# The Role of Assessment within a RtI Framework: Focus on Screening & Progress Monitoring

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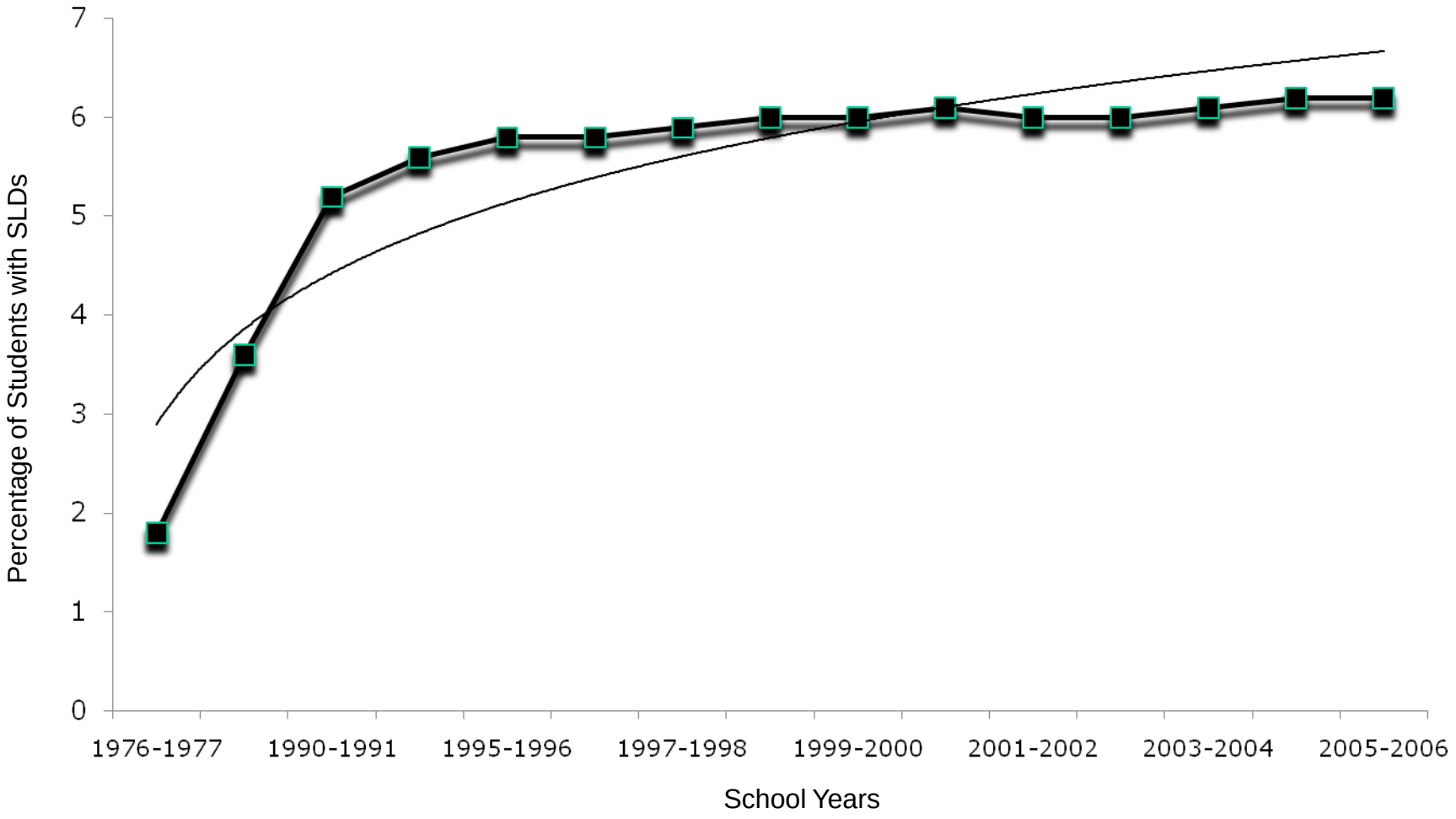
# Why RTI? Why now?

- Approaches to identifying students with learning problems and learning disabilities:
  - Traditional IQ/Achievement Discrepancy
  - Response-to-Intervention

# Why Use RTI Over Previous Models of Identification?

- Education of All Handicapped Children Act (1975) defined "underachievement" as a discrepancy between IQ and Achievement
- IQ/Achievement discrepancy has been criticized:
  - IQ test do not necessarily measure intelligence
  - Discrepancy between IQ and achievement may be inaccurate
  - Rests on a "Wait to Fail" approach

# Why Use RTI Over Previous Models of Identification?

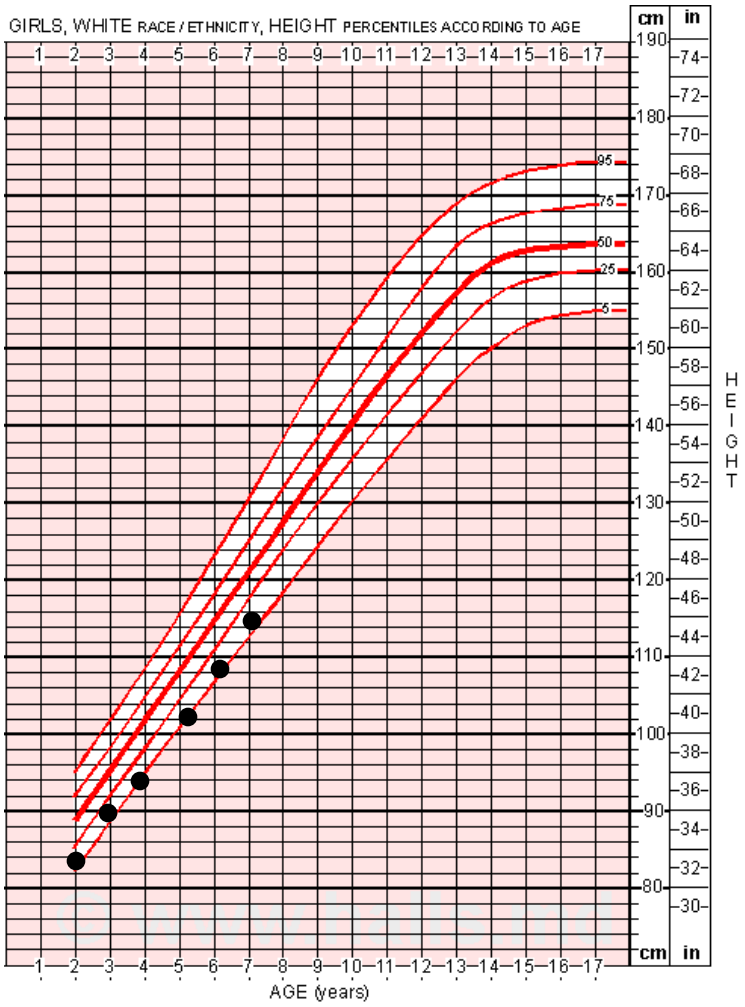


# Why Use RTI Over Previous Models of Identification?

- RTI is an alternative framework for "underachievement": unexpected failure to benefit from validated instruction.
- RTI eliminates poor instructional quality as an explanation for learning problems.
- Students are identified for a continuum on instructional intervention only after not responding to previous instruction that is effective for most.
  - Poor instructional quality is ruled out as an explanation for poor student performance.
- Students are provided intervention early!
  - RTI does not wait for students to fail!

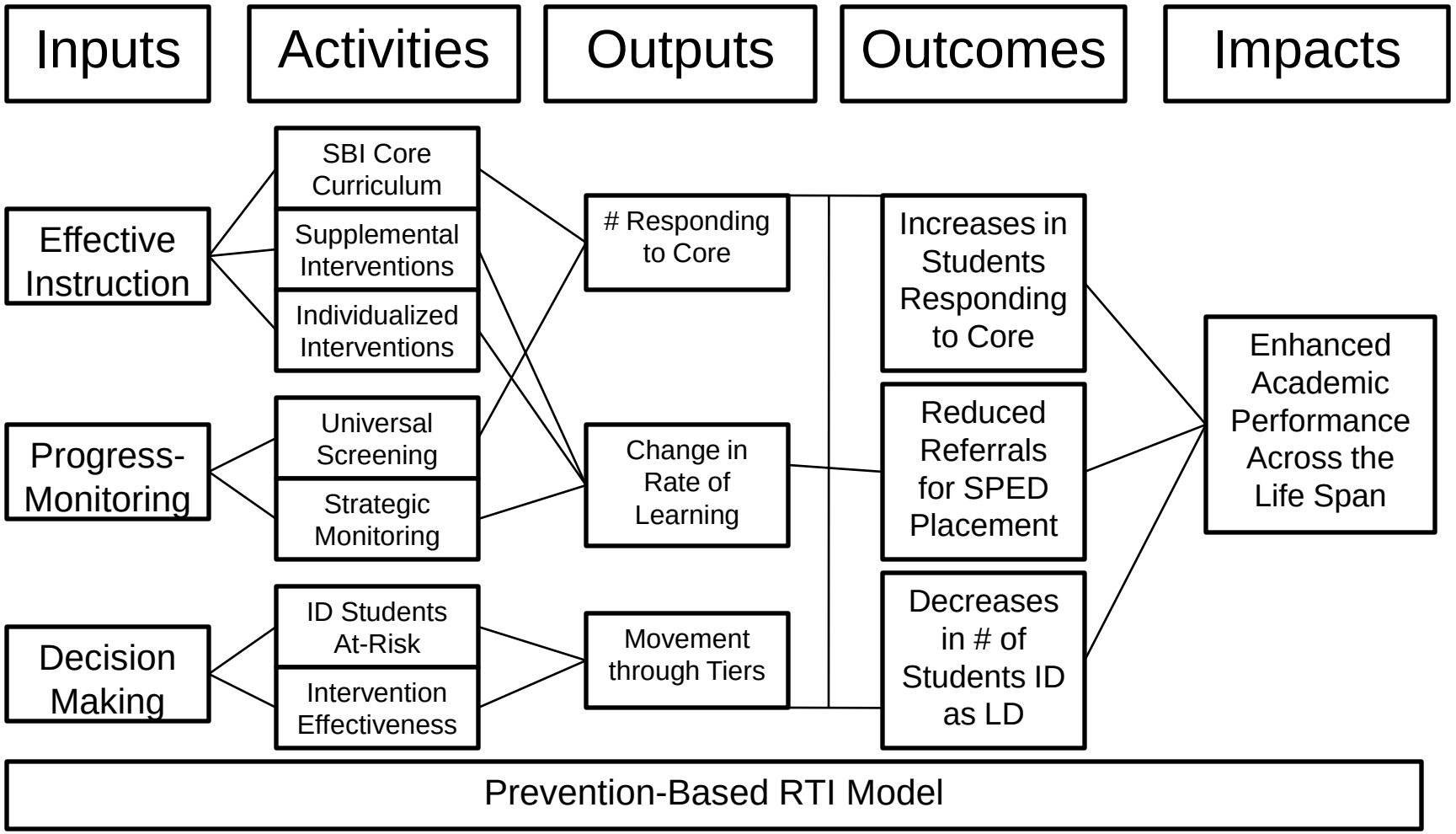
# Why Use RTI Over Previous Models of Identification?

Special interventions (or education) are considered only when a "dual discrepancy," in response to validated instruction is observed.




"Dual Discrepancy" refers then to how a child's progress compares to others "at one point in time" AND the "rate of growth" over time.

# RTI Logic Model



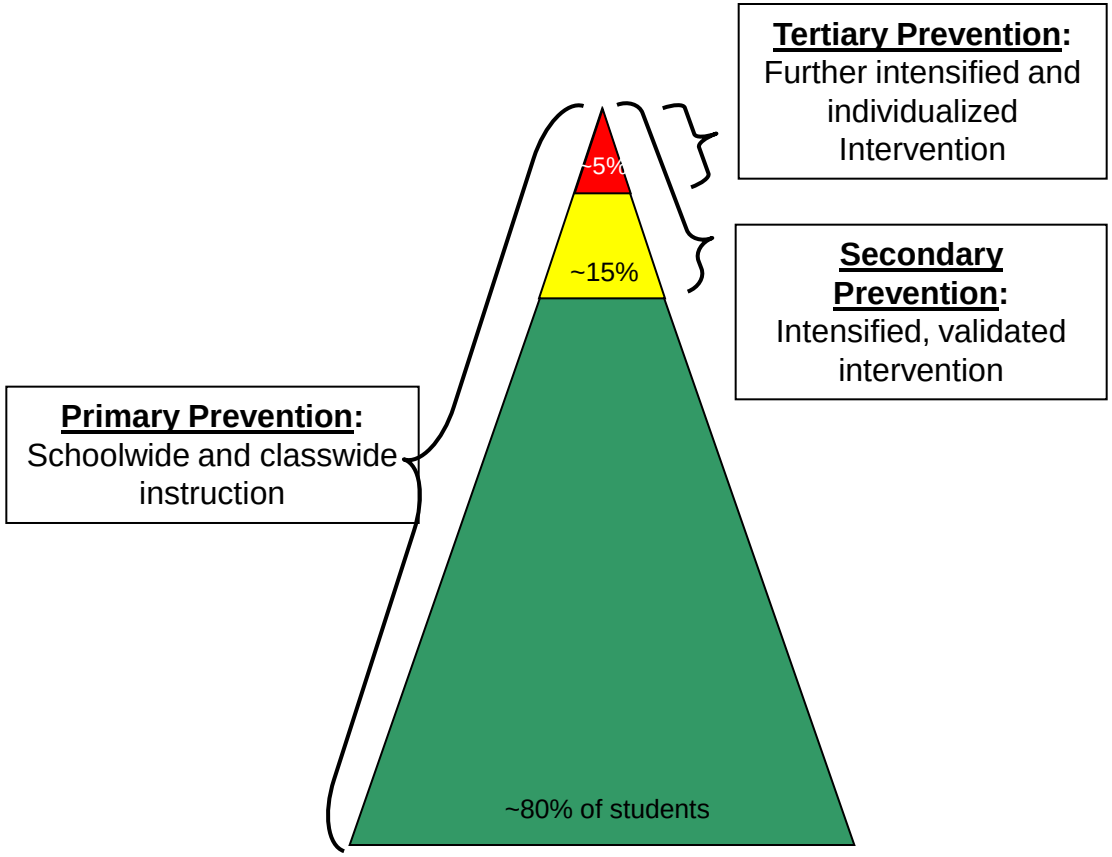
# Once we have these things in place .....

- Multi-tier prevention system that identifies and intervenes with students who are exhibiting academic difficulties

- Public health population based methods

  - Primary prevention
  - Secondary prevention
  - Tertiary prevention

# Continuum of Schoolwide Support



# RTI Measurement in Context

# RTI's Multiple Measurement Perspectives

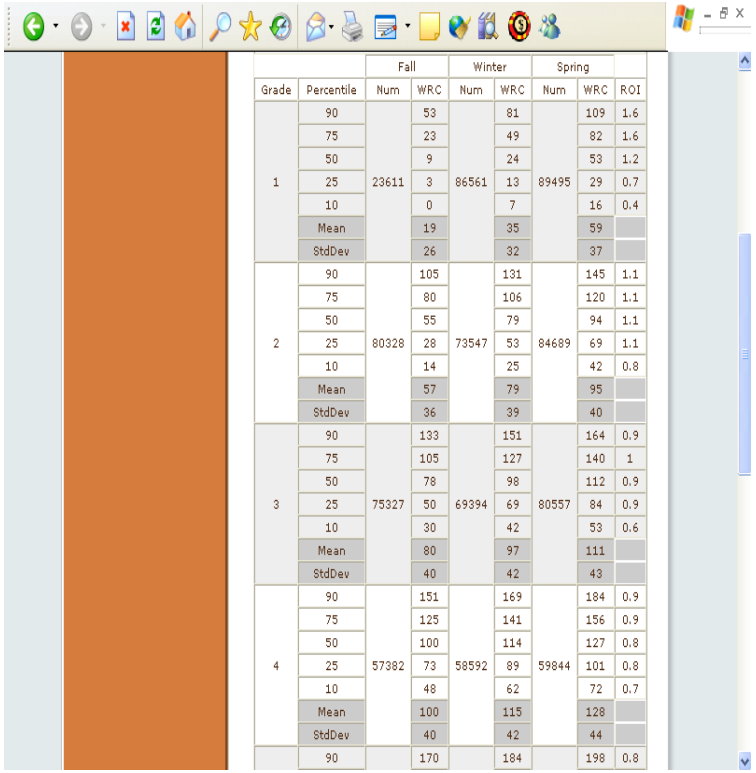
- *Screening Assessment*
  - A form of measurement where outcomes are referenced to a normative distribution or criterion of reference
  - Within RTI, screening assessments are used to compare an individual's performance with that of a peer group or criterion value
  - Example, periodic universal screening to determine possible risk
  - Individual student data are collected at one point in time, summarized, and compared to peer group standards
- *Progress Monitoring (Formative) Assessment*
  - A form of assessment that produces scores that have meaning independent of peer comparisons
  - Within RTI, progress monitoring or formative assessments are used to describe an individual's performance in general areas (e.g., reading, math) over time
  - Often summarized in time-series graphs

# RTI's Multiple Measurement Perspectives

- *Diagnostic Assessment*
  - A form of assessment that attempts to pinpoint areas of weakness and/or concern
  - Within RTI, diagnostic assessment is used to target specific areas of instructional focus
  - Example, a phonics assessment might be used pinpoint specific weaknesses that are specific targets for intervention
  - Specific improvement is generally indexed via mastery of the skills/objectives being taught
  - Generalized improvement is measured using progress monitoring assessments

# RTI's Multiple Measurement Perspectives

- *Screening Assessment*



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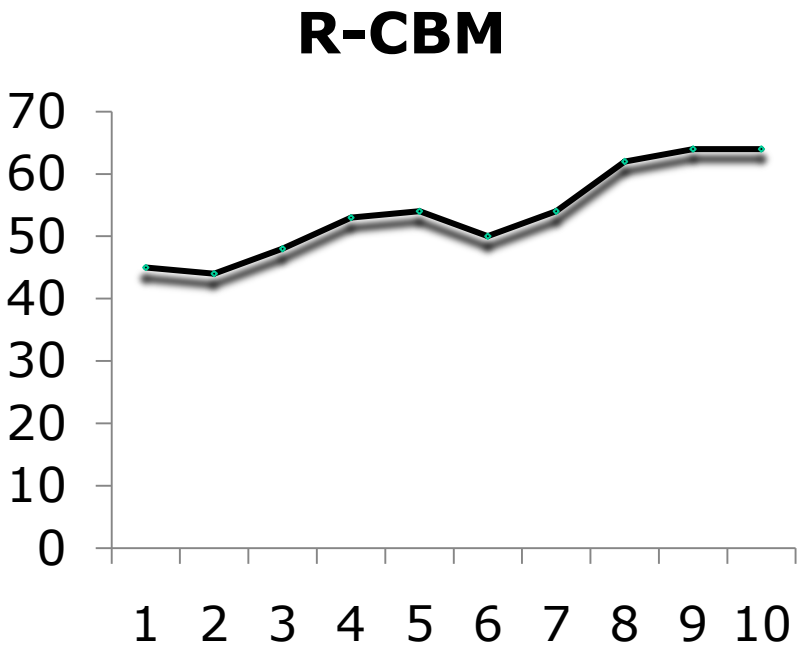
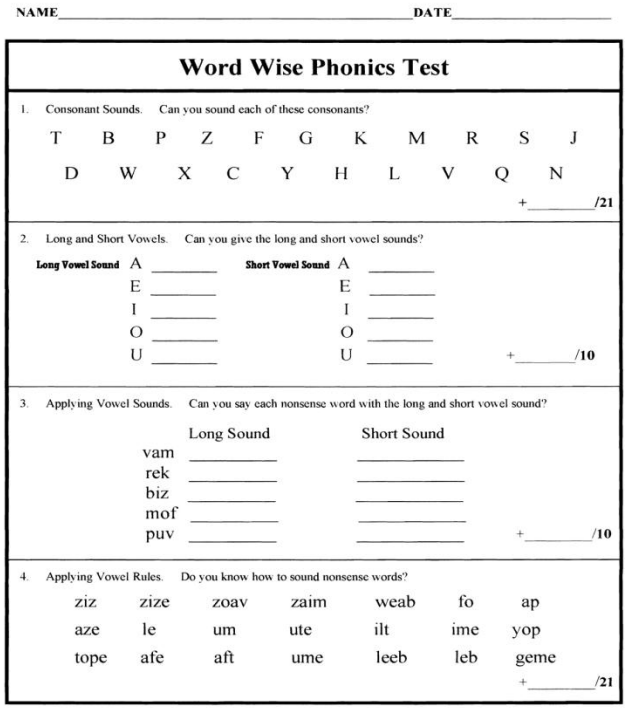
- *Progress Monitoring (Formative) Assessment*



# RTI's Multiple Measurement Perspectives

- *Diagnostic Assessment*



NAME_____ DATE_____

**Word Wise Phonics Test**

1. Consonant Sounds. Can you sound each of these consonants?

T B P Z F G K M R S J

D W X C Y H L V Q N

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2. Long and Short Vowels. Can you give the long and short vowel sounds?

| Long Vowel Sound | | Short Vowel Sound | |
|---|---|---|---|
| | A _____ | | A _____ |
| | E _____ | | E _____ |
| | I _____ | | I _____ |
| | O _____ | | O _____ |
| | U _____ | | U _____ |

+_____/10

3. Applying Vowel Sounds. Can you say each nonsense word with the long and short vowel sound?

| | Long Sound | Short Sound |
|---|---|---|
| vam | _____ | _____ |
| rek | _____ | _____ |
| biz | _____ | _____ |
| mof | _____ | _____ |
| puv | _____ | _____ |

+_____/10

4. Applying Vowel Rules. Do you know how to sound nonsense words?

| | | | | | | |
|---|---|---|---|---|---|---|
| ziz | zize | zoav | zaim | weab | fo | ap |
| aze | le | um | ute | ilt | ime | yop |
| tope | afe | aft | ume | leeb | leb | geme |

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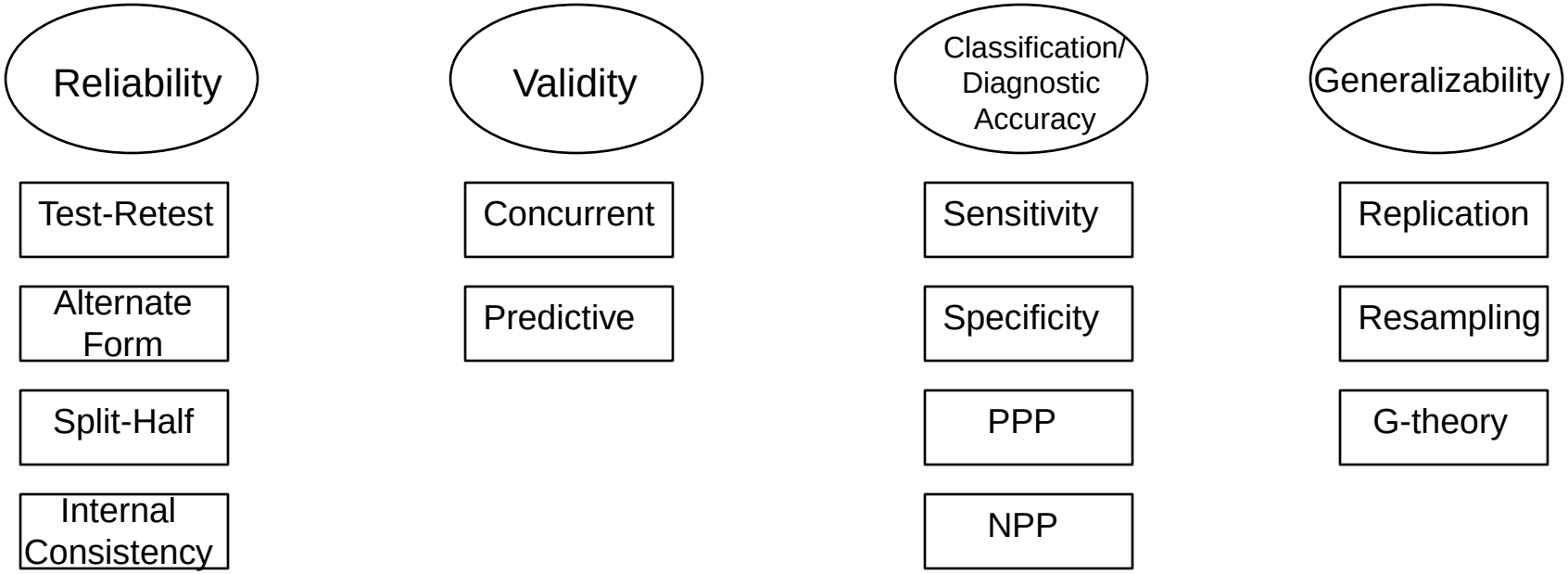
# National Center on Response to Intervention (www.rti4success.org)

NCRTI defines **screening** assessment as: "screening that involves brief assessments that are valid, reliable, and evidenced based [that] are conducted with all students or targeted groups of students to identify students who are at risk of academic failure and, therefore, likely to need additional or alternative forms of instruction to supplement the convention general education approach."



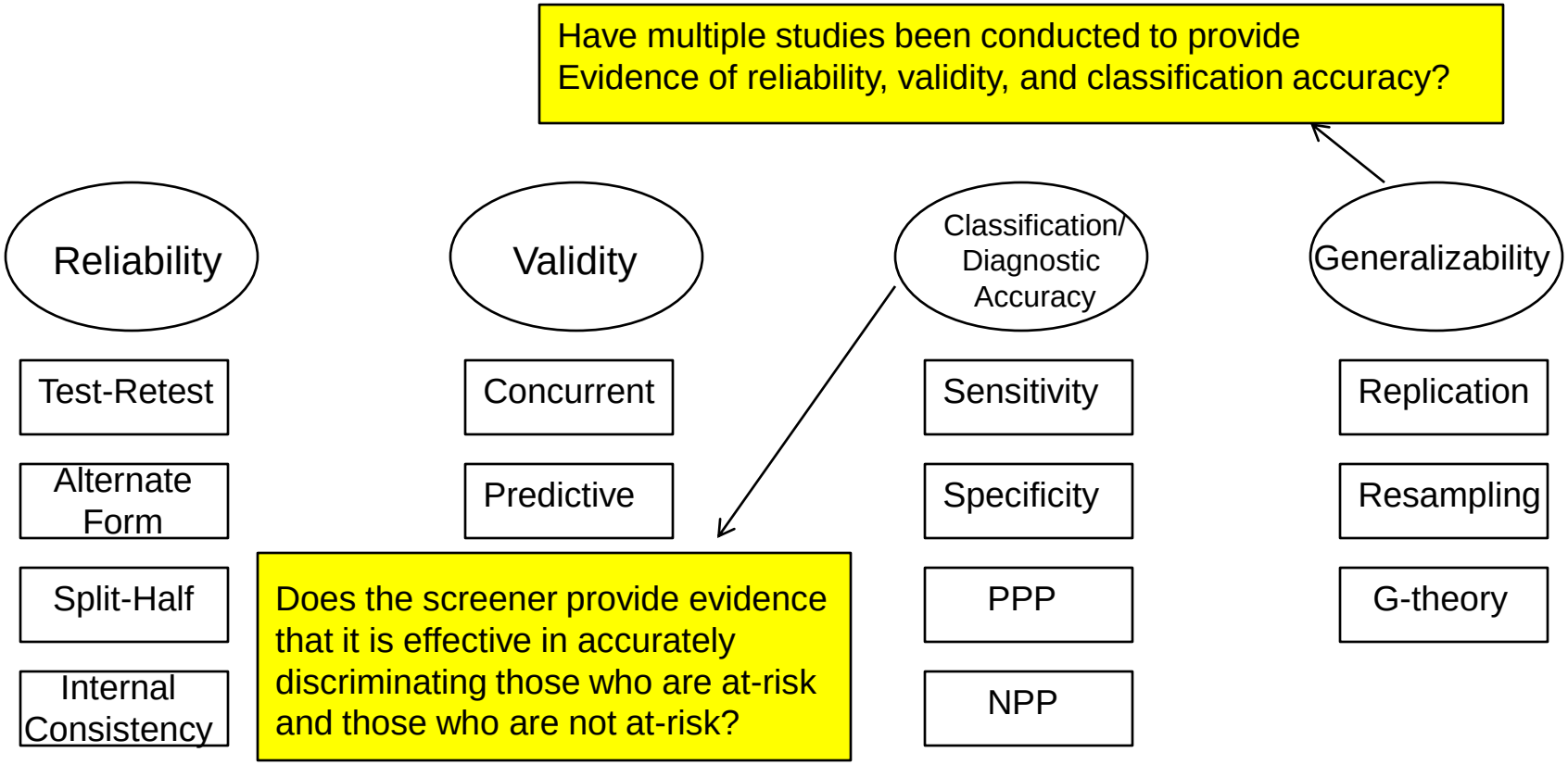
# NCRTI Example

| TOOLS | AREA | Classification Accuracy | Generalizability | Reliability | Validity | Disaggregated Reliability, Validity, and Classification Data for Diverse Populations | Efficiency | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Administration Format | Administration & Scoring Time | Scoring Key | Norms/ Benchmarks |
| **AIMSweb** | Reading Curriculum Based Measurement (R-CBM) | ◐ | Moderate High | ● | ● | ~ | Individual | 2 Minutes | Yes | Yes |
| **Dynamic Indicators of Basic Early Literacy Skills (DIBELS)** | Letter Naming Fluency | ○ | Moderate Low | ● | ◐ | ~ | Individual | 2 Minutes | Yes | Yes |
| | Nonsense Word Fluency | ◐ | Moderate Low | ● | ◐ | ○ | Individual | 2 Minutes | Yes | Yes |
| | Oral Reading Fluency | ◐ | Moderate High | ● | ◐ | ◐ | Individual | 2 Minutes | Yes | Yes |
| | Phoneme Segmentation Fluency | ○ | Moderate Low | ◐ | ○ | ◐ | Individual | 2 Minutes | Yes | Yes |
| **Scholastic** | Phonics Inventory - Screener Version | ◐ | Moderate High | ● | ◐ | ~ | Individual Group | 10 Minutes | Computer Scored | No |
| **STAR** | Early Literacy | ◐ | Broad | ● | ◐ | ● | Individual Group | 10 Minutes | Computer Scored | Yes |
| | Reading | ◐ | Moderate High | ● | ● | ● | Individual Group | 10 Minutes | Computer Scored | Yes |
| **STEEP** | Oral Reading Fluency | ● | Moderate High | ● | ◐ | ~ | Individual | 1 Minute | Yes | Yes |

**Chart Legend:** ● Convincing Evidence | ◐ Partially Convincing Evidence | ○ Unconvincing Evidence | ~ No Evidence Submitted

# What if my screener has not been evaluated?

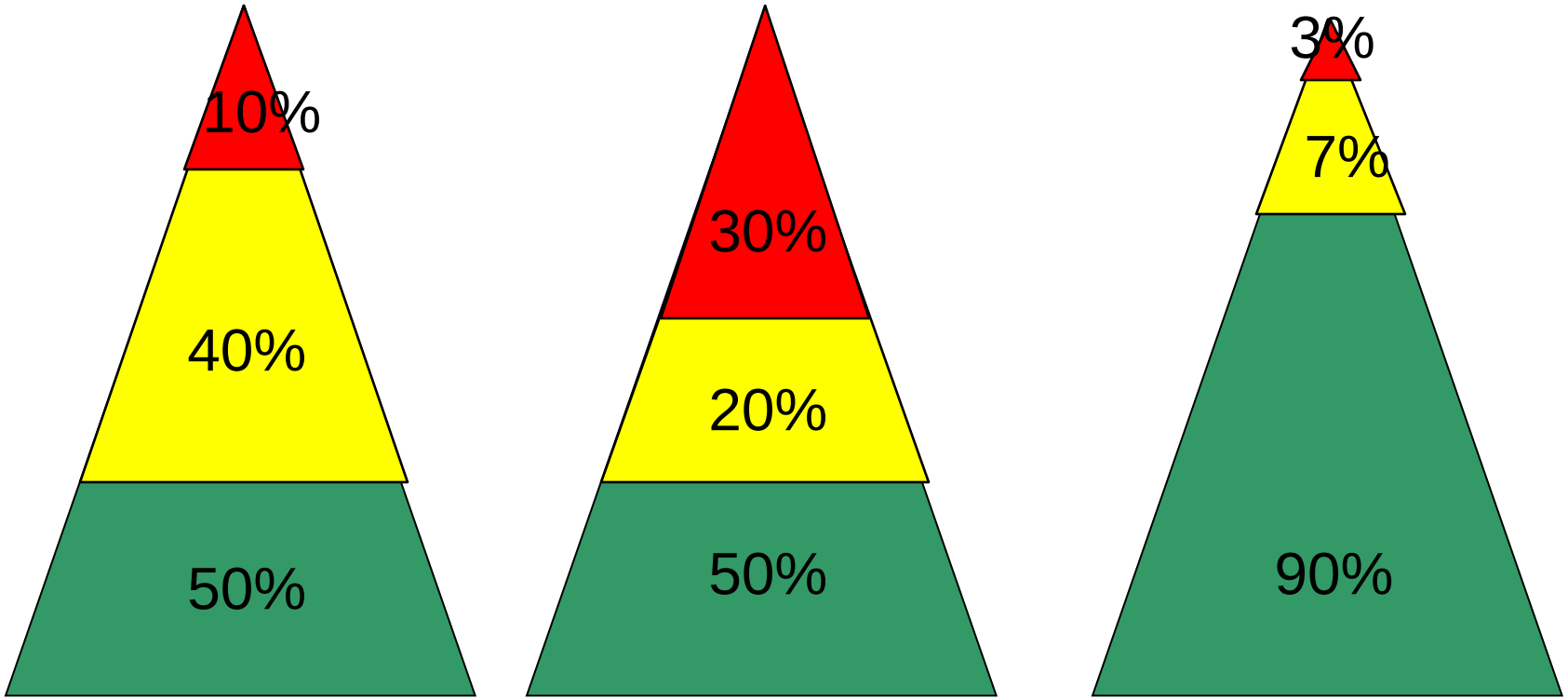
A thorough and critical self-evaluation needs to be conducted to determine if and to what extent the current screening instrument provides evidence of:



# Decision Making Using RTI Screening Assessment

- Once adequate reliability, validity, and classification/diagnostic accuracy conditions are satisfied
- RTI screening measures can be used to:
  - Evaluate the overall quality of the general education program
    - Number and percentage of students who are responding to the core curriculum program
  - Determine those students for whom the general education program is insufficient for ensuring adequate academic development thus placing them at risk for further academic difficulty

# Decision Making Using RTI Screening Assessment

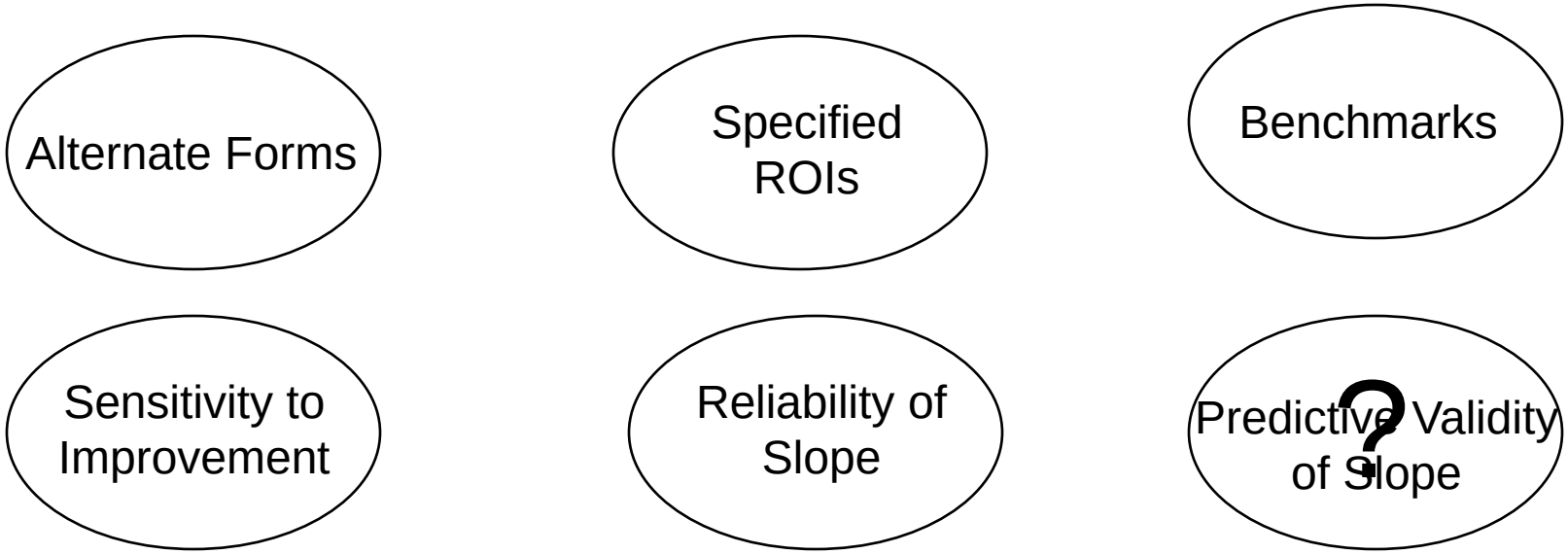


# Decision Making Using RTI Screening Assessment

- If reliability, validity, and classification/diagnostic accuracy conditions have not been satisfied
- RTI screening measures cannot and should not be used to:
  - Evaluate the overall quality of the general education program
  - Determine those student for whom the general education is insufficient for ensuring adequate academic development

# National Center on Response to Intervention

NCRTI defines absolute progress monitoring as “repeated measurement of academic performance to inform instruction of individual students in general and special education [which] is conducted at least monthly to (a) estimate rates of improvement, (b) identify students who are not demonstrating adequate progress, and/or (c) compare the efficacy of different forms of instruction to design more effective, individualized, instruction.”



# NCRTI Example

**General Outcome Measures** Mastery Measures

| TOOLS | AREA | Reliability of the Performance Level Score | Reliability of the Slope | Validity of the Performance Level Score | Predictive Validity of the Slope of Improvement | Alternate Forms | Sensitive to Student Improvement | End-of-Year Benchmarks | Rates of Improvement Specified | Norms Disaggregated for Diverse Populations | Disaggregated Reliability and Validity Data |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AIMSweb | Math | ● | ● | ● | ● | ◐ | ◐ | ● | ● | No | ● |
| | Oral Reading | ● | ● | ● | ● | ● | ◐ | ● | ● | No | ● |
| | Test of Early Literacy - Letter Naming Fluency | ● | ● | ● | ● | ● | ◐ | ● | ● | No | ● |
| | Test of Early Literacy - Letter Sound Fluency | ● | ● | ● | ● | ● | ◐ | ● | ● | No | ● |
| | Test of Early Literacy - Nonsense Word Fluency | ● | ● | ● | ● | ● | ◐ | ● | ● | No | ● |

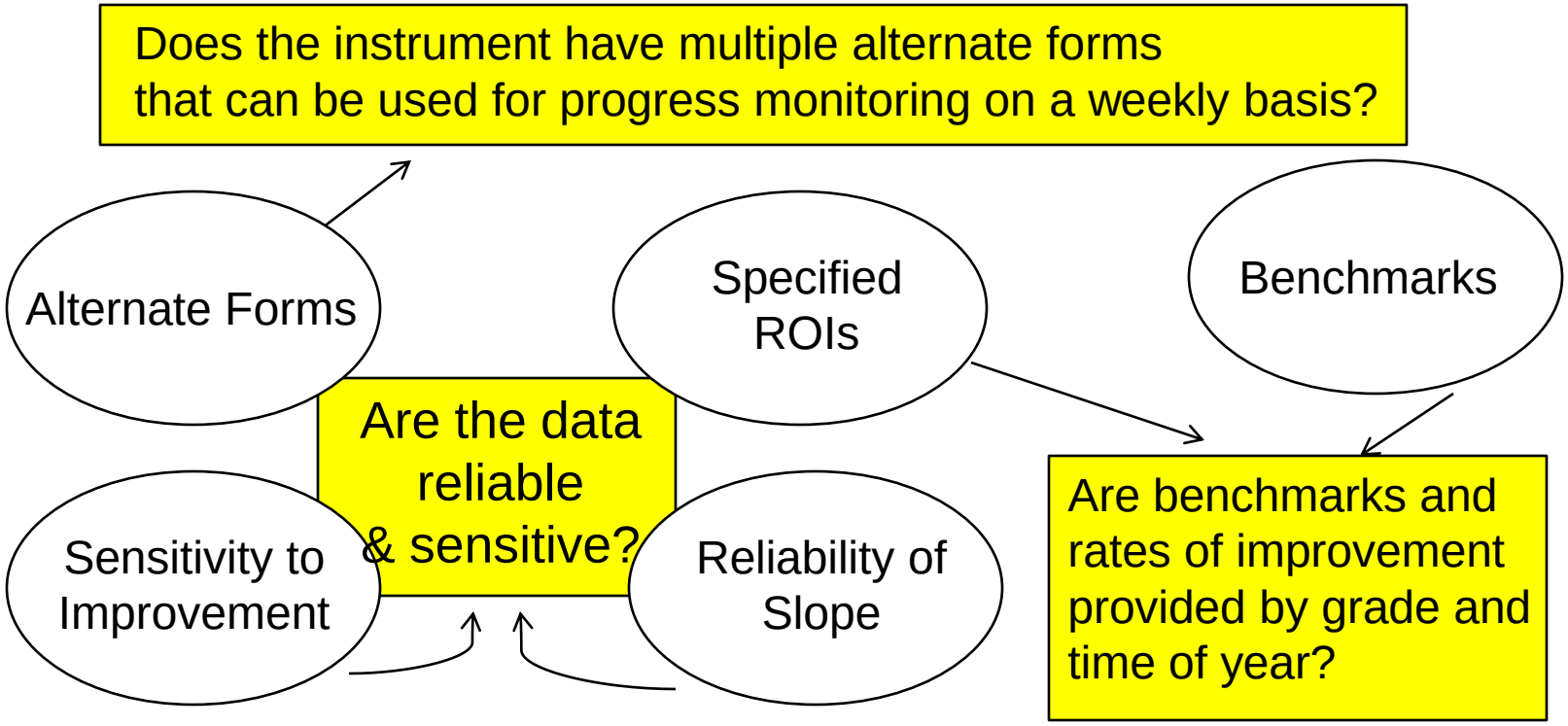
**Chart Legend:** ● Convincing Direct Evidence | ◐ Partially Convincing Evidence or Convincing Indirect Evidence | ○ Unconvincing Evidence | ..... No Evidence Submitted

# Decision Making Using RTI Progress Monitoring Formative Assessment

- Once adequate reliability, validity, and sensitivity, specified rates of improvement/growth, and benchmarks are demonstrated
- RTI formative progress monitoring can be used to:
  - Summarize a student's rate of growth and response to intervention over time, and
  - Determine whether or not the intervention has resulted in sufficient response

# What if My Formative Progress Monitoring Instrument Has Not Been Evaluated?

A thorough and critical self-evaluation needs to be conducted to determine if and to what extent the current formative progress monitoring instrument provides evidence of:



# Decision Making Using RTI Progress Monitoring Formative Assessment

- If reliability, validity, and sensitivity, specified rates of improvement/growth, and benchmarks are demonstrated
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  - Summarize a student's rate of growth and response to intervention over time, and
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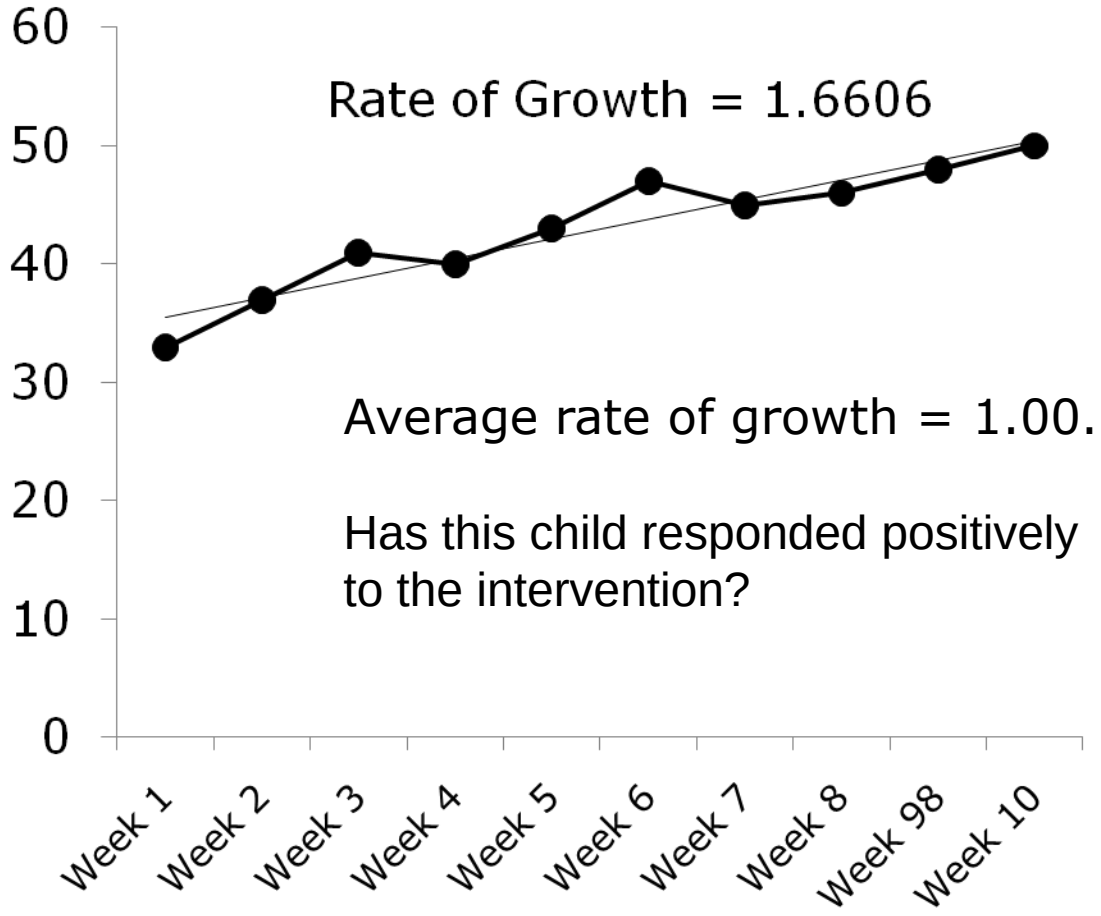
# Decision Making Using RTI Progress Monitoring Formative Assessment

- If your instrument has published rate of growth information
  - Find the average rate of growth expectation that corresponds to grade level of the progress monitoring material that you are using
  - Set a goal that exceed this rate of growth by a factor of 1.5



# Sample Slope Information

R-CBM

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# Decision Making Using RTI Progress Monitoring Formative Assessment

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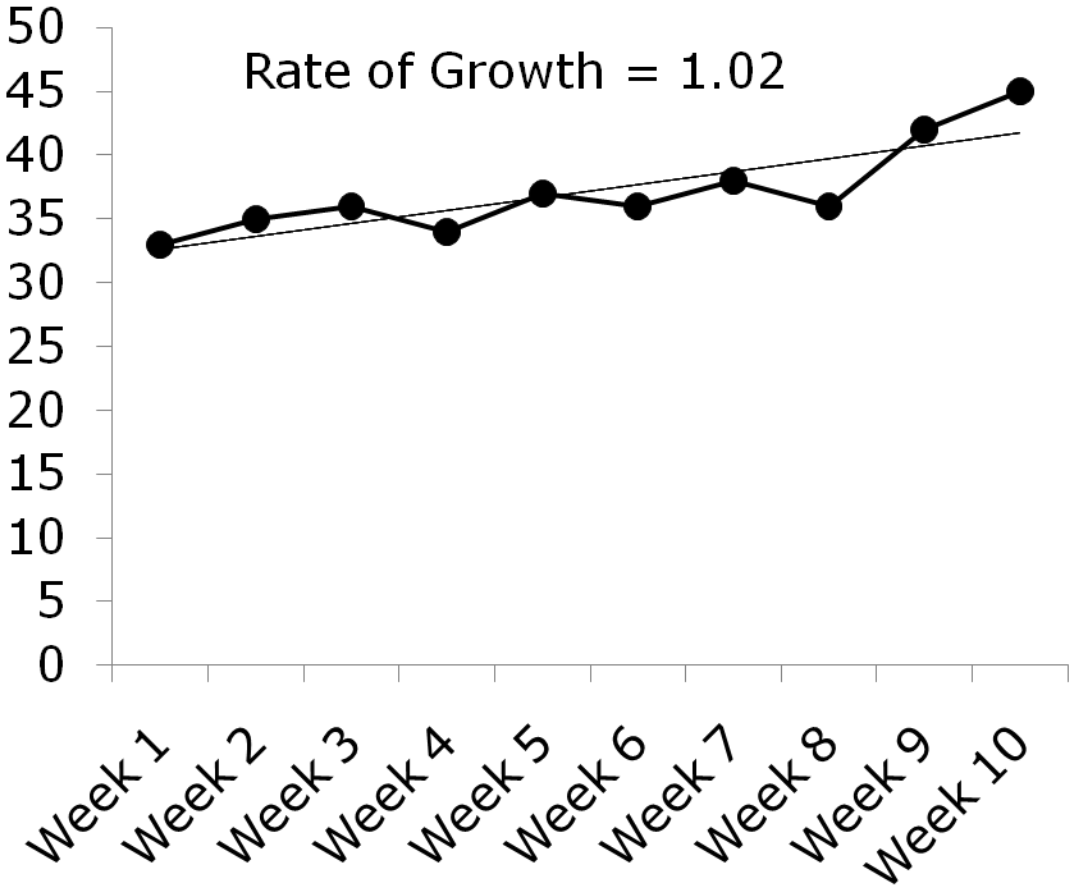
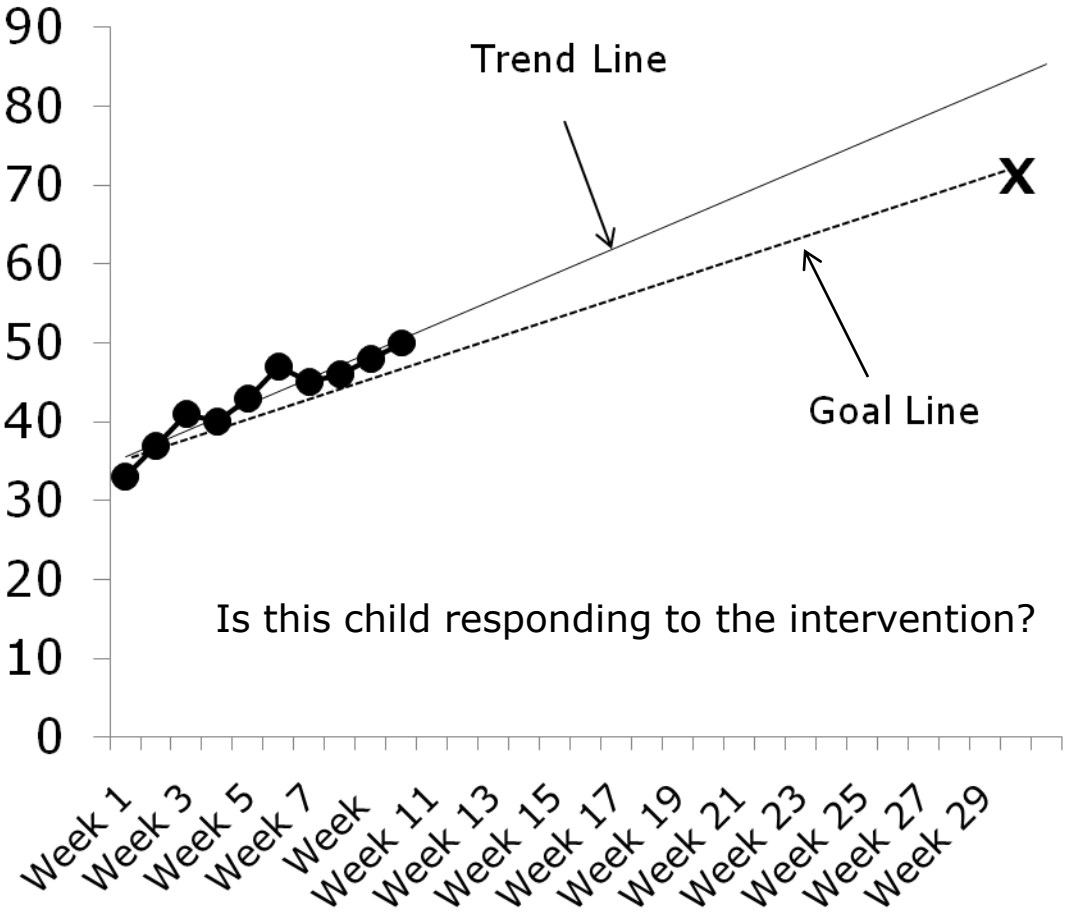


# Decision Making Using RTI Progress Monitoring Formative Assessment

- If your instrument has published rate of benchmark information
  - Find the benchmark that corresponds to a "long-term goal"
    - Long-term goals are typically represented by the spring benchmark for a given grade level
  - Place an "X" at the level that corresponds to the to the end of year long-term goal
  - Compare trend line to goal (aim) line to determine a student's response to intervention



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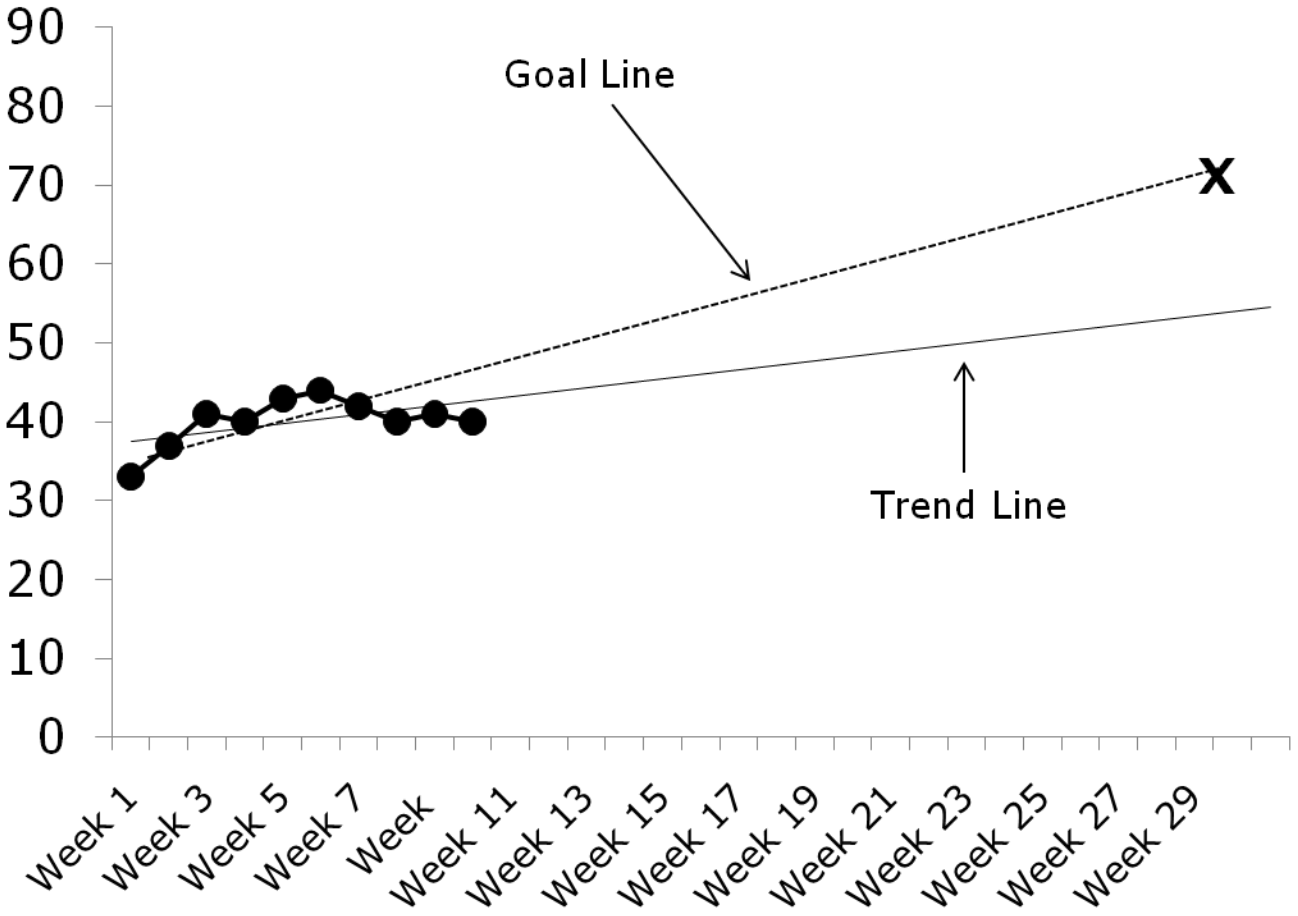
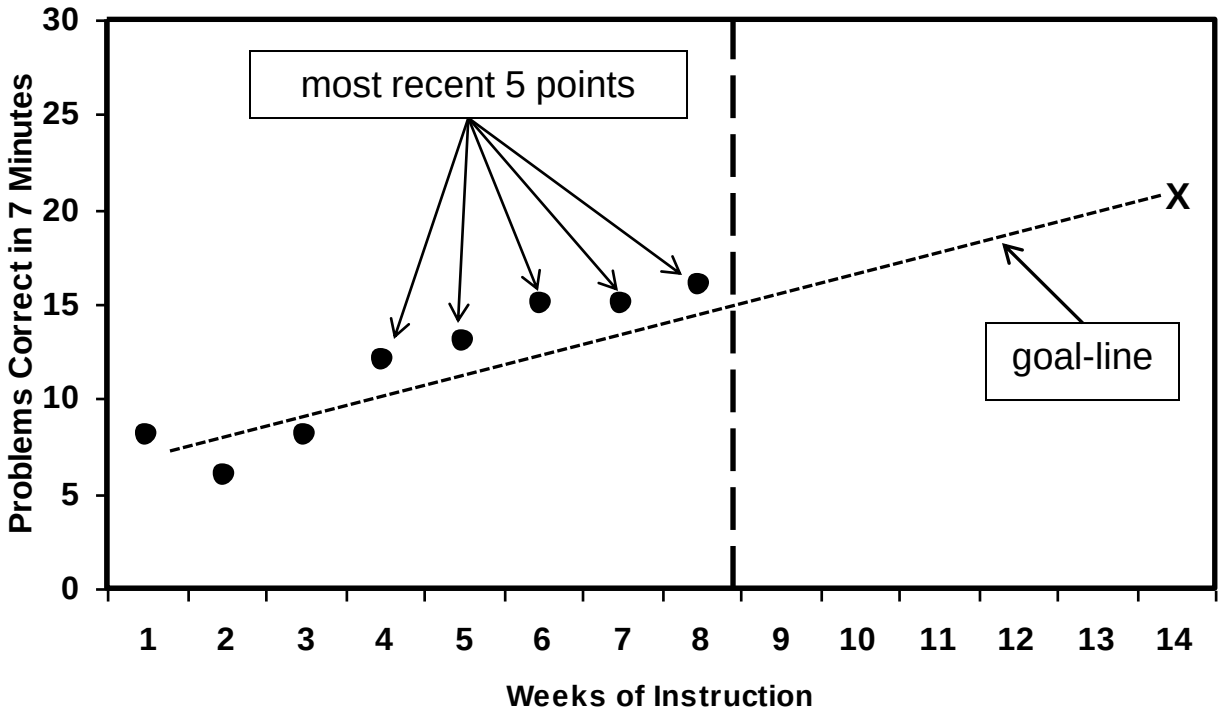


# Formative Decision Making Using RTI Progress Monitoring

- Decision rules for formative progress monitoring data:
  - Based on the five most recent consecutive scores
  - Based on student's trend-line

# Formative Decision Making Using RTI Progress Monitoring

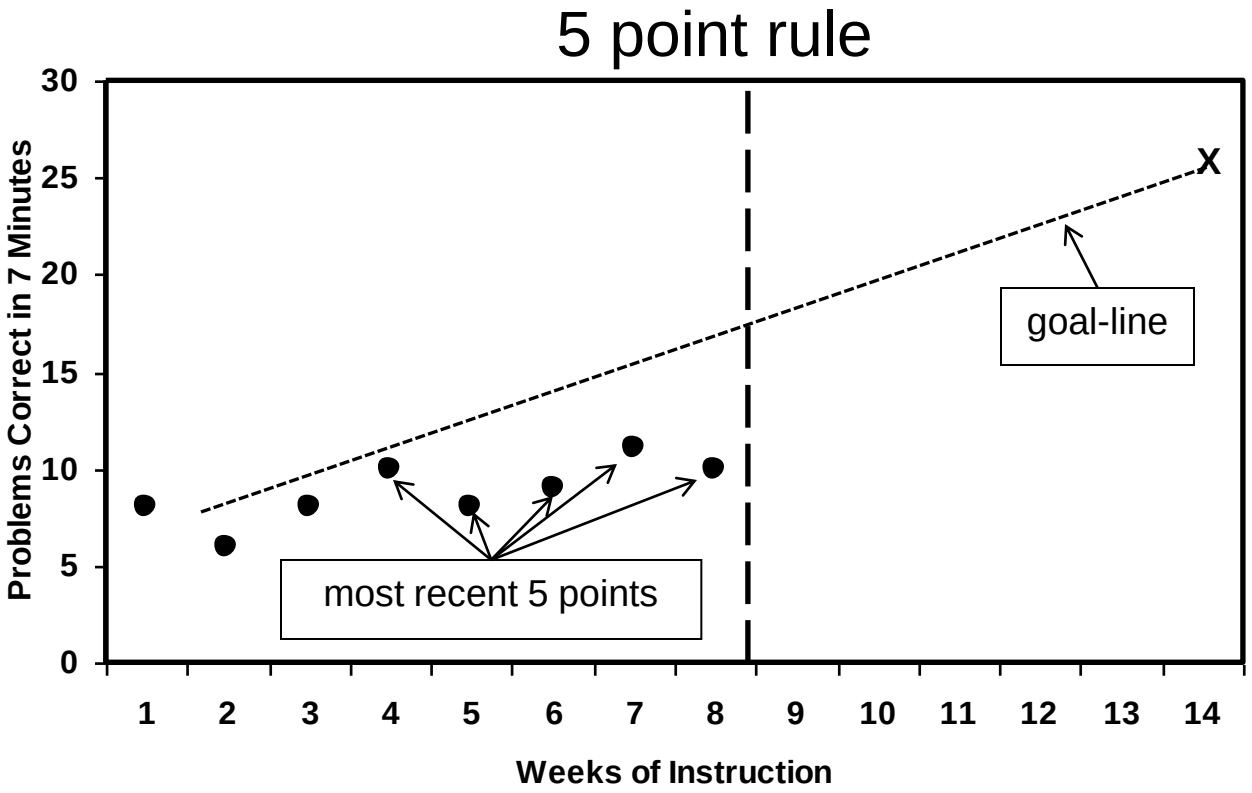
## 5 point rule



# Formative Decision Making Using RTI Progress Monitoring

- Based on the five most recent consecutive scores
  - If the four most recent consecutive scores are all **above** the goal-line, keep the current intervention and **increase** the goal

# Formative Decision Making Using RTI Progress Monitoring

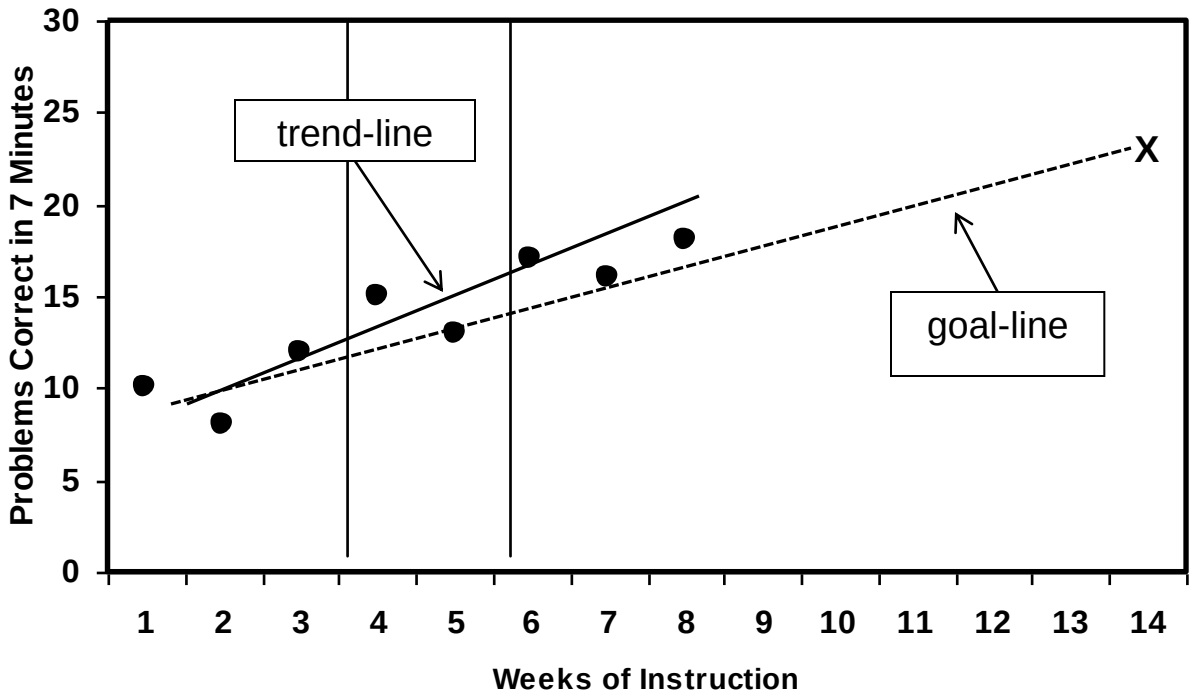


# Formative Decision Making Using RTI Progress Monitoring

- Based on the five most recent consecutive scores
  - If the five most recent consecutive scores are all **above** the goal-line, keep the current intervention and **increase** the goal
  - If the five most recent consecutive scores are all **below** the goal-line, keep the current goal and **modify** the instruction
  - When the five most recent consecutive scores are **neither** above or below the goal-line, **maintain** the current goal and instruction and continue to progress monitor

# Formative Decision Making Using RTI Progress Monitoring

## Analysis based on trend



# Formative Decision Making Using RTI Progress Monitoring

- When the trend-line is **steeper** (i.e., accelerating) relative to the goal-line, keep the current intervention and **increase** the goal
- When trend-line is **lower** (i.e., decelerating) relative to the goal-line, keep the current goal and **modify** the instruction
- When the trend-line is **equal** (i.e., parallel) to the goal-line, **maintain** current goal and instruction and continue to progress monitor

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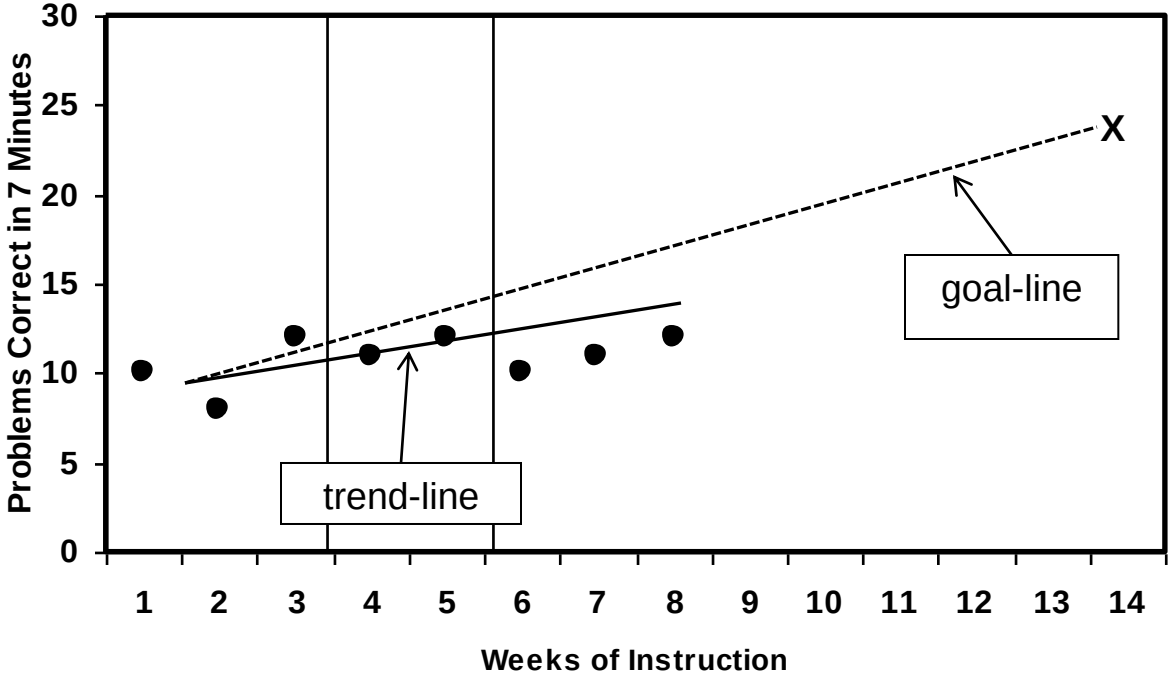

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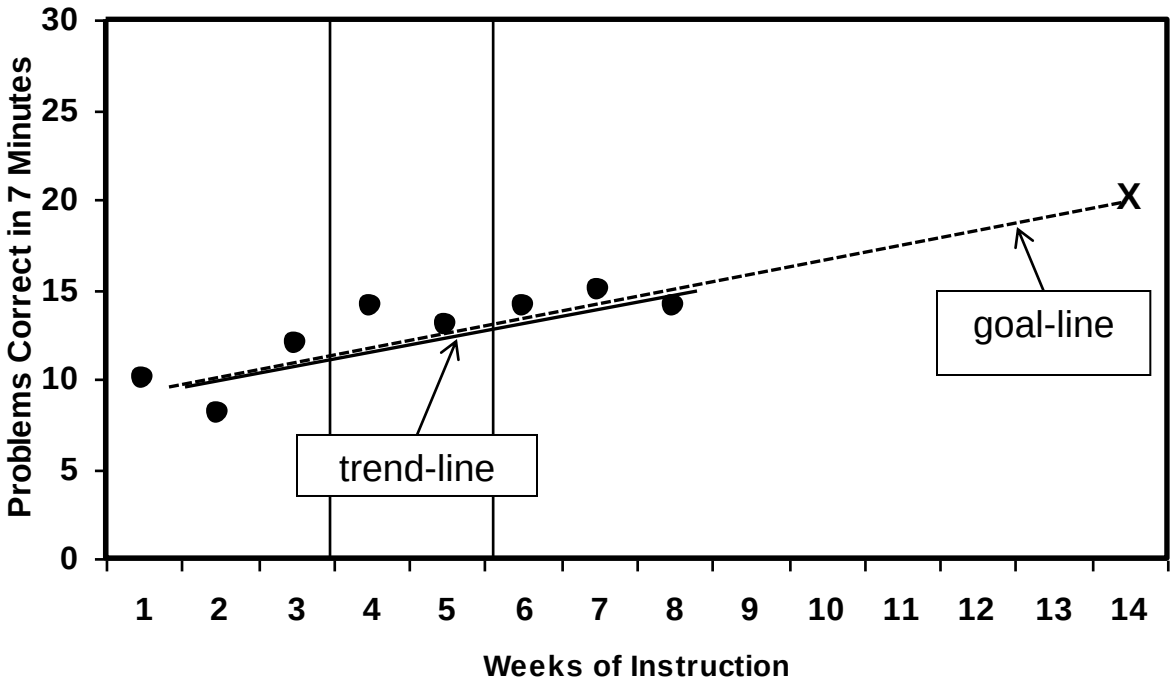


# Formative Decision Making Using RTI Progress Monitoring

- When the trend-line is **steeper** (i.e., accelerating) relative to the goal-line, keep the current intervention and **increase** the goal
- When trend-line is **lower** (i.e., decelerating) relative to the goal-line, keep the current goal and **modify** the instruction
- When the trend-line is **equal** (i.e., parallel) to the goal-line, **maintain** current goal and instruction and continue to progress monitor

# Screening Assessment Summary

**When psychometric conditions are met screening measures can be used to:**

- Reliably screen all students across a variety of academic skill domains
- Identify students who are at risk
- Evaluate the overall effectiveness of the core curriculum

**When psychometric conditions are not met, screening measures run the risk of:**

- Providing inconsistent and unreliable estimates of student performance
- Providing invalid assessments of students risk status
- Providing inaccurate assessments of the core curriculum's overall effectiveness

# Formative Progress Monitoring Summary

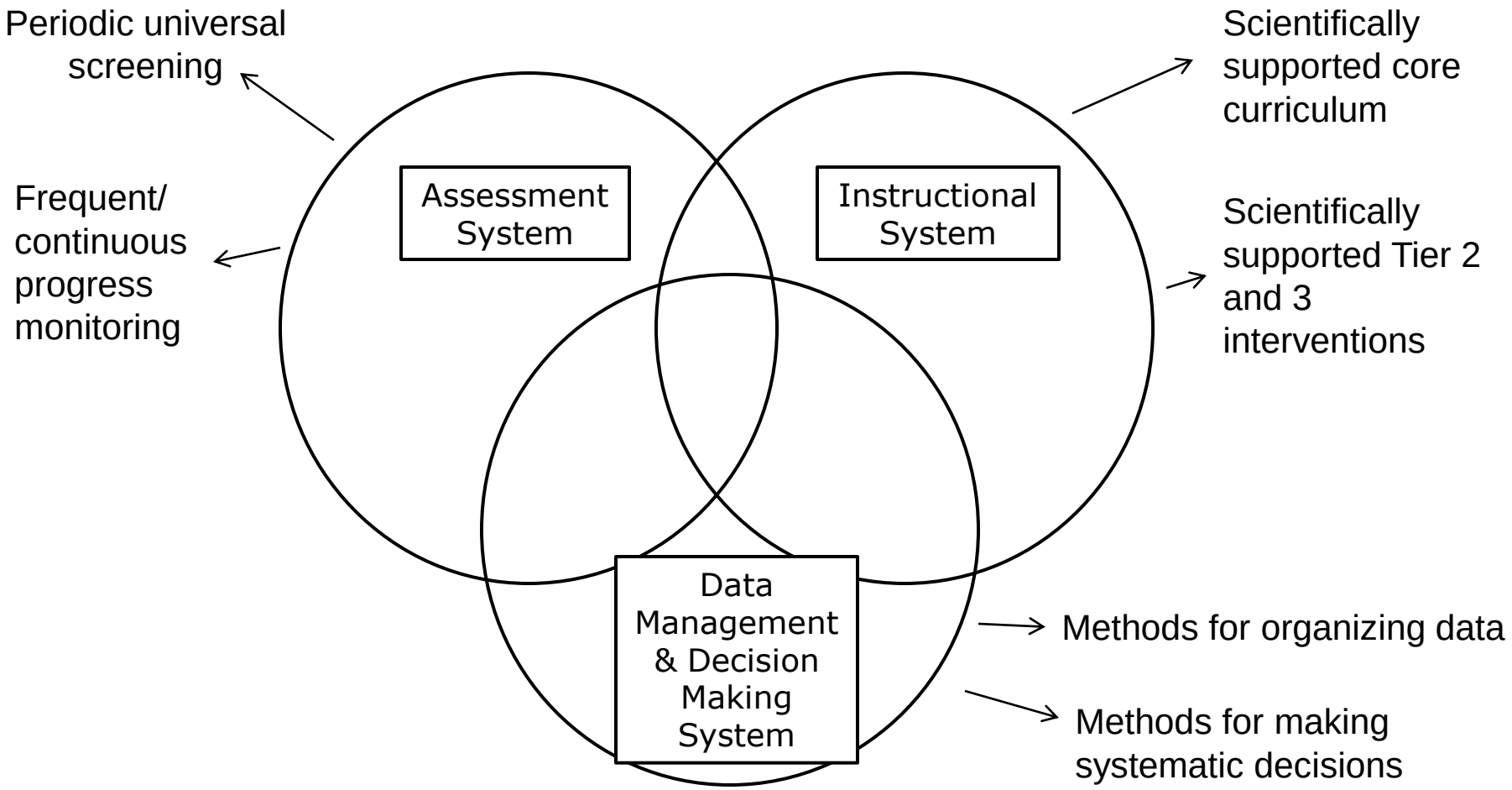
**When psychometric conditions are met, formative progress monitoring measures can be used to:**

- Provide sensitive estimates of students' growth over time
- Reliably summarize weekly student performance in response to intervention
- Provide rates of growth and benchmarks to be used in goal setting
- Formatively determine when instruction is having its desired effect and when instruction needs to be altered

**When psychometric conditions are not met, formative progress monitoring measures run the risk of:**

- Being unable to reliably summarize weekly student performance
- Being unable to provide accurate rates of growth
- Being unable to be validly used in instructional decision making

# When is in place …. A good RTI system will have ….




# Thank You!