



# GETTING DOWN — TO FACTS II —

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## Continuous Improvement: Building System Capacity To Learn

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**About:** The Getting Down to Facts project seeks to create a common evidence base for understanding the current state of California school systems and lay the foundation for substantive conversations about what education policies should be sustained and what might be improved to ensure increased opportunity and success for all students in California in the decades ahead. *Getting Down to Facts II* follows approximately a decade after the first Getting Down to Facts effort in 2007. This research brief is one of 19 that summarize 36 research studies that cover four main areas related to state education policy: student success, governance, personnel, and funding.

This brief summarizes two *Getting Down to Facts II* technical reports on continuous improvement for California:

**Toward a Common Vision of Continuous Improvement for California**

Alicia Grunow, Sandra Park, Heather Hough, Jason Willis, and Kelsey Krausen, September 2018.

**Using Data for Improvement: Learning from the CORE Data Collaborative**

Heather J. Hough, Laura Mulfinger, and Erika Byun, September 2018.

These and all GDTFII studies can be found at [www.gettingdowntofacts.com](http://www.gettingdowntofacts.com).

## Introduction

Creating continuously improving education systems could be the antidote to one-off education reforms that come and go with little to show for the effort. The strategy has been picking up steam in recent years, urged on by the federal Every Student Succeeds Act (ESSA); the California Department of Education; and the Bill & Melinda Gates Foundation, which recently announced that it is earmarking 60% of its \$1.7 billion investment in education during the next five years to support school improvement networks.

Continuous improvement in education evolved from decades of similar efforts in industry and health care that resulted in significant improvement in outcomes and efficiency. What distinguishes continuous improvement from other reform strategies is its focus on the underlying architecture of the system that is producing undesirable outcomes (e.g., low graduation rates, high suspension rates, English learner performance gaps). Continuous improvement engages multiple stakeholders (e.g., teachers, administrators, operational staff, parents) in disciplined problem-solving to discover, implement, and spread evidenced-based changes that work locally to improve student success. Education organizations that have invested in continuous improvement approaches have been able to provide early examples of the advantages of this approach in education.

The two reports summarized here describe continuous improvement and what it looks like in practice, examine the current state of continuous improvement efforts in California, explain the challenges and barriers facing districts trying to get it going, and offer some policy ideas to smooth the way.

## KEY FINDINGS

- Continuous improvement is *not* business as usual.
- When it's well understood and appropriately applied, a continuous improvement approach can improve education quality.
- Educators, researchers, and education organizations in California see continuous improvement as central to enduring education transformation, but it is still in a nascent stage.
- Continuous improvement requires an initial significant investment in time and money to make it a reality.
- California's data systems are not adequate for helping districts monitor progress toward specific goals.
- More training and coaching are needed to build expertise so California can achieve continuous improvement throughout the state.

## Summary of Key Findings

### Continuous improvement is *not* business as usual

For decades, education reform has been dominated by a series of disjointed efforts that don't necessarily connect with or support each other. Over time, when it became clear that one approach wasn't going to work, another easy fix took its place. Each new initiative was introduced with great hype, but often without the support to figure out how to get ideas to work in practice for diverse students in diverse contexts. Results, if they were evaluated at all, came at the end of the school year when that group of students was gone.

Unlike most other education reforms, continuous improvement is a complex, systemwide strategy. It requires key shifts from traditional reform approaches. The premise is that the individual people in an organization aren't the cause of current problems, rather that the system is *designed* in a way that produces the problems. Continuous improvement creates a culture of collaboration and experimentation. It provides a structure for teachers and staff to identify problems, design interventions specific to those problems, learn from trying them out in context, and evaluate their effectiveness while there's still time to make any necessary changes. It is distinguished by assumptions, summarized in Figure 1 (following page), that represent a set of beliefs and distinct theory of action about how to make progress.

**Figure 1: Distinguishing Features of a Continuous Improvement Approach**

ASSUMPTION	DESCRIPTION
<b>Systems produce outcomes.</b>	Continuous improvement assumes that it is the system and not individuals that produces current outcomes and accordingly focuses attention on system design and operation.
<b>Efforts focus on key processes.</b>	Improvement efforts focus on the processes that produce the outcomes as opposed to focusing exclusive attention on the outcomes themselves.
<b>Progress requires collective learning and discovery.</b>	Improvement efforts are structured to encourage workers throughout the organization to engage in collective learning about their practice. Data and problem-solving methodologies are used to make assumptions about cause and effect explicit, and to test ideas in practice.
<b>Frontline workers are uniquely situated to learn how to get ideas to work.</b>	Those directly responsible for implementation of a practice (e.g., classroom teachers) are actively involved in learning how to get that practice to work in context. Their unique knowledge of the day-to-day work is a form of expertise necessary for effective improvement.
<b>As effective practices are discovered, they are spread throughout the organization.</b>	As effective practices are discovered, they are spread and become standard work for the organization. These practices are continually updated and adapted to context through local experimentation.

**When it’s well understood and appropriately applied, a continuous improvement approach can improve education quality**

In recent years, continuous improvement has been gaining widespread attention in education. Entire school districts, charter management organizations, and other groups of public schools brought together by education organizations are turning to continuous improvement to address intransigent and complex problems in both instruction and management.

Some of the school districts that have invested in continuous improvement are beginning to see results. For example, the School District of Menomonee Falls, Wisconsin, reduced middle school suspensions from 283 to 60 and increased Advanced Placement participation more than three-fold within a few years after beginning its transition to continuous improvement. Between 2009 and 2014, Fresno Unified School District increased its graduation rates from 69% to 79%, and its college eligibility rates from 32% to 48%, as measured by California’s A-G course completion rates, which are required for admission to the University of California and California State University systems. Maryland’s Montgomery County Public Schools, which began its organizational transformation in 1999, closed its achievement gap during the next decade. By 2009, the proportion of students successfully completing Algebra 1 or a higher-level math course with a grade of C or better increased by about 54% from 43% to 66%. Gains were especially dramatic for Hispanic and African American students, jumping by nearly 188% and 124%, respectively. These examples, and others like them, demonstrate that a continuous improvement approach can produce meaningful changes.

## Educators, researchers, and education organizations in California see continuous improvement as central to enduring education transformation, but it is still in a nascent stage

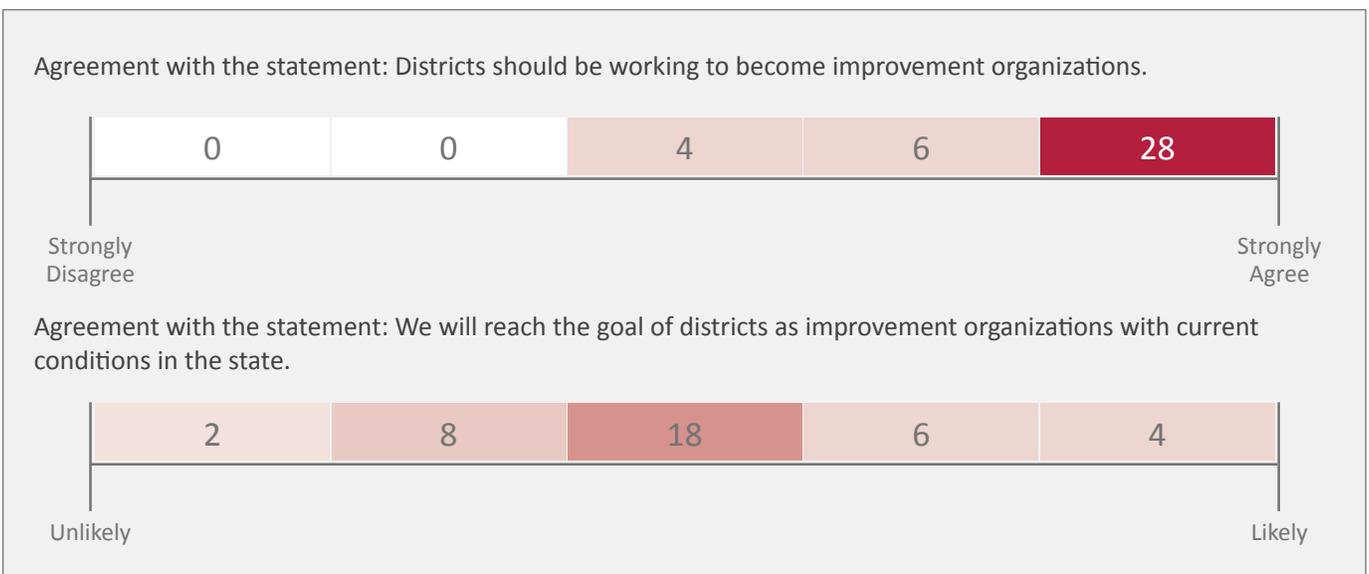
Continuous improvement is increasingly being embraced by state policymakers, educators, and researchers in California as an integral method for improving student outcomes. The California Department of Education, for example, uses the term continuous improvement 23 times in the [January 2018 version](#) of the state plan to comply with the federal Every Student Succeeds Act (ESSA).

The state’s ESSA plan underscores California’s move toward increasing local control. Specifically, several new state policy structures—the Local Control Funding Formula (LCFF), the California School Dashboard, and the Local Control Accountability Plan (LCAP) process—have given school districts more autonomy in how they allocate resources to support underserved students, how they evaluate student and school performance, and how they can choose to intervene when groups of students are not achieving.

Under these new approaches, district leaders create goals in each of the state’s eight priority areas, and then allocate resources strategically to ensure equitable outcomes for all students.<sup>1</sup> The [guiding principles](#) of this new system are that multiple measures guide educators to focus on the “right drivers” and that local leaders are given the resources and expertise to act on what they learn from the data.

However, since continuous improvement is a systems approach, there is a growing understanding that achieving this vision requires improving the way that organizations function. For example, nearly three-quarters of education leaders surveyed at a California meeting on continuous improvement in October 2017 agreed with the statement: “Districts should be working to become improvement organizations.” However, these leaders were in much less agreement with the sentiment that: “We will reach the goal of districts as improvement organizations with current conditions in the state” (see Figure 2).

**Figure 2: Survey of Education Leaders Attending Continuous Improvement Convening**



<sup>1</sup> California’s eight priority areas are (a) basic services, (b) implementation of state standards, (c) course access, (d) student achievement, (e) other student outcomes, (f) student engagement, (g) parent involvement, and (h) school climate.

The state leaders who expressed doubt over whether California districts will reach the goal of becoming continuous improvement organizations did so, in part, based on what they see as a lack of understanding about what it takes to effectively carry out and sustain it. Even though most educators have heard about continuous improvement and have a general idea of what it is, few have made it an integral part of the daily life of their schools and districts.

If half-heartedly or partially implemented, continuous improvement runs the risk of becoming a surface-level reform that doesn't bring about transformative change. To prevent continuous improvement from becoming merely a convenient slogan, the field as a whole needs agreement on what continuous improvement looks like when it becomes the expected way of daily life in a district and how to support it at scale.

### Continuous improvement requires an initial significant investment in time and money to make it a reality

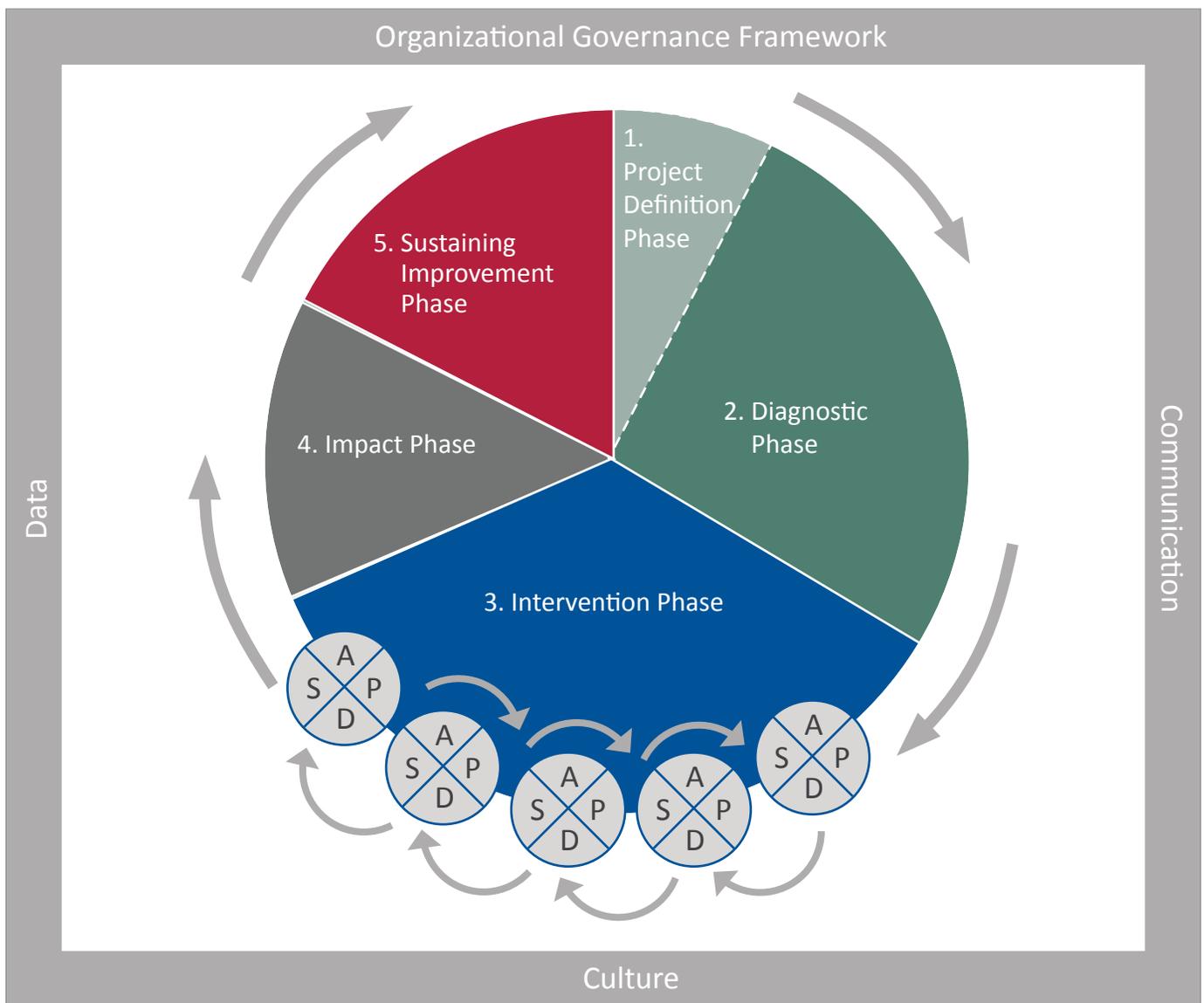
Organizations and networks that get results allocate significant time and resources to build improvement capacity. These upfront investments have long-term payoffs by enabling educators and administrators to more efficiently target their resources toward improvement efforts that work and that are connected to their organizational goals. In particular, continuous improvement organizations invest in ongoing training and coaching to build improvement expertise.

In the early stages, organizations often rely on outside experts to help build their improvement expertise. Over time, the training gets built into the fabric of the organization and improvement coaching becomes embedded into regular role responsibilities. Some of this can be done with district employees after they're fully trained; but at the start, outside expertise is required. This can be a significant barrier for some districts. For example, a district leader estimated that a three-year contract with a private consulting and training group would cost up to \$200,000, which not all districts can afford. And it's not just money—shifting priorities to free-up resources takes time. Indeed, the transformation to a continuous improvement district will take several years, which runs counter to the traditional accountability model that expects districts to show improvements within a single academic year.

### California's data systems are not adequate for helping districts monitor progress toward a specific goal

In a continuous improvement approach, people at all levels of the system need to know how to decide what to measure and how to analyze data to both understand variation in performance among students and to evaluate whether a new program or new instructional method is actually improving outcomes. There are different phases of continuous improvement, and the data needed at each of these phases are quite different (see Figure 3 on the following page). In the project-definition phase, data needs are geared toward understanding the problem (e.g., which schools or students are underperforming and on which measures). During the diagnostic phase, managers evaluate existing processes within that area of interest to diagnose potential quality problems and opportunities for improvement. During the intervention phase, individuals use data within iterative cycles for implementation and progress monitoring. In the impact phase, leaders use data to evaluate the effect of interventions on predetermined performance measures. And finally, in the sustainability phase, data are used for monitoring and refining interventions as well as providing feedback in order to sustain the improvements.

**Figure 3: Overview of Improvement Process**



Note: Adapted from The Victorian Quality Council (2008). P = Plan, D = Do, S = Study, and A = Act.

Continuous improvement needs both more frequent and deeper data in order to catch problems while there's still time to turn them around. However, California has a very limited data infrastructure. As a result, the research conducted for these reports found wide variation in district access to data and capacity to use data for improvement.

The California Longitudinal Pupil Achievement Data System (CALPADS) contains individual student data including demographics, courses taken, discipline, assessments, and graduation. However, it doesn't provide enough useful granular information to support improvement. The data that schools and districts currently get from the state are in the words of one district leader "really an autopsy." They tell what happened the previous year, which doesn't allow the teacher or system leader to use the data to help that group of students because they have moved on. Furthermore, these data aren't presented back to educators in ways that are easy to analyze or understand.

As a result, some districts and networks are beginning to build this data infrastructure for themselves. For example, a network of districts known as the CORE districts has created a data collaborative to provide faster and more detailed information about student and school performance. Nearly 60 school districts that together cover almost a third of all the state's public school students are now part of the collaborative. Districts pay a small fee to join the data collaborative, and in return receive access to much more information than is available through CALPADS, and with stronger analytic tools.

Sometimes the CORE data system simply makes better use of data from CALPADS. For example, CORE has developed an academic growth metric that provides more information about school performance than what's currently reported by the state. The CORE measure of student growth takes into account an individual student's prior test history, socioeconomic disadvantage, disability status, English learner status, homelessness, and foster care status. With this information, educators can see the impact a school has on student achievement compared to other schools with similar characteristics. CORE also reports on-track indicators, including high school readiness scores at the middle school level, which are based on predictive analytics that combine a student's GPA, attendance, grades, and suspensions. These indicators measure a student's risk level at the start of high school.

The data collaborative also adds new measures to state data, including surveys of school climate completed by students, parents, and staff; social-emotional learning measures; college-going rates; and college outcomes, with additional metrics being developed.

Member districts also have access to an interactive feature that is available in some states, but not in California. It allows districts to make comparisons between and within schools, and to analyze how achievement is changing over time on the multiple measures contained in the data system. While the data available through the CORE data collaborative have filled a need for many districts, they are insufficient to support continuous improvement. More frequent data to help actors at all levels of the system are needed to support all the cycles of improvement, and many districts don't have access to these kinds of data, nor do they have the time and expertise to build the data themselves.

### More training and coaching are needed to build expertise so California can achieve continuous improvement throughout the state

California education leaders interviewed by the researchers reported that one of the barriers to applying continuous improvement is a lack of enough training and coaching to build expertise in schools and districts. Everyone needs to learn different strategies, tools, and processes that are part of continuous improvement. But there are a limited number of districts that can serve as models and illustrate best practices, and a majority of district leaders surveyed said no outside group is helping them to implement continuous improvement.

However, California can invest in this training and coaching infrastructure through the state's System of Support, which is designed to help the 200+ school districts that have been identified as requiring differentiated assistance. As part of the state's philosophy of giving local leaders greater authority to determine what's best for local districts, state education officials have tapped county offices of education as lead agencies in providing assistance through the System of Support. Although all 58 county superintendents and other county and school district staff have received training in continuous improvement, more investment needs to be made. The majority of district superintendents interviewed reported that they're either receiving no support for continuous improvement or support that's more targeted to specific initiatives rather than the systemwide focus of continuous improvement.

## Conclusion

Continuous improvement is rapidly becoming the state’s favored strategy for increasing student achievement. In places where it has been successful outside California, districts have been able to invest heavily in training and coaching. Cultivating an environment across the state that supports districts’ use of continuous improvement methods will require collaboration from state agencies, advocacy groups, technical assistance providers, districts, and schools. Educators at all levels, and those who support them, need to develop a shared understanding and vision of what a quality education system looks like and what their role is in contributing to such a system.

A continuous improvement approach statewide requires a fundamental shift in the mindsets, roles, and responsibilities of everyone in the system and how they relate to and interact with each other. In particular, it pushes more of the problem-solving and decision-making to schools and districts. In this shifting geography, county offices of education and the state must provide districts with the necessary supports. However, county offices don’t necessarily have the expertise to provide the support that districts need. In this way, how the System of Support is built and executed is critical to ensuring that every school and district across the state has the support that it needs.

Interviews with district leaders show that they support the vision of continuous improvement as outlined by California state education officials. However, many are challenged by the lack of a clear definition of continuous improvement. Even state education leaders are still working to understand the principles, tools, and processes at the core of continuous improvement. Impediments also exist to creating a better data system and building the capacity to make use of better data. Finally, continuous improvement requires sustained focus and investment over time, which often runs counter to traditional policy pressure to improve virtually overnight.

California has started to address some of the challenges, but there is more to do to ensure that all systems are aligned and that every district and school has access to the tools, resources, and coaching that they need to succeed. In this way, state education agencies can play a critical role in setting the vision, developing the capacity to achieve it, and building a consensus for the path forward.

## Lead Author Biographies

*Alicia Grunow is coauthor of Learning to Improve: How America’s Schools Can Get Better at Getting Better (Harvard Education Publishing, February 2015). Grunow and Sandra Park are cofounders of the Improvement Collective, which provides training, consulting, and coaching to help schools and organizations serving children to design and build systemwide improvement infrastructures. They are both also senior fellows at the Carnegie Foundation for the Advancement of Teaching.*

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