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RESEARCH BRIEF

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Practices That Support **DATA USE** in Urban High Schools

What factors have had an impact on the use of student performance data in low-performing urban high schools?

The Study

Lachat, M. A., & Smith, S. (2005, July). Practices that support data use in urban high schools. *Journal of Education for Students Placed at Risk, 10*(3), 333–349.

Methodology

This study examines how five low-performing, high-poverty urban high schools in three school districts used data to inform school improvement. The data collected over a four-year period included such documents as education improvement plans; field notes taken during data analysis meetings at schools; and interviews with administrators, teachers, and school data teams. After analyzing the information gathered during the school visits, authors Mary Ann Lachat and Stephen Smith produced a report that outlines the factors that promote or inhibit the use of data to monitor progress as well as the policy implications.

In Brief

"The high school reform movement is drawing increasing attention to the need for more systematic uses of data to inform the policy, management, and instructional changes that result in higher student achievement," say the authors (p. 333). This study examined four data-related issues: quality and access, data disaggregation, the role of collaborative inquiry in understanding data, and leadership structures that support data use.

Data Quality and Access

Researchers found that the availability of and timely access to student performance and demographic data affect data use in schools. In the study schools, for

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example, data related to student mobility and dropouts were not being updated accurately, which created poor data quality. In addition, student performance data were not available in a timely manner. Limited availability of accurate data at the right time, the authors found, can be a major barrier to data use in schools. The study found that schools were able to address these issues by collaborating with district-level staff to develop a formal data access plan that set up timelines for when data could be accessed and specified how data would be disaggregated. Implementing this plan resulted in staff members getting student assessment data earlier, which contributed to their ability to target instructional strategies more effectively. Researchers found that over time, staff in these schools used student performance data more frequently.

Data Disaggregation

This study reaffirmed other research that shows that disaggregating data is a key element of improved data use. Student performance data were disaggregated by student demographics and participation in specific programs or interventions. Breaking down the data by these categories allowed the staff to examine them more easily and draw more targeted conclusions. For example, after looking at disaggregated data, one school staff member recognized that students who got high grades in their coursework often scored at low levels on state achievement tests. The data led staff members to conclude that they needed professional development that focused on increasing their skill in recognizing the quality of student work and improving their grading practices.

Collaborative Inquiry

The study also showed that when school staff worked together to discuss and analyze student performance data, their comfort level with data use increased and resulted in more frequent use of data to inform curricular decisions. A particularly powerful strategy for creating positive change consisted of school staff members working together to develop a set of key questions that focused on student performance to guide their review of the data. The questions structured their inquiry and encouraged staff to stay focused on student achievement. In fact, developing questions together led the staff to go beyond student performance data to examine financial or staffing data as well. These collaborative activities contributed to a better understanding of how data can be used to inform school improvement strategies.

Leadership Structures That Support Data Use

The study provided evidence that school leaders can foster the use of student performance data throughout a school. In part, they can do this by sharing leadership among other administrators and teachers. In addition, creating organizational structures such as data teams and data coaches proved to be effective mechanisms for fostering a school culture that embraces the use of data to make instructional decisions. Data coaches can be helpful in resolving data quality issues and can model the productive use of data, thus encouraging the staff to develop a deeper understanding of the useful role of data in school improvement.

Suggestions for School Improvement

Although this study explores data use in urban high schools, the five lessons it suggests can be applied in schools striving to use data effectively.

Lesson 1: Provide Timely Data in an Accessible Format

The authors assert that "many urban schools and districts would profit from a technical review of their procedures for collecting and

updating student data" (p. 345). Although modernizing data warehousing technology is not a financially feasible option for every district, all schools and districts can benefit from asking and answering the question, "What can be done to make these data more accessible to teachers and school leaders?"

Lesson 2: Establish Structures That Support Data Use

Establishing a data team and identifying a data coach can help school staff members stay focused on using data for continuous school improvement. The study found that "the activities of the data teams were central to increasing communication among school staff about the trends and issues shown in the data" (p. 344). Organizing the work of the data team around a set of specific questions adds another "potent strategy for building staff skills and keeping the focus on student learning and achievement" (p. 343). Data coaches can work with staff members who have little or no experience using data to improve their data literacy skills.

Lesson 3: Encourage a Culture of Questioning

"Effective data use requires a culture that is driven by inquiry, not fear," say the authors (p. 337). Continuous improvement requires information sharing, objective analysis, and the ability to ask—and answer—difficult questions. In schools where student and teacher performance data are typically not shared and discussed, changing institutional culture can be difficult; but with support from leadership and the necessary training, a data-driven approach to improving instruction can be achieved.

Lesson 4: Ensure Adequate Teacher Professional Development

Engaging teachers in the process of data analysis is essential, say the authors. This engagement is best ensured through systematic professional development that allows teachers to learn about and practice data use in a variety of settings and results in an increased capacity to use data effectively. The authors conclude: "Teachers need to learn how to obtain and manage data, ask good questions, accurately analyze data, and apply data results appropriately and ethically" (p. 336).

Lesson 5: Demonstrate Leadership

"School leaders need to view and champion data use as integral to school reform processes," say the authors (p. 345). The principal as well as other administrators and lead teachers should seek out ways to demonstrate how data can be used in pursuit of school improvement.

Challenges

This research identifies several challenges for schools. One is access to meaningful student data. Although schools and districts collect data related to student demographics, programs, and student achievement, it can be difficult for principals and teachers to obtain or use the data. The authors stress that teachers need "timely, diagnostic data on the students they teach," but often they have access only to compliance data (p. 335). Other challenges include needlessly complex presentation formats and significant lag time between when data are collected and when they are analyzed and made available. And, as more and more schools and districts address these issues, they are still confronted with answering the question "What do we do with what we find out?" Securing adequate time to devise answers to this question is essential.

Bottom Line

This study does not address the important step of moving from understanding data to acting on the information. But the authors are clear: "Teachers are better able to modify their instructional strategies when

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they have current information about the skill levels and proficiencies of their students" (p. 335). Having access to data from a variety of sources in a timely manner—and using it constructively—can lead to more appropriate instruction in the classroom and higher achievement for students.

Other Resources

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The Center for Data-Driven Reform in Education (www.cddre.org) at Johns Hopkins University is funded by the Institute of Education Sciences at the U.S. Department of Education. The center helps states and districts organize and use data and provides information on effective programs and practices.

The Using Data project (usingdata.terc.edu) is funded by the National Science Foundation. Its purpose is to increase the capacity of school and district leaders to create a culture of collaborative inquiry that uses data to improve both teaching and learning.

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