

California's State and Local Education Data Systems



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Getting Down to Facts

A research project designed to provide California's policy-makers and other education stakeholders with comprehensive information about the state's school finance and governance systems, and lay the groundwork for a conversation about needed reforms. The project was made possible by grants from the Bill & Melinda Gates Foundation, the William and Flora Hewlett Foundation, the James Irvine Foundation, and the Stuart Foundation.

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For the full text of the author's research report and the other studies in this project, see: www.irepp.net

For background on California's school finance system, see: www.californiaschoolfinance.org

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"Data-driven decision making" has become a central educational strategy based in part on the theory that the effective use of data can improve resource allocations aimed at raising student achievement. The two studies summarized here address important questions about California's existing education data systems, the status of district-level capacity to use data to drive decision making, and how both can be improved. The first focuses on the various state data systems, and the second—beginning on page 4—looks at data usage in California school districts.

Education Data in California: Availability and Transparency

By Janet S. Hansen, Senior Policy Researcher, The RAND Corporation

This paper describes the potential for using K–12 education data to support school improvement efforts and the effective, efficient use of education resources. It also examines the availability and transparency of education data in California. The study addresses three broad questions related to the state's education data system:

1. What is the state of California's education data system currently?
2. What is being done to strengthen it?
3. What are the obstacles and challenges to improving the system so that it can be an effective tool for helping policymakers and education leaders understand how schools are performing and how resources can be most effectively allocated?

Summary of Key Findings

Questions about how well schools are doing—and whether investments in public schools are accomplishing the state's desired goals—are increasingly central to debates over education policy and the most effective way to allocate resources. The ability to answer these questions depends on strong data systems that collect the relevant information and make it available to various stakeholders in the education enterprise in accessible and understandable ways.

Nationwide initiatives related to education data have set new standards for both the types of data needed and the kind of data system a state should try to develop. Through the No Child Left Behind Act (NCLB), the federal government has specified numerous kinds of information about students, teachers, schools, districts, and states that it wants reported. This has put new pressure on California to create an integrated, longitudinal statewide information system. At the federal level, the U.S. Department of Education is attempting to consolidate formerly separate data collections and is developing a web-based network to provide state education agencies and the federal government with the capacity to transfer and analyze information about education programs.

Study Methods

The author of this study uses a broad-based review of data systems in other states, combined with information from the U.S. Department of Education, the National Education Data Partnership, and others to describe emerging standards for an effective state education data system.

The author's questions about California's data system are presented within this larger context, and she evaluates the system against this national perspective. To that end, this study includes a review of public documents and websites, plus interviews with individuals knowledgeable about California and other state data systems.

California lags most states in its data approach and the quality of its education data system

California is lagging most other states in developing education data systems capable of helping policymakers and others understand how schools are doing and how resources can be deployed most effectively to increase student learning. The state has only begun in the last several years to move beyond the traditional approach to data collection: emphasizing discrete, disconnected data “silos” that address reporting and monitoring requirements but do not lend themselves to robust, integrated analyses that can guide policy and program improvement.

Despite some recent reductions, the state still has 125 active data collections in the California Department of Education (CDE) alone. A few of the key ones include:

- The California Basic Education Data System (CBEDS), which collects information on student and staff demographics using three separate forms.
- Fiscal data using the Standardized Account Code Structure (SACS), which provides a common data framework for local education agencies. (SACS includes subcodes permitting school-level reporting, but their use is voluntary and there are no consistent data definitions.)
- Student achievement data, which are provided to the state and districts by test vendors.

These data are publicly available through several online websites and on School Accountability Report Cards (SARCS). The latter, originally mandated by Proposition 98, are prepared by districts to provide parents and the community with information about the condition and performance of each public school in the state. Since 1988 the number of required data elements for the SARCS has steadily grown, making them increasingly unwieldy. The state continues to look at ways to address this.

Important teacher data are collected by the California Commission on Teacher Credentialing and the California State Teachers Retirement System, both of which operate and report independently of the CDE. These data cannot now be linked easily to school and student information.

California School Information Services (CSIS), which operates independently of the CDE, provides a vehicle for collecting data extracted from the student information systems in participating districts. CSIS was originally envisioned as the vehicle through which California would develop comparable information systems in all districts, but state policymakers made participation voluntary, not mandatory. As of June 30, 2006, 263 districts used CSIS to electronically transmit data for three state collections.

The state has taken some important steps in recent years

Despite the plethora of education data available in California and efforts to improve the management and usability of those data, the state currently lacks the ability to:

- Track students individually and over time, and link them to performance scores and outcomes, such as graduation;
- Track teachers individually and link them to students taught, their preparation programs, and the professional development they receive;
- Provide teachers with student histories and performance indicators;
- Link school/district resource use with student performance.

Longitudinal data systems of the type described above are essential for tracking such key policy-relevant variables as student and teacher mobility, changes in student achievement over time, and accurate graduation and dropout rates. They can provide information to help teachers tailor their instruction to individual student needs and enable policymakers to evaluate

which educational programs and practices are associated with gains in student achievement.

California has taken a number of actions to enhance its public school information systems. The CDE has improved its data management practices and supports the work of CSIS. The state has also taken the initial steps to implement both a student longitudinal data system (California Longitudinal Pupil Achievement Data System or CALPADS) and a teacher longitudinal data system (California Longitudinal Teacher Integrated Data Education System or CALTIDES).

CALPADS was originally authorized by legislation in 2002. It is currently scheduled for completion in December 2008. As now envisioned, it would include only the data elements required by the federal government as part of NCLB and would not be specifically designed to support elaborate and complex data selection queries often desired by education policymakers and researchers.

A feasibility study for a Teacher Data System (TDS) was completed in March 2006. The CDE and the Commission on Teacher Credentialing have been authorized and funded to begin development of the system and to also create a system of unique teacher identifiers during 2006–07.

In August 2006, the Legislature passed Senate Bill 1614, which called for a comprehensive state education data system within the CDE that includes information on the teacher workforce. The bill specifically includes both CALPADS and CALTIDES within the California Education Information System.

Political obstacles and a lack of commitment leave progress in question

Data management and longitudinal data system initiatives in California are promising, but their success is not yet assured. The state has not developed a “culture of data” that emphasizes the

necessary connection between good data and school improvement efforts. Neither has California created strong incentives for school districts to care about the substance and quality of the data they provide to the state. This is in contrast to other states, such as Florida and Texas, where policymakers recognized the importance of good data systems to school improvement efforts and acted on this link many years ago.

The state's past track record in funding data initiatives has also demonstrated only a half-hearted commitment. For example, state policymakers failed to provide the funds necessary to meet targets for enrolling all districts in CSIS. In 2006 the Legislature declined to provide the recommended level of funding to support local data activities and compensate districts for the work involved in maintaining the new student identifier system, the quality of which will be essential to CALPADS's successful implementation. The state is taking a narrow approach to CALPADS, planning to include only data required by the federal NCLB law in the student

data system. Some state officials have had reservations about committing the resources necessary to expand state educational data systems. Because of concerns related to a state constitutional ban against unfunded mandates, state officials have been reluctant to impose new data requirements that could cause school districts to insist that they need state funds to modify their local information systems.

Author's Conclusion

The author concludes that California needs to address several challenges related to leadership, funding, and data accessibility if its current data system initiatives are to fulfill their promise. She believes it is unlikely that the state can build data systems capable of supporting data-driven policy and funding decisions without strong, long-term support from state leaders. She also notes that California's history of lukewarm support for education data system development raises questions about whether the state will make the ongoing, long-term commitment to communication and training that

appears critical to the success of complex data systems.

While current activities such as DataQuest, Ed-Data, and SchoolMatters (all web-based services that draw on CDE data) make a fair amount of information available to the public, the more far-reaching benefits for policymakers will come if researchers (both inside and outside government) have access to data that will allow them to study the effectiveness of the state's public school investment. California could draw on the experiences of other states to develop policies and procedures for ensuring appropriate access.

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Bringing the State and Locals Together: Developing Effective Data Systems in California School Districts

By Springboard Schools, San Francisco, California

This paper focuses on the data needs of local school district leaders. It examines the following questions:

1. How do the policy context and California state data systems support school district data needs?
2. What data are most needed by school district leaders?
3. What is known about the desired characteristics of effective district-based data systems and data use?
4. What district practices support good use of data?

Summary of Key Findings

The role of the California state data system in supporting school district data needs has been driven largely by federal and state policy related to testing and accountability. These measures have increased pressure on states and districts to collect and disaggregate performance data for students with limited proficiency in English, with disabilities, from low-income families, and from racial and ethnic minority groups.

California's data system has not supported school district data needs, but some changes are occurring

The authors find that, until recently, California's data system lacked the basic elements needed for tracking and reporting student performance effectively at the local level, such as a standardized student code or identifier. Further, the state's focus on data systems primarily designed to support mandated reporting has de-emphasized collecting data to support local decision making. State data systems were not created to serve local needs per se. While the authors find that some districts use state data to guide instructional decisions, this rarely occurs.

More encouraging are some recent changes. California School Infor-

Study Methods

Springboard Schools conducts a literature review, including academic research, advocacy statements, and policy papers that provide guidance on education data systems.

The authors then conduct interviews with leaders from selected California school districts. The interviews:

- Provide examples from the field of issues raised in the literature;
- Shed light on areas where the literature was thin or raised questions; and
- Explore the unique experiences and perspectives of district leaders who have achieved success, even in light of challenging conditions.

The study also draws on findings from surveys of principals that were part of a Springboard Schools study of high-performing, high-poverty districts.

Finally, the authors interview state policymakers concerned with data issues.

mation Services (CSIS) is beginning to address this issue by building local capacity to use state data. For 2006–07, the state provided some separate funding to school districts to support development of their own data systems and infrastructure.

While districts vary in their use of data, their most pressing need is for data related to student achievement and instructional improvement

Districts vary in their capacity to design and use an effective data system. This study finds wide disparities in the quality of data systems across school

districts in California; but by most reports, widespread data use is limited. That said, district needs are more uniform. Research and interviews from the field reveal that district central offices and schools need student achievement data from multiple sources and data on instructional practices.

District offices are focused on increasing student achievement and closing achievement gaps. Although other types of data are also needed for optimal decision making (e.g., data on supports students receive outside the classroom), fiscal constraints and limited staff knowledge of how to work with those data

lead to district leaders and teachers concentrating on data that are most relevant to student learning and instructional practices.

Accessibility, a sense of ownership, and ease of use are keys to effective district-based data systems

The authors find that effective data systems focus on enhancing active data use at all levels of the school and district, especially among teachers. Research indicates this is achieved by creating data systems that are accessible, promote a sense of ownership, and are easy to use.

The literature supports some level of access to data for all educators in the system. However, it is divided on the degree to which teachers and school leaders should analyze the data themselves. Some researchers find that teachers are capable of bringing new insight to the analysis due to their classroom expertise. Others find that teachers lack the time or other resources needed for analysis, and that the system would be better served if analysis and presentation of data were left to administrators from the district central office.

Interviews from high-performing sites suggest that school site personnel should have direct access to the data. In order for the data to be useful for teachers, it is essential that teachers and students feel a sense of owning the data they will use to track progress and see how the data clearly link to the work they are undertaking. In the absence of this sense of ownership, they are less likely to use these data to inform further action.

Finally, ease of data use is important at all levels of the system. If the technology is too difficult, the data will not be used.

A strong data infrastructure and fine-grained data are central requirements for a useful system

The literature and the authors' field interviews cite a number of ideas, structures, and processes that support construction of an effective data system and active use of data. District central offices are key players in this process.

Building an effective data system may involve redistributing resources from other needs. Fine-grained data focused on student achievement for each student and by subgroups increase the capacity of teachers and school leaders to identify relevant trends and begin to design instructional strategies for improvement. Effective systems include multiple sources of information about students, such as assessment data, student work, and teacher logs about particular students. Some of these data can be collected for all students in the state, while others may be specific to a given district, school, or classroom. Triangulation of these data allows for more meaningful analysis and response to problems.

Developing staff capacity to use data, particularly at the school level, will support the good use of data

Building an effective local system is necessary but not sufficient to ensure good use of data. Springboard's review of best practices in the literature and in California school dis-

tricts found the following supports to also be important:

- Engaging school leaders and teachers in helping district leaders design and implement the data system;
- Placing a premium on professional development related to data use;
- Using school-based data mentors to build capacity for individual data use and collaborative staff inquiry; and
- Empowering staff to use data as they work together to analyze what works and ways to improve instruction.

These supports build knowledge and skills related to data use at all levels of the system, but especially at the school level. Importantly, they help change the perception of data. Teachers are more likely to see use of data as valuable for their own decision making rather than only as necessary for compliant reporting. As district leaders partner with school staff to design the data system, they benefit from the staff's unique insight and lay a foundation for joint ownership and the trust needed to successfully launch the system.

Springboard Schools is a nonprofit network of California educators involved in instructional reform initiatives, teacher and administrator professional development, and education research and evaluation. Springboard Schools was founded in 1995 as the Bay Area School Reform Collaborative (BASRC), an initiative of the Annenberg Foundation and the William and Flora Hewlett Foundation. This study was completed in January 2007.