Child Outcomes and RTI in the Future of School Psychology

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What To Do With Egbert??

- 1st Grade, falling behind in reading
- Slow progress compared to peers
- Likely to miss benchmarks related to passing 3rd Grade reading test
- Distractible, inattentive, disruptive
- What next??????

Sound Familiar

Progression of Federal Education Legislation

1960s Assistance — 2000s Results

[ESEA | EHA | Goals 2000 | NCLB / IDEA Rdg 1st]

Process — **Products**

Number Served — **Goals Attained**

Changes Everything

Child Outcomes

Overview

- Focus of assessment, classification and intervention?
  - Child outcomes
  - Reject claims not supported by data
  - Rigorous experimental or quasi-experimental designs
- Scientifically-based interventions
  - Work for groups
  - Need to be tested at individual level
  - Necessity of problem solving

“Value?” of Traditional Clinical Practice

- Focus on internal child deficits based on hypothetical constructs
- Assessment outside of natural settings
- “Insight” impossible to verify
- High level of inference
- Assumptions of instructional or treatment implications without data
- Enormous vested interests

Scientifically-based Interventions

- Strong internal validity, did the intervention actually make a difference
- Rigorous experimental designs
- Random assignment
- Subjects described in detail
- Contrasting intervention conditions

High Stakes

- A. Kaufman on IDEA changes
  - "With the certain disappearance of the ability-achievement discrepancy for the determination of learning disabilities, along with other substantial changes in definitions and procedures, the fate of the traditional IQ test and the newer breed of theory-based cognitive measures---as well as the nature of clinical practice in general---hangs in the balance."

Egbert in the Traditional System

- Refer Egbert
  - Preferral "intervention" (check a box)
  - Comprehensive Evaluation-Battery of Tests, "common battery"?
  - Assessment largely outside of the natural context
  - Dubious generalizations from test behavior to classroom
  - Eligibility assessment unrelated to intervention
  - Wait to Fail

Traditional View of Assessment

1. "The core procedure of a comprehensive evaluation of LD is an objective, norm-referenced assessment of the presence and severity of any strengths and weaknesses among the cognitive processes related to learning in an academic area."

2. WE DISAGREE!

RTI Comprehensive Evaluation Core

- RTI Core is the analysis of achievement and behavior, using direct measures in natural settings,
  - Precise analysis and measurement of skills levels
  - Precise analysis of alterable conditions
  - Application of powerful instructional design and behavior change methods
  - Assessment of rate of learning, progress monitoring with formative evaluation
  - Decisions based on intervention outcomes

Are the High Incidence Categories Meaningful?

- MR: 0.4% (NJ) to 3.0% (WV) 7Xs
- ED: 0.1% (AR) to 2.0% (MN) 20Xs
- LD: 2.7% (KY) to 9.3% (RI) 3Xs
- Sp/L: 0.8% (HI) to 3.8% (WV) 5Xs
- OHI: 0.1% (MS) to 2.1% (RI) 21Xs
- All: 9.7% (CO) to 17.9% (RI) 1.8Xs
  - What Accounts for the Differences??; Also differences between LEAs within states
  - 2002-2003, age 6-17, school enrollment, Table AA-13, www.IDEAdata.org

Finding the right kids?

- Finding the "right" kids is easy!!
- Doing something about achievement and behavioral trajectories is complex
- Focus on outcomes
- Verifying teacher judgments is trivial
- Find the same kids. Difference???
  - Prevention
  - Early identification-treatment
  - Integration of identification and treatment

MSP: Sample of RTI Students (N=106) (24% not eligible)

	Col 1 LD	Col 2 RTI	Col 3 LD	Col 4 MR	Col 5 ???	Col 6
	IQ-Ach Discrep. Ach > 6%	**PS & Low Ach. ≤ 6th %**	**IQ-Ach Discrp: Ach ≤ 6th %**	**IQ ≤74, Ach ≤ 6 AB deficits**	**Met no IQ or Ach.Cri-teria**	**Total**
Af	3 4%	18 23%	33 42%	23 29%	2 3%	79
Wh	4 15%	4 15%	11 41%	6 22%	2 7%	27

MSP: Sample of Traditional System Students (N=56) (20% not eligible)

	Col 1 LD	Col 2 MR	Col 3 ??	Col 4 LD	Col 5 MR	Col 6 ??
	IQ-Ach Discrep Only	IQ≤74 AB Def Only	Low Ach Only	IQ-Ach Discrep & Low Ach	IQ≤74 AB Def & Low Ach	Met no criteria
Af	2 (7%)	2 (7%)	4 (13%)	6 (20%)	12 (40%)	4 (13%)
Wh	6 (23%)	1 (4%)	3 (11%)	9 (35%)	7 (27%)	0
	OK	OK	?????	OK	OK	?????

Iowa Study of Traditional and Alternative Classification Effects

- Tilly, Upah, & Reschly study
- Conducted in late 1980s, prior adoption of the Problem Solving System and RTI eligibility
- Purpose: To determine the likely effects of non-IQ based classification procedures on future LD populations
- Studied referrals, eligible for LD and not eligible for LD (or sp ed)

Results

- 109 of 159 referrals were diagnosed LD using traditional procedures
- 69% of those referred were placed in sp ed
- 80% of new LD placements met official IQ-Ach discrepancy requirements
- 80% of 109 students placed in LD met the CBM two times discrepant criterion

Implications

- Traditional system decisions have relatively high error rates, 1 in 5 to as high as 50%
- Alternative criteria are as accurate AND have other benefits: e. g., relevance to intervention, etc.

What Does Work? Placement??

Treatment/Intervention	[a]Effect Size
EMR/Sp. Ed. Placement (IQ 50-75)	-.14
Slow Learner/Sp. Ed. IQ 75-90	-.34
SLD and E/BD Sp. Ed.	+.29

Traditional Placement Practices???

Weak Relationships to Outcomes

Note: Effect size is expressed in SD units, analogous to a z-score

Centrality of ATI Foundation

- Diagnosis Focused on Level and Pattern of Performance
- "Match Up" Teaching Methodology to Aptitudes; Avoid "Dead Tissue" (Reynolds, 1992)
- Many Applications in Special Education (e.g..., Neuropsychology, Learning Styles, Multicultural Teaching Methodology, Simultaneous vs Sequential, Information Processing Modality, Right Hemisphere -- Left Hemisphere, visual vs Auditory Learners

Aptitude by Treatment Matching???

Treatment/Intervention	[a]Effect Size
Modality Matched Instr. (Aud.)	+.03
Modality Matched Instr. (Vis.)	+.04
Simultaneous/Successive	??
Right Brain/Left Brain	.00
Cultural Leaning Style	.00

NOTHING FOR KIDS

FEEL GOOD ASSESSMENT

ATI Claims: Maximum Benefits from Matching

Aptitudes-Cognitive Processes	Treatments: Teaching Methods
Strengths in Auditory modality Left hemisphere preference Successive/Sequential Cog Style	Phonetic elements; Synthetic phonics
Strengths in Visual modality Right hemisphere preference Simultaneous Cog Style	Sight, whole work methods, Whole Language

Results of ATI Research

- King of England describing his Danish brother-in-law: There is nothing there.
- Cronbach, (1975). "Once we attend to interactions, we enter a hall of mirrors that extends to infinity." (p. 119)
- Kavale (1999) No supportive data, but cannot kill processing
- Vaughn and Linan-Thompson (2003), "There is no empirical support for the use of modality-matched instruction or learning styles as a means to enhance outcomes for students with LD." (p. 142).

Neuropsychology in Special Education and School Psychology

- Distinguish between neuropsychology and neuroscience
- Neuropsychology is dependent on psychometric profiles
  - Difference scores are less reliable
  - Scatter is normal
  - Base rates for profile variations
  - Flat profiles are atypical
- Nearly all have profile variations

Old vs New Models of Brain and Learning

Neuropsychology	Neuroscience	Implications
Brain as static	Brain as dynamic	Change from experience
Diagnose strong/weak areas; Avoid "Dead Tissue"	Activate areas related to specific achievement	Interventions to improve brain activation
Match teaching to strengths	Create strengths by interventions	Effective interventions specific to achievement areas

Another Dry Hole: Cognitive Processes in ADHD and LD Identification

- Why? Match LD definition??
- Benefits to kids?? (vs test authors)
- Process training? Like ATI, no benefits
- Diagnose LD? Abandoned by OSEP in 1977; No reason to reinstate
- OSEP Federal LD classification criteria have NEVER required cognitive process assessment 34 CFR 300.540

What Does Work: Some Examples

Treatment	Effect Size
Applied Behavior Analysis.	+ 1.00
CBM+Graphing+Formative Evaluation	+ .70
CBM+Graphing+Formative Evaluation+Reinforcement	+ 1.00
Comprehension Strategies	>+1.00
Many other effective instructional and behavior change principles	

Part III: Policy and Legal Influences

- Presidents Commission on Excellence in Special Education (2002) report, A New Era: Revitalizing Special Education for Children and their Families.
  - http://www.ed.gov/inits/commissionsboards/whspecialeducation/reports.html National Academy of Sciences/National Research Council Panel Report
- National Academy of Sciences/National Research Council Panel Report
  - http://www.nap.edu/catalog/10128.html
- LD Summit Researchers Recommendations (Bradley et al., 2002)
- NICHD Dyslexia Studies

Commonalties in Policy

- Accountability-Improved results for all students and better results are possible!!
- Multiple tiers of intervention defined by increasing measurement precision and intervention intensity
- Scientifically-based interventions
- Progress monitoring with formative evaluation
- Decisions at all levels driven by child response to intervention
- Problem Solving

Alternative Criteria

- Large Discrepancy in Relevant Domain(s) of Behavior Using Direct Measures in the Natural Context with Local Norms
- Insufficient Response to ***High Quality*** Interventions in General Education
- Documented Adverse Impact on Education
- Documented Need for Special Education
- Exit Criteria
- For LD, add exclusion factors and, if other data suggest MR, screen for MR

LD Summit August and Nov. 2001
LD Roundtable Recomm: September 2002

- Classification Criteria
  - Eliminate IQ-achievement discrepancy
  - Joe Jenkins, U of Washington, "Use of IQ-achievement discrepancy makes us look stupid!"
  - Other ways to determine "unexpected" low achievement
- R. Bradley, L. Danielson, & D. P. Hallahan (Eds.) Identification of learning disabilities: Research to practice (pp. 791-804). Mahwah, NJ: Lawrence Erlbaum

LD Researchers: IQ-Achievement Discrepancy

- Majority View (20 votes)
  - IQ-Ach discrepancy neither necessary or sufficient. IQ testing not needed in most cases of suspected LD
  - Screen for MR, via achievement test, or screening measures in AB or IQ
- Minority View (1 vote)
  - IQ-Ach discrepancy is an important marker, but not sufficient
  - Underachievement essential to LD

LD Researchers: Processing Deficits

- Although processing difficulties have been linked to some SLD (e.g., phonological processing and reading), direct links with other processes have not been established. Currently available methods for measuring many processing difficulties are inadequate. Therefore, systematically measuring processing difficulties and their link to treatment is not yet feasible.

LD Researchers: Response to Intervention (RTI)

- Alternative Identification of LD
  - In addition to achievement testing, history, and observations
  - RTI is the most promising method
  - RTI promotes effective practices and closes gap between identification and treatment.
  - Problem-solving models that use progress monitoring with formative eval. are effective

Multi-Tiered Academic Interventions of Increasing Intensity and Measurement Precision

- Academics (Empirically validated instruction)
  - Level I: General Education: All students
  - Level II: Standard Protocol Treatments: Small group tutoring (3-4) in general education:
  - Level III. Problem Solving: Individualized interventions in general education leading to, in some cases, sp ed eligibility
  - Level IV: Special education: More intense services brought to student

Multi-Tiered Academic Interventions of Increasing Intensity and Measurement Precision

- Behavior-Empirically validated
  - Level I: General Education : School wide positive discipline
  - Level II: Standard Protocol Treatments : Classroom organization and management
  - Level III. Problem Solving : Targeted individual interventions in general education
  - Level IV: Special education : More intense services brought to the students

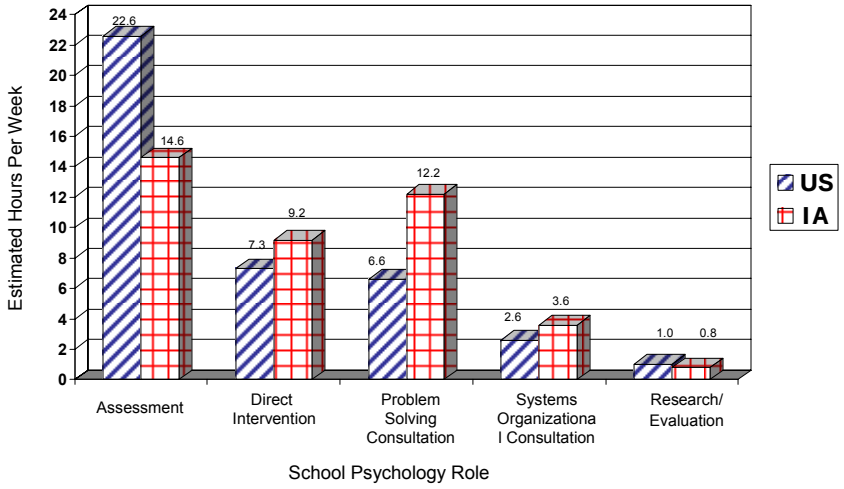
LD Identification: Tier I, Tier II, Then What?

- Tier I and Tier II are done well and are insufficient (significant double discrepancy exists): THEN WHAT???
- Four Options: Implications and Value
  - Cognitive assessment, processes, pattern of strengths and weaknesses??
  - IQ-achievement discrepancy??
  - Intense, individualized problem solving
  - Nothing-child is eligible

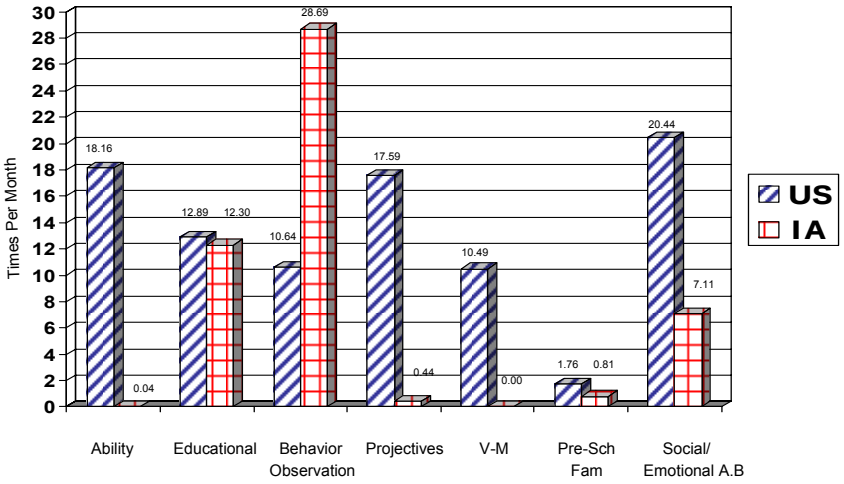
School Psychology: Transition From Correlational to Experimental Science

- Cronbach, 1975, "One monitors responses to the treatment and adjusts it .." (p. 126).
- Problem Solving-self correcting methodology. Scientific method
- Steps and components to follow
- Change, not prediction
- Disconfirm predictions

Current Roles of School Psychologists in the U.S. and Iowa

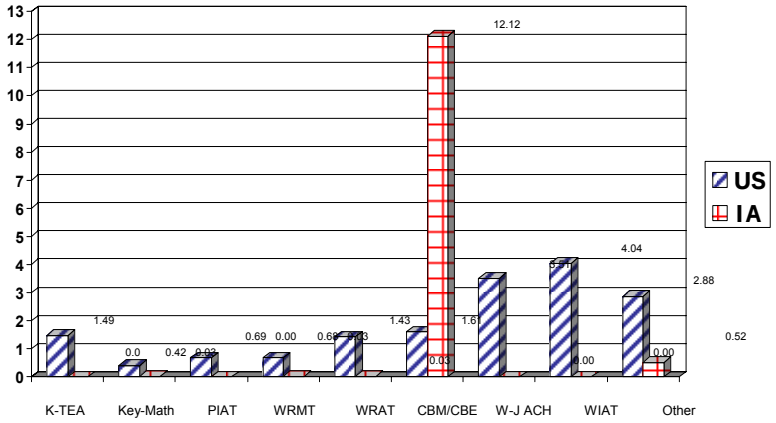


School Psychology Assessment in Traditional and Alternative Delivery Systems



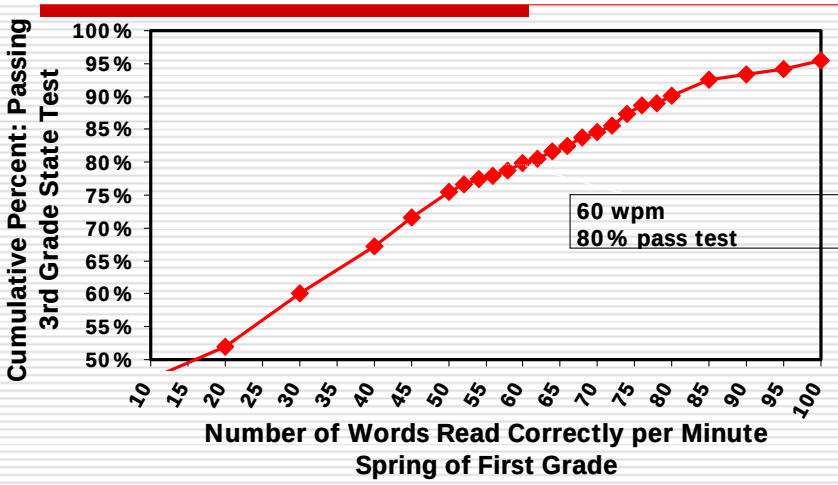
Reschly: Reform 39

Assessment of Educational Skills: U.S. and Iowa

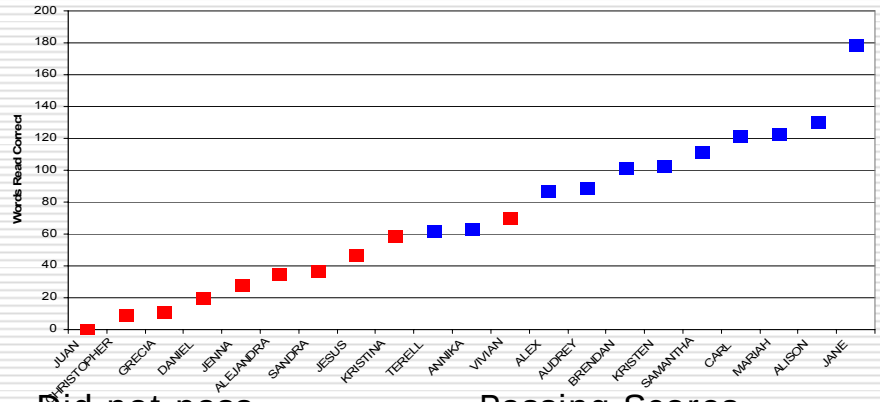


Reschly: Reform 40

Tier I Screening in General Education

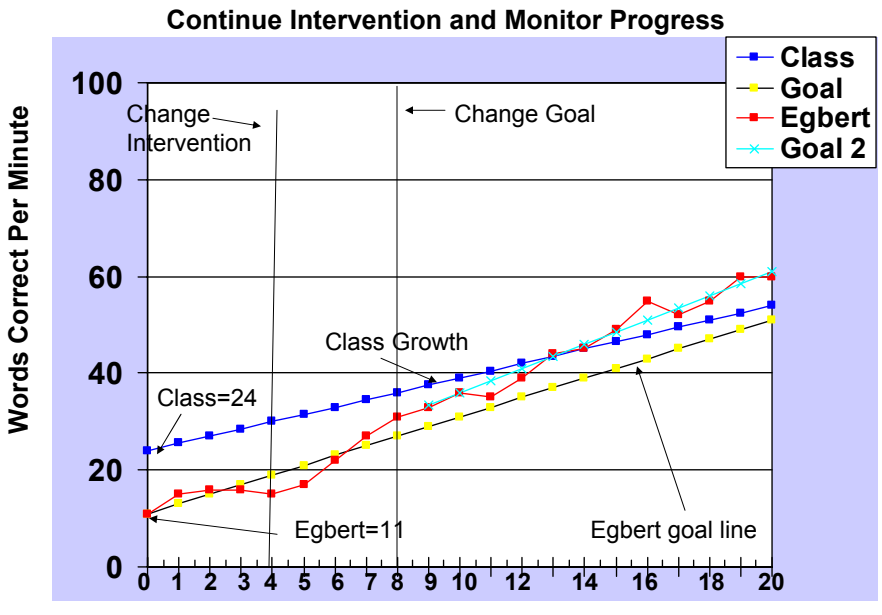


3rd Grade Classroom Example



Did not pass

Passing Scores



Sense of Humor

Three things that are real: God, human folly, and laughter;

The first two are beyond our comprehension

So we must do what we can with the third. John F. Kennedy

Best wishes to you for a great convention and year