Building State Capacity and Productivity Center
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Getting Beyond the Data: The State Role in Fostering Continuous Improvement

Data Quality Campaign

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In 2013, the Strategic Data Project reported that students enrolled in Delaware's vocational-technical schools were more likely to complete high school than were similar peers attending the state's other public schools. This is a tremendously valuable insight for a state hoping to improve the graduation rate in its traditionally underserved communities. Incredibly, though, the data for this analysis—including test scores, graduation rates, and student and school information—had been sitting in the state's data warehouse for years.[1] Data's power is in its secure application to improve student achievement and system performance.

Over the last 10 years, states across the country built robust longitudinal data systems comprising students' academic performance data linked to classroom, school, and district data. Since 2005, the Data Quality Campaign (DQC) has tracked states' progress toward implementing 10 essential elements of a quality data system.[2] When DQC last surveyed these elements in 2011, all but one state had put eight or more of the essential elements in place. This was more than double the number of states that had this capacity in 2005.[3] It means that virtually every state now has the data needed to answer the questions most critical to improving education policy and practice at all levels.

But many states have yet to fully leverage data in schools, in districts, and in the state agency itself. Teachers and principals vary tremendously in their capacity to access, interpret, and incorporate data for school and district improvement.[4] Many states are still developing systems to raise local leaders' awareness and ability to act on data, and just 14 states have data literacy requirements for educator licensing and program approval policies. Perhaps even more importantly, state education agencies (SEAs) have not consistently incorporated data from their own data systems into policy and regulatory decisions that they control.

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1. For more about this story and the Strategic Data Project's partnership with Delaware, see Lindsay Page, "Informed Decisionmaking in Practice: Connecting Data and Policy in Delaware," Data Quality Campaign, *The Flashlight* blog, August 9, 2013, accessed September 10, 2013: www.dataqualitycampaign.org/blog/2013/08/informed-decisionmaking-in-practice-connecting-data-and-policy-in-delaware/

2. "State Analysis by Essential Element," Data Quality Campaign, accessed October 21, 2013: www.dataqualitycampaign.org/node/388/

3. This includes data on attendance, demographics, test scores, student grades, and completion. Most states have yet to put together the final pieces: linking students and teachers, and incorporating transcript and college entrance exam data.

4. See Julie A. Marsh, John F. Pane, and Laura S. Hamilton, *Making Sense of Data-Driven Decision Making in Education: Evidence from Recent RAND Research* (Santa Monica, CA: RAND Corporation, 2006).

These failures represent more than missed opportunities. As the other essays in this volume attest, states face tremendous pressure to drive advances in educational productivity by holding down costs while dramatically increasing student achievement. Meeting these demands will require states to move beyond gathering data and toward using it to improve the productivity of educational systems, while ensuring the privacy, security and confidentiality of student data is protected.

GETTING BEYOND THE DATA: EXAMPLES FROM STATES LEADING THE WAY

When states have good longitudinal data systems, and the right people can access and understand the information, policymakers can better gauge the relative performance of schools, districts, and programs; identify best practices; and base the allocation of scarce resources on what has provided the greatest impact. Prompt access to reliable data won't just help state administrators. With these data, students and families can pick the schools and courses most likely to lead to successful outcomes, and teachers can deliver more powerful and targeted instruction.

SEAs can play a leading role in making these opportunities a reality. As creatures of the state, they are uniquely situated to leverage state resources to bolster local access and capacity for data use. As regulatory and policymaking bodies, they are poised to leverage data to improve their own systems of support and intervention—better identifying the schools, districts, and programs that need help and more precisely identifying what they need to improve. This essay reports on the progress states have made in going beyond data systems toward securely using data to drive continuous improvement.

Leveraging State Resources to Improve Data Use in Districts and Schools

Large, high-capacity districts led the way in building sophisticated data systems and tools for instructional staff. But even the most sophisticated district-built systems generally do not follow students' progress as they move into careers or college, and one district's system can't be easily merged with other districts' systems to provide a statewide perspective on the performance of local school systems. Moreover, many smaller districts lack the capacity to develop comparably sophisticated data tools, leaving significant gaps in local data use.

The states leading the way are working to address these gaps by leveraging state resources to supplement, not supplant, district-level efforts to improve data use. Georgia, Texas, and Delaware offer great examples of how states can reduce data redundancies and streamline data management by creating centrally managed data repositories and dashboards. Such efforts benefit both large districts, which already have sophisticated local systems but lack integrated access to longitudinal data systems, and smaller districts, which often lack the capacity to develop and support a locally managed system. Oregon shows how states can go one step further by offering direct support to teachers and other instructional leaders toward using data in their professional practice.

When the Georgia Department of Education first sought to improve access to its longitudinal data system, officials found that many districts had already invested in their own data management systems, which were not compatible with state-level databases. This meant that state data were underutilized and generally disconnected from the richer array of data available within districts. In 2009, after extensive stakeholder engagement, the department released what it called a "tunnel," which links data from a single state system directly to district-level student information systems.[5] District staff can now view and compare state and local performance information on specific schools or programs to identify best practices, while teachers and parents have access to detailed longitudinal data to support children in the classroom and at home.[6]

In Texas, where more than 1,000, mostly small school districts had their own systems for collecting and analyzing data, the need for better access and support was clear. The Texas Education Agency realized that districts were struggling under the cost of collecting and reporting data to the state. At the same time, many districts received state-sponsored reports too late for them to be useful to instructional staff monitoring student progress. The new Texas Student Data System provides two solutions to solve these problems: a set of dashboards for teachers, and a revised data submittal system to reduce the burden on administrators.[7]

5. "State Longitudinal Data System Frequently Asked Questions," Georgia Department of Education, accessed September 6, 2013: http://slds.doe.k12.ga.us/DataHubPortal/Documents/SLDS%20FAQs.pdf

6. For more information on the "tunnel," see "Georgia's Information Tunnel: Linking District Ingenuity with State Resources to Make Data Matter," Data Quality Campaign, accessed September 6, 2013: www.dataqualitycampaign.org/success-stories/state-stories/georgia-information-tunnel-linking-district-ingenuity-with-state-resources-to-make-data-matter/

7. For more information on the Texas story, see "Texas Leads the Charge for the State-of-the-Art State-Level Reporting," Data Quality Campaign, accessed September 6, 2013: www.dataqualitycampaign.org/success-stories/state-stories/texas-leads-the-charge-for-state-of-the-art-education-data-reporting

Delaware, meanwhile, created Education Insight, a $1.3 million program funded through the state's Race to the Top grant. Education Insight aggregates data from a variety of existing sources to provide teachers, principals, and other staff a comprehensive view of each student and school. The program is free for all public schools in the state, traditional or charter, and shows how states can effectively leverage resources to improve data access in districts and schools.[8]

Beyond access, states are poised to enhance district- and school-level staff capacity to use data in decisionmaking. Oregon provides a strong example of the promise for students when a state agency supports effective data use in the classroom. As the Oregon Department of Education began to build a statewide longitudinal data system in 2007, it organized the Oregon Direct Access to Achievement (DATA) Project, in collaboration with several other state organizations and 19 regional support districts that offer services to the districts in their area.[9] The project's two-day, in-person training institutes have trained nearly 5,000 educators to use data to inform instructional decisions.

Oregon's effort has paid off. After just two years of teacher professional development in participating schools, teachers reported significantly increased use of data-driven decisionmaking. The results for students also look promising: the percentage of students scoring proficient or better on the state test grew significantly more in participating schools than in schools whose teachers did not receive training on data use in their classrooms.[10]

Supporting Data Use in Districts and Schools: Guiding Principles

Principle 1: Collaboratively identify district data capacity to inform state data efforts.

Principle 2: Transform data into actionable information and ensure district access.

Principle 3: Ensure data literacy among educators through preservice and in-service policies and practices.

Principle 4: Maximize efficiency and minimize burden in data collection.

Source: Data Quality Campaign, *From Compliance to Service: Evolving the State Role to Support District Data Efforts to Improve Student Achievement* (Washington, DC: Data Quality Campaign, November 2011).

8. "Statewide Data Dashboard Gives Educators New Tool to Support Student Learning," Delaware Department of Education, August 21, 2012, accessed September 6, 2013: www.doe.k12.de.us/news/2012/0821.shtml

9. "About Us," Oregon Direct Access to Achievement Project, accessed October 21, 2013: www.oregondataproject.org/content/about-us

10. Next Level Evaluation, *Oregon DATA Project Final Evaluation Report* (Fayetteville, AR: Next Level Evaluation, 2011).

Improving Data Use in the SEA

SEAs are uniquely positioned to drive system-wide continuous improvement. SEAs collect financial and performance data on teachers, principals, schools, and programs, and they set policies that govern those actors' roles and opportunities for improvement. Consider that a single change to state licensure policy can have the effect of completely refashioning the teacher preparation pipeline. Using data to inform policy choices like these can have wide reach with very little in the way of new financial investments. Work in Tennessee and Louisiana shows how policies ranging from teacher preparation and certification to school support can be made more efficient and effective by using existing state data. Illinois, Texas, and Florida show how statewide data can be mobilized to produce more accessible and informative progress reports.

Though Tennessee's work is still in early stages of analysis, the state is in the process of evaluating certification pathways for teachers using teacher evaluation data (see Gross and Jochim's essay in this volume). In a similar vein, Louisiana shares teacher evaluation data with teacher preparation programs to help them improve their own practice, as well as that of the teachers they train. Given the state's central vantage point and influence over certification pathways, efforts like these can improve the pool of human capital available to districts and schools throughout a state.

States have made far less progress in identifying and disseminating information on effective school models. Some states are working to simplify how they present school and district progress reports to make them more accessible and easier to identify those schools showing notable progress. In a recent redesign of their school report cards, Illinois consolidated the most important information into the first two pages, leaving the deep-dive information and reporting to secondary pages.[11] The state also allowed schools to report some of their own information in the report cards, such as special curricular options and extracurricular activities.

MOVING FORWARD

How can states leverage data for greater impact? This is a critical issue for states to tackle as they seek to improve outcomes for students. States often lack the analytic capacity to conduct independent

11. "New Report Cards in Development for 2013," Illinois Interactive Report Card, October 20, 2013, accessed October 21, 2013: http://iirc.niu.edu/HTMLPage.aspx?source=newreportcard

evaluations of their existing investments. There are turf issues, and the current culture and structures in education do not support working across traditional boundaries. Stakeholders can be skeptical about the quality and use of data, especially given that data are sometimes used to punish educators and schools, not to help them improve. And, as in all areas of education reform, resources are a constant challenge at a time of scarcity and competing priorities.

The examples from the states presented in this essay suggest that these issues are not insurmountable. The starting point for SEAs seeking to improve local access and use of data is to understand what district leaders and instructional staff want and require from the state. A user-friendly data delivery and retrieval system will probably look different in different states, given that districts vary tremendously in their baseline capacity. SEAs can play a constructive role by designing systems that work for administrators and instructional staff and by providing effective support and training through professional preparation programs, online resources, or some other coordinated effort.

Making better use of data in the SEA is more than a matter of thinking creatively and strategically about data and the problems administrators are trying to solve. It means designing and collecting metrics that are meaningful indicators of success or progress and sharing those data with relevant stakeholders—including program managers, families, and school districts. Perhaps more importantly, it requires a shift in mind-set. We must constantly ask: Are the current options the best ones, based on our analysis? This is very different from viewing data in aggregate terms and making policy and program decisions with little reference to whether choices are cost-effective.

Across the country, leading states are recognizing that the power of data is in application. As other states define their roles and opportunities in this regard, they will be making progress toward their ultimate goal: improving student achievement.