



NATIONAL COMPREHENSIVE CENTER
FOR **TEACHER QUALITY**

Innovation Configurations: Helping Pre-Service and In-Service Teachers Implement Effective Classroom Practices in Urban Schools

**Great Teachers for Our
City Schools National Summit
Denver, CO
April 28, 2011**

Daniel J. Reschly

dan.reschly@vanderbilt.edu

615-708-7910

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TQ Center: Teacher Preparation and Response to Intervention (RTI)

- Teacher preparation and professional development programs do the following:
 - Provide building blocks to increase **quantity** and **quality** in the teaching force.
 - Influence teacher **effectiveness**, **retention**, and **equitable distribution**.
 - Influence student academic and behavioral outcomes.

Multi-Tiered **Academic** Interventions of Increasing Intensity and Measurement Precision

- Tier I: General Education: All students; Effective instruction, 80-85% at benchmarks; PREVENTION
- Tier II: Standard Protocol and Problem Solving: (10 to 20 weeks) Small group and individualized interventions: EARLY IDENTIFICATION-TREATMENT
- Decision Making: Continue Program, Modifications, Comprehensive Evaluation??
- Tier III: More Intensive, Sustained Instruction in General and/or Special education
- Key Mechanism: Formative Evaluation

Multi-Tiered **Behavior** Interventions of Increasing Intensity and Measurement Precision

Level I: General Education : School wide positive discipline, effective classroom organization and management, teacher assistance teams
PREVENTION

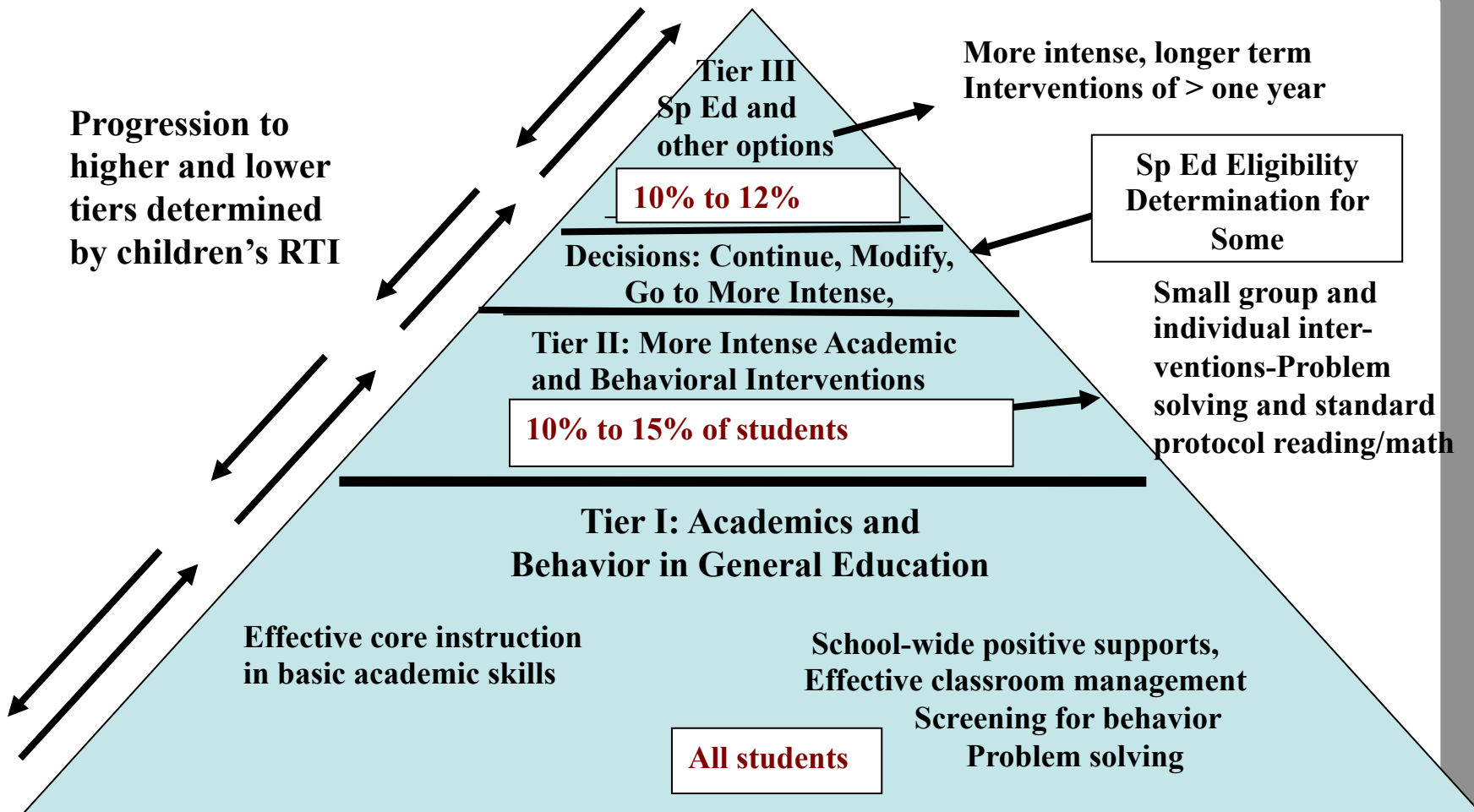
Level II: Individualized Problem Solving re: Behavior: Targeted, intense individual interventions in general education EI-ET

Decision Making? Continue Program, Modifications, Comprehensive Evaluation

Level III: More Intensive, Sustained Instruction in General or Special education

Key Mechanism: Formative Evaluation

Figure 2. Multi-tiered System with Tiers Varying in Intervention Intensity and Measurement Precision



Barriers to RTI Implementation

- Districts reported that the three primary obstacles to implementing RTI as are follows:
 - **Insufficient teacher training**
 - Lack of intervention resources
 - **Lack of data, knowledge, and skills for tracking/charting**

Source: Spectrum K12 Solutions, 2009

Centrality of Teachers and Teacher Preparation

- Teacher effects are significant, especially for at-risk students and students with disabilities.
 - Tennessee Value Added Assessment System: Three years of highly effective teachers overcome effects of low socioeconomic status
 - Teacher *qualifications* (e.g., degree level) have modest to trivial effects.
 - Teacher practices have large effects.
 - Research-based teaching practices exist but are not taught in most teacher preparation programs.
- Improved teacher preparation and professional development are prerequisites to improved achievement.

Mechanisms and Tools Represented in This Workshop

- The following resources are essential to meeting the challenge:
 - Innovation configurations to define critical student and teacher competencies
 - Mechanisms to improve faculty competencies
 - Professional development at the state and national levels
 - National RTI programs: American Institutes for Research and National Center for Learning Disabilities
 - College of Education: deans, National Council for Accreditation of Teacher Education, state program approval, state licensure requirements

What Works?

RTI Research Foundations

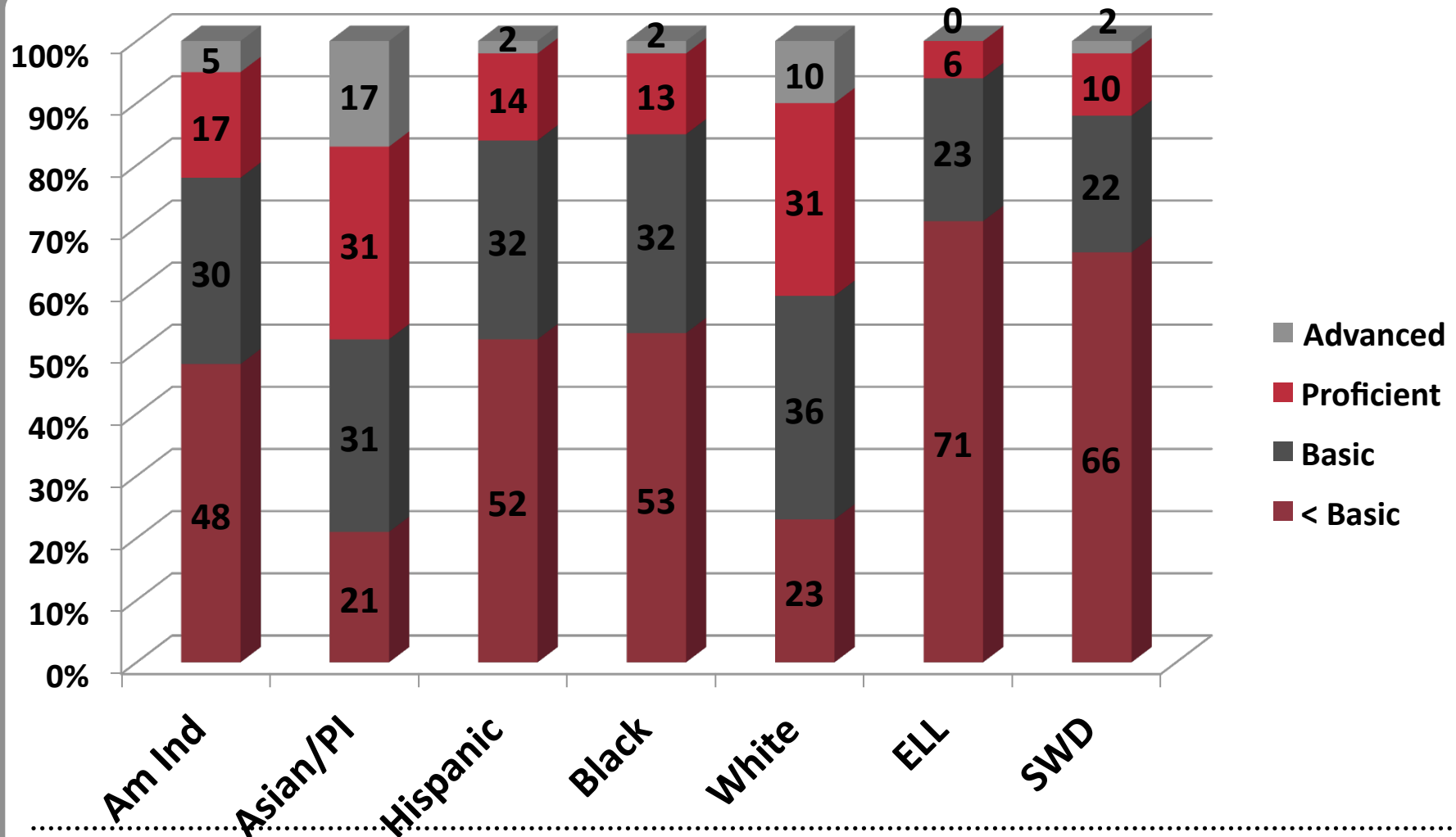
- **Treatment and Effect Size**
- Applied Behavior Analysis (+ 1.00)
- Curriculum-Based Measurement
+ Graphing + Formative Evaluation
+ Reinforcement (+0.80–1.00)
- Explicit Instruction and
Problem Solving (+0.70–1.50)
- Comprehension Strategies (+1.00)
- Mathematics Interventions (+0.60–1.10)
- Writing Interventions (+0.50–0.85)
- Matching Instruction to Learning Styles (0.00 to 0.00)

Effect sizes the same across sociocultural groups

Importance of Scientifically Based Reading Instruction

- Reading is a gateway competence.
- Referrals to special education are dominated by students with reading problems.
- Reading competence is related to several important educational outcomes.
 - Science of reading instruction
 - Chall, 1967, 2000; National Reading Panel, 2000; Snow, Burns, and Griffin, 1998
 - Florida Center for Reading Research (<http://www.fcrr.org/>)
 - The University of Texas at Austin, Vaughn Gross Center for Reading and Language Arts (<http://www.texasreading.org/utcrla/>)
- Science of reading instruction markedly underutilized

National Assessment of Education 4th Grade Reading (2009) Tables A-12, A-15, & A-16

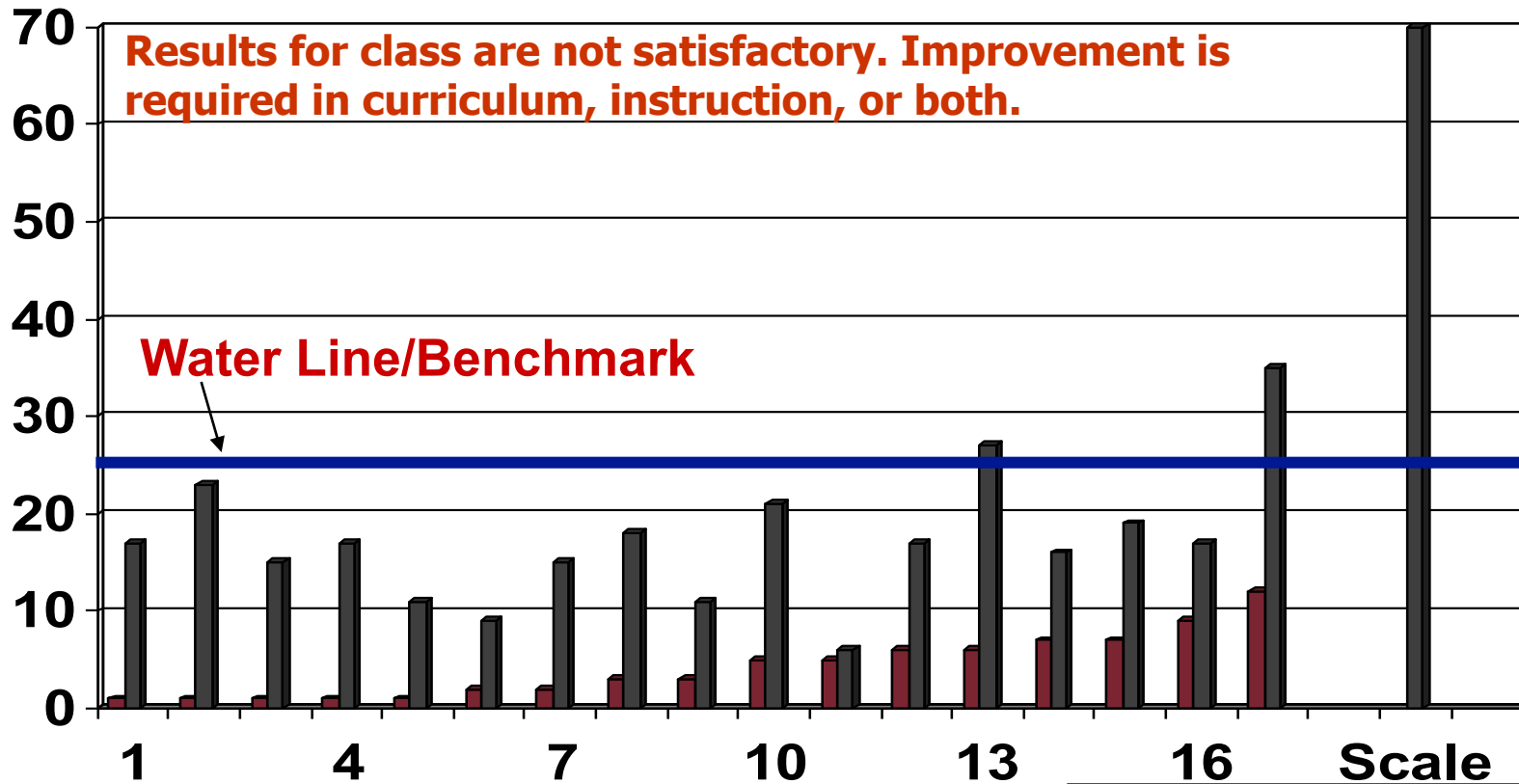


Universal Screening Results

- **Assess success of instructional program.**
 - Determine the percentage of students at or above benchmarks.
 - If necessary, examine curriculum, instruction, or both.
- **Identify students below benchmarks.**
 - Implement interventions within the general education classroom.
 - Assess progress and consider need for more intensive interventions at Tier II.

Kindergarten (KTG): Initial Sound Fluency Fall to January 2005–06

Benchmark: Winter KTG—25 Sounds Correct per Minute

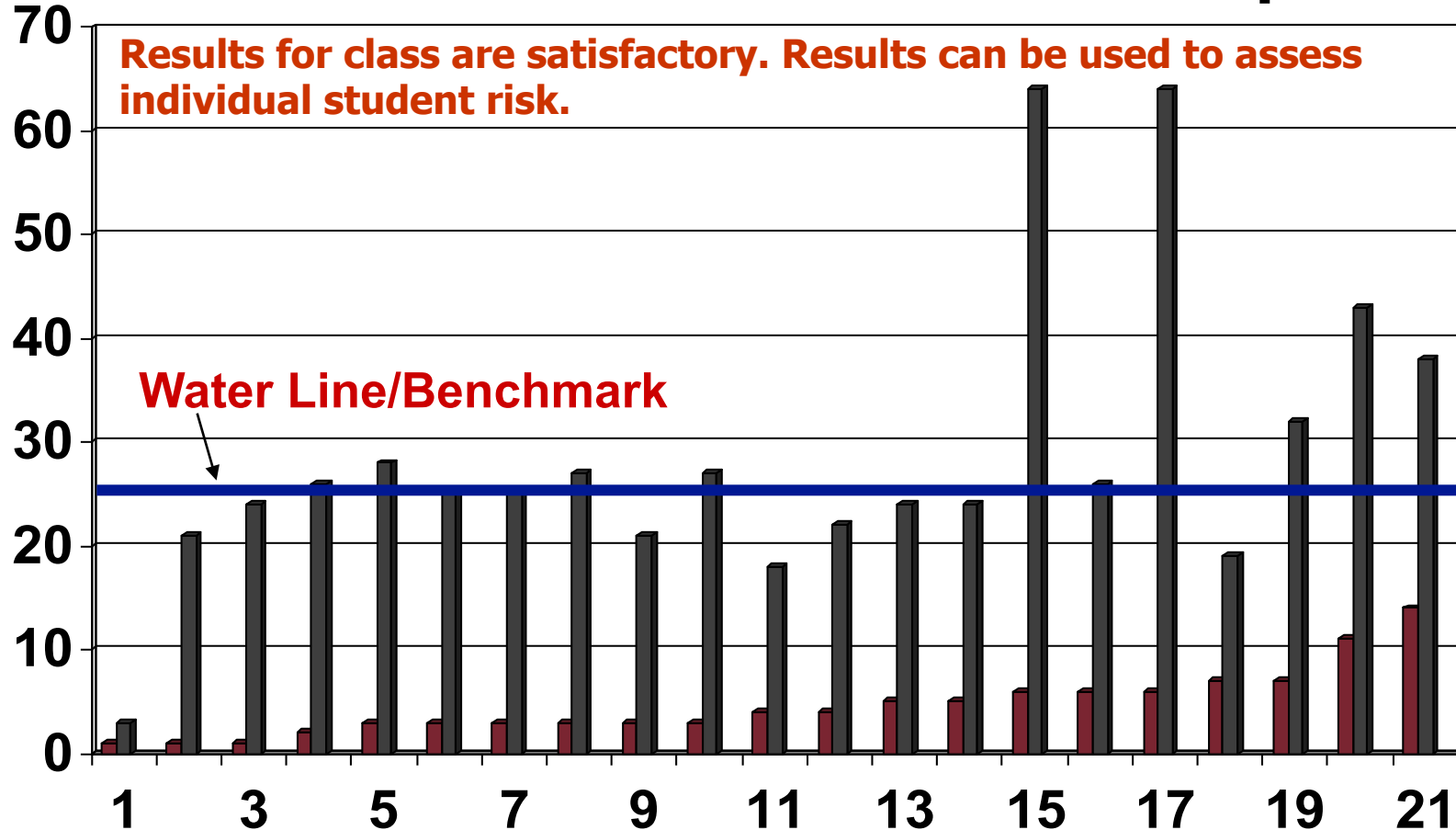


New KTG Teacher and Traditional Instruction

On all classwide graphs, look at level and progress.

Kindergarten (KTG): Initial Sound Fluency Fall to January 2005–06

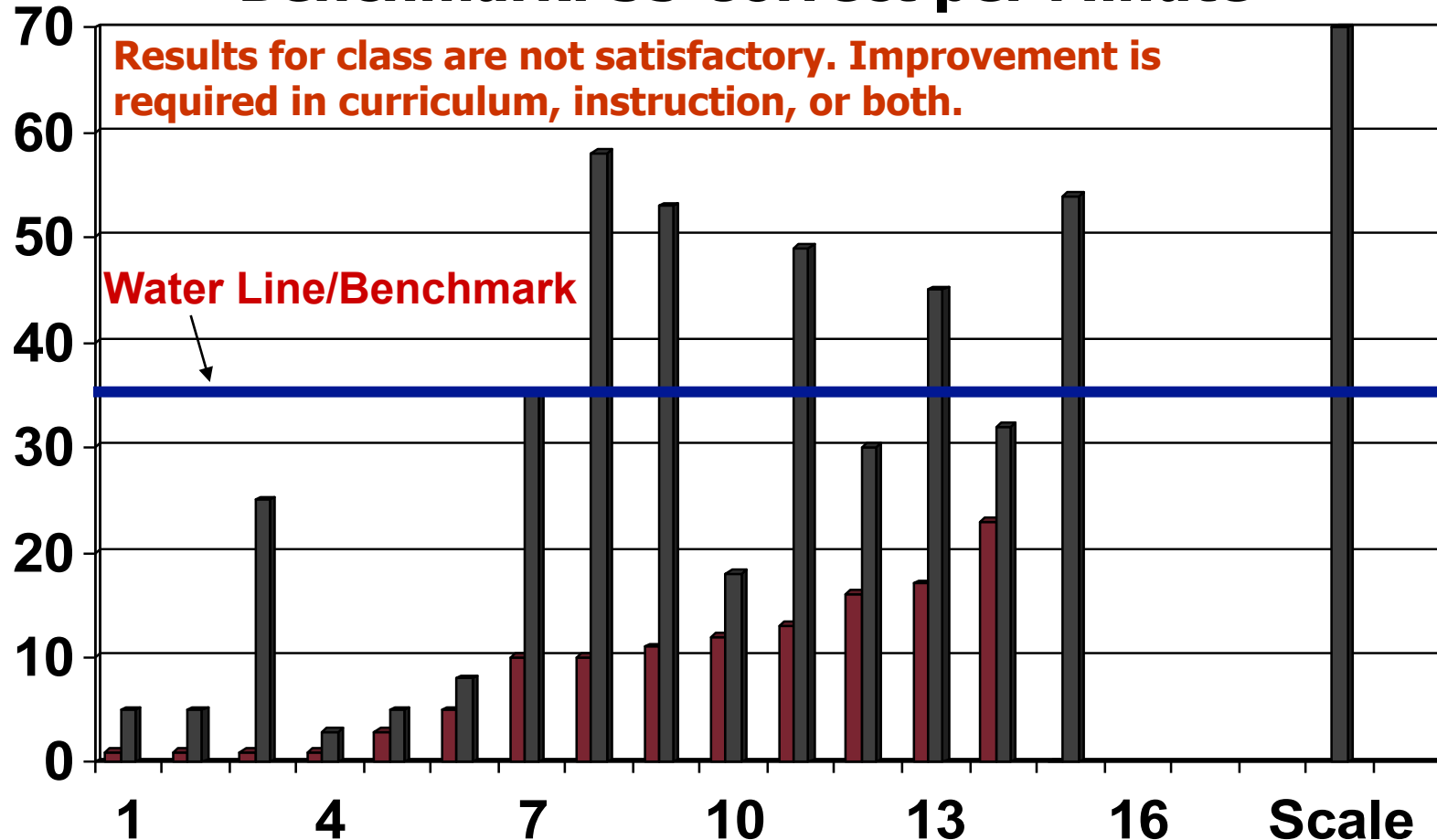
Benchmark: Winter KTG—25 Sounds Correct per Minute



Experienced Teacher Direct Instruction

Phoneme Segmentation Fluency: January to May 2005–06

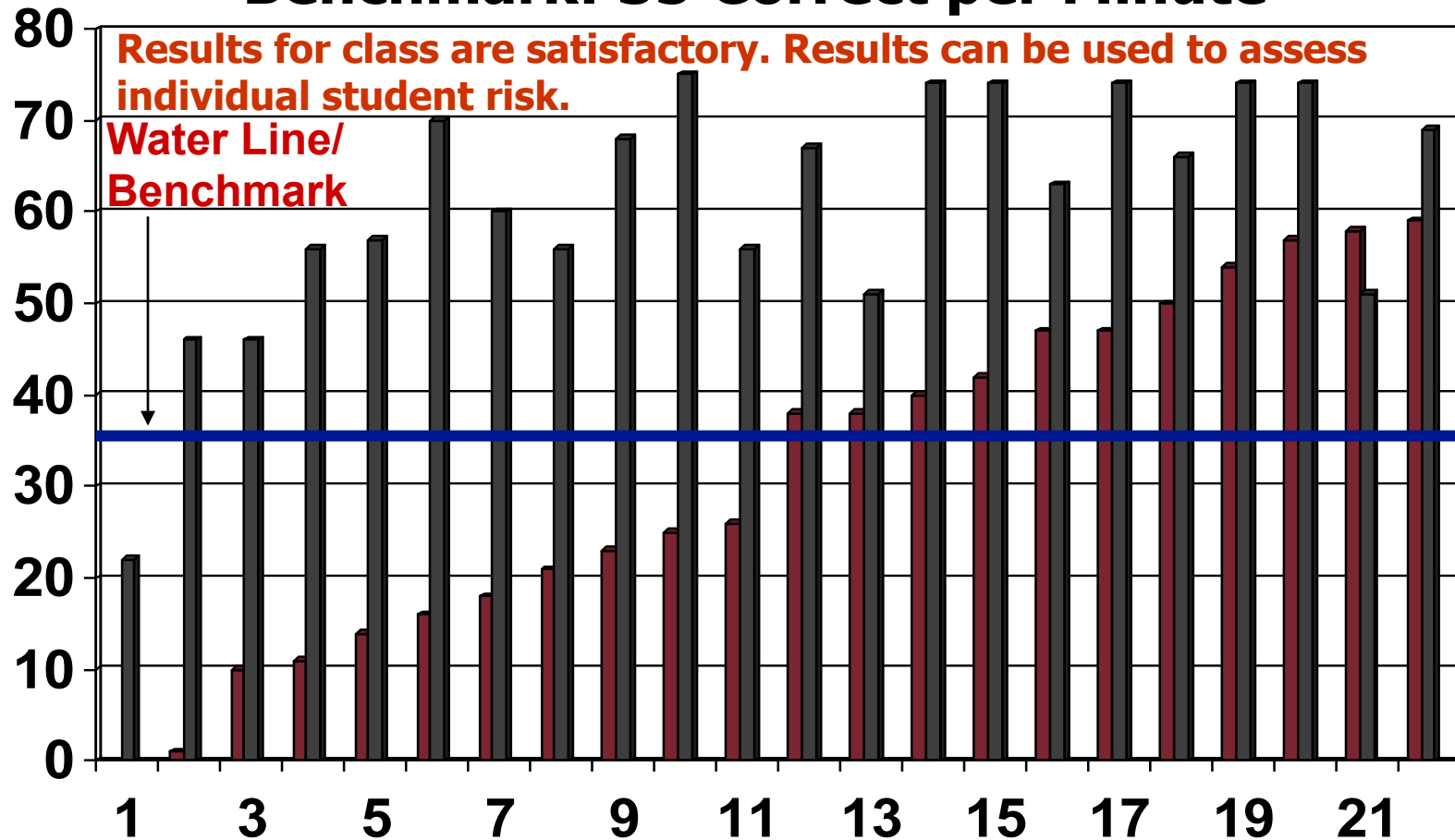
Benchmark: 35 Correct per Minute



New KTG Teacher and Traditional Instruction

Phoneme Segmentation Fluency: January to May 2005–06

Benchmark: 35 Correct per Minute



Experience Teacher Direct Instruction

Consequences of Not Meeting Tier I Goals

- Upside down: Excessive numbers of students in Tiers II and III
- Overload Tier II and Tier III
- Low probability of passing high stakes reading tests
- Markedly reduced likelihood of high school completion and postsecondary educational and career participation

National Mathematics Advisory Panel Report Key Findings

- Conceptual understanding, computational and procedural fluency, and problem solving skills are equally important and mutually reinforce each other.
- Students should develop immediate recall of arithmetic facts to free the “working memory” for solving more complex problems.

National Mathematics Advisory Panel Report Key Findings

- Teachers' consistent use of **formative assessments** can improve student learning in mathematics.
- **Explicit instruction for students who struggle** with mathematics is effective in increasing student learning. Teachers should understand how to provide clear models for solving a problem type using an array of examples, offer opportunities for extensive practice, encourage students to “think aloud,” and give specific **feedback**.

Tier I: Core Academic Program

Scientifically Based Instruction in Reading

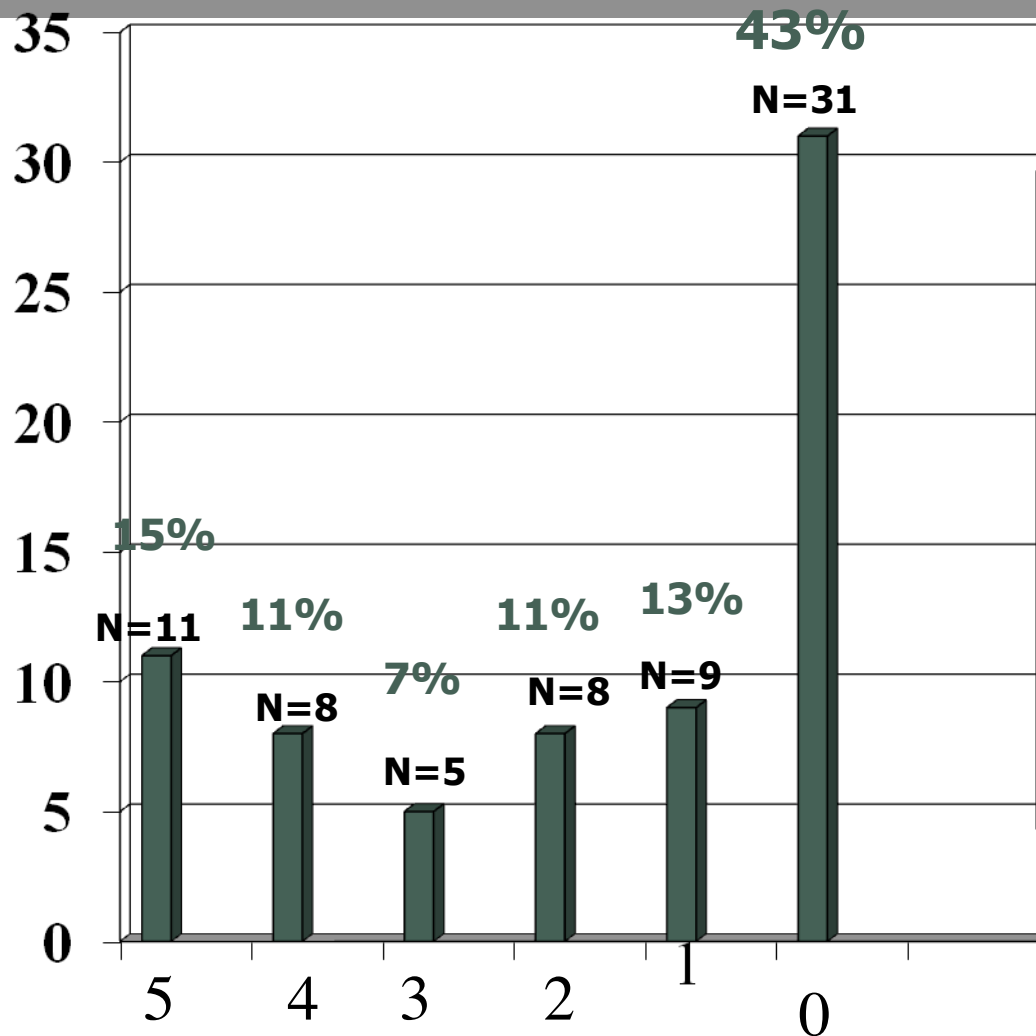
- Reading Curricula Content (Snow et al., 1998)
 - Phonemic Awareness
 - Phonics
 - Fluency
 - Vocabulary
 - Comprehension
- Plus**
- **Direct, systematic instruction**
 - **Universal screening and formative evaluation**

Tier I: Core Academic Program

Scientifically Based Instruction in Reading

- Problem of teacher preparation
- Innovation configurations: reading, classroom behavior, inclusive services, learning strategies (Reschly, Smart, & Oliver, 2007)

National Council on Teacher Quality: Reading Components Taught Well



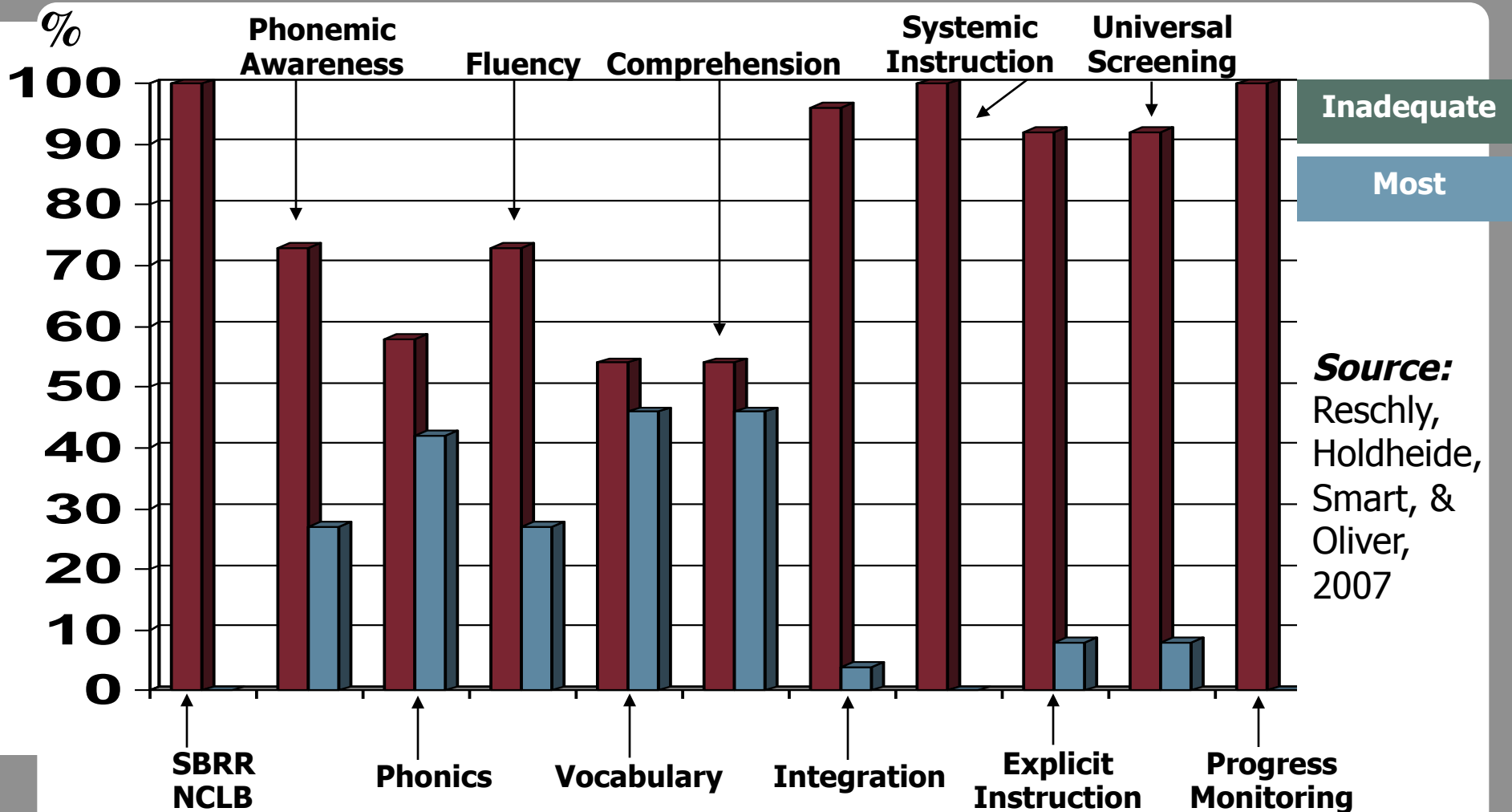
Five Components

- Phonemic Awareness
- Phonics
- Fluency
- Vocabulary
- Comprehension

■ Number and percent of institutions teaching reading components well.

Source: Walsh, Glaser, & Wilcox, 2007

Preparation of Special Education Teachers in Scientifically Based Reading Instruction in 27 Institutions of Higher Education (IHEs)



Source:
Reschly,
Holdheide,
Smart, &
Oliver,
2007

Reading Course Syllabi: Projects

- Explain your philosophy of literacy.
- Develop bulletin board to motivate children to read.
- Produce journal explaining personal experience in learning to read.
- Analyze the social justice implications of literacy.

What gaps do you see in educator competence related to RTI?

Teacher Quality Work at Vanderbilt University

- Meet Elementary and Secondary Education Act (**ESEA, 2002**) and Individuals with Disabilities Education Act (**IDEA, 2004**) **priorities**.
 - Scientifically based instruction: beginning reading
 - Improved least restrictive environment profiles
 - Greater integration of students with disabilities in the general education curriculum and environment
 - Improved outcomes for students with disabilities and economically disadvantaged students

What Is an Innovation Configuration?

- Development and implementation of educational innovations and methodologies (30 years).
 - Evaluate programs and fidelity of implementation of educational interventions.
 - Professional development tools guide implementation of innovation within a school and to facilitate the change process.

Definition

- ***Innovation Configurations*** can be viewed as tools to assess **content** and **quality** of teacher preparation and professional development.

TQ Center Innovation Configurations

- Determine the degree to which **federal policies** and **evidence-based practices** are implemented in coursework and training.
 - Focuses on an entire program (not a single syllabus or professional development event)
 - Identifies the range and depth of the competencies addressed
 - Identifies the strengths, gaps, and redundancies
 - Creates consistency in common vocabulary and coherency within programs

Innovation Configuration Design

- Innovation configurations typically have two dimensions:
 - Essential components of the innovation
 - Essential components are based on research, policy, and best practices.
 - Descriptors and examples are included to guide application of criteria to coursework, standards, and classroom practice.
 - Degree of implementation
 - The degree of implementation determines the breadth and depth of content coverage.

Levels of Implementation

- **No mention.** The component is not mentioned. (Code = 0)
- **Mentioned.** The component is mentioned. (Code = 1)
- **Mentioned, plus readings/tests** are specified. (Code = 2)
- **Mentioned, plus readings/tests, plus assignments such as papers, projects** are required. (Code = 3)
- All prior levels, **plus supervised practice (fieldwork) with feedback about degree of success** are required. (Code = 4)

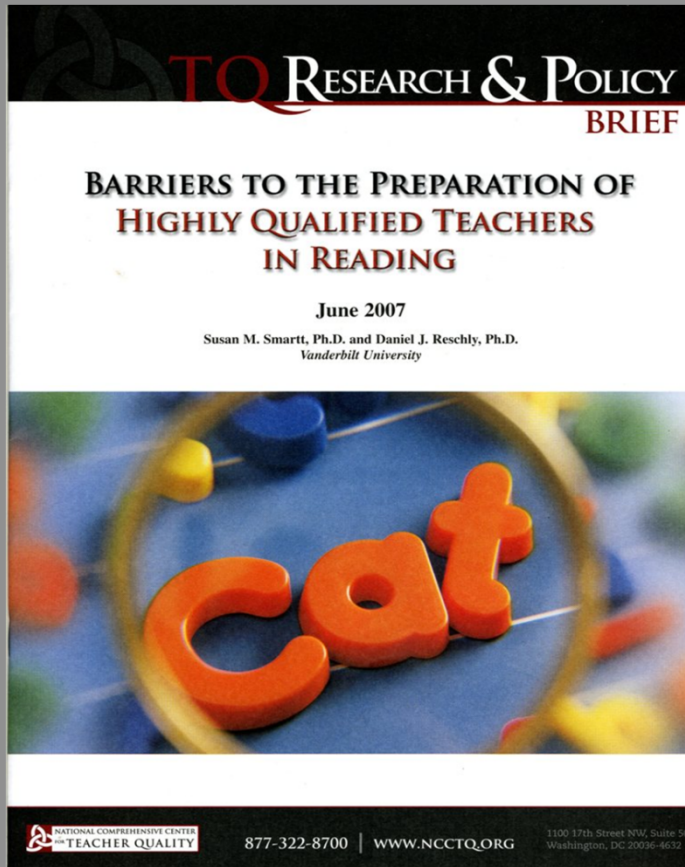
Application of Innovation Configurations

- IHE faculty self-assessment, self-reflection, course improvement
- IHE department heads, deans, and other university administrators, high-quality instruction in teacher preparation programs

Application of Innovation Configurations

- State departments of education, instruction statewide with common language and goals that are consistent with federal policy (e.g., Maryland, Connecticut, Massachusetts, and Colorado)
- Grant performance measures of evidence-based practices within the curriculum (OSEP 325T grants)

TQ Research & Policy Brief



- Smartt, S. M., & Reschly, D. J. (2007). *Barriers to the preparation of highly qualified teachers in reading* (TQ Research & Policy Brief). Washington, DC: National Comprehensive Center for Teacher Quality.

<http://www.tqsource.org/publications/June2007Brief.pdf>

What Is the Scientifically Based Reading Instruction Innovation Configuration?

- Essential key components (content validity)
 - *Preventing Reading Difficulties in Young Children* (Snow, Burns, & Griffin, 1998).
 - *Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction* (National Reading Panel, 2000).
 - Policy support
 - ESEA (2002)
 - IDEA (2004)

Scientifically Based Reading Instruction Essential Components

- **Scientifically based reading research/ ESEA/IDEA**
- Phonemic Awareness
- Phonics
- Fluency
- Vocabulary
- Comprehension
- **Integration of components**
- **Systematic and explicit instruction**
- **Screening and progress monitoring assessment**

See Smartt and Reschly, 2007

Inter-Judge Reliability:
approximately 0.85

Scientifically Based Reading Instruction Innovation Configuration (See Handout)

Key Essential Component	None Code = 0	Mention Only Code = 1	Mention Plus Readings/ Tests Code = 2	Plus Assignments Code = 3	Plus Supervised Practice Code = 4
Comprehension					
Integration					
Systematic Instruction					
Explicit Instruction					
Screening Assessment					
Progress Monitoring					

Practice Using an Innovation Configuration

Your Turn!

Innovation Configurations

- Innovation Configurations (Hall & Hord, 1987; Roy & Hord, 2004)
- TQ Center Innovation Configuration Topics
 - Scientifically Based Reading Research (Smartt & Reschly, 2007)
 - Classroom Organization and Behavior Management (Oliver & Reschly, 2007)
 - Inclusive Practices (Holdheide & Reschly, 2008)
 - Learning Strategies (Schumaker, 2009)
 - English Language Learners (McGraner & Saenz, 2009)
 - RTI in Middle and High Schools (Reschly & Wood-Garnett, 2009)
 - Mathematics Instruction and Assessment (Coming.....)

Take Five!

- Review document with partner and discuss the following:
 - Reactions
 - Thoughts
 - Suggested modifications
- Questions/thoughts?

IHEs

- **Essential** partners to improving student achievement through RTI

The Situation

- Universities, colleges, community colleges, and alternative certification programs prepare teachers and administrators and determine the following:
 - Knowledge that teachers acquire
 - Attitudes and dispositions of teachers
 - Schema that teachers develop
 - Instructional practices of teachers

Therefore....

- It is imperative that those educating our future teachers are informed about the following:
 - National and state initiatives
 - Research and data regarding initiatives
 - What teachers need to know and be able to do to implement RTI effectively
 - RTI in general

Brainstorm

- Focusing on your role, what have you done or do you plan to do that informs and instructs education stakeholders in your state about RTI?
 - For example, podcasts, meeting facilitation, professional development, sustained coaching
- Record each activity; prepare to share.
- You have five minutes.

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