Data-Driven Decision Making Process

Process	Sample Questions/Steps	Tools/Resources
Step 1: Conduct a Treasure Hunt	• What trends, strengths and/or areas of concern do you find in the last three years of your Student Outcome Data? • How do students perform from one year to the next (cohort) and over time? • What percentages of students are meeting state standards? Has this changed? How? • Do gaps exist among subgroups (ethnicity, socioeconomic status, special education and English language learners (ELL)? • Do gender gaps exist? • What relationship, if any, exists in performance across content areas?	State, district and school achievement data Other data (e.g., attendance, behavior, suspension, expulsion, supplemental service, etc.) District data technology tools DDDM Data Template *
Step 2: Analyze Data to Prioritize Needs	• What areas should be celebrated and what adult actions contributed to the performance? • Which areas have the greatest potential for growth? • Which areas are of most urgent need? • What curriculum, instruction or assessment realities may be contributing to data results? • What school practices (remediation, before/after school intervention, etc.) influence the data results? • What is the root cause of data results?	Root Cause Fishbone * District data technology tools DDDM Data Organizer * DDDM Data Analysis *
Step 3: Establish SMART Goals	• Specific targeted subject area, grade level and student population • Measurement instrument to be used and the element examined must be measurable • Achievable percentage gains or increased in terms of expected change • Relevant subject areas - is the goal tending to an urgent need? • Time when the assessment will take place as well as timely in terms of identified need • Current reality or baseline data point if available	DDDM Prioritize Needs * Analysis Organizer *
Step 4: Select Specific Strategies	• For each goal, brainstorm the strategies that could be implemented to increase the likelihood of achieving that prioritized goal. • Each strategy should be specific and measurable/accountable. • Strategies are action-oriented. They are what the teacher, school team/department will do. • Strategies might consider and include classroom assessment practice, classroom instruction, prioritizing the curriculum, resources, staff development opportunities, instructional flexibility, parental support and program changes. • List of strategies in order of priority. • Identify the previous or current strategies that have been most successful in reaching student achievement goals. • When developing strategies to support prioritized goals, consider identifying those practices and activities that should be discontinued to increase the focus necessary to implement the most effective strategies. • SMART goal example: percentage of Grade 7 students scoring at proficiency or higher will increase from 56 percent to 66 percent by the end of the 2009-10 school year as measured by the district required mathematics assessment administered in June 2010.	SMART goal format * • Specific • Measurable • Achievable • Realistic • Timely District/school improvement plan

Step 5: Determine Results Indicators	• What results indicators can we gather and analyze on a regular basis throughout the year to determine if the strategies are increasing student performance?
	• Each strategy should contain one or more results indicators that identify:
	  • whether the strategy is actually being implemented as designed; and
	  • if it is being implemented as designed, is it having the desired effect on student learning?	

Step 6: Monitor and Evaluate Results	Review your work from developing questions to determining results indicators then determine how will you monitor the strategies. When you create your monitoring plan consider: • teacher or administrator teams • monitoring cycles • goals • strategies • impact on student and adult behavior • ability to make midcourse corrections	

Resources

Ainsworth, Larry. 2003. *Power Standards: Identifying the standards that matter most*. Englewood, CO: Advanced Learning Press.

Ainsworth, Larry. 2003. *Unwrapping the Standards: A simple process to make standards manageable*. Englewood, CO: Advanced Learning Press.

Connecticut Accountability for Learning Initiative Registration go to http://www.sdecali.net

Connecticut Accountability for Learning Initiative Information go to http://www.ct.gov/sde/CALI

Connecticut State Department of Education Homepage go to http://www.sde.ct.gov

DuFour, R., DuFour, R., Eaker, R. *On common ground: The power of professional learning communities*. Bloomington, IN: National Education Service.

Leadership and Learning Center, http://www.leadandlearn.com

Marzano, R., Norford, J.S., Paynter, D.E., Pickering, D.J. & Gaddy, B.B. 2001. *A handbook for classroom instruction that works*. Alexandria, VA: Association for Supervision and Curriculum Development.

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Reeves, D. B. 2002. *Making Standards Work: How to implement standards-based assessments in the classroom, school and district*. Denver, CO: Advanced Learning Press.

Reeves, D. B. 2001. *101 Questions and answers about standards, assessment, and accountability*. Denver, CO: Advanced Learning Press.

Reeves, D. B. 2004. *Accountability for Learning: How teachers and school leaders can take charge*. Alexandria, VA: Association for Supervision and Curriculum Development.

Reeves, D. B. 2004. *101 More questions and answers about standards, assessment, and accountability*. Englewood, CO: Advanced Learning Press.

Reeves, D. B. 2002. *The daily disciplines of leadership: How to improve student achievement, staff motivation, and personal organization*. San Francisco, CA: Jossey-Bass.

*Document titles in this guide that are followed by an asterisk are available electronically on the Connecticut State Department of Education Web site: http://www.ct.gov/sde/CALI.

This guide is a collaborative effort between the Connecticut State Department of Education and the regional educational service centers.

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CALI
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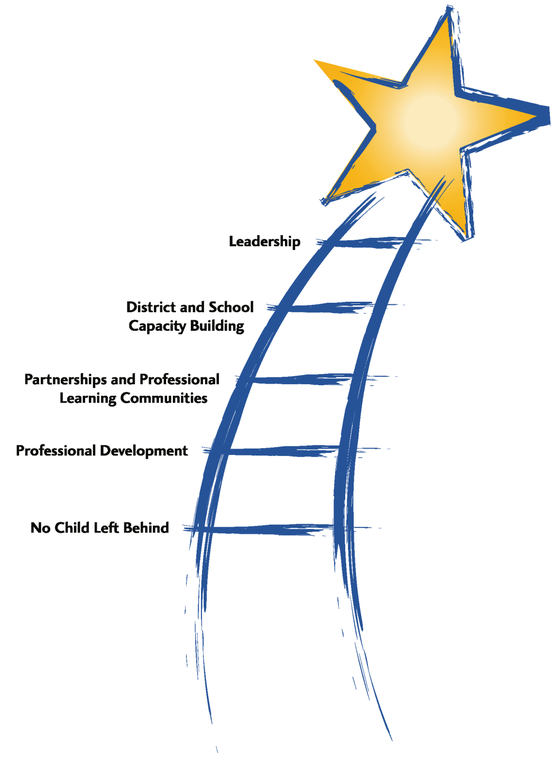


Data-Driven Decision Making: A Desktop Reference Guide

Data-Driven Decision Making for District and School Level Data Teams

Introduction

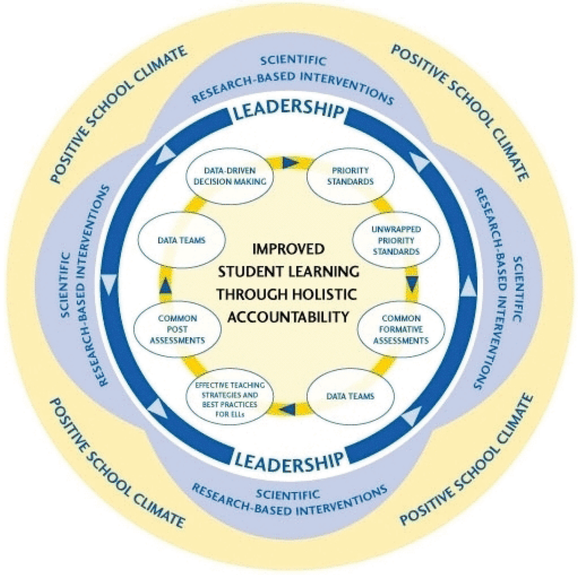
The Connecticut State Department of Education (CSDE) has developed and implemented the Connecticut Accountability for Learning Initiative (CALI) to accelerate the learning of all students and to close the achievement gap in the state. As part of this work, the Department has partnered with the Leadership and Learning Center, regional educational service centers (RESCs), and the State Education Resource Center (SERC) to provide district- and school-level training and technical assistance in the following key areas:

- Data-Driven Decision Making (DDDM): ongoing review of student data by district leaders, building leaders and teachers to determine strengths and areas in need of improvement at the district and school level.
- Data Teams (DT): ongoing analysis of data from common formative assessments to identify strengths and weaknesses in student learning, and to identify instructional strategies that will best address student and learning objectives in the classroom.
- Engaging Classroom Assessments (ECA) formerly known as Making Standards Work (MSW): aligning district and school expectations to state standards by developing classroom-based instruction and assessments to improve student performance.
- Effective Teaching Strategies (ETS): applying the nine research-based effective instructional categories identified in the Art and Science of Teaching (Marzano et al. 2001), and nonfiction writing to develop lesson plans that best meet student needs.
- Improving School Climate (ISC): collectively, administrators, teachers, pupil personnel staff, para-professionals and other school staff are provided with both a context and concrete direction enabling them to gain the understanding necessary to collect appropriate data, create school climate improvement plans and implement them in their respective schools.
- Scientific Research- Based Interventions (SRBI): Connecticut's Framework for Response to Intervention (RTI), a process used to determine if and how students respond to instruction and social-emotional learning. SRBI provides a framework for school teams for designing, implementing, and evaluating educational interventions in a timely manner.

This guide provides an overview of DDDM. SERC or your RESC is available to provide support in the implementation of the DDDM process. Document titles in this guide that are followed by an asterisk are available electronically on the Connecticut State Department of Education Web site: http://www.ct.gov/sde/CALI.

Rationale

The Connecticut State Department of Education has developed and implemented a comprehensive accountability initiative to accelerate the learning of all students. This initiative is based on the findings of nationally recognized researchers, including Dr. Douglas Reeves, Dr. Michael Schmoker, Dr. Robert Marzano, Dr. Richard Elmore, Dr. Jerome Freiberg, Dr. John Simpson and others. Their work provides evidence that schools with high rates of poverty and high percentages of ethnic minorities in their student populations can achieve high academic performance. Common characteristics of these high-achieving schools include:



- a clear focus on achievement;
- standards-based curriculum that emphasizes the core subject areas of reading, mathematics and writing;
- use of data to inform instructional and leadership decisions;
- frequent assessment of student progress and multiple opportunities for student improvement;
- an emphasis on research-based effective teaching strategies, including nonfiction writing;
- collaborative teams focused on student learning;
- all adults held accountable for student achievement; and
- a positive school climate.

"If teachers [and leaders] systematically examine their professional practices and their impact on student achievement, the results of such reflective analysis will finally transform educational accountability from a destructive and unedifying mess to a constructive and transformative force in education" (Reeves 2004, p. 6).

Data-Driven Decision Making: District and School Level

DDDM is an essential process that should be used as the basis for all district and school decisions to improve student achievement. The process generally begins with a collaborative analysis of what Douglas Reeves calls "effect" or "Student Outcome Indicators" (Reeves 2004). Effect data are systemwide indicators that are required by federal and state statutes. These data points apply to every school in a district and may, for example, include state test scores, attendance figures and dropout rates.

While it is important to know where the students in your district are, it is equally important to know how they got there. Accordingly, the DDDM process not only analyzes effect data, but also analyzes "High Leverage Adult Actions" or "cause" data. High Leverage Adult Actions are measurable practices that reflect the decisions of the adults in the school. Some examples of High Leverage Adult Actions that Reeves provides are: the number of times a month teachers convene in data team meetings; the percentage of assessments that are collaboratively scored; or the time devoted to nonfiction writing. By analyzing the relationship between Student Outcome Indicators and High Leverage Adult Actions, districts and schools can determine which practices yield the greatest improvements in student performance (Reeves 2004).

DDDM can be used to investigate the following essential questions:

- How is your school or district performing as a learning institution?
- Are all students learning?
- What do you expect students to know and be able to do by the end of the year?
- Do you know why you are getting the results you currently have?
- What practices do you want to continue, replicate or eliminate?

DDDM is a six-step ongoing process that should be used at the school and district level. The six steps are:

1. Find the data: conduct a "Treasure Hunt." Find three years of trend data and matched cohort data that includes such things as student achievement, discipline, expulsion, etc.
2. Analyze the data to prioritize needs: identify your strengths or needs.
3. Establish SMART goals: identify your most important objectives for student achievement based on the challenges your school team identified through analyzing the data and the determination of your prioritized needs analysis.
4. Select specific strategies: for each goal, brainstorm the strategies that could be implemented to increase the likelihood of achieving that prioritized goal.
5. Determine results indicators: results indicators identify whether the strategy is actually being implemented. If the strategy is having the intended effect on student learning and improved performance, determine a results indicator for each of your targeted strategies. If needed for clarification, review the results indicators on the action plan example.
6. Monitor and evaluate results: to assist with engagement of the continuous improvement cycle that identifies midcourse connections where needed and adjusts strategies to assure fidelity of implementation.

What is Data?

Data is more than just numbers and test scores. Data includes any information that helps us learn about learning. Data can include:

- district student achievement
- state assessment performance
- school assessments
- graduation or promotion requirements
- content-area and grade-level requirements
- perceptions
- behavior
- attendance
- benchmarks

It is important when analyzing data to consider not only the Student Outcome Indicator (effect data), such as student achievement results, but also the High Leverage Adult Actions (cause variables), such as adult behaviors and indicators in teaching, curriculum, leadership, behavioral strategies and other factors that influence student achievement (Reeves 2004). We need to create as much data, or more, about the actions of adults as we have about students.

Examples of Student Outcome Indicators	Examples of High Leverage Adult Actions
• District student achievement • State assessment performance • Graduation or promotion requirements • Content-area and grade-level requirements	• Percentage of assessments scored collaboratively by classroom teachers with specific criteria • Percentage of time spent with small group instruction • Percentage of disciplinary actions that result in out-of-school suspension • Percentage of homework that is devoted to writing in the content area • Percentage of teachers engaged in bimonthly data team meetings