“Data Informed Decisions (D.I.D.)”

Session 7 – 1:00 pm - 2:30 pm
Location: Sacajawea Room

Wednesday
May 18, 2011
Todd E. Johnson, PhD., Director
Center for Research and Data Analysis ESD #113

Data Informed Decisions (D.I.D.)

More than numbers, averages, and percentages

Purpose:
Session will explore the youth level data available to enhance decision making, personalized learning, & supports.

Data Defined

- The term **data** is defined as “information organized for analysis or used as the basis for decision-making,” and can come in many forms from many sources.

- Data typically fall into two main categories: quantitative and qualitative.

Data Spectrum

- Little knowledge of specific students
- Individual
- Classroom
- School
- District
- State
- National
- International
- Assessments

The Data Pyramid

- Anually
- State Assessments
- Data about people, practices, and environments

- Quarterly or end of unit
- Benchmark Common Assessments
- (end-of-unit, common grade-level tests utilizing GLE(s))

- 1-4 times a month
- Formative Common Assessments
- (math problem of the week, writing samples, science journals, other student work)

- Daily/Weekly
- Formative Classroom Assessments
- Mastery of content (student self-assessments, descriptive feedback, open-ended responses, performance assessments)

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Data Sources Available

- Stated
  - Express something
- Observed
  - Notice or perceive (something)
- Documented
  - Record (something)
- Tested
  - Means to determine the presence, quality, or truth of something
- Conflictual
  - A state of disharmony between something

Informed Defined:

- Having or showing knowledge of a particular subject or situation
- Based on an understanding of the facts of the situation

An informed decision is a decision made after learning relevant facts about the focus of the decision.

DATA DEFINED NOTES

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<th>Data-Driven Dialogue Detail</th>
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Data-Driven Dialogue Detail

PHASE 1 Predict

- Analyzing information
  - What important points seem illogical?
  - What are some patterns or trends that are emerging?
  - What seems to be surprising or unexpected?
  - What are some things we've overlooked?

PHASE 2 Observe

- Generating possible explanations
  - What other insights or implications can we derive?
  - What questions are raised?
  - What additional data might we explore with our analysis?
  - What broader implications might we anticipate?

PHASE 3 Infer

- Making an educated guess
  - What are some possible implications?

PHASE 4 Verify

- Confirming decisions
  - What additional steps might we take to validate our conclusions?
  - What further data might we collect?

Data Deformed

Schools are gathering more and more data, but having data available does not mean that data are used to guide instructional improvement. Many schools lack the process to connect the data that they have with the results they must produce.

-Love, 2004

Taking Data to New Depths

INFORMED

- Pair and Share

- Define INFORMED?
- Two examples?

Grades are almost completely relative, in effect ranking students relative to others in their class. Thus extra achievement by one student not only raises his position, but in effect lowers the position of others.

-James S. Coleman

Coleman Report (1966) quantified the effect of differentiated resources on student achievement.
INFORMED NOTES

TEN REASONS TO BRING DATA INTO DECISIONS

Data Informed Decisions:
1. Assess the current and future needs of youth
2. Determine if goals are being met
3. Decide what to change
4. Engage in continuous improvement
5. Identify root causes of problems
6. Align supports to desired outcomes
7. Provide personalized learning and supports
8. Track professional development
9. Meet accountability provisions
10. Keep constituents informed about progress.

You will be able to improve youths’ experiences because the programs and services will be informed by data.

INFORMED

- Review information with others.
- Make time to reflect on youth data sources.
- Keep goals front and center at all times.
- Your experience and skill are crucial, so build on this knowledge to increase youth achievement.
Lexile Framework

- Standard Scale for Reading Achievement
- Developed by MetaMetrics, Inc.
- Matches readers and text
- 75% comprehension of matched texts
- Many states incorporate Lexile scores on summative assessments
- [http://www.lexile.com](http://www.lexile.com)

Managing Comprehension

- Readers can experience **frustration** when...
  - Text readability is **100L+ above** their Lexile level
- Readers can experience **ease** when...
  - Text readability is **50-100L below** their Lexile level
- Readers can experience **growth** when...
  - Text readability is **within their Lexile range**

**General Reading Recommendation:**

Targeted text range of **100L below to 50L above** the student’s Lexile level

Note: This range may vary based on text type, reading context and purpose, reading strategies and support, and reader motivation.

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Two Underlying Concepts of the Lexile Framework®

- **Reader Ability**
  - The ability of readers to construct meaning from text (as measured on tests)
- **Text Readability**
  - The difficulty of reading materials (based on dimensions or characteristics of the text)

Based on the relationship between Reader Ability and Text Readability, it is possible to:

- Predict Reading Comprehension
- Differentiate Instruction
- Measure Reader Progress and Growth
Limitations of Lexile Measures

What Lexiles don’t address

- **Text Characteristics**
  - Appropriateness of Content
  - Text Support
  - Text Quality

- **Reader Characteristics**
  - Interest and Motivation
  - Background Knowledge
  - Reading Context and Purpose

*Lexiles only measure text readability.
*Therefore, input from readers, parents, teachers, and librarians is always necessary.

Quantile Framework

- Standard Scale for Mathematics Achievement
- Developed by MetaMetrics, Inc.
- MetaMetrics working with states for adoption
- http://www.quantiles.com
Quantile Framework Taxonomy

- The taxonomy consists of mathematics skills that cover kindergarten through content typically taught in Geometry, Algebra II, Trigonometry and Pre-calculus.
- These mathematics skills are specific descriptions of expectations within the demands of mathematics curriculums.
- Within the Quantile Framework each skill is called a QTaxon.

Knowledge Cluster

- Use the order of operations to simplify numerical expressions with parentheses and exponents.
- Model and explain the distributive property.
- Use order of operations with addition, subtraction, multiplication and division.
- Describe the effects of operations on size and order of numbers.
- Calculate the area and perimeter of rectangles and the perimeters of plane figures.
- Restate exponential notation to repeated multiplication.
- Calculate the areas of triangles, parallelograms and circles.
Implications for Support

- The Quantile range identifies the learning frontier of mathematics skills in which a student can have success after some introductory instruction.

- A Quantile measure for a skill offers insight into its difficulty for a student to initially learn that concept.

Quantiles for Informed Decisions

- Understand content progression with the Quantile Framework taxonomy and knowledge clusters on the website

- Determine student readiness by knowing each student’s Quantile measure

- Differentiate instruction by linking students with appropriate instruction at their level

  - By knowing the Quantile level of the instruction (content, process, and/or product) and matching it with the Quantile measure of the student

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  http://oregondataproject.org/

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  A Summary of Issues, Developments and Plans for Washington
  WERA Symposium on Achievement Growth Models

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  http://www.pct.edu/k12/govmath/2005/docs/Using-Data-to-Inform-Instruction.ppt?event_id=112803&schema_id=6&q=%22Five%2DD%27s%22

- Michele Blatt and Phyllis Veith
  The Importance of Instructional Leadership in the RTI Initiative
  School System Leadership Team Conference
  West Virginia Department of Education
  https://sites.google.com/a/wvde.k12.wv.us/leadership-team/

- Data Driven Decisions for Academic Achievement (D3A2) provides Ohio teachers with systematic access to valuable performance data and aligned educational content to help them meet the needs of their individual students.
  http://www.d3a2.org/

- Forum Guide to Building a Culture of Quality: Data in School and District Evaluation
  http://nces.ed.gov/forum/pub_2005801.asp