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.

“Data by themselves are not very useful to principals and teachers for school improvement purposes. It’s only 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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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 support ed 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.”

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**References**


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**Principal ONLINE**

Access the following web resources by visiting *Principal* magazine online: www.naesp.org/SeptOct

**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.