Data Based Decision Making

Overview

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Data-Based Decision Making

4 Purposes of Assessment

Screening
- Identify Concern
- Identify Level of Concern

Diagnostic
- Identify Skill Deficits
- What Needs to be Taught?

Progress Monitoring
- Is it Working?
- Ensure Gap is Closing at Desired Rate

Outcome
- Predicted by Screening and Progress Monitoring
Consider…

How Would you Describe an Effective System?

How Well Is Your System Working – District?
How Well Is Your System Working in the Long-Run?

Median = 19%
What Would Your Data Trend Look Like?

SCHOOL-WIDE Approach Overview

1. Arrange system to meet the needs of the full range of students (i.e. benchmark, strategic, intensive)

2. Universally screen and place students according to instructional needs in reading, writing, math and behavior

3. Use differentiated instruction to meet the needs of instructional groups

4. Use research-based/research validated interventions and instructional practices

5. Conduct frequent progress monitoring to ensure adequate growth

6. Provide on-going professional development to support system-wide structures of instruction
7. Use data to evaluate effectiveness of the school-wide system

8. Use problem-solving teams to identify and address unhealthy systems

9. Develop intervention plans for students whose needs cannot be adequately addressed within the system (e.g., require intervention/instruction not available as part of the overall system)

10. Uses information relevant to a student’s response to intervention (progress monitoring data, review of intervention duration, intensity, and fidelity) as part of process for determining eligibility for special education

SCHOOL-WIDE Approach Overview cont.

**RTI Framework**

**Problem Solving Systems and Individuals**

- **Universal Screening** (step 1)
  - What Level of instructional support do students need to be successful?
  - BENCHMARK Support
    - What support is provided?
  - STRATEGIC Support
    - What support is provided?
  - INTENSIVE Support
    - What support is provided?

- **Progress Monitoring and Reviewing Outcomes** (step 2)
  - Is the BENCHMARK support system effective? (e.g. 80% making adequate progress)
  - Is the STRATEGIC support system effective? (e.g. high % of students making adequate progress)
  - Is the INTENSIVE support system effective? (e.g. high % of students making adequate progress)

- **Complete ICEL RIOT Evaluation** For Learner Including Acute Intervention and progress monitoring plan (step 3)
  - Are there students that have not responded to systems level support and require specially designed instruction?

- **SPED Eligibility Determination** (step 4)
  - Are there students that have not demonstrated adequate progress despite extensive intervention that may require long-term supports and individualized instruction?

**Wayne Callender**
Teacher’s perceptions of barriers to greater use of data include:

- lack of time to analyze data
- systems are difficult to use
- data in the system are not useful
- district policies around curriculum coverage or pacing prohibit teachers from going back to reteach content that the students have not yet mastered. U.S. Department of Education (2009)
Outcomes Driven Model for RTI Decisions

<table>
<thead>
<tr>
<th>ODM Step</th>
<th>Decisions/Questions</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify Need</td>
<td>Are there students who may need support? How many? Which students?</td>
<td>Screening data (Benchmark data)</td>
</tr>
<tr>
<td>2. Validate Need</td>
<td>Are we confident that the identified students need support?</td>
<td>Diagnostic assessment data and additional information as needed</td>
</tr>
<tr>
<td>3. Plan and Implement Support</td>
<td>What level of support for which students? How to group students? What goals, specific skills, curriculum/program, instructional strategies?</td>
<td>Diagnostic assessment data and additional information as needed</td>
</tr>
<tr>
<td>4. Evaluate and Modify Support</td>
<td>Is the support effective for individual students?</td>
<td>Progress Monitoring data and formative evaluation</td>
</tr>
<tr>
<td>5. Evaluate Outcomes</td>
<td>As a school/district: How effective is our core (Tier I) support? How effective is our supplemental (Tier II) support? How effective is our intensive intervention (Tier III) support?</td>
<td>Outcome Assessment information (Benchmark data)</td>
</tr>
</tbody>
</table>

Matching Educational Questions to Purposes of Assessment

<table>
<thead>
<tr>
<th>Purpose of Assessment</th>
<th>Educational Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
<td>What skills or weaknesses does a student have in components of reading?</td>
</tr>
<tr>
<td>Progress Monitoring</td>
<td>What percent of students in 2nd grade met grade level proficiency?</td>
</tr>
<tr>
<td>Diagnostic</td>
<td>Is Matilda responding to our intensive intervention?</td>
</tr>
<tr>
<td>Outcome</td>
<td>Are there any students in our kindergarten that need additional support to reach end-of-year reports?</td>
</tr>
</tbody>
</table>
Essential Ideas of a Systems Focused Assessment Plan

• Screening is used to identify level of support students require
• Informal diagnostic testing is used to identify instructional focus or placement
• Progress monitoring (emphasis on in-program assessments) is used to monitor learning/inform instruction
• Assessments are used to monitor systems and students – are systems highly effective for students?

Turn to a Partner…

• What are the four purposes of Assessment?

• Discuss with your partner how your school currently evaluates the effectiveness of student support systems
Purpose of Assessment

Screening
Diagnostic
Progress Monitoring

Method of Assessment

CBM/Group Testing
Functional Assessment
CBM/In-program Testing

Use Screening Assessment to Inform the Level of Support
Success Zone Probabilities

**GREEN**
High probability of grade-level or above success on the state assessment

**YELLOW**
Questionable probability of grade-level or above success on the state assessment

**RED**
Low probability of grade-level or above success on the state assessment

What Level of Support Required?

**Benchmark**
- Generally can meet standards
- Average Learner
- Can Adapt and Adjust to teacher’s style

**Strategic:**
- Gaps in skill and knowledge
- 1-2 years behind (40th to 20th percentile)
- Struggles academically - may appear unmotivated
- Can read, but often has specific skill deficits (i.e., comp.)
- May not complete homework

**Intensive:**
- Tests below the 20th percentile
- Frustrated and unmotivated
- Reading skills are limited - more than 2 years below
- Typically require a comprehensive intervention approach
- Cannot handle content area work
CBM/DIBELS is Useful in Making and Confirming These Decisions

- It is time efficient, accurate, and provides reliable and valid information.
- Provides information relevant to the four purposes of assessment.
- It links to intervention goals for students with direct service needs.
- It links to frequent progress monitoring for students with direct service needs.

Possible Source for CBM Materials
Introducing easyCBM

**easyCBM is a free screening and progress monitoring system**

- Provides math assessments based on the NCTM Focal Point Standards in Mathematics
- Provides a variety of reading assessments based on the National Reading Panel’s recommendations for literacy assessments
- Reading measures: reading comprehension, passage reading fluency, word reading fluency, letter names, letter sounds, phoneme segmenting
What the Research Says About Fluency

Fluent Readers:
• Focus their attention on understanding the text
• Synchronize skills of decoding, vocabulary, and comprehension
• Read with ease and accuracy
• Interpret text and make connections between the ideas in the text

Nonfluent Readers:
• Focus attention on decoding
• Alter attention to accessing the meaning of individual words
• Make frequent word reading errors
• Have few cognitive resources left to comprehend

EasyCBM Vocabulary Assessment

Vocabulary 6_Fall

Student Name: ___________________________ Date: ________________

1. Sean had to boost his little brother up into his high chair. boost means:
   A. cart    B. throw    C. lift up

2. After years of avoiding the dentist and not brushing properly, Samuel's teeth began to decay. decay means:
   A. whiten    B. grow    C. rot

3. After Ursula failed the quiz, she knew it was time to hit the books before the final test. Here hit the books means:
   A. punch her books    B. study harder    C. buy new books

4. The squirrel slumbered in her den during the long winter. She awoke in the spring to fresh seeds all around. slumbered means:
   A. snore    B. sleep    C. rest
EasyCBM Reading
Comprehension Assessment

Student Copy

Form 5-6

Directions: Please read the story and then answer the questions that come after it.

The Dare

Brad slammed on his brakes and admired the black rubber streak his bike tire left on the driveway. He could already hear his dad’s lecture about leaving skid marks on the smooth grey concrete. Dark clouds were forming over his head, and Brad thought that maybe it would rain and wash away the mark before his dad saw it.

Brad wheeled his bike along the side of the house and stopped at the door to the garage. Leaving his bike there, he grabbed his backpack from the handlebars and went into the garage. Brad pulled the crumpled piece of notebook paper from the front pocket of his jeans and studied the list carefully: rope, flashlight, duct tape, screwdriver, wire. Brad began to gather the items and stash them in his backpack. His heart started to beat faster as he thought about the task ahead of him. “No sweat,” he told himself. “It will be a piece of cake.”

Next, Brad quietly opened the door leading into the laundry room of the house. He peeked around the corner to see if his mom was in view. Not seeing her, he crept into the kitchen and opened the snack cupboard. He grabbed a couple of

EasyCBM Comprehension

1. How long was Brad supposed to stay in the Potter Mansion by himself?
   A. At least three hours.
   B. As long as he could.
   C. Most of the night.

2. What rule did Brad break when he went out at night?
   A. He took food and other supplies from the house without telling his parents.
   B. He wasn’t supposed to go to the Potter Mansion because it was dangerous.
   C. The three miles to the Potter Mansion was farther than he was allowed to ride.

3. What was the main reason Brad decided to spend time alone in the Potter Mansion at night?
   A. He wanted to be in a club with a group of middle school boys.
   B. He wanted to show that he wasn’t afraid of haunted houses.
   C. He wanted to show that he was braver than the other boys.
Example EasyCBM Math – 8th

Math Algebra 8_6

1. \[5x + 6 = y\]
   \[x = 5\]
   \[y = \_\_\_\_\_\_\_\_\_\_\_\_\]  

   A. 35
   B. 25
   C. 31

2.  
   \[\text{Where do the lines intersect?}\]

   A. (-2, -1)
   B. (2, 1)
   C. (-2, 1)

DATA BASED DECISION MAKING

Using Assessment for Instructional Decisions

Screening (revisit)

Diagnostic

Progress Monitor
The Teacher’s Perspective of Diagnostic Testing

Diagnostic Testing...

Is there a difference in the instruction for children struggling or at-risk for different reasons?

“...thus far, no conclusive evidence exists that the particular cause (genetic or environment) of a child’s delay in either of these domains is relevant to the type of instruction he or she will require in learning to read”

National Reading Panel Report, based on 115,000 reading research studies
Cognitive Processing and Interventions: ATI or Matching Strengths Effects

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

**NOTHING FOR KIDS**

**FEEL GOOD ASSESSMENT**

Source: Daniel J. Reschly

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**Two Types of Diagnostic Assessments**

1. Generic Diagnostic Assessments - to identify missing skills for targeted instruction. **Great for Strategic level students**

2. Placement Tests – accompany specific intervention programs; used to inform placement within program. **Great for Intensive level students**
Consider...

What type of errors do Intensive level students most often make?

What type of errors do Strategic level students make?

How well does your system differentiate the needs of Strategic and Intensive level students?

Establish Diagnostic Protocols:

Use Functional Academic Assessments and Placement Tests

1. FAAs Are...
   - Informal
   - Brief
   - Used to evaluate academic skills

2. FAAs Especially useful with strategic level students

3. Intensive Students are given Program Specific Placement Tests

4. Often do not require parental consent – examine purpose:
Phonics Screener

Generic Phonics Screener

Student Name: __________________________
Grade: __________________________

1. Letter Names
I
"Tell me the names of these letters."

2. Letter Sounds
"Tell me the sound that each letter makes."

3. "Read these words the best you can. The top row are words you may recognize. The bottom row are not real words."

4. A. fog men gum fit lap
   B. shop them which chill hatch

5. phonics survey

CORE Phonics Surveys

Skill Assessed: Phonics
Grade Level: K-0
Language: English
Grouping: Individual

WHAT The CORE Phonics Survey and the CORE Spanish Phonics Survey assess the phonics and phonics-related skills that have a high rate of application in beginning reading. Each survey presents a number of lists of letters and words for the student to identify or decode. Pseudowords, or made-up words, are included since the student must use decoding skills to correctly pronounce these words and cannot have memorized them. These assessments are best used to plan instruction for students in the primary grades and to develop instructional groups. They may be administered every four to six weeks.

WHY A student’s ability to use knowledge of sound/letter
Skill Specific Assessment

G. Multisyllabic words

Administer this item if the student is able to read most of the single-syllable real and pseudo-words in the previous items. Say to the student: Now I want you to read down the first column of words. Each of the real words in this column has two syllables. Point to the first column. If the student can read at least 3 out of 8 of the words in this column, say: Now I want you to read some made-up words. Do not try to make them sound like real words. Point to the second column. Repeat the same procedure for the third column. NOTE: The following made-up words can be pronounced in two ways: sunop (su-nop or sun-op); wopam (wo-pam or wop- am); potife (po-tile or pot-tile); zuride (zu-ride or zur-ide); and zubo (zu-bo or zub-o).

<table>
<thead>
<tr>
<th></th>
<th>Closed-closed</th>
<th>kickap</th>
<th>pugnad</th>
<th>quilbrap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Closed silent e</td>
<td>compete</td>
<td>silinate</td>
<td>surbkine</td>
</tr>
<tr>
<td></td>
<td>Open or closed</td>
<td>depend</td>
<td>sunop</td>
<td>wopam</td>
</tr>
<tr>
<td></td>
<td>Open or closed</td>
<td>zero</td>
<td>zubo</td>
<td>yodu</td>
</tr>
<tr>
<td></td>
<td>Silent e</td>
<td>locate</td>
<td>potife</td>
<td>zuride</td>
</tr>
<tr>
<td></td>
<td>Consonant - ie</td>
<td>stable</td>
<td>grickle</td>
<td>morkle</td>
</tr>
<tr>
<td></td>
<td>R-controlled</td>
<td>further</td>
<td>triper</td>
<td>sharbid</td>
</tr>
<tr>
<td></td>
<td>Vowel team</td>
<td>outlaw</td>
<td>doipnoe</td>
<td>loymaud</td>
</tr>
</tbody>
</table>

Functional Academic Assessments

Examples:

- Houghton Mifflin Phonics Screener
- Assessing Reading: Multiple Measures
- Ekwall/Shanker Reading inventory
- DIBELS/CBM Error Analysis
- Curriculum-Based Evaluation (CBE)
  - Reading
  - Writing
  - Math
- Designing Effective Mathematics Instruction, Third Ed. (Stein, Silbert, Carnine)
- Program Assessments (placement tests)
Program Specific Diagnostic Placement Test

**Corrective Mathematics Comprehensive Placement Test**

Section II Parts E and F

<table>
<thead>
<tr>
<th>Name</th>
<th>Class</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>Tester</td>
<td></td>
</tr>
</tbody>
</table>

**Part E**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Draw the picture for the fraction.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>( \frac{4}{7} + \frac{2}{7} = )</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>( \frac{10}{8} - \frac{2}{8} = )</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>( \frac{2}{4} \times 5 = )</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>( \frac{2}{7} \times 4 = )</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>( \frac{3}{4} - \frac{1}{4} = )</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>( 4 - \frac{3}{2} = )</td>
<td></td>
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</tbody>
</table>

**Part F**

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<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>( 2\frac{1}{2} + \frac{1}{3} = )</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Reduce this fraction</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Write this fraction as a mixed number.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>( \frac{3}{8} + \frac{1}{2} = )</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>( \frac{4}{15} \times \frac{3}{15} = )</td>
<td></td>
</tr>
</tbody>
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### Purpose of Assessment vs. Method of Assessment

- **Screening (revisit)** → **Benchmark Testing**
- **Diagnostic** → **Functional Assessment**
- **Progress Monitoring** → **CBM & In-program Testing**
Progress Monitoring Protocols:

Two Types of Progress Monitoring:

<table>
<thead>
<tr>
<th>Type of Assessment</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-Program Assessment</td>
<td>Are students learning the content?</td>
</tr>
<tr>
<td>CBM/DIBELS</td>
<td>Are they generalizing?</td>
</tr>
</tbody>
</table>
In-Program Progress Monitoring

- Accompany most programs
- Provide critical information about in-program learning
- Administered regularly
- Identifies which students require more instruction
- Predictors of later skill development/generalization
CBM for Academics (out-of-program)
Progress Monitoring Examples:

<table>
<thead>
<tr>
<th>Area</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>EasyCBM: Passage Reading</td>
</tr>
<tr>
<td>Reading Comprehension</td>
<td>CBM: Multiple Choice Reading, Maze, Cloze</td>
</tr>
<tr>
<td>Math application,</td>
<td>CBM (computation, concepts, number sense) Easy CBM (Number</td>
</tr>
<tr>
<td>Operations,</td>
<td>Algebra, Geometry</td>
</tr>
<tr>
<td>Written Expression</td>
<td>CBM (TWW, CWS, WSC)</td>
</tr>
</tbody>
</table>

Out-of-Program Progress Monitoring

The aimline connects where you are to where you want to get to, and shows the course to follow to get there.
## Schedule for Progress Monitoring

<table>
<thead>
<tr>
<th>Type of Monitoring</th>
<th>Benchmark</th>
<th>Strategic</th>
<th>Intensive</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-Program or Instructional Monitoring</td>
<td>Regular Intervals, End of Unit or Chapter test, Quizzes, Standards-Based testing</td>
<td>On-going to assess obtainment of targeted skills</td>
<td>As indicated by intervention program (e.g., mastery tests)</td>
</tr>
<tr>
<td>Out-of-Program (CBM, etc.)</td>
<td>None</td>
<td>Once per Month</td>
<td>Twice per Month (minimum once per month)</td>
</tr>
</tbody>
</table>

### Monitor Instructional Groups

**Group A**
- Student weekly growth: .5 cwpm
- Instructional Group Average weekly growth: .5 cwpm

**Group B**
- Student weekly growth: .5 cwpm
- Instructional Group Average weekly growth: 1.75 cwpm

Fien, 2007
Useful Format to Guide Data Meetings

Weekly School-Wide Tracking System
Effective Systems Must be the Priority

Celebrate Success, but hold schools/grades accountable

Wayne Callender
Purpose of the Data-based Action Planning GLT Meeting

– Review Grade Level Data
  • Summary of Effectiveness Report - Semester
  • Progress Monitoring – On-going
  • Lesson Progress Reports – On-going

– Identify systems and students that need support
  • Benchmark, Strategic, and/or Intensive – Semester
  • Progress Monitoring – On-going

– Plan Instructional Support
  • Healthy System Checklist – Semester/On-going
  • Alterable Variables – Semester/On-going
Example GLT Agenda

• School A
  – Review Progress Monitoring Data, In-program assessments and Lesson Progress
  – Identify Instructional Modifications for Groups
  – Identify Instructional Modifications for Individuals
  – Professional Development: i.e., Review and practice Learning Strategies, develop learning centers

• School B
  – Review Progress Monitoring Data
  – Review Action Plan
  – Problem Solve for a struggling student after reviewing group progress

Example MTSS Agenda
Topics

– Are the grade level interventions effective? (Review Data for instructional groups)
– Problem Solving a grade level system (e.g., how to increase progress of 6th grade intensive students)
– Discuss plans for interventions professional development
Contact Information

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