Data-Informed Decision Making for Educational Programs

Georgia Compensatory Educational Leaders, Inc.
2015 Conference

Nicholas L. Handville
Operations Analyst III
Georgia Department of Education

Data-Informed Decision Making for Educational Programs

SCHOOL IMPROVEMENT & DISTRICT EFFECTIVENESS

Session Description

This session will provide attendees with an introduction to using data with educational programs. Topics covered will include: ***identifying and collecting data***, using data for ***program planning and implementation***, and using data to ***support program leadership and management***. The session is designed primarily for those who are new to working with data; however, even those who are more experienced will benefit from the resources and best practices provided during the session.
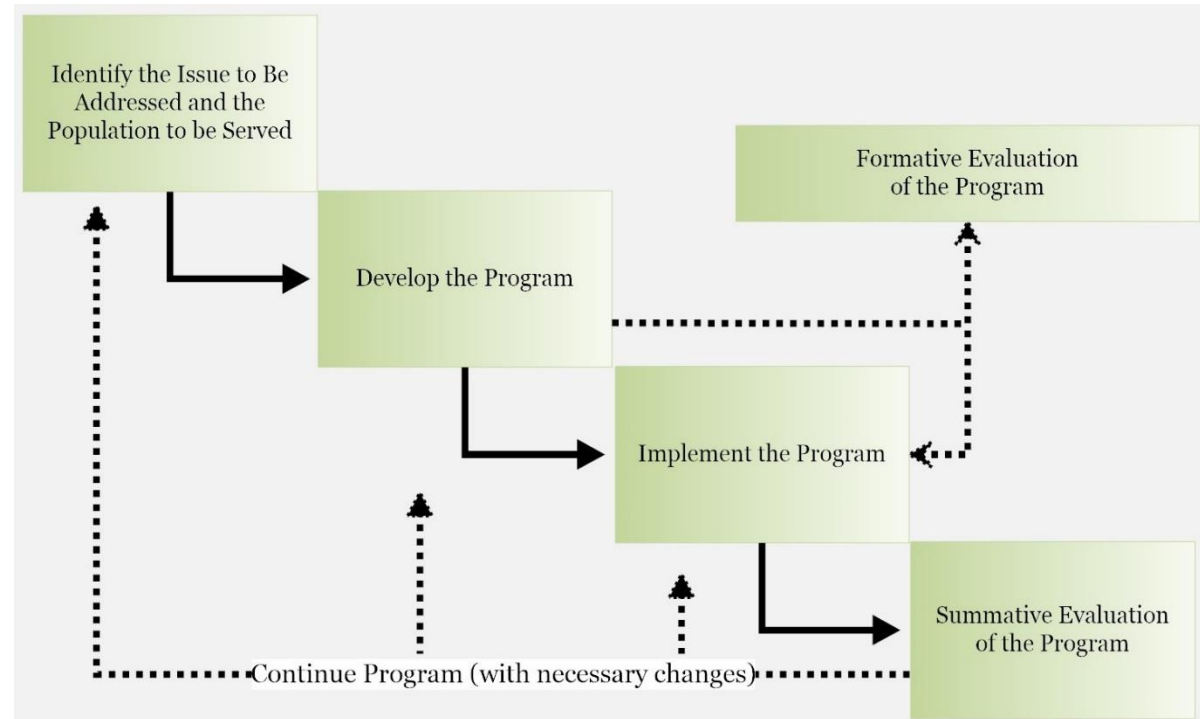
Assessing Your Needs and Interests

- Expectations and goals for the workshop

- Experience with data

- Experience with decision making

Program Life Cycle Framework

1. **Identify** the issue to be addressed and the population to be served.

2. **Develop** the program

3. **Implement** the program

4. **Evaluate** the program

5. **Determining** success and future of program

Data-Informed Decision Making

- What is it?

- Why is it important?

- What role should it play in compensatory education?

What is DIDM? Analytical vs. Intuitive Thinking

Decision Making Based on Intuition, Tradition, or Convenience	Data-Informed Decision Making
Scattered staff development programs	Focused staff development programs as an improvement strategy to address documented problems/needs
Budgetary decisions based on prior practice, priority programs	Budget allocations to programs based on data-informed needs
Staff assignments based on interest and availability	Staff assignments based on skills needed as indicated by the data
Periodic administrative team meetings focused solely on operations	Administrative team meetings that focus on measured progress toward data-based improvement goals

Source: Learning Point Associates (2004)

Why Use DIDM?

- Allows team to work toward continuous improvement

- Supports meeting accountability requirements

- Assists with focusing work and monitoring of progress

- Develops a sense of community through organizational learning

The Role of DIDM

- Making informed decision that lead to improved student achievement

- Objective picture of what needs to improve

- Discover what is working and what is not working
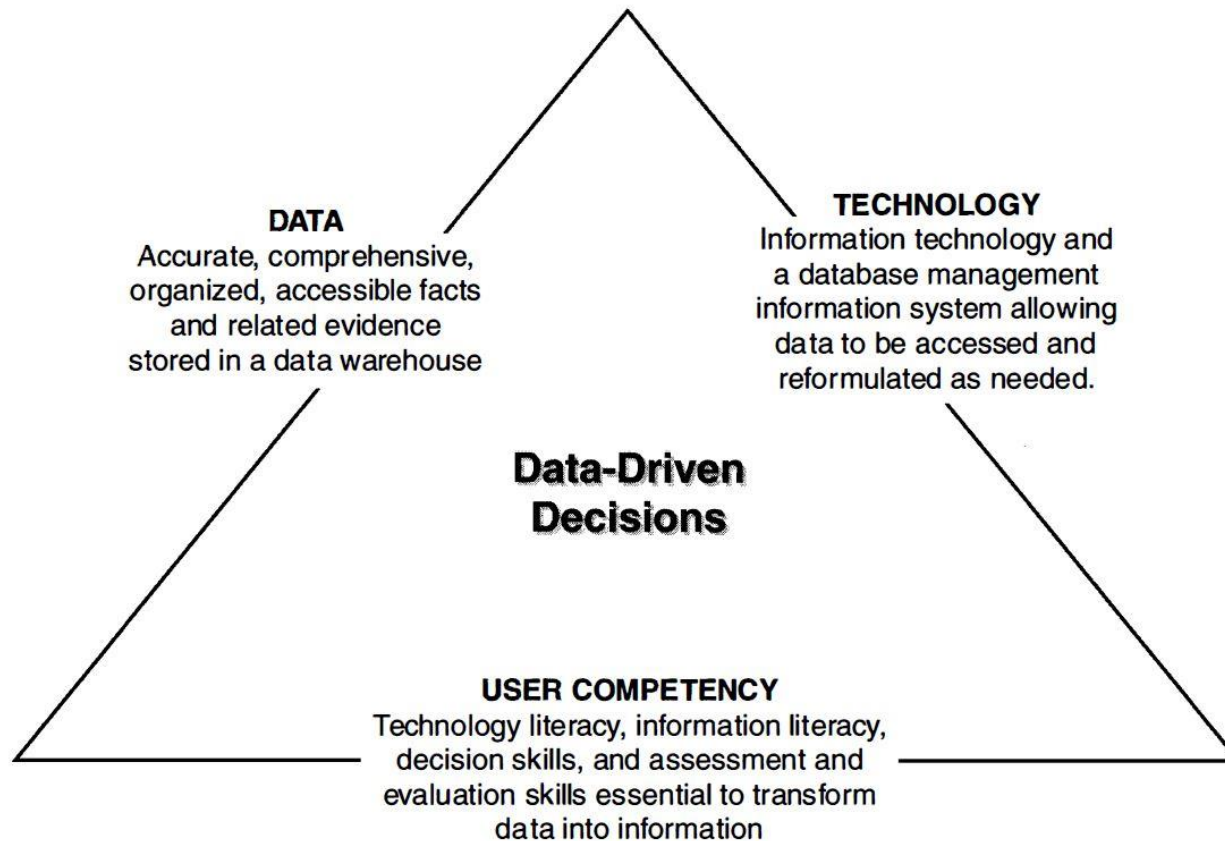
- Monitor and celebrate progress

Data Use Essentials

- Develop a data team

- Collect various types of data

- Analyze data patterns

- Generate hypotheses

- Develop goal-setting guidelines

- Design specific strategies
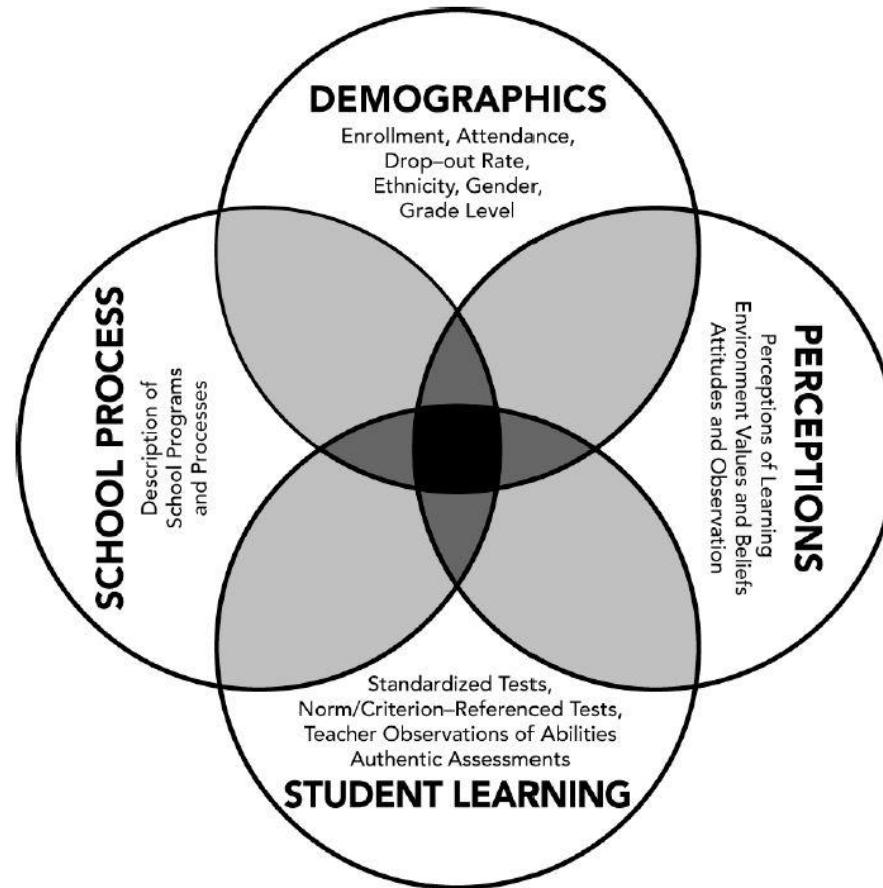
- Define evaluation criteria

- Commit to using data

Source: Learning Point Associates (2004)

DIDM Inputs Triangle

DATA
Accurate, comprehensive, organized, accessible facts and related evidence stored in a data warehouse

TECHNOLOGY
Information technology and a database management information system allowing data to be accessed and reformulated as needed.

Data-Driven Decisions

USER COMPETENCY
Technology literacy, information literacy, decision skills, and assessment and evaluation skills essential to transform data into information

Source: Kowalski (2008)

Multiple Measures of Data

Connecting Data to Academic Improvement

- Data-informed decision making can be used to make systemic improvements that have large and significant impact on students

- Four phases:
  - Collecting (obtain the data)
  - Connecting (analyze the data)
  - Creating (act upon the data)
  - Confirming (evaluate effectiveness using data)

Source: Kowalski (2008)

Areas to Apply Data-Informed Decision Making

- Curriculum and Instruction

- Program Operations

- Professional Development

Steps to Continuous Improvement

1. Disaggregate data

2. Instructional development and focus

3. Frequent assessments

4. Tutorials and Enrichment

5. Maintenance and monitoring of learning

Adapted from: Kowalski (2008)

Five Factors Influencing DIDM Success or Failure

- The nature and scope of the data employed by the improvement and accountability systems, as well as the relationships and interactions among them

- The types of indicators (summary statistics) used to track progress or to make comparisons among schools and districts

- The interactions between the improvement and accountability systems

- The kinds of consequences attached to high and low performance and how those consequences are distributed

- The culture and context of data use -- the ways in which data are collected, interpreted and acted upon by communities of educators, as well as by those who direct or regulate their work

Source: Hargreaves (2013)

Recommendations for Establishing an Effective DIDM System

- Measure what is valued instead of valuing only what can easily be measured

- Create balanced scorecard of metrics and indicators

- Insist on high quality data that are valid and accurate

- Establish improvement cultures of high expectations and high support

- Move from thresholds to growth

- Shared decision-making authority, as well as responsibility for implementation

- Be the drivers, not the driven, so that statistical and other kinds of formal evidence complement and inform educators' knowledge and wisdom concerning their students and their own professional practice, rather than undermining or replacing that judgment and knowledge

Source: Hargreaves (2013)

Data Skills for Teachers

- Find the relevant pieces of data in the data system or display available to them (*data location*)

- Understand what the data signify (*data comprehension*)

- Figure out what the data mean (*data interpretation*)

- Select an instructional approach that addresses the situation identified through the data (*instructional decision making*)

- Frame instructionally relevant questions that can be addressed by the data in the system (*question posing*)

Source: Means (2011)

Data Skills for Teachers: Data Location

- Finding relevant data in a complex table or graph

- Manipulating data from a complex table or graph to support reasoning

Source: Means (2011)

Data Skills for Teachers: Data Comprehension

- Comparing data to a verbal statement
- Understanding a histogram as distinct from a bar graph
- Interpreting a contingency table
- Distinguishing between cross-sectional and longitudinal data

Source: Means (2011)

Data Skills for Teachers: Data Interpretation

- Examining score distributions

- Understanding the effect of outliers

- Appreciating limits on generalizability

- Understanding measurement error

Source: Means (2011)

Data Skills for Teachers: Instructional Decision Making

- Understanding the value of subscale scores and item-level data

- Using student data to plan differentiated instruction based on student needs

- Synthesizing multiple data sources to inform instructional practices

Source: Means (2011)

Data Skills for Teachers: Question Posing

- Aligning questions with purpose and data

- Forming queries that lead to actionable data

- Appreciating the value of multiple measures

Source: Means (2011)

DIDM Recommendations for Programs

- Set clear expectations around the use of student data as the basis for decisions.

- Integrate collaborative exploration of data into existing structures for joint teacher planning and reflection on teaching.

- Provide a safe environment for teacher examination of their students' performance.

- Support teachers in making the link between data and alternate instructional strategies.

Source: Means (2010)

Resources

- Creighton, T. B. 2000. *Schools and data: The educator's guide for using data to improve decision making.* Corwin Press.

- Hargreaves, A. & Braun, H. (2013). *Data-Driven Improvement and Accountability.* Boulder, CO: National Education Policy Center. http://nepc.colorado.edu/publication/data-driven-improvement-accountability/.

- Kowalski, T. et al. (2008). *Data-Driven decisions and School leadership: Best Practices for School Improvement*. Pearson.

- Means, B. et al. (2009). Implementing Data-Informed Decision Making in Schools – Teacher Access, Supports and Use. U.S. Department of Education

- Means, B. et al. (2010). Use of Education data at the Local Level: From Accountability to Instructional Improvement. U.S. Department of Education

- Means, B. et al. (2011). Teachers' Ability to Use Data to Inform Instruction: Challenges and Supports. U.S. Department of Education.

Contact Information

Nicholas L. Handville
Operations Analyst III
Office of School Improvement
Georgia Department of Education
1854 Twin Towers East
205 Jesse Hill Jr. Drive, SE
Atlanta, Georgia 30334

Office: (404) 657-9864
nhandville@doe.k12.ga.us
www.doe.k12.ga.us