

SCHOOLS AS EFFECTIVE DATA USERS

The question is not whether to integrate the use of data in school improvement efforts, but how.

by Nancy Protheroe

Data use and decision-making—these two phrases have appeared together in probably hundreds of education articles and have been the topic of a host of presentations during the past decade. In addition, research studies have confirmed the importance of data-informed decision-making to school improvement. Thus, school leaders have found it makes sense to use data to help clarify decisions, identify alternative solutions to problems, and target resources effectively. The real question, then, should not be whether to integrate the use of data in school improvement efforts, but how.



Research also tells us that more effective schools typically use data differently than less effective ones. For example, one study compared schools with rapid improvement to schools that made less progress and found that a primary difference was: “the extent of data use to *inform instruction*. [Staff members] from growth schools more elaborately discussed the use of data to inform collaboration, guide them in making needed instructional adjustments, adjust their alignment with standards, develop intervention strategies, assess individual student progress, and develop instructional modifications” (California Comprehensive Center and American Institutes for Research, 2006).

Two key elements of the “how” of data use are establishing a process for data use and ensuring that conditions to support effective data use are present. Research conducted in schools that use data well provides helpful direction for both of these elements.

Plan of Action

In Love’s (2008) view, data and results are, in too many schools, “two shores with an ocean in between ... What is often lacking is a process that enables schools to connect the data with the results they want.” Depka (2006) has a suggestion for schools regarding data use: “Be selective about the data you choose ... It is important to provide enough data so that participants can have a good degree of confidence that their observations are accurate. But too much information at one data delve can overwhelm, confuse, and exhaust people.”

Many “good data user” schools found that an important element of their success involved expanding their definition of data beyond results from state assessments and other more traditional indicators. Thus, a principal might intentionally use classroom observations to identify gaps in good teaching strategies that should be addressed by schoolwide teacher development.

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when data have been turned into information, and that information is used to stimulate conversations about the future direction of the school, that data utilization is meaningful and important in school reform” (Williamson in Principals’ Partnership, n.d.).

In addition, your goal should be to embed the use of data in the day-to-day operations of your school as part of a continuous cycle of school improvement. Thomas (2006) emphasizes the importance of an explicit “take action” component of data use as critical to school improvement. For example, he discusses a teacher team review of assessment and related data: “Unless the team emerges from the data analysis process with a clear plan of action for identified students and for classroom instruction, it has wasted its time.”

Supporting the Process

While studying schools making effective use of data, researchers Means, Padilla, DeBarger, and Bakia (2009) found a persistent pattern of what they called “prerequisites and supporting conditions.” Understanding these supporting conditions and then ensuring they are in place are important responsibilities for school leaders. Four such supporting conditions—a trusting environment, training for staff, opportunities for teachers to collaborate, and developing a culture of data use—are discussed briefly below.

A Trusting Environment. It’s easy to see why some staff members might fear increased use of data since it can

shine a brighter light on school problems or—even more worrisome—on their lack of success with some students. Thus, developing a trusting environment in which people feel comfortable and safe talking about and studying school- or classroom-based problems must begin before the emphasis on data use is increased.

As an example of the importance of trust to data usage, Langer, Colton, and Goff (2003) describe a group of teachers engaged in collaborative analysis of student work: “Trust in fellow group members allows [a teacher] to bring a struggling student’s work to the group without fear of being judged or criticized.”

Training for Staff. The need for teacher development has been addressed head-on by schools that have incorporated the effective use of data in their improvement efforts. Opportunities to learn how to analyze assessment data have typically been provided in a variety of ways, including, for example, staff development focused on how to read and analyze reports of assessment results or one-on-one sessions with a principal and a teacher to review and discuss results from classes and students.

However, Holcomb (2004) reminds us that effective data use requires more than number-crunching skills. Thus, training is often especially powerful when it is organized around an authentic task. For example, when a grade-level team is guided through its initial efforts to take a more detailed view of achievement data for individual students,

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teachers on the team are simultaneously learning important skills. Finally, training for staff should include time spent on encouraging teachers and other school staff to recognize the data analysis skills they already have.

Opportunities for Teachers to Collaborate. Another key component of effective systems is the provision of time for teachers to discuss the data and to work together to develop solutions. According to Means et al. (2009), there needs to be “strong expectations that educators will take the time to examine data and use those data to guide improvements in their programs and practices.”

Although teachers view such time for interaction as an opportunity both to develop their skills in data analysis and to brainstorm and share effective instructional strategies, they report that such opportunities are scarce in many schools (U.S. Department of Education, 2008). Means et al. (2009) consider such opportunities an essential element in effective data use since “the most sophisticated data warehouse in the world will have no effect on instruction if no one has—or takes—the time to look at the data, reflect on them, and draw inferences for instructional planning.”

Harrison and Bryan (2008) describe this as the critical next step many schools still need to take to make more effective use of data. In their view, data management systems might be in place, but “the focus now needs to move to the structures and allocation of time that will allow teachers to engage in data conversations about student achievement and its implications for classroom planning and instruction.”

Some of these “data conversations” might be whole-school and include such topics as patterns of student achievement and needs for teacher development. However, another use of data might be to support student goal-setting conversations, with one teacher interacting with one student.

Role of School Leaders

School leaders “play a major role in ... setting expectations for staff participation in data-informed decision making, and making resources such as supported time available to support the enterprise” (Means et al., 2009). Thus, principal leadership is embedded in ensuring the “supporting conditions” described above are present. However, there are also other ways in which a principal can develop an environment supportive of data use. According to Thornton and Perreault (2002): “Demonstrating the utility of data is critical to gaining teachers’ support and cooperation. In general, teachers need to become comfortable consumers; the data collected should become ‘their data.’” They go on to say that “By engaging staff members in a meaningful project, the principal can identify and model the value of data-based decision making ... To build teachers’ confidence in data analysis, the principal should select an initial project that is likely to succeed.”

Nancy Protheroe is director of special research projects at the Educational Research Service.

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✦ **Data-Informed Leadership in Education**, developed by the Center for Teaching and Policy at the University of Washington, discusses what schools need to do to use data to inform conversations about improvement.

✦ **Teachers’ Use of Student Data Systems to Improve Instruction: 2005 to 2007** is a report developed for the U.S. Department of Education that summarizes teacher responses to questions about their data use and supports they feel would make them better data users.

✦ This *ERS Spectrum* article, “Improving Teaching and Learning with Data-Based Decisions: Asking the Right Questions and Acting on the Answers,” provides a brief overview of effective data use in schools.