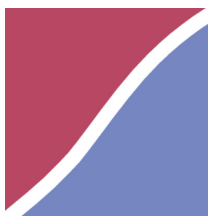


Continuous Improvement In California Education: Data Systems and Policy Learning

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The “Getting Down to Facts” (GDTF) studies released in March 2007 offered a clear diagnosis of the issues facing California’s education system. Now, as California moves beyond the facts and begins the search for ways to improve the performance of California schools and students, the state faces a critical policy dilemma. On the one hand, the evidence presented in GDTF made it clear that simply putting more resources into California’s present education system is unlikely to produce the large gains in performance that Californians expect from their schools. On the other hand, the GDTF studies made it equally clear that bringing about significant improvements in educational performance may require a substantial increase in the resources that the state spends on education, along with increased autonomy and flexibility for local educators to decide how these resources should be used. The policy dilemma that the state faces is how to ensure that local actors use new resources in the best possible ways, without increasing the regulatory burden on schools and school districts or adding to the profusion of categorical funding streams.

In PACE’s view, the solution to this dilemma has two key elements. First, the state needs to focus its reform efforts on creating a system that fosters innovation and learns from experience to support continuous improvement toward the goal of academic success for all students. The critical first step toward this goal is to accelerate current efforts to build a strong and comprehensive data system based on the collection and analysis of longitudinal data on individual students and teachers. Second, the state needs to make significant investments in human capital and capacity building at all levels of the education system. Personnel policies must ensure that California educators have the time, knowledge, and skill they need to improve the performance of their schools and students, and incentives within the education system should be aligned to encourage the development and adoption of new and more effective practices.

We address the first of these two elements in this policy brief.¹ We argue that a robust data system is the essential foundation for an education system that is capable of continuous improvement in school and student performance. Great data by themselves will not lead to continuous improvement in the educational performance, however. Policies must also be designed and implemented in ways that support careful evaluation and the production of new knowledge about effective programs and practices. In addition, the state must support the creation of institutions to disseminate new knowledge and encourage the adoption of best practices at all levels of the education system, from the classroom to the California Department of Education (CDE).

¹ We address the second element in another PACE policy brief, “Reshaping Personnel Policies to Improve Student Achievement,” by Julia E. Koppich and Amy Gerstein.

I. Data Collection

A strong data system that produces rich and timely data on students, classrooms, and schools is a necessary condition for the creation of a continuously improving education system. The availability of reliable data is essential to the accurate measurement of performance at all levels of the system, and to the identification of practices, programs, and policies that are effective in improving the performance of schools and students. Timely and reliable data can support teachers as they make decisions about the students in their classrooms, and principals as they make decisions about the allocation of resources in their schools. District and state officials need comprehensive data to inform their decisions about policy and funding. Taxpayers and voters need far more information than they currently have on what's working and what's not in California's education system so that they can make informed decisions about how best to support California's students and secure the state's economic future. In the absence of timely and reliable data, California's education system is literally flying blind.

California's education data system lags far behind data systems in other states and other countries, generally failing to provide the kinds of information that teachers, principals, parents, and others need to support continuous improvement in the performance of schools and students.

The Legislature should:

- ∞ Move immediately to accelerate the implementation of CALPADS and CALTIDES, including sufficient funds for districts to support the training and infrastructure necessary to ensure that data collection is both timely and reliable.
- ∞ Expand the scope of data collection under CALPADS and CALTIDES to focus on identifying policies and programs that enhance learning outcomes, and not simply on compliance with federal mandates. The marginal cost of collecting additional information while the system is under development is low; expanding the scope of data collection later could prove costly.
- ∞ Ensure that data on individual teachers and students can be linked, to identify what teaching practices and strategies are working and to target support to students and teachers who need it.
- ∞ Support the development of a data system in which education data can be linked to data from other sectors, including but not limited to higher education, pre-K education, social services, health care, corrections, and employment, in order to understand how factors outside of schools affect student performance and also to track the impact of educational policies and programs into students' adult lives. Student learning is affected by multiple factors inside and outside the school, and it is important for California's education data system to be able to account for as many of these factors as possible.
- ∞ Consider basing unique student and teacher identifiers on social security numbers, w/ appropriate safeguards, as is already done in other states, in order to make linkages across data systems possible.

II. Data Use

Funding alone may not be enough to gain the buy-in at the local level needed to ensure the quality of data collection. School and district personnel must also see how their investments in the data system support their own efforts to improve the performance of local schools and students. Too often, educators perceive data as a threat, widely used to stigmatize and punish them and rarely used to support them or expand their opportunities for success. The perception that data are dangerous is a powerful disincentive to the creation of a strong and effective data system, because those responsible for collecting and using the data may have an interest in seeing the system fail. Changing this perception will require the state to return the data that it collects to teachers, parents, schools, and school districts on timelines and in formats that support their efforts to improve learning outcomes for the students under their care. In addition to quality and timeliness, the state must also provide infrastructure and training to support data analysis and use at all levels of the education system.

The Legislature should:

- ∞ Support efforts by CDE and school districts to develop timely and informative “report cards” on the performance of individual schools. Parents need information on the schools where their children are enrolled not in the middle of the year, when their children are already deeply enmeshed in relationships and activities, but before the school year begins when they are still in a position to make decisions about the schools they would like their children to attend.
- ∞ Support efforts by CDE and school districts to make data on student performance available to teachers at times when they can use it. Teachers need data on the performance of the students in their classes not at the end of the year—when these students are about to become someone else’s responsibility—but at the beginning of the year when information about students’ strengths and weaknesses might enable teachers to adapt their instruction to students’ needs.
- ∞ Invest in capacity-building to support data collection, data analysis, and informed decision-making at all levels of the system. Investments in capacity building will have to include the employment of specialized personnel, training and professional development for educators, and increased time for educators to make use of the data available to them.
- ∞ Support the creation of state-level institutions for the accumulation and validation of information on “best practices,” including the development of effective mechanisms for making knowledge about effective programs and practices available to teachers, school leaders, and district officials. At present lessons learned in one school or district typically remain the exclusive property of those directly involved, because there are few channels through which new knowledge can be validated or diffused. The Legislature should seek to ensure that learning that occurs in one part of the system (e.g., one school district, or one teacher’s classroom) is made available to others within the system.

III. Continuous Improvement

Policy implementation concerns are not separate from the data system. Even with great data and access, it will be difficult for Californians to learn which policies and programs are working unless those policies and programs are implemented in ways that facilitate evaluation. The data system is needed in order to provide the information necessary to evaluate programs, but deliberate implementation is also needed in order to ensure the availability of informative data. The state must also invest resources in evaluation to learn which policies and practices are effective in improving performance and which are not.

The Legislature should:

- ∞ Design and implement policies in ways that support organizational learning. This might often involve the design and implementation of quasi-experiments, in which new policies and practices are adopted in a carefully selected sample of schools and classrooms, in order to identify whether and under what circumstances new approaches result in better outcomes for students, before they are put into practice in all schools.
- ∞ At the state level, commit resources to rigorous, independent policy evaluation, to identify programs and practices that improve the performance of California schools and students. It is not sufficient to encourage innovation and experimentation in the education system. It is also necessary to evaluate carefully and systematically how new policies and practices affect (or not) academic performance. Without careful evaluation, the opportunities for learning afforded by new flexibility are likely to be squandered.
- ∞ At the district and school level, provide resources (time, training, and specialized personnel) to increase capacity to support data analysis, data use, and organizational learning. Educators at all levels of the system need time and support to reflect on their work, to consider different ways of organizing and carrying out their responsibilities, and to provide support and guidance for others. For example, teachers not only need timely data on the past and current performance of their students; they also need training to be able to interpret the data and determine what the data have to tell them about which practices will be most effective with which students.

IV. Measuring Improvement

Judging the success or failure of schools solely on whether their students meet the California grade-level standards now ensures that most schools that enroll large numbers of poor students will be labeled as failures. As longitudinal data on students and teachers become available California will therefore need to develop additional “value-added” measures that can fairly and accurately assess the progress that schools are making toward the goal of proficiency for all of their students, in order to take fair account of the different challenges faced by different schools.

- ∞ Valid measures of student progress are not supported by California’s current data system, but they will become increasingly feasible with the full implementation of CALPADS and CALTIDES. Agreement on the nature of these measures and how they should be incorporated into California’s accountability system should be a priority for policy-makers.
- ∞ Psychometricians in California and across the country are currently at work on the development of valid indicators of student progress, which will allow policy-makers and officials to measure the “value added” by different instructional programs and strategies. The Legislature can support this work by providing incentives to school districts and union locals that are willing to experiment with these new technologies by putting them to work to support continuous improvement in the performance of schools, teachers, and students.

V. Conclusion

California has set very high goals for the performance of our state’s education system, and the current performance of the system is a long way from meeting those goals. As we challenge our state’s educators and students to do better, though, it is essential to recognize that the goal we seek—a system that educates all students, including the most disadvantaged, to very high standards—far exceeds what any education system in the U.S. currently achieves. Learning how to accomplish this goal is not simply a matter of learning what other states are doing and imitating high performers; it requires learning how to educate students in new and better ways. To accomplish California’s ambitious educational goals, the state’s education system will have to be reorganized to support innovation and to learn from experience.

California does not currently have the capacity to use information well. In order to do so, the state must systematically and consistently collect data on students, teachers, classrooms, schools and districts. The data that the state collects must be synthesized and distributed in ways that make them useful to stakeholders, and made available for independent evaluations. In addition, the state should begin to implement policies and programs in ways that support evaluation and organizational learning. Without strong support for data collection, data use, and policy learning in the education system the goals that we have set for our state’s schools and students will remain out of reach.

VI. Research and Additional Resources

Policy Analysis for California Education (PACE) is a non-partisan policy research center based at the University of California – Berkeley and Stanford University. PACE seeks to increase the impact of academic research in educational policy debates in California. The policy recommendations included in this brief are based on the research reported in “Getting Down to Facts,” and on continuing research at PACE and elsewhere on data systems and the conditions required for continuous improvement in educational systems. PACE will publish two additional policy briefs on data systems and continuous improvement in California’s education system in Fall 2007.