCLB is to IDEA

- Problem solving is the engine of instruction at the various tiers, like standard protocols are the engine in the IDEA view.
- Multiple meanings of problem solving in:
 - Differentiated instruction (tier 1)
 - Team collaboration (e.g. Teacher Assistance Teams, Instructional Support Teams)
 - Behavioral Consultation

Different Meanings = Confusion

- “Problem solving” signifies different processes, skill sets, and research results, depending on whether it refers to experimental teaching, differentiated instruction, building-based teams, or expert consultation
- Nevertheless, for most, problem solving signifies “Behavioral Consultation.”

Behavioral Consultation as Defined in the Professional Literature

- BC promotes individualized intervention for at-risk children through teacher-consultant.
- BC is indirect, mediated by teacher or parent, and it is iterative:
 - Problem Identification
 - – Problem Analysis and Intervention Design
 - Implementation
 - Evaluation

What's Standard and What's Not in Behavioral Consultation

- Whereas Behavioral Consultation's 4 stages are "standard," its treatments are not. It may even be seen as "anti-standard," which is a strength and weakness.

Multi-Level Problem Solving and RTI

- Level 1: Teacher–parent
- Level 2: Teacher–teacher
- Level 3: Expert consultant–teacher (pre-referral intervention)
- Level 4: Special education eligibility
- Behavioral Consultation occurs on each of the 4 levels.

Problem Solving: How Effective?

- Differentiated Instruction
- Building-based teams
- Behavioral Consultation
 - Little evidence it results in the use of research-validated instruction.
 - Or leads to accurate implementation of research-validated instruction.
 - Or that it promotes academic achievement.

How Effective Is the Standard Treatment Protocol Model?

- Strong evidence for the selection of research-validated instruction
- Strong evidence of fidelity of treatment implementation
- Strong evidence for strengthening at-risk students' academic achievement

**Why are the Public Schools More
Likely to Scale Up the Standard
Treatment Protocol Model than
the Problem Solving Model?**

**The Prevention and Identification
of Reading Disability**

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Purposes

1. **Examine the efficacy of 1st-grade secondary tutoring in reading**
2. Assess RD prevalence and severity, with and without secondary tutoring and as a function of identification method
3. Explore pretreatment cognitive abilities associated with reading development

Districts, Schools, and Teachers

- 2 school districts in Tennessee (urban Metro-Nashville and suburban Williamson County)
- 8 Title 1 and 8 non-Title 1 elementary schools
- 42 first-grade teachers assigned randomly within schools to PALS ($n = 21$) and No-PALS ($n = 21$); in this presentation, we collapse PALS and No-PALS classes into Tier 1 instruction

Identifying “At-Risk” Students

- In the 42 classes, all students screened on:
 - RLN (CTOPP)
 - CBM Word Identification Fluency
 - Teacher judgment
- The 6 lowest students per class on one or both measures, also judged as such by the teacher, were designated “low study entry.”

Study Conditions

- In each class, the 6 “low study entry” were rank ordered and split into top and bottom strata.
- Within each stratum, children were randomly assigned to:
 - *Fall Secondary Tutoring* ($n = 84$)
 - *Spring Secondary Tutoring* ($n = 84$) -- if unresponsive to general education
 - *Control* ($n = 84$).
- In this presentation, we focus on Spring Tutoring and Control conditions (not the Fall Tutoring condition).

Study Conditions (Cont'd)

- We collected weekly WIF data: 9 waves in the fall and 9 waves in the spring.
- We identified the subset of students who were unresponsive to Tier 1 general education, using “dual discrepancy” on fall WIF slope and level.
 - Tier 1-unresponsive students to fall general education instruction:
 - Spring Tutoring: $n = 40$
 - Control: $n = 24$

Study Conditions (Cont'd)

- We administered a battery of standardized reading tests at fall, mid-year, end of grade 1, end of grade 2.
- Unresponsive students comparable by condition on:
 - IQ
 - Vocabulary
 - CTOPP Rapid Digit Naming, Elision, Memory for Digits
 - WRMT WID and WA
 - TOWRE Sight Word and Phonemic Decoding
 - Teacher Ratings of Effort and Distractibility
- They were:
 - $\sim 2/3 SD < \text{mean}$ on WIF local norms
 - $\sim 2/3 SD < \text{national norms}$ on IQ, Vocabulary, Phonological Processing
 - $1/3$ to $2/3 SD < \text{national norms}$ on reading measures
 - Teachers' mean effort rating $\sim 60\%$
 - Teachers' mean distractibility rating between “sometimes” and “very often”

Secondary Tutoring

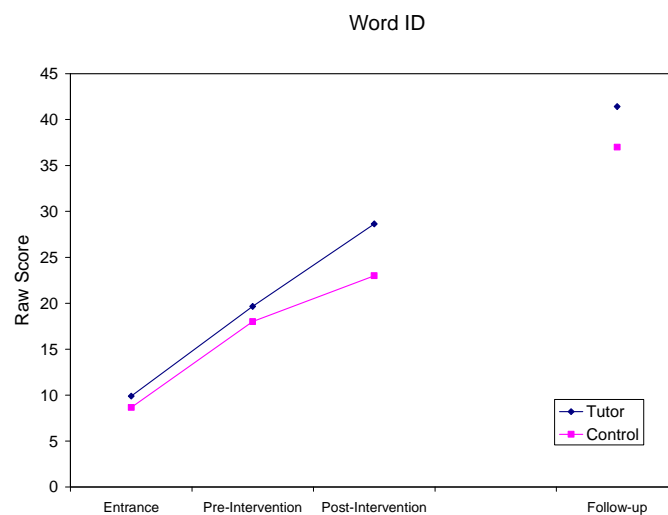
- Groups of 2-4 students
- Validated treatment protocol
 - Letter-sound correspondence, decoding words, sight word recognition, fluency-building, and partner reading, with point system for motivation
 - 9 wks, 4x per wk, 35-45 min per session
- Fidelity
 - All sessions audiotaped
 - Tapes of sessions #14 and #28 checked for all tutors against a 79-item checklist
 - Inter-rater agreement on coding of tapes was 96% across sessions and tutors
 - > 95% tutor fidelity across sessions and tutors

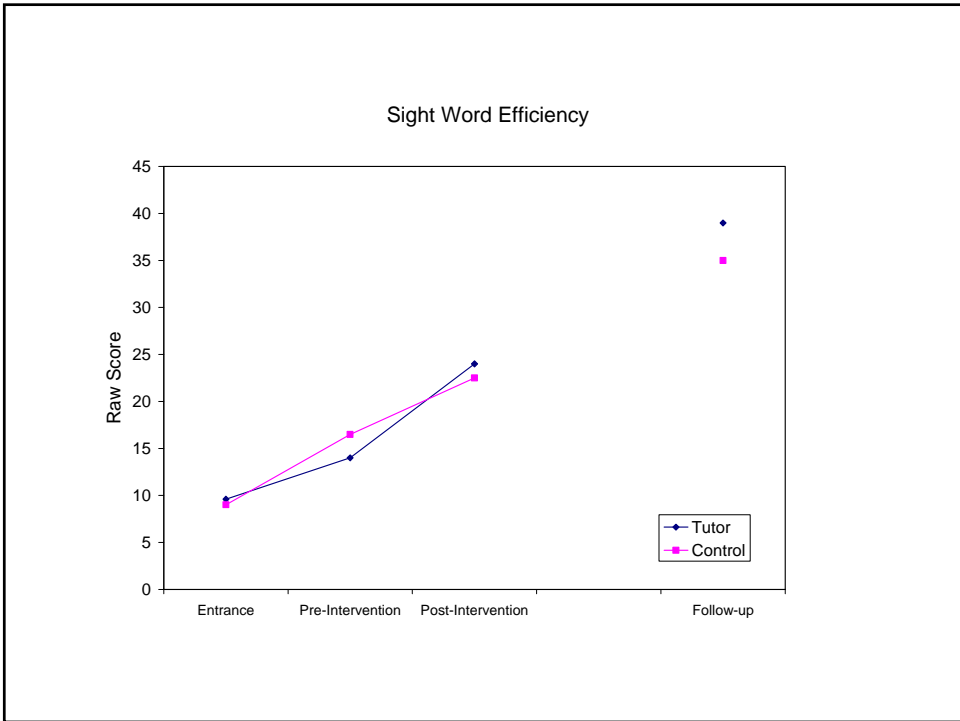
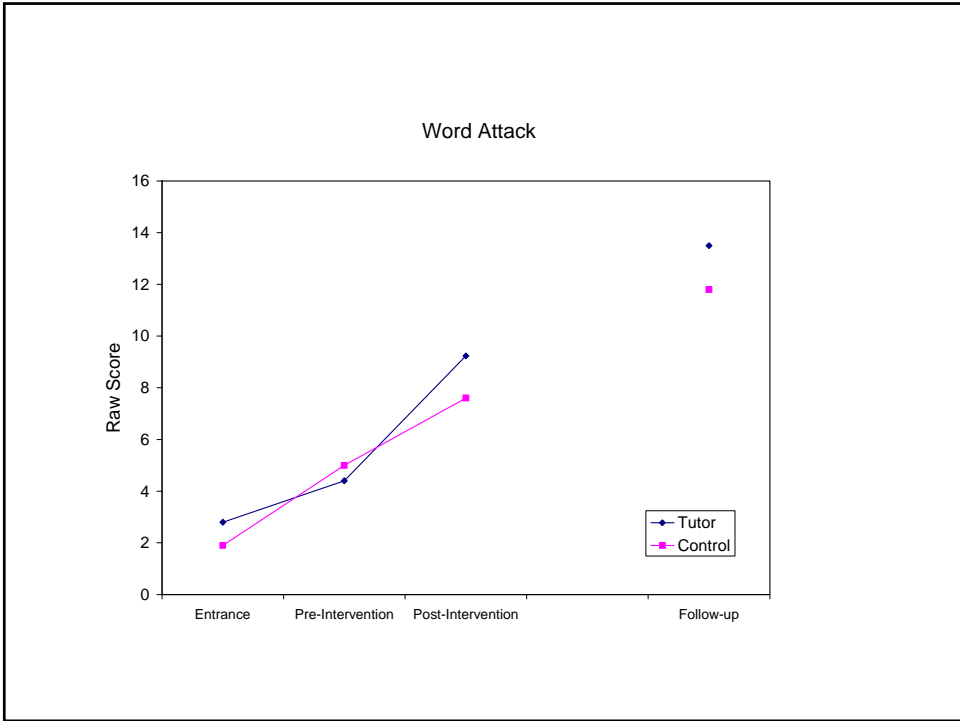
Secondary Tutoring Efficacy Progress Monitoring Data

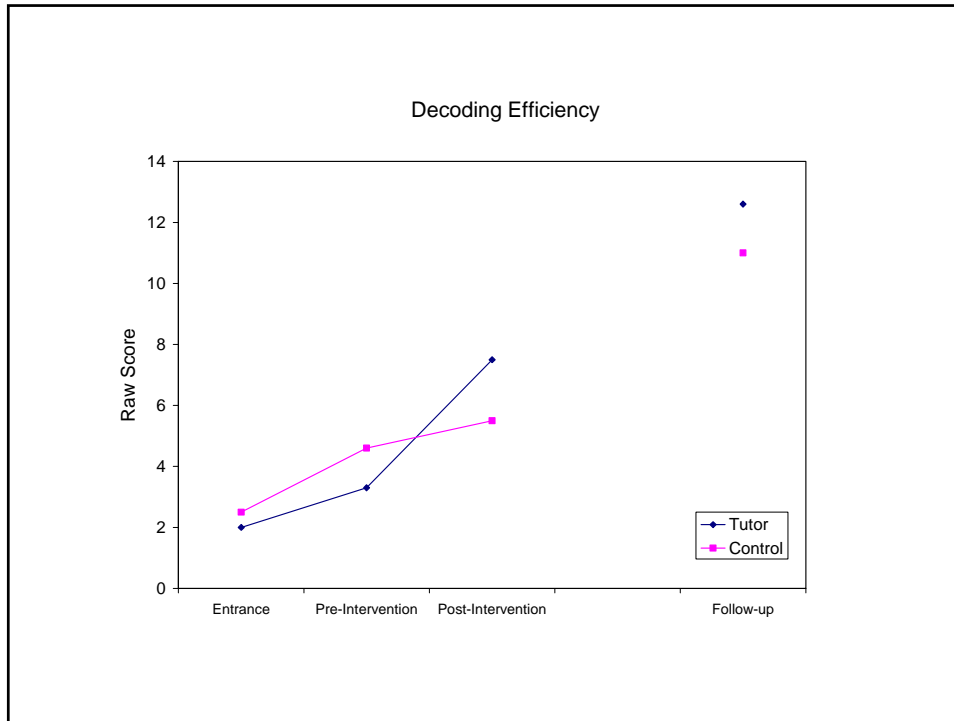
- Spring Tutored and Control exhibited similar growth from fall to mid-year, prior to tutoring (slope 1).
- Spring Tutored group showed greater growth than control from mid-year to end-year, during tutoring (slope 2).

Secondary Tutoring Efficacy: Standardized Reading Measures

- For 3 or 4 measures (all but Sight Word Efficiency):
interaction between condition and time, whereby
 - Contrast from pretest to mid-year was comparable for Spring Tutored and Control
 - Contrast from mid-year to posttest was significant, with Spring Tutored outperforming Control.
- Effects maintained at end of grade 2.







Secondary Tutoring Efficacy

*Did tutoring decrease RD prevalence
at end of 1st grade?*

Defining RD = 1st-grade WID slope < .75 SD
below normative mean slope

Yes: RD rates significantly lower in Spring
Tutored (43.5%) than Control (81.8%)

IDEA and NCLB Frameworks Do Not Provide for Intensive Instruction

- IDEA: Relies on the traditional continuum of SE placements and services
- NCLB: SE is blurred in GE and places too much confidence in problem solving
- Behavioral Consultation by defn is a “compromised approach” to instruction.

Experimental Teaching

For Additional Information

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This Presentation

- Responsiveness-to-Intervention (RTI)
- Curriculum-Based Measurement (CBM), the Scientifically Validated Approach to Progress Monitoring
- Using CBM within RTI
 - Identify risk for poor learning outcomes
 - **Determine responsiveness to intervention**
 - Enhance student outcomes

CBM in RTI: Determining Responsiveness to The Standard Tutoring Protocol in Secondary Prevention

- CBM is administered weekly throughout tutoring.
- If CBM slope or projected year-end performance is adequate, student returns to primary prevention (but weekly CBM continues).
- If slope and year-end performance are both inadequate, then student moves to tertiary (individualized) prevention.

Secondary Prevention: Determining Responsiveness to The Standard Tutoring Protocol in Secondary Prevention

Grade	CBM Probe	< Slope	< End level
Kindergarten	Letter Sound Fluency	< 1	< 30
Grade 1	Word Identification Fluency	< 1.8	< 30
Grade 2	Passage Reading Fluency	< 1	< 60
Grade 3	Passage Reading Fluency	< 0.75	< 70
Grade 4	Maze Fluency	< 0.25	< 25
Grade 5	Maze Fluency	< 0.25	< 25
Grade 6	Maze Fluency	< 0.25	< 25

Note: These figures may change pending additional RTI research.

This Presentation

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CBM To Design Individualized Programs in Tertiary Prevention

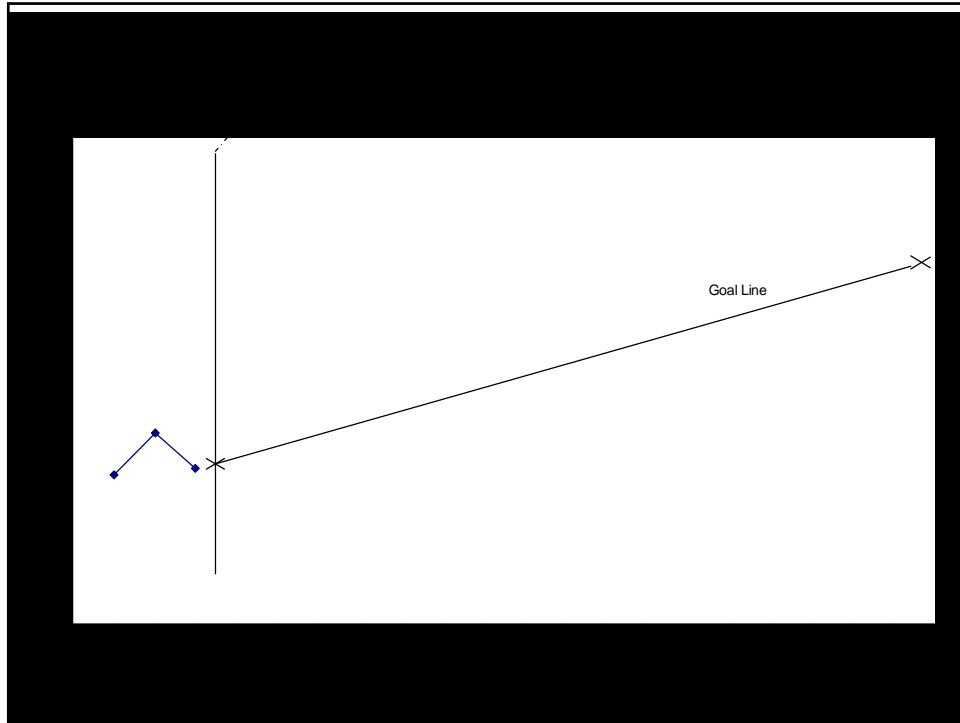
- Begin tertiary prevention with a validated tutoring protocol, but implement more frequently, and/or with longer sessions, with smaller group size.
- Collect CBM weekly to systematically experiment with instructional components. In this way, individually tailor the tutoring protocol to match the student's needs and ensure its effectiveness for that student.

Sam's Case Study

- Sam developed sizeable reading deficits by the end of 2nd grade, despite strong primary and secondary prevention.
- In 3rd grade, Sam entered tertiary prevention. In Sam's school, tertiary prevention was delivered as part of special education.
- Given Sam's large reading deficits, his teacher, Mrs. Hayes, set his IEP goal as competent 2nd-grade performance at the end of 3rd grade.

Sam's Case Study

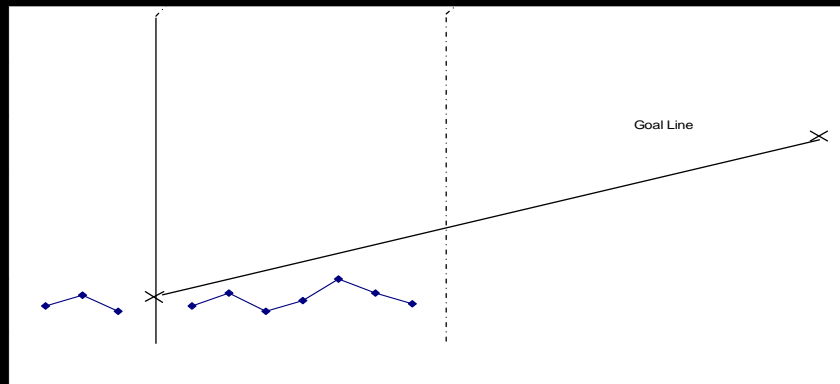
- She began with the Wilson program, but conducted sessions more intensively (twice daily, each time for 30 minutes, on a 1:1 basis).
- She also implemented CBM. Each weekly test systematically assessed overall competence in the 2nd-grade reading curriculum using passage reading fluency.
- The score on each week's CBM test is an overall indicator of reading competence at 2nd grade.



After Seven Weeks with Intensified Wilson Program,

- Mrs. Hayes studied Sam's progress.
- On his graph, Sam's scores were all below his goal line. Research tells us that with this pattern, Sam is not likely to achieve the year-end goal.
- So Mrs. Hayes needed to revise Sam's instructional program to foster greater progress.

Sam: Time to Make A Change



Sam

- To determine the nature of the instructional change she would implement for Sam, Mrs. Hayes conducted a Quick Miscue Analysis during Sam's next CBM testing.
- The Quick Miscue Analysis is one strategy for conducting a diagnostic analysis of Sam's reading strategies and gaining insight into productive directions for supplementing the Wilson program and for building Sam's individualized program.

Larry ^{saw} was ^{him/ (T provided)} very excited! His father	6
had ^{our} just ^b brought home a new puppy. Larry's	14
^{mother} brother and sister ^{was} were going to be ^{much} very	22
^{sorpray} surprised , too.	24
The little ^{pup} puppy was ^{blue} black and brown	31
with a ^{for} few white patches. ^{much} Her ^{His} ears ^{hair} were long	40
and ^{funny} floppy . ^{teeth} Her ^{were} tummy ^{torn} nearly touched the	47
^{growl} ground . ^{our} Dad ^{puppy} said ^{boy} this dog was a beagle. //	55
Larry thought their new dog was cute.	62
He couldn't decide what he wanted to name	70

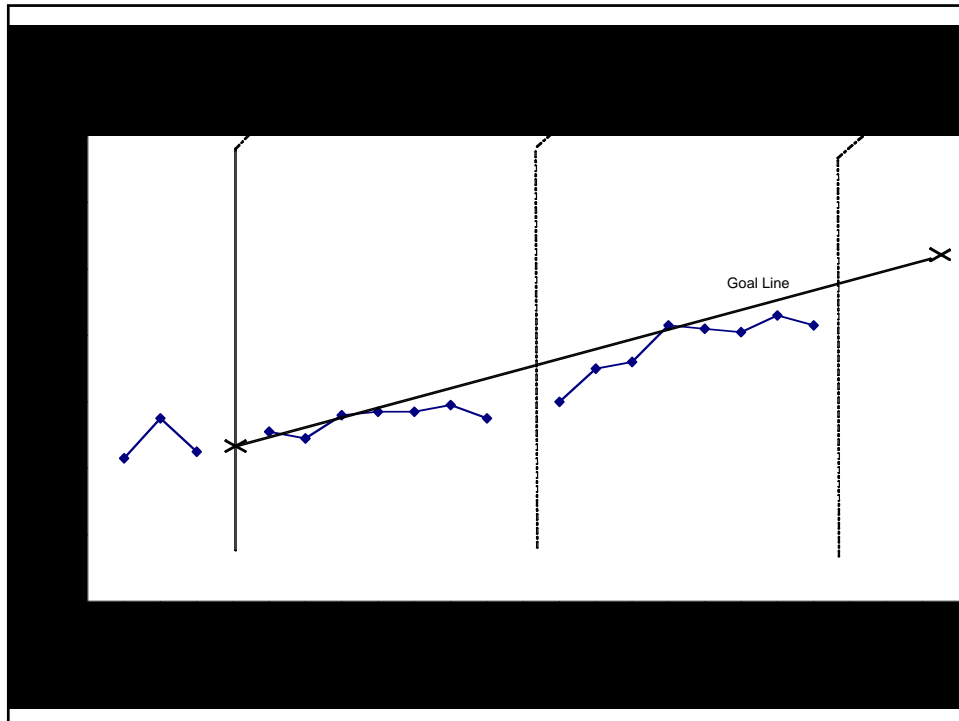
Word Written	Word Spoken	Grapho-phonemic	Syntax	Semantics
was	saw	no	yes	no
very	him	no	no	no
excited	-----	no	no	no
just	our	no	no	no
brought	b	minimal	no	no
brother	mother	yes	yes	no
were	was	minimal	yes	yes
very	much	no	yes	yes
surprised	sorpray	yes	no	no
puppy	pup	yes	yes	yes
Quick Miscue Analysis		30%	50%	30%

Sam's Instructional Change

- Given Sam's inadequate reliance on the semantics of the passage, Mrs. Hayes decided to introduce a tape recorder activity, whereby Sam monitored semantic miscues in his own reading.
- Given Sam's poor use of grapho-phonemic strategies, Mrs. Hayes also conducted a diagnostic assessment of Sam's decoding skills. She learned that Sam had difficulty with vowel teams and decided to target vowel teams for intensive review in and out of contextualized reading.
- These changes were incorporated into the Wilson program.

After Seven Weeks with This Revised Wilson Program,

- Mrs. Hayes again studied Sam's progress.
- She drew a line of best fit through Sam's CBM scores to characterize his rate of progress. His rate of progress had improved substantially with this revised Orton program.
- However, Sam's most recent 4 CBM all scores fell below his goal line. Research tells us that with this pattern, Sam is not likely to achieve his year-end goal.



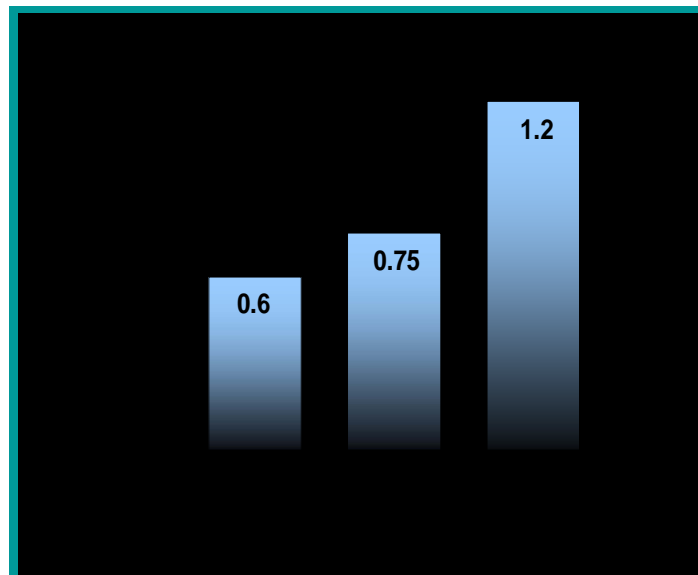
Sam's Next Instructional Change

- So, Mrs. Hayes knew that she needed to make another instructional change.
- She decided to introduce a systematic reinforcement program to reward on-task behavior and hard, accurate work during the tutoring sessions.

In This Way ...,

- Mrs. Hayes continues this iterative process over time, using the data to formatively design an individualized program that works for Sam.
- Field-based randomized control trials show that when teachers use CBM in this way, they plan more differentiated instruction, and they effect better student outcomes.

Effect Sizes for CBM



In Sum ...,

- RTI is a promising framework for preventing the serious negative consequences associated with exiting school without the skills need to succeed in life.
- CBM is a critical component of the RTI system.
- Within RTI, CBM is used to
 - Identify risk for poor learning outcomes
 - Determine responsiveness to intervention
 - Enhance student outcomes.
- CBM is a signature practice for individualizing instruction for students who do not respond to the validated, standard tutoring protocols used in secondary prevention.