Data Use and Student Achievement: What Does the Research Say?

December 17, 2014

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What Are Data?
Student Data—Why Use Them?

- Systematic, regular assessment may be a key ingredient for school improvement.
Mixed Evidence Connecting Data Use With Student Achievement

Data Use

Improved Teaching and Learning
Mixed Evidence Connecting Data Use With Student Achievement

Data Use + Improved Teaching and Learning
Mixed Evidence Connecting Data Use With Student Achievement

Data Use ➔ Improved Teaching and Learning
Understanding the Mixed Findings: How Do Educators Use Data?
**Data-Driven Instructional Change**

**Context**
- Assessment Context
- Instructional Context
- State Data Culture
- District Data Culture
- School Data Culture

**Supports for Data Use**
- Data Infrastructure
- Structured Time for Data Review
- Training/Professional Development
- Data Coaches
- Principal Leadership

**Data Review**
- Frequency of review
- Duration of review
- Mode of review (independent, collaboration around data)
- Type of review
  - Student level
  - Class level
  - Item level
  - Trends over time

**Data Interpretation**
- Identify individual student needs
- Diagnose learning problems
- Identify class needs
- Identify areas for strengthening teaching

**Instructional Response and Intervention**
- Establish/adjust groupings
- Change scope and sequence
- Adjust lesson plans
- Review and reteach
- Provide general and targeted interventions

**Improved Student Achievement**
Making Data Available in a Timely Fashion
Allowing Time for Teachers to Respond to the Data
Helping Educators Translate Numbers Into Lesson Plans

http://www.doe.mass.edu/edwin/
Preventable Failure: Improvements in Long-Term Outcomes When High Schools Focused on the Ninth-Grade Year

FIGURE 1
Ninth grade on-track rates improved most when schools acted on real time data about student absences and course performance

- CPS high school principals made accountable for on-track
- UChicago CCSR releases “What Matters” Report, providing guidance for schools to improve on-track rates
- CPS starts issuing monthly data reports for each high school, allowing educators to easily address needs of freshmen at-risk of going off-track

Note: This figure represents first-time freshmen who are not receiving special education services and are not enrolled in a charter or alternative school.

http://ccsr.uchicago.edu/sites/default/files/publications/On-Track%20Validation%20RS.pdf
Superficial Data Use

- Labeling students without intervening
Superficial Data Use: Data Walls

- Data walls
Superficial Data Use

- Data review without instructional change

Student test score →
- Reteaching content
- Regrouping students
- Changing scope or sequence of lesson
- Using new materials
Thank you

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