Data Analysis and the Assessment Loop

PreK-3 Training Module
PreK-3 Data Uses

Identify Strengths and Support Areas
Establish Goals
Identify Professional Development Needs
Inform Instruction

Plan and adjust instruction for incoming students

Adjust instruction and practices to strengthen alignment for future students

Birth-PreK Data

Kindergarten Data

1st Grade Data

2nd Grade Data

3rd Grade & Beyond

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The Big Ideas
PreK-3 Data and Information Assessment Loop

The big ideas

• Official document of the agreements for your PreK-3 system regarding:
  • The types of assessments that will be used
  • What information will be analyzed
  • How the information and data will be shared throughout all levels of the PreK-3 system
## Data and Assessment Loop Process

<table>
<thead>
<tr>
<th>Part 1</th>
<th>Part 2</th>
<th>Part 3</th>
<th>Part 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>List</td>
<td>Analyze and Prioritize</td>
<td>Make Agreements</td>
<td>Sharing Opportunities</td>
</tr>
</tbody>
</table>

- **List all of the assessments currently in use PreK-3 in your system.**
- **Identify the types of data available from those assessments.**

**Part 2: Analyze and Prioritize**
- Do these assessments:
  - Enable you to identify strengths, needs, and gaps?
  - Anything missing?
  - Duplications?
  - Aligned to goals?
  - Data available for each level of your system?
  - Systematic process for reviewing data?

**Part 3: Make Agreements**
- Make agreements regarding what assessment and data you will use in your PreK-3 system.
  - Record your decisions.

**Part 4: Sharing Opportunities**
- Determine which data sharing opportunities will be utilized in your PreK-3 system.
  - Record your decisions.
## Strength Based Inventory

### P-3 Strength Based Alignment Process

In the space provided below:

1. List the assessments you currently utilize to identify student strengths and challenges for the goals in this specific focus area.
2. For each item you list:
   - a. Identify how much instructional time you allocate per day
   - b. Determine if the instruction is direct or embedded

<table>
<thead>
<tr>
<th>Assessments Utilized</th>
<th>Frequency</th>
<th>Authentic</th>
<th>On-demand</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the space provided below:

1. List the ways assessment data and information is shared
2. For each item you list:
   - a. Identify how frequently the activity occurs
   - b. List who is involved in the sharing activity

<table>
<thead>
<tr>
<th>Assessment Data and Information Sharing Activities</th>
<th>Frequency</th>
<th>Who Is Involved?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PreK-3 System Data Analysis

- District
- School
- Grade
- Class
- Group
- Student

System Level

Individual Level
## Assessment Types and Purposes

- **Different types of assessment**

<table>
<thead>
<tr>
<th>State Level</th>
<th>Universal Screener</th>
<th>Progress Monitoring</th>
<th>Diagnostic</th>
<th>Curriculum Based</th>
<th>Observation and data collection</th>
</tr>
</thead>
</table>

- **Assessment of and for learning**

<table>
<thead>
<tr>
<th>Assessment of learning</th>
<th>Assessment for learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summative and formative assessments</td>
<td>“Early warning” formative assessments (progress monitoring)</td>
</tr>
<tr>
<td>• Screening tools</td>
<td>• Clear vision and learning targets</td>
</tr>
<tr>
<td>• Progress monitoring</td>
<td>• Observation</td>
</tr>
<tr>
<td>• State assessments</td>
<td>• Descriptive feedback</td>
</tr>
<tr>
<td>• Standards based assessments used for report cards</td>
<td>• Communication</td>
</tr>
<tr>
<td></td>
<td>• Direct and immediate impact on learning</td>
</tr>
</tbody>
</table>

- **Authentic and on-demand assessments**
**Different Types of Assessment**

<table>
<thead>
<tr>
<th>Assessment Type</th>
<th>Frequency</th>
<th>Description</th>
<th>Results Used For</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Level Assessment</td>
<td>1 x per year</td>
<td>Measures progress toward meeting set standards</td>
<td>Accountability</td>
</tr>
<tr>
<td>Universal Screeners</td>
<td>3 x per year</td>
<td>Measures progress toward meeting established benchmarks</td>
<td>District, school, grade, classroom decisions</td>
</tr>
<tr>
<td>Progress Monitoring</td>
<td>Every 2 to 4 weeks</td>
<td>Measures ongoing incremental progress toward meeting established benchmarks</td>
<td>Small group and individual student decisions</td>
</tr>
<tr>
<td>Diagnostic Assessment</td>
<td>Up to 2-3 times per year</td>
<td>Measures progress toward learning discrete skills “digs deeper”</td>
<td>Small group or individual student decisions</td>
</tr>
<tr>
<td>Curriculum Based Measures</td>
<td>At the end of curriculum lessons</td>
<td>Measures progress toward mastering curriculum content</td>
<td>Whole class, small group, and individual student decisions</td>
</tr>
<tr>
<td>Classroom Observation &amp; Data Collection</td>
<td>Conducted daily / continuously</td>
<td>Observation notes and data, work samples/portfolio, daily interactions</td>
<td>Teacher support student growth and engagement in the learning process and adjustments to instruction</td>
</tr>
</tbody>
</table>
**Assessment of Learning**

<table>
<thead>
<tr>
<th>Assessment of learning</th>
<th>Assessment for learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summative and formative assessments</td>
<td>“Early warning” formative assessments (progress monitoring)</td>
</tr>
<tr>
<td>Given annually, quarterly, or weekly</td>
<td>Continuous part of the learning process</td>
</tr>
<tr>
<td>Provides evidence of who is and is not meeting standard/benchmarks</td>
<td>Students are provided with clear learning targets and descriptive feedback about progress</td>
</tr>
<tr>
<td>On demand testing that holds students, teachers, schools, and districts accountable for meeting required standards</td>
<td>Students and teachers directly involved in the process of adjusting, scaffolding, and monitoring learning on daily basis</td>
</tr>
</tbody>
</table>

- Screening tools
- Progress monitoring
- State assessments
- Standards based assessments used for report cards

- Clear vision and learning targets
- Observation
- Descriptive feedback
- Communication
- Direct and immediate impact on learning
Benefits

On Demand
- Identify At Risk
- Inform Instruction
- Working Memory
- NELP and RAN

Authentic
- Doesn’t rely on single measure
- Within the class time
- Ongoing
- Shared responsibility
Authentic Assessment

• Authentic assessments are typically:
  • A direct measurement of skills
  • Involve tasks that require engagement and performance
  • Include an analysis of the processes used to produce the response
    • What it is not:
      • norm-referenced standardized assessments
      • fixed-choice multiple-choice assessments
      • true/false assessments
      • fill-in-the-blank assessments
    • What it is:
      • performance based assessment (*performance*)
      • portfolios of student work (*portfolio*)
      • student projects (*dynamic*)

Authentic Assessment

• “An assessment that requires students to generate a response to a question rather than choose from a set of responses provided to them.” (CRESST)

• Examples:
  • Exhibitions
  • Investigations
  • Demonstrations
  • Written or oral responses
  • Journals
  • Portfolios

On Demand Assessment

• “An assessment that takes place at a predetermined time and place, usually under uniform conditions for all students being assessed.” (CRESST)

• Examples:
  • The SAT
  • Statewide assessments
  • District-wide assessments
  • Most in-class unit tests
  • Final exams

Why Fast Matters

• The more quickly a student associates a meaning to a printed word, the more rapidly the student recognizes the word. Thus, vocabulary and language comprehension will also affect reading fluency. If a student hesitates about which sound a grapheme represents, or can’t recognize the meaning of an intended word, she will be slowed down and may not be able to hold the meaning of the whole sentence or passage in mind.

(LETRS, Module 5 page 19)
Formative Assessment

Formative assessment is capable of triggering big boosts to students’ achievement – the educational equivalent to the cure for the common cold.

James Popham, 2010 Strategic Priorities for School Improvement, Harvard Education Letter, No. 6
Research on Assessment, Data & Feedback

Barometers of Influence

\[ d = 0.15 - 0.4 \]
Typical effects of teachers on students that can be accomplished in a year of teaching

\[ d > 0.4 \]
Zone of desired effects

\[ d = 0.0 - 0.15 \]
What students could achieve without schooling

Below \( d = 0.0 \) Decrease achievement

## Research on Assessment, Data & Feedback

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Effect Size (d) and Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-report grades</td>
<td>d = 1.44</td>
</tr>
<tr>
<td></td>
<td>1(^{st}) of 138</td>
</tr>
<tr>
<td>Providing formative evaluation</td>
<td>d = 0.90</td>
</tr>
<tr>
<td></td>
<td>3(^{rd}) of 138</td>
</tr>
<tr>
<td>Feedback</td>
<td>d = 0.73</td>
</tr>
<tr>
<td></td>
<td>10(^{th}) of 138</td>
</tr>
</tbody>
</table>

Embedded Formative Assessment

- Excellent resource
- Provides over *fifty* practical techniques for classroom formative assessment
- Also covers:
  - Use of classroom questioning
  - Learning intentions and success criteria
  - Feedback
  - Collaborative and cooperative learning
  - Self-regulated learning

Embedded Formative Assessment By Dylan Wiliam
www.solutions.com
It is a Matter of Balance

Authentic Assessment
Formative
Classroom and Individual Student Assessment
Assessment for Learning

On Demand Assessment
Summative
State and District Assessments
Assessment of Learning
How to Analyze Data

• Develop a systematic process
  • Start at the district/school level and work down to individual students
  • Think horizontally and vertically at each level
  • Develop a consistent set of questions to ask about the data to guide the discussion
  • Keep discussions focused on overall goals and student needs
  • Focus on intervention as well as prevention
How to Analyze Data

• Things to consider when analyzing data at each level in your system
  • Patterns within groups of students
  • Trends across time
  • Inconsistencies (consider multiple data points to determine if it was a one time thing or happens consistently across settings)
  • Think about sub-skill deficits
More Essential Questions to Consider

- Which skills seem to be of concern?
- Is additional diagnostic assessment needed?
- Does the error pattern / area of concern impact
  - one student
  - small group of students
  - all students
- How can core instruction be adjusted?
- Is additional / specialized instruction needed?
While the Mission and Goals serve to drive and weave the curriculum, instruction, and assessment — it is assessment that begins, rather than ends the process.

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### School / Grade Level Inconsistencies

- Number of students tested
- Correct measures administered
- Scores for all subtests entered
- Extreme increase or decrease in student subtest or composite score

| Fall | NWF | WNR | NWG | CGS | CLS | WVR | NWF | WNR | NWG | CGS | CLS | WVR | Total | Accuracy | Value | Retail | Composite |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|---------|------|-------|-----------|
| 13   | 28  | 9   | 0   | 50  | 19  | 0   | 5   | 6   | 11  | 45% | 0   | 0   | 24  |
| 14   | 25  | 16  | 0   | 55  | 22  | 2   | 5   | 11  | 16  | 31% | 0   | 0   | 29  |
| 15   | 39  | 11  | 0   | 74  | 46  | 0   | 5   | 36  | 42  | 14% | 0   | 0   | 52  |
| 20   | 2   | 14  | 0   | 36  | 37  | 11  | 7   | 6   | 13  | 54% | 8   | 0   | 63  |
| 9    | 32  | 7   | 0   | 48  | 17  | 4   | 8   | 7   | 15  | 53% | 8   | 0   | 37  |
| 31   | 42  | 23  | 0   | 66  | 26  | 5   | 9   | 10  | 19  | 47% | 0   | 3   | 42  |
| 25   | 36  | 9   | 0   | 70  | 27  | 8   | 9   | 8   | 17  | 53% | 8   | 0   | 34  |
| 48   | 33  | 8   | 2   | 89  | 37  | 0   | 9   | 12  | 22  | 41% | 0   | 13  | 46  |
| 31   | 23  | 12  | 0   | 66  | 62  | 20  | 10  | 6   | 16  | 63% | 26  | 14 | 118  |
| 23   | 40  | 15  | 0   | 76  | 32  | 5   | 10  | 4   | 14  | 71% | 44  | 4   | 91  |
| 13   | 45  | 16  | 0   | 76  | 31  | 9   | 10  | 5   | 15  | 67% | 32  | 13 | 82  |
| 33   | 22  | 16  | 5   | 71  | 42  | 12  | 10  | 9   | 19  | 53% | 8   | 10 | 72  |
| 34   | 38  | 10  | 0   | 82  | 54  | 8   | 11  | 11  | 22  | 50% | 2   | 0   | 75  |
| 4    | 28  | 2   | 0   | 34  | 14  | 0   | 11  | 9   | 20  | 55% | 8   | 0   | 33  |
| 0    | 27  | 3   | 12  | 8   | 20  | 60% | 11  | 1   | 53  |
| 23   | 24  | 11  | 0   | 58  | 32  | 9   | 12  | 7   | 19  | 63% | 26  | 10 | 79  |
| 40   | 33  | 23  | 4   | 96  | 43  | 13  | 13  | 13  | 26  | 50% | 2   | 9   | 71  |
| 41   | 39  | 0   | 0   | 41  | 63  | 18  | 14  | 8   | 22  | 64% | 26  | 0  | 121 |
| 24   | 39  | 25  | 4   | 89  | 60  | 16  | 14  | 6   | 20  | 70% | 38  | 11 | 127 |
| 14   | 39  | 27  | 0   | 80  | 53  | 16  | 15  | 10  | 25  | 60% | 20  | 6  | 104 |
| 22   | 32  | 23  | 0   | 77  | 47  | 4   | 17  | 4   | 21  | 81% | 62  | 0  | 130 |
| 28   | 49  | 18  | 0   | 95  | 38  | 1   | 17  | 10  | 27  | 69% | 26  | 5  | 82  |
| 26   | 1   | 0   | 0   | 26  | 55  | 16  | 17  | 6   | 23  | 74% | 50  | 15 | 138 |
| 36   | 30  | 29  | 0   | 95  | 67  | 21  | 15  | 7   | 25  | 72% | 44  | 19 | 150 |
| 42   | 34  | 17  | 0   | 93  | 39  | 7   | 20  | 7   | 27  | 74% | 50  | 26 | 116 |
| 41   | 62  | 37  | 0   | 140 | 67  | 17  | 20  | 7   | 27  | 74% | 50  | 9  | 140 |
| 41   | 63  | 46  | 0   | 150 | 65  | 1   | 21  | 8   | 29  | 72% | 44  | 9  | 151 |
| 40   | 51  | 34  | 2   | 125 | 54  | 12  | 21  | 6   | 27  | 78% | 56  | 7  | 143 |
| 31   | 27  | 22  | 0   | 80  | 31  | 7   | 22  | 6   | 28  | 79% | 56  | 19 | 118 |
| 12   | 37  | 15  | 0   | 64  | 53  | 10  | 22  | 23  | 45  | 49% | 0   | 10 | 65  |
| 37   | 42  | 24  | 2   | 103 | 61  | 2   | 23  | 9   | 32  | 72% | 44  | 0  | 120 |
| 46   | 60  | 35  | 4   | 141 | 79  | 25  | 24  | 12  | 36  | 67% | 32  | 3  | 160 |
Instructional Process

• Determine need based on data
• Develop goal(s)
• Determine how goal will be measured (which assessment / data collection method will be used?)
• Monitor and chart progress
• Evaluate progress across multiple levels of your system
• Make adjustments as needed
Other Data and Information to Consider

- Pacing
  - What unit did the student/group begin at?
  - What unit is the student/group currently on?
  - What unit does the suggested pacing guide suggest the student/group should be on?
  - How many days does it take the student/group to complete a unit?

- Time
  - How much time is spent on whole class instruction daily?
  - How long are small groups in session?
  - How much of that time is spend on actual instruction?
  - Does the student have access to additional instructional time?
    - More direct instruction during small group rotation
    - Double dose later in the day
Other Data and Information to Consider

• Intensity and Engagement
  • How many students are in each small group?
  • Does the teacher use a perky pace during instruction?
  • How many practice opportunities are provided for each student during teacher directed instruction?
  • Does the teacher use a variety of strategies to keep student engaged during the lesson?

• Practice and Generalization
  • Are targeted practice opportunities made available on a daily basis?
  • Does the student have the opportunity to practice and generalize the skills learned independently to demonstrate mastery?
Data and Information Sharing Opportunities

- Pass the Baton
- Grade level teaming time
- Response to Instruction / RR meetings
- Vertical teaming meetings
- Other transitions