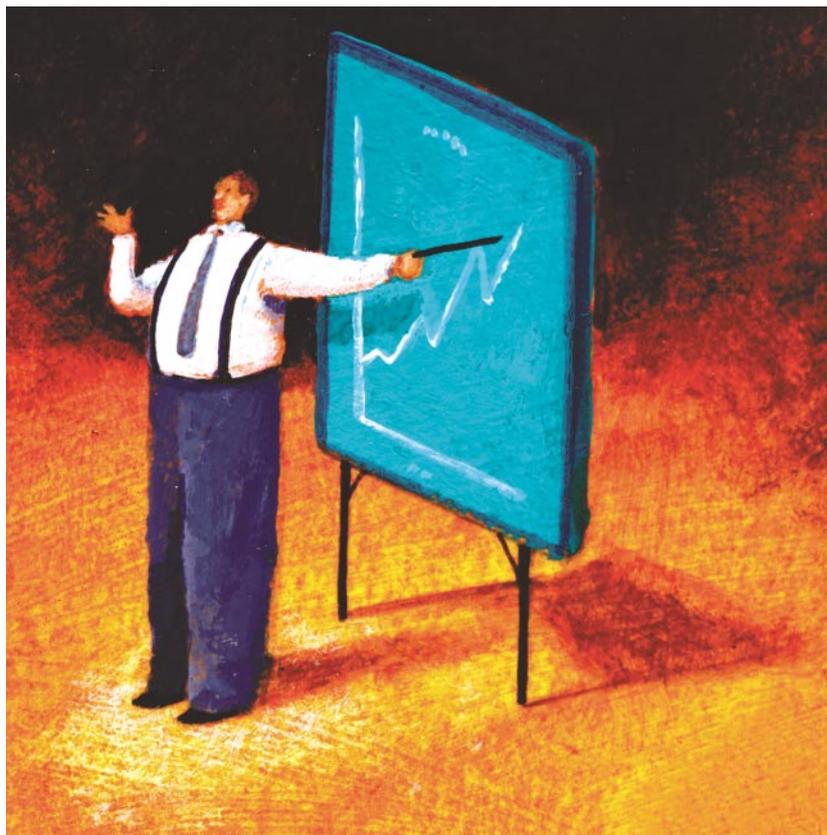


# Breaking Down the Data



*Looking for ways to improve instruction and student learning?  
Take an informed approach*

**By Dennis W. Rudy and William H. Conrad**

Imagine that you and your fellow school board members, together with the superintendent, are tucked away again at the local hotel conference center revising the school district's strategic plan. Chart paper is flying, participants are scrambling for markers, and soon the copying machines will hum with the district's revised five-year goals and action plan.

While this is happening, your state education department is releasing the criteria it devised for defining exactly what *is* Adequate Yearly Progress under the federal No Child Left Behind Act. Of course, this means breaking down the student performance in each of your schools in reading and math. And you must break down the data according to major ethnic and racial groups, students receiving free and reduced-price lunch, and students who have limited English proficiency. Special education students must be included as well.

Meanwhile, your district's principals have convened their school improvement committees to document progress in meeting state benchmarks. They are working to align school improvement efforts with stated board goals. Some of your schools also are preparing for an upcoming North Central Accreditation site visit and possibly even gathering data to attain Blue Ribbon Schools designation.

Does this sound like your school district?

If you participate in these now mostly routine activities, or in an increasing number of similar tasks, you have been living and working in the world of data-driven decision making.

## **What is data-driven decision making?**

Using data to support instructional planning has become an important focus for schools, districts, and education organiza-

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tions. The intent of data-driven decision making is to collect, analyze, and interpret meaningful school improvement data to make a positive impact on curriculum, instruction, and student learning.

For educators and community members to find such data useful in planning curriculum and instruction, the data must be aligned and tied to student performance goals at the classroom, school, and district level. That is why successful school improvement efforts are made up of teachers, administrators, and community members working together to address the teaching, learning, and assessment needs of all students.

Remember, it all begins where the rubber meets the road: in the classroom.

We were both part of the District Data Use Project, an initiative sponsored by the American Association of School Administrators, the National School Boards Foundation, and UCLA's National Center for Research on Standards and Student Testing (CRESST). Funded by a grant from the U.S. Department of Education, the project helped more than 50 school districts realize the potential of data-driven decision making through the use of CRESST's free Web-based Quality School Portfolio (QSP) software and other support tools.

The study focused on three key questions:

1. How do schools and districts collect and organize data to answer key questions?
2. How do schools and districts use data to answer key questions?
3. How do schools and districts take action and present results based on the data?

Among the work of the project was collecting accounts from school board members, several of which we include here to illustrate how data can be used effectively.

For example, the Hawthorne Scholastic Academy, a K-8 magnet school in Chicago, used data-informed decision making to improve students' narrative writing. The school's staff members used the Illinois School Improvement Web site (<http://ilsa.isbe.net>) to review how their school performed on the Illinois Standards Achievement Test (ISAT) over a three-year period. As part of the analysis, the staff determined that students needed to improve their organization skills in narrative writing as well.

The Hawthorne team established a data-informed approach, using writing rubrics and the QSP software, to evaluate how students were performing on the standards. With the software, which can be customized to meet individual school and district needs, the team was able to collect, organize, and prescribe ways for student improvement. Over the next school year, Hawthorne's approach resulted in a significant improvement in students' scores on narrative writing, not just at the

local level but on the state-mandated ISAT test as well.

### Four key elements

Four key elements foster data-driven decision making: leadership in curriculum and instruction; performance indicators; technology; and staff development and continuous improvement. Let's look at them one at a time:

■ **The leadership element:** Leadership at all levels is important as schools and school districts attempt to implement data-informed improve-

ment. Successful educators recognize the key role that leadership plays in helping schools reach achievement goals.

Curriculum and instructional leadership that focuses on student progress, relies on student achievement data, and conceptualizes the data in a way that can be graphically portrayed is critical to continuous improvement efforts. This type of data-driven decision making in schools increasingly is an integral part of district and school-level accountability plans.

Board members in New Mexico's Rio Rancho School District demonstrated strong leadership by unanimously supporting the expectation that the administration use data to support any proposals before the board. A Rio Rancho board member said data are critical in asking informed questions.

"As a board, we recognize the importance of asking the right questions," the board member said. "Some of the questions we ask include: Are we using the proper tools? Are we asking students the right questions? Are our kids improving year to year? Are they competitive? Are they staying in school? What is their academic performance? Do we use SAT scores for appropriate comparisons? Do we use percentiles of how students are doing as they progress year to year through school?"

■ **Performance indicators:** By now, we are all familiar with the need to document what students should know and be able to do. Research shows that districts that promote data collection at both the school and district level can achieve school improvement goals and address key questions.

Student and program area assessments that are administered frequently, aligned with instructional targets, and collected, scored, recorded, and evaluated are key conditions for improving student performance.

Another element in successful data-informed decision-making processes is the presence of data champions at the school level. The central administration of the North Penn School District, a 13,500-student suburban school system north of Philadelphia, successfully infused data-informed processes at Pennfield Middle School using CRESST's QSP software.

The middle school's assistant principal championed a data-informed student writing initiative that, when supported by teachers, resulted in measurable improvements in test scores. By the end of the school year, 93 percent of the students were listed as "proficient or above" on the state writing test. School



leaders said the writing initiative also resulted in reduced discipline referrals because of teachers' increased focus on data-driven instruction.

■ **The role of technology:** Technology plays a key role in helping school districts and schools look at and disaggregate data for determining student academic achievement. Technology tools are becoming more commonplace and necessary for schools and teachers who want to use data-informed processes to improve student achievement.

Chicago's James McCosh School, a high-performing inner-city school, used technology in its data-informed process to improve reading in grades two through eight. The instructional staff used five-week assessments in reading to monitor how students were performing on standards-aligned reading initiatives.

The student performance data was then imported into QSP. Bar charts and reports were produced for each class and grade level to monitor student reading progress. The data reports focused teacher discussions on the success of the reading interventions and how they could be improved to better meet students' needs.

■ **Staff development and continuous improvement:** Meaningful school and district improvement initiatives must include staff development plans that are well planned, implemented, and evaluated. Schools and school districts that use a continuous improvement process of planning, taking action, collecting results, and reflection are more likely to achieve their educational goals.

Many educators and researchers support this inquiry-oriented approach to data-informed continuous improvement. Districts that compare themselves to other school districts that effectively use data-informed processes are likely to be more successful in improving student performance. Schools and districts that use data in this way share these characteristics:

■ Technology-rich processes and plans are in place throughout the district to collect and organize data in support of district improvement.

■ The plans are implemented at all levels, including the school board, central administration, schools, and classroom.

■ Results and consequences exist that demonstrate the school district has taken data-informed actions to address key strategic initiatives.

### Some lessons learned

It is clear from the project that school districts need systems to collect, organize, and visualize data to answer key questions. And it is clear that one way to use data-informed improvement is to focus on student achievement.

We learned other lessons as well:

■ Leadership is critical for systemwide implementation of effective data-informed decision making.

■ Administrative organizational structures that are supported by school boards play a key role in the systemwide use of data-informed decision making.

■ Data collection in support of district improvement occurs broadly across the district and more deeply when data-informed projects involve members of the school community at many levels.

■ School districts must build the staff's technology capacity at the classroom, school, and district levels.

We know from experience that success in using data-driven decision making in our schools is more than just possible—it is what our children and communities deserve. By providing evidence of what students know and do, we believe we can improve the learning opportunities for everyone enrolled in our schools.

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