

Learning and Practicing Continuous Improvement: Lessons from the CORE Districts

H. Alix Gallagher
Benjamin W. Cottingham



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H. Alix Gallagher, Policy Analysis for California Education
Benjamin W. Cottingham, Policy Analysis for California Education



Acknowledgements

In October 2015, Policy Analysis for California Education (PACE) launched a research partnership with the *CORE Districts* in California. The CORE-PACE Research Partnership is focused on producing research that informs continuous improvement in the CORE districts and policy and practice in California and beyond.

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Executive Summary

The education sector is embracing the hope that continuous improvement will lead to more beneficial student outcomes than standards-based reform and other approaches to policies and practice in prior decades. This report examines attempts in California to realize the potential of continuous improvement in some of the state's largest districts. Policy Analysis for California Education and the *CORE Districts*, a nonprofit collaborative of eight urban school districts, have been engaged in a research-practice partnership since 2015. This report presents lessons learned from their collaboration in 2018-19, and is accompanied by three case studies that provide a more in-depth discussion of exemplary practices in two districts and one school.

The report opens by briefly defining continuous improvement and tracing the history of the *CORE Districts*. It then focuses on two questions that are central if California's schools and districts are to realize the potential of continuous improvement. Through interviews, observations of professional learning events and team meetings, and analysis of artifacts created through learning events and improvement work, PACE gleaned six lessons:

- What do we know about how to support educators in learning continuous improvement?.

Lesson 1: Embedding continuous improvement processes into the existing norms of schools is complex work; approaches to teaching it need to include cycles of practice and feedback to help educators apply complicated ideas in their own local contexts.

Lesson 2: Participating in a series of workshops rarely provides people the depth of knowledge necessary to lead or teach continuous improvement.

Lesson 3: Improvement teams need access to content area expertise as well as continuous improvement expertise.

- What conditions support continuous improvement in districts and schools?

Lesson 4: Leaders used four key leadership moves to build an organization in which continuous improvement can thrive.

Lesson 5: Districts can take deliberate steps to build a culture conducive to continuous improvement.

Lesson 6: Structures and processes to break down silos and share information across organizational units do not inherently create continuous improvement, but they are foundational components that can support or hinder its progress.

The remainder of this report explains these lessons and implications for broader continuous work in California and beyond.

Introduction

American education in the past decades has been characterized as having a lot of reform and very little change (Payne & Kaba, 2001; Cohen, Spillane & Peurach, 2018). The field has produced substantial innovation, with new ideas about instruction, approaches for using technology in education, and an ever-deepening knowledge-base around the efficacy of particular interventions (e.g., the [What Works Clearinghouse](#), which compiles evidence from rigorous program evaluations “to provide educators with the information they need to make evidence-based decisions”). Given the general sense that a few decades of standards-based accountability failed to bring about consistent improvements in student outcomes, policymakers are embarking on a new approach called “continuous improvement.” In no place is this more evident than California, where state policy (e.g., Local Control Funding Formula, California’s Every Student Succeeds Act Plan) prescribes continuous improvement (Grunow, Hough, Park, Willis, & Krausen, 2018). Continuous improvement is an appealing approach because it addresses areas where prior reform approaches have failed. In theory, it taps the expertise of educators at all levels of the system to examine what is and is not working well in their schools, identify potential approaches to addressing those areas, and test those ideas in their local context until they find solutions that they can implement in ways that produce desired results.

Perhaps because of the policy attention or the intuitive appeal of the term (who would argue against schools continually getting better?), educational leaders are typically quite ready to state that they are working on continuous improvement. Because there are multiple specific methodologies (e.g., Baldridge, Deliverology, Improvement Science, Lean, Six Sigma) and activities (e.g., root cause analysis, iterative testing cycles) that fit under the umbrella of continuous improvement, however, colloquial use of the phrase is so broad that it can be almost meaningless (Hough, et al., 2017). When we describe continuous improvement, we are referring to approaches that align with Grunow and Park’s (2019) understanding of the assumptions that characterize continuous improvement:

1. Systems produce outcomes
2. Change efforts focus on key processes
3. Progress requires continual *learning* and discovery
4. *Frontline workers* are uniquely situated to learn how to get ideas to work
5. As effective practices are discovered, they are *spread* throughout the organization [emphasis in the original]

In 2018-19, through the CORE-PACE Research Partnership, PACE examined the CORE District’s effort to support its eight member districts as they worked to deepen their

practices around continuous improvement.¹ In this report we provide a brief history of the CORE Improvement Community (CIC), describe our research methods, and then present lessons learned from our research this year.

CORE Improvement Community

The eight CORE districts are Fresno Unified School District, Garden Grove Unified School District, Long Beach Unified School District, Los Angeles Unified School District, Oakland Unified School District, Sacramento City School District, San Francisco Unified School District, and Santa Ana Unified School District. Together they serve over one million students enrolled in approximately 1,800 schools. The *CORE Districts* collaboration began in 2010, with a joint proposal to secure federal Race to the Top funds. Although the proposal was unsuccessful, it led to continued collaboration that resulted in the creation of the *CORE Districts*, (referred to hereafter as *CORE*), a nonprofit organization, with a board of directors made up of the superintendents of each of the CORE districts. In 2013, that was strengthened when *CORE* secured a waiver from some sanctions of No Child Left Behind in exchange for using an innovative, multiple measures accountability system that *CORE* developed to evaluate school performance.

In 2016, *CORE* decided to pivot into continuous improvement by launching the CORE Improvement Community (CIC), which focused on “improvement science” as a specific approach to continuous improvement. Modeled loosely on a Networked Improvement Community (Bryk, Gomez, Grunow, & LeMahieu, 2015), the CIC aimed to improve mathematics achievement of African American and Latinx students in grades 4-8. The CIC launched in 2016-17, with *CORE* leading all districts in a system analysis (Nayfack, Park, Hough, and Willis, 2018). During the 2017-18 school year, the CIC launched Local Improvement Teams (LITs) in 21 schools across five districts, as well as two District Improvement Teams. As described in Gallagher, et al. (2019), each district used a different strategy for selecting schools to launch Local Improvement Teams. The teams tested a wide array of approaches to improving math instruction. During 2018-19, the CIC encompassed 23 LITs across five of the districts and one District Improvement Team (in a sixth district). While the vast majority of the school teams focused on improving students’ mathematics outcomes, some worked on English language arts or other district goals.

Within *CORE*’s approach, educators can take on a range of roles in continuous improvement, the most common of which are participating on a continuous improvement team, facilitating a team, or supporting others to learn or practice continuous improvement. In addition to those with direct involvement in continuous improvement, *CORE* also recognizes the role that administrators (e.g., principals, superintendents) may play in sponsoring teams that they do not necessarily participate in on a day-to-day

¹ The larger, nonprofit organization is identified as the *CORE Districts* (referred to as *CORE*). When discussing one of more of the individual partner districts within the organization, they are referred to as CORE districts.

basis. CORE hosted multiple capability programs in 2017-18 and 2018-19 designed to support people in differing roles in learning how to best support improvement in their organizations and to continue to develop the CIC as a network.² During 2018-19, the CIC's network-wide, capability-building offerings were:

1. **Local Improvement Facilitator Training (LIFT)**—Designed to support participants to become improvement facilitators who support school and district teams in using improvement science to tackle specific problems of practice in their local contexts. In 2018-19, LIFT was comprised of four, two-day in-person sessions, and two additional webinars.
2. **Executive Leadership for Improvement and Equity (ELIE)**—Designed for upper-level district leaders to give them a foundational knowledge of improvement science, support for developing mindsets that foster equity, and approaches for supporting improvement projects in their contexts. In 2018-19, ELIE comprised four, one-day in-person sessions, with 60-90 minute virtual seminars in between in-person sessions.
3. **CORE Improvement Community (CIC) convenings**—Designed to facilitate network development, provide opportunities to learn improvement science, and share practices and learnings from local improvement projects. There were two, one-day CIC Convenings in 2018-19.

A total of 124 individuals from seven of the CORE districts participated in one or more of these three offerings during 2018-19. Patterns of participation differed across the districts (see Figure 1).

Figure 1: Number of participants in CORE capability-building programs

District Name	CIC Convening	ELIE	LIFT	Total*
District 1	14	1	5	14
District 2	6	2	22	25
District 3	24	4	13	36
District 4	5	2	5	8
District 5	8	4	14	21
District 6	4	1	8	11
District 7	2	1	5	8
Total	63	15	72	124

Source: Event participation data collected by CORE.

* The totals represent the number of unique individuals who attended, so the sum of entries in a row may not equal the row total. For example, if one person attended ELIE and LIFT, s/he would counted as one person in the total column.

² The offerings were slightly different in 2017-18 versus 2018-19. For a description of offerings in 2017-18, see Gallagher et al., (2019).

Additionally, *CORE* held monthly CIC leads calls for the district leaders who were the main CIC contact in each district. These served as opportunities to share information and advance network building. In five of the districts, *CORE* also led either district-specific professional learning events (e.g., events designed to teach groups of principals and/or district leaders key concepts in improvement science) and/or regional convenings that brought together teams engaging in continuous improvement to share their learning. In addition to these structured offerings, *CORE* provided coaching for school and district leaders and team facilitators upon request.

As described, both the nature of the teams participating in the CIC (e.g., team aim, selection process) and the nature of team leaders' participation in *CORE*-provided supports for learning continuous improvement varied. Additionally, *CORE* did not provide a set program of offerings (e.g., there was no suggestion that all participants in LIFT also engage in a certain number of coaching hours). Instead, *CORE* created multiple entry points for districts to build their staff's understandings of improvement science in ways that worked around staff members' other commitments. The variation in each district's culture and processes as well as their participation in learning opportunities offered by *CORE* motivated two major questions around which PACE anchored its research during the 2018-19 school year:

1. What do we know about how to support educators in learning continuous improvement?
2. What conditions support continuous improvement in districts and schools?

PACE answered these questions through a series of five related products. The first is this report, which concisely explains our research methods and then elevates key lessons learned. We also crafted three purposefully selected cases drawn from the *CORE* districts, which describe the practices that two districts and one school have used to improve their systems. While all three cases describe the work of exemplars, we do so with the belief that the central practices described could be successfully brought into many other districts and schools. The first case describes how Long Beach Unified School District has built systems that support educator learning and improvement; the second highlights the structures, processes, and culture that support continuous improvement in Garden Grove Unified School District; and the final describes Ayer Elementary School in Fresno Unified School District and how supports from the district and *CORE* combined with the leadership team's approach are helping a school practice continuous improvement. The fifth product is a policy brief, which summarizes the lessons learned across the report and three cases. This collection of reports in no way seeks to evaluate the CIC. Instead they are focused on the interactions between participating district and school systems and the learning opportunities *CORE* provided with the intent of drawing lessons that are relevant to both the *CORE* districts and to the broader set of leaders and policymakers interested in accelerating improvement in various contexts.

Methods

PACE relied on three main sources of data for our work:

1. Semi-structured interviews with *CORE* staff, district staff (e.g., superintendents, cabinet members, program leaders, teachers on special assignment), school administrators, and teachers participating on improvement teams.
2. Observations of key capability-building events hosted by *CORE* as well as district and school events conducted as part of improvement work.
3. Analysis of artifacts from events and from improvement teams' work.

Data sources and analytic approach

Our data come from three main sources: interviews, observations, and analysis of artifacts. We conducted 116 interviews (109 individual interviews and 7 group interviews) with district leaders ($n=39$), school administrators ($n=14$), instructional coaches ($n=17$), teachers ($n=32$), and *CORE* staff ($n=14$). Interviews were recorded and transcribed. We also observed 23 *CORE* events, such as *CORE*-led improvement capability-building sessions (88 hours total) and 8 district or school improvement activities, such improvement team meetings (24 hours total). During observations we took notes describing activities and participants' engagement. At the events, we also collected agendas, event materials, and artifacts of work (e.g., poster paper where participants recorded discussions).

Analysis included several rounds of content coding of interview transcripts, observation notes, and artifacts, interspersed with regular discussions among members of the research team to surface initial hypotheses and explore potential patterns in the data within and across districts. We broadly focused our initial coding on how educators described their experiences with *CORE*, their continuous improvement approach, and their perceptions of the organizational conditions that enabled or constrained their work. We drew upon the Coherence Framework developed by the Public Education Leadership Project (n.d.) and Fullan and Quinn's (2015) Coherence Framework to create a hybrid heuristic tool to examine existing district and school conditions and their inter-relationships. Next, we used Grunow and Park's (2019) five features of continuous improvement to examine the range of approaches districts were taking to work towards their overall goals. We coded all data with these categories and then developed case-ordered descriptive matrices comparing the districts (Miles, Huberman, and Saldana, 2014). From these we developed major themes about the continuous improvement approaches across the sites.

This report draws upon all of the interviews, observations, and artifacts to draw lessons we believe are broadly applicable for educational leaders and policymakers. We turn next to the lessons learned about supporting educators to learn continuous improvement and the organizational conditions that support continuous improvement in schools and districts.

Lessons Learned

We think of continuous improvement not as a specific set of tools, but rather an iterative approach to systematically getting better. Continuous improvement can be about innovation—taking a novel idea and then testing and refining a prototype—but it can also be about figuring out how to successfully adapt someone else’s ideas in a specific context. Across methodologies, those working on continuous improvement need to: use data to identify a specific problem to focus on, understand which aspects of the system are causing the problem, identify high-leverage changes in processes to address the problem, and involve those who work on the front lines of those processes in learning as they implement changes in their practice. Even ignoring the requisite broader organizational conditions necessary to support continuous improvement (which is the focus of the latter half of this report), learning the technical skills involved in continuous improvement and developing proficiency in applying them in complex educational organizations is very challenging work.

What Do We Know About How To Support Educators In Learning Continuous Improvement?

Our research provided many examples of the complexities involved in learning about and attempting to undertake continuous improvement. It is not surprising that learning continuous improvement is a relatively slow process. Continuous improvement is an applied set of skills that need to be implemented collaboratively in dynamic organizations. Our data led us to three main lessons, none of which are surprising, but all of which have implications for substantial changes in typical current practice for how organizations support educators to learn about and take up continuous improvement in their practice.

Lesson 1: Embedding continuous improvement processes into the existing norms of schools is complex work; approaches to teaching it need to include cycles of practice and feedback to help educators apply complicated ideas in their own contexts.

Continuous improvement in education began relatively recently, and is adapted from methodologies used in health care and manufacturing, so there has not been much time to study how educators best learn to take these approaches into their practice with

integrity. We use the word “integrity” here to signify that we are not looking for “fidelity” of implementation, (i.e., strict adherence to tools or processes), but rather the thoughtful integration of new practices into existing practices in ways that preserve the fundamental principles of the new ideas as they are adapted to fit local needs, strengths, and contexts. CORE’s capability-building programs, as well as various offerings that some of the CORE districts are providing for school- and district-level leaders within their systems, are designed to support participants in learning and then applying specific methods and tools associated with various continuous improvement approaches. Improvement science, the approach CORE’s programs are most deeply influenced by, is technically complicated. Our data revealed two divergent approaches to handling the complexity by simplifying key ideas and providing scaffolds to support emergent practice, each of which has strengths and drawbacks.

One way to lower the cognitive demand of learning a continuous improvement methodology is for those teaching it to focus on a few fundamental ideas, helping novices gradually improve the precision of their understanding around those ideas. One of the CORE districts took this on as a central approach to spreading improvement. A district leader explained their approach as: “How do we continue to take something that is viewed as a really complex and, therefore, unobtainable process, and really scale it back to its essential components in a way that enables folks to move through the process more nimbly?” Like many districts in California, this district had pockets of educators who have experienced one or more different improvement methodologies. This created communications challenges because people used different words (e.g., Plan Do Study Act, Lesson Study, ROCI Cycle) to describe relatively similar ideas around examples of iterative cycles of testing and learning. This district attempted to address this challenge by distilling continuous improvement down to what the leaders we interviewed repeatedly referred to as “the three questions” that are central in the Model for Improvement (Langley, et al., 2009):

1. What are we trying to accomplish?
2. How will we know that a change is an improvement?
3. What change can we make that will result in improvement?

In interviews, district leaders described focusing heavily on building broad-based buy-in to overarching improvement goals and figuring out how the district could best provide data to support schools in doing improvement work. District leaders made an intentional decision to let educators use a variety of approaches to improving (e.g., lesson study, improvement science) and they focused on building consistent practice around the three questions. Leaders in this district found this simplification of continuous improvement to be highly valuable in directing people’s attention away from the minutiae of distinctions in language and tools across improvement approaches. A current leader in the district explained why leaders are trying to develop a common language to align the work across sites:

[A former district leader] said, 'I want you guys to engage in continuous improvement.' And [even without] clarity it was like, 'Just go! Everybody do it.' ...[E]verybody was doing it in different ways. Everyone wasn't necessarily calling out specific strategies...So [continuous improvement] work started... and there's a lot of work being done, [but] we're still trying to figure out how to get that shared language and how to make sure people have shared experiences to learn from.

Developing a common understanding of what continuous improvement will look like across district departments and school sites requires district leadership to consider what aspects will be tight (e.g., the questions and steps for improvement that need to be followed closely) and what will be loose (e.g., flexibility around the goals and tools each site chooses to address its unique problems). Common language is an important factor in making the work sustainable and allows learning to be shared across the district.

The more common approach we saw in our analysis was the provision of scaffolds for continuous improvement. This approach often focuses on teaching educators specific tools (e.g., fishbone diagram, Plan Do Study Act form) designed to help novices successfully execute small steps that cumulatively support the execution of an important component of continuous improvement. Strengths of the scaffolding approach include the fact that they: (a) provide guidance to educators who are new to the work; (b) codify the approach in ways that facilitate teaching and, therefore, spread; and (c) create a shared language to describe complex processes among people using similar tools. Those strengths are not diminished by also noting the downsides of scaffolding. Limitations of the tools include the potential for conducting Plan Do Study Act cycles in illogical or compliance-oriented ways, especially for educators who lack understanding of the underlying principles of continuous improvement. For example, one leader in a district that had built continuous improvement into the district processes reported that some principals engaged with the tools from "a compliance space," when the district asked principals to complete specific tools, such as a fishbone diagram, as deliverables. The principals "were complying with a task, but did not seem to really be leaning into the thought process of this improvement science cycle to really improve outcomes for kids. They were more task-[oriented]."

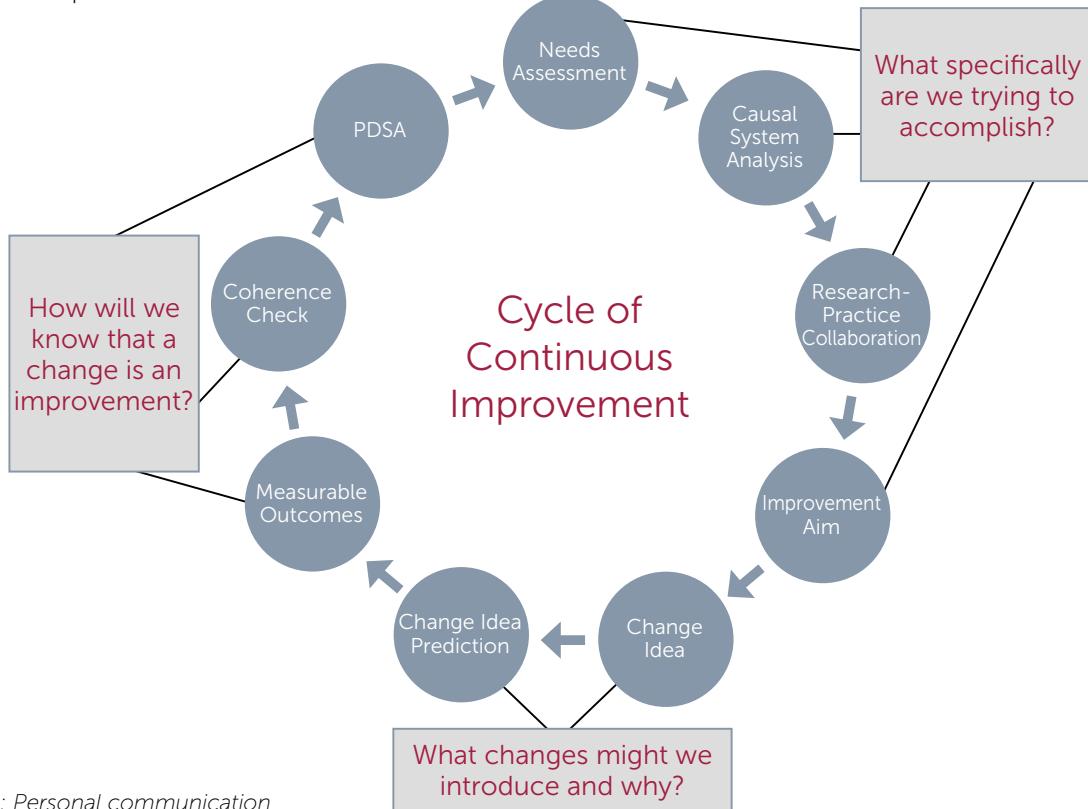
Scaffolds can also create so many small steps that novice improvers lose the proverbial forest for the trees, creating confusion. One district leader reflected on the differences in approach the district was taking (which was focused on an improvement cycle with nine specific steps), relative to the approach of focusing more broadly on the three main questions of continuous improvement:

The nine-step cycle, I think, is very, very deliberate, but it isn't straightforward. It's not simple. If you take the three questions of improvement science where you could say [the nine-step cycle] comes

from, those are a lot more accessible. You could break those three questions and think, 'okay, well these [nine steps] actually then fit into those [three questions].' The [questions] are a lot easier to grab hold of. I think a lot of people, senior leadership included, struggled with the nine-step cycle. [They d]on't really understand it. Where in its essence, it's actually just asking those three questions.

This leader, in leading teams, took the nine-step cycle and mapped each of the steps onto the three questions in an effort to help the teams understand how the smaller steps fit into the big picture (Figure 2).

Figure 2: Connecting the nine-step cycle of continuous improvement to the three questions



Source: Personal communication

As the discussion above suggests, there is no simple way to teach an approach as complex as continuous improvement work; simplification and scaffolding just have differing strengths and challenges. Fortunately, education research offers guidance and understanding about how educators can learn to take up new and complex ideas and apply them successfully in their practice.

Research on how educators learn complex skills

Some of the most-developed understandings of how educators learn and become effective at applying complex skills come from research on how people learn to teach.³ Grossman et al.'s (2009) work suggests that carefully supported opportunities for practice are critical to bridging the gap between developing knowledge about new approaches and being able to successfully apply them in complex settings.

Combining ideas from Grossman et al. (2009) and McDonald, Kazemi, and Kavanagh (2013), suggests that educators are most likely to be able to take up and successfully apply continuous improvement when they engage in the following cycle:

1) *introducing and learning*, where educators build knowledge about the new approach and see examples of others demonstrating specific aspects of the new approach; 2) *heavily-scaffolded practice*, where educators have opportunities to explore key ideas in simulations and practice discrete skills before combining them into an overall approach; 3) *practice in context*, where educators get to try out the new ideas in their own schools and districts; and 4) *analyzing practice and consolidating learning*, where feedback and reflection support teachers in recognizing aspects of practice they are enacting well and how they could further improve. Finally, we note that for inservice teachers, coaches have strong evidence for effectiveness in supporting teachers to learn new instructional approaches, suggesting coaching might be an effective way to facilitate educators in analyzing and consolidating their learning about continuous improvement (Kraft, Blazar, & Hogan, 2018).

CORE's approach to teaching continuous improvement excels in the first two steps of the learning cycles described. For example, *CORE* co-facilitated a training with staff from a district to introduce continuous improvement tools and methods to ten district-level teams and to help these teams begin thinking about a problem of practice they would work to solve in the coming year. After an overview of continuous improvement, *CORE* introduced five continuous improvement skills (supported by tools) that could be used to determine a problem of practice, develop a plan to address a given problem, and subsequently measure the impact of changes made.⁴ *CORE* then split district teams into

³ Research on preservice and inservice teacher learning is relevant to questions about how educators might learn continuous improvement for two main reasons: (1) instruction and continuous improvement both require learning complex technical skills and figuring out how to successfully apply them in contexts with rich interpersonal demands and complex organizational dynamics; (2) studies of teacher learning are focused on a relatively similar population of educators. For these reasons, research on teacher learning is a reasonable body of literature from which to draw hypotheses about how educators might learn to do continuous improvement.

⁴ The skills and tools were root cause analysis using existing student data, interpreting graphical representations of data, decision-trees for problem analysis, literature and document scans, and empathy interviews with students.

five groups—one for each tool—to learn about and practice using one of the five tools in mixed departmental groups using curated sample student data and resources. These groups were led by *CORE* staff or district staff that had carried out their own improvement projects the prior year working with *CORE*. Participants were then expected to return to their district teams to explain how to use the tool, outline its pros and cons, and describe findings from the sample data they had been given. This method of delivery gave each participant exposure to multiple tools, a chance to dig deeply into the use of one, and practice integrating multiple streams of information to determine problems of practice very clearly meeting the first two steps of the learning cycles described above. It is too soon to tell how steps three and four will occur with this group of participants or whether *CORE* will facilitate that process.

For Local Improvement Facilitator Training (LIFT), *CORE* attempts to provide a close connection between heavily-scaffolded practice and participants' practice in context by creating an "action period guide" that sets out, in broad strokes, the work that teams should be doing in between their facilitators' learning sessions.⁵ However, Local Improvement Teams' progress through improvement projects varied substantially based on when teams launched, whether facilitators and team members had prior experience with continuous improvement (e.g., if the LIT was in its second year), how frequently teams met, and a range of other factors. As a result, *CORE* coaches found that the content taught in capability-building programs was sometimes out of sync with where individual teams were in the process, which restricted participants' ability to take what they were learning and try it out in their schools and districts. If participants did not attempt to apply what they learned to an improvement project in their school or district, any knowledge they acquired from learning events remained latent; and there was clearly no way for them to proceed to the final stage of the cycle of reflecting and getting feedback on their practice.

When facilitators and their teams did get an opportunity to practice continuous improvement approaches and get feedback, they reported that that support could be transformative. One teacher described how the team started trying to run PDSAs without a deep understanding of continuous improvement, but well-timed support from a *CORE* coach mid-way through the year made this an excellent learning experience:

[L]istening to the way [the CORE coach explains] things... is making it all be more concrete for us... we kind of jumped all in without necessarily having all the knowledge that we need... [W]e've made mistakes along the way... But ... if [the principal] would have brought [the CORE coach] in at the beginning of the year, we would have not been ready for it. We still needed

⁵ For example, *CORE*'s action period guide early in the school year helped team facilitators focus on building an aim for their team's work for the upcoming school year. Action period guides later in the year focused on running Plan Do Study Act cycles to test change ideas to see if the changes led to improved outcomes.

to experience and play with it, and [after we had run a few PDSAs] was just the perfect time to get the more technical part of it solidified in our brains.

Teachers at this school greatly appreciated receiving coaching after initial attempts to apply continuous improvement processes, giving support to the idea that this type of learning structure—which is well-supported in research on how pre- and inservice teachers can learn new instructional practice—is also effective for supporting educators to learn continuous improvement. Our data do not suggest that providing expert coaching for every team and facilitator doing improvement is the only way to ensure the research-based learning cycle is complete. For example, we could imagine participants bringing artifacts of their teams’ work to learning events, creating opportunities for peer and expert feedback with subsequent reflection based on the artifacts. As schools and districts in CORE and beyond think about scaling continuous improvement, our data suggest that they need to think not only about building educators’ knowledge of continuous improvement through carefully designed learning sessions, but also about how to structure feedback at key intervals so that educators have support for guided reflection after they have attempted to use those ideas in their work.

Lesson 2: *Participating in a series of workshops rarely provides people the depth of knowledge necessary to lead or teach continuous improvement.*

As California seeks to rapidly expand the practice of continuous improvement in schools and districts, many school, district, and County Office of Education (COE) leaders are participating in events offered by a wide range of support providers designed to help them lead improvement teams and support others to learn and practice continuous improvement. This is putting many district and COE staff in the position of leading continuous improvement projects or teaching others about continuous improvement when they themselves have minimal personal experience in improvement.

For some individuals we interviewed, continuous improvement meshed nicely with prior knowledge, experience, and beliefs. They eased relatively quickly into roles facilitating teams and supporting others’ learning of continuous improvement because they could build on their existing mental schemas to easily learn continuous improvement approaches. One facilitator reported, “[M]y background is all in research and evaluation and assessment. So [for many]... years I’ve been evaluating programs. Not in the same way as the improvement science model expects it—it’s organized differently—but the technical know-how is pretty similar.” This individual’s prior experiences, however, are not typical for educators.

More often, even when educators participated in multiple rounds of professional learning opportunities, if they themselves had relatively little experience participating in and leading continuous improvement efforts, they found it challenging to support others’ continuous improvement learning. One district leader said she found her relative lack of

personal experience doing improvement projects very challenging when she was asked to coach others about continuous improvement.

I understand this model where they're training us and then we're going in. But some of it, what I try to do is relate back to what I did and I acknowledge that I am learning with them about this because it's different. If you've never yourself... engaged in true [continuous] improvement work at a school site, I think it's really hard to present some of this. I think I do my best... but I don't think I'm the very best trainer for this group of people.

The nature of continuous improvement—complicated technical components and complex interpersonal work in dynamic organizational settings—seems to require that most educators have multiple rounds of their own successful practice to develop the breadth of experience necessary to support others confidently and successfully.

One promising response to the capacity dilemma created by the desire to scale continuous improvement rapidly before there is a wide supply of leaders who have extensive personal experience in continuous improvement, is the practice of providing coaching supports for novice improvers who are being asked to facilitate others' learning of continuous improvement. One recipient of such coaching support, who had participated in multiple professional learning series (some offered by CORE and some offered by other providers), nonetheless found it challenging to support others who were being asked to lead improvement teams. She reported that she felt deeply grateful to have a coach herself, whom she could call when she reached the limits of her nascent experience, and who helped her provide better support for others:

I think what clearly was missing and still is missing is a coach for us as we learned this bucket of work so we can coach [other people]. And that's what [my CORE coach] has [done] for me... [H]e picks up every time I call him; when I text him, he returns my text... he doesn't make me feel foolish when I tell him straight up, '[Coach], I'm struggling with how to coach [another leader] on how to assess her change idea. This is what she's proposing, but I can't seem to come up with the right coaching questions and the right probing questions to get her to flush through her change idea...' He'll serve as a thought partner and I... greatly need that.

As her comments show, a "train the trainers" approach to spreading improvement puts unreasonable demands on educators—even senior district leaders—who themselves are in the early stages of developing their own practice as continuous improvers. This leader greatly appreciated her coach's support, and her interview testified to ways that the coaching support helped her. Her interview also revealed ways in which she would have been better-positioned to support others after additional experience applying continuous improvement herself.

Overall, our data suggest that coaching can be a helpful Band-Aid for those being asked to lead others in continuous improvement before they themselves have a deep continuous improvement practice. Our data do not provide examples of how to more fundamentally address the shortage of experienced improvers at a time of great desire to spread continuous improvement, though this issue is quite pressing for many districts across California.

Lesson 3: Improvement teams need access to content area expertise as well as continuous improvement expertise.

Prior sections have focused on the types of supports for learning and trying continuous improvement that facilitators or leaders need to enable this work. This section focuses more on the needs of improvement teams themselves, especially teachers. Underlying our argument is an understanding that society continually asks teachers to evolve their practice in response to new standards, new technology, new understandings about the most effective pedagogies, and now new roles participating in and leading continuous improvement. Given the way teachers' days are structured, with the vast majority of time spent teaching and very little time set aside for teacher learning, teachers cannot keep abreast of a vastly expanding knowledge base through time granted within most teachers' contract days. Especially at the elementary level, where teachers are responsible for teaching multiple subjects, it is virtually impossible for them to have deep content and pedagogical knowledge in all areas of instruction. Local Improvement Teams identified access to content knowledge as critical in selecting promising change ideas. As one district improvement team lead noted, "I think that there's value in anchoring the work in a content. It can be any content, but anchor it in a content." Continuous improvement expertise is clearly a necessary step for using the methodologies, but it is equally important that staff simultaneously have access to content specific expertise to select change ideas and identify appropriate measures. Expertise can be drawn from teacher experiential knowledge, but should also be supplemented with content-focused coaching or facilitation with access to outside research that identifies content-specific best practices.

All of the districts in CORE had someone in a position like Teacher On Special Assignment (TOSA) or mathematics coach who was available to support their teams, though the precise role and number of schools supported by each coach varied substantially. Some of the changes mathematics teams wanted to try required teachers to try out new instructional approaches. When coaches with content knowledge had roles that enabled them to regularly be in schools and classrooms participating in Local Improvement Teams, teachers were relatively unanimous in their expression of appreciation of a range of supports, which included helping teachers find relevant instructional materials and modeling of the new instructional approaches that were the teams' "change ideas." One teacher described the support that her LIT received from its district-provided mathematics coach, who regularly attended their grade-level meetings:

It's a little less now, but I think [our coach came to our school] once every other time we met, and we meet once a week. Or, they're available to us through email for any kind of questions that we have. They often would come and be there when we were planning our next cycle, so we could ask questions up front about what we should be looking for if we didn't know ourselves.

At an event CORE hosted in this district where all LITs sent representatives to reflect upon their year, appreciation for the mathematics coaches was expressed by every team. Other teams mentioned how their coaches helped them find necessary instructional materials and, as needed, would come in to teach a demonstration lesson to model how to effectively implement the change idea being tested. For teams to reap these benefits, however, coaches have to be present for improvement team meetings and have sufficient time to support teachers in their classrooms. This was not the case in all districts. While one district had enough TOSAs so that each one served two schools; in others, TOSAs covered many schools (e.g., in one district coaches were assigned so many schools that some rarely made it out to most of their school sites); and in some districts TOSAs were a discretionary expense in a school's budget (and so some schools might not have access to a TOSA at all). If the aim of a continuous improvement project requires teachers to learn and apply new instructional approaches, teams appear likely to flounder without the regular and relatively intensive support of someone (often a TOSA) with deeper instructional expertise than most teachers and administrators can be expected to have.

As we looked at what it takes to support teachers and educational leaders to learn, practice, and spread continuous improvement, we consistently landed on the idea that educators often need more support to succeed than they typically receive. This should give policymakers and districts leaders pause, because if educators lack the support to learn and practice continuous improvement deeply, there is no reason to think they will be able to successfully use these complex practices to improve student outcomes. From here, we pivot from educators' learning to the contexts which can either support or hinder the practice of continuous improvement approaches.

What Do We Know About The Conditions That Support Continuous Improvement?

In theory, continuous improvement can be approached from two directions—a network of teams focused on the same topic, or the organizations seeking to improve. The Networked Improvement Community (NIC) model promoted by the Carnegie Foundation for the Advancement of Teaching is a strategy for improving outcomes while putting organizational conditions in the background (Bryk, et al., 2015). In contrast, organizational conditions are in the foreground both in Fullan and Quinn's (2015) Coherence Framework and the [Public Education Leadership Project \(PELP\) at Harvard's Coherence Framework](#) (n.d.). Fullan and Quinn (2015) and PELP both articulate (with

each prioritizing different aspects) the ways that a clear purpose and vision for effective instruction, organizational structures and processes, culture and mindsets, leadership, and external conditions affect districts' and schools' ability to improve. We hypothesized that these organizational conditions matter for improvement even in teams participating in a NIC (note that the CIC is a network, but does not aspire to be a full-blown NIC). We used our data collection in 2018-19 to explore the organizational conditions that appear to support or hinder continuous improvement. It is worth noting that we do not believe organizations need to have all foundational conditions in place before engaging in continuous improvement. In fact, continuous improvement processes could be used to improve organizational conditions. Additionally, while we observed improvement taking place, we did not observe any districts that claimed they had established all of the needed foundational components prior to beginning the work.⁶

What we found was that leaders play a central role in fostering conditions for improvement in terms of how they interact directly with improvement work, build organizational culture, and create structures and processes that facilitate multi-directional information flow. These lessons offer considerations for districts and schools in moving from their current state to one where they can better support improvement.

Lesson 4: Leaders used four key leadership moves to build an organization where continuous improvement can thrive.

As we looked across our data for patterns where continuous improvement seemed to be laying down the deepest roots and spreading within organizations, we saw a clear pattern of leadership support. Not all leaders showed that support in the same way, but we identified four leadership moves that helped build continuous improvement: being a champion, creating safe spaces, building others' capabilities, and providing resources for continuous improvement.

Being a champion. As we looked across districts and schools where continuous improvement was gaining a strong foothold, we saw leaders who were setting an expectation that continuous improvement was not a separate program, but rather the way

⁶ A discussion of how the organizational conditions in the CORE districts supported and hindered continuous improvement would be remiss if it omitted a discussion of the challenging external conditions facing some California districts. Events such as labor disputes, financial distress, and rapid leadership changes can erode trust in district and school leadership and the systems themselves. In 2018-19, a few of the CORE districts had to navigate strained labor-management relations, with three experiencing strikes; one teachers union specifically contested CORE providing professional learning opportunities focused on continuous improvement to teachers. Staff in those districts cited the unsurprising negative impacts this had on the progress of ongoing work. A few of the CORE districts had active strategies designed to mitigate contextual risks. One has a long tradition of conservative budgeting that has helped it avoid teacher layoffs; the superintendent in a district described strategies for nurturing an informed and supportive school board; and leaders in other districts described working hard to maintain a close relationship between district and union leadership. The extent to which these strategies could be implemented successfully in all districts is unclear.

their organizations tackled the greatest challenges in educating their students. This does not mean that all continuous improvement work needs to focus on instruction. Instead, it requires a recognition that all parts of an educational organization (e.g., teachers, bus drivers, food service workers, janitors, etc.) create the conditions that foster student learning and a commitment to improving the performance of organizational units (e.g., instruction, transportation, food service, facilities, etc.) in order to have a positive impact on the broader organizational goals around student outcomes.

How leaders set this tone manifested itself in different ways. One district with established leadership and experience in improvement methodologies determined district goals with small teams of senior leaders. Another district leader modeled continuous improvement in how she organized meetings and facilitated improvement methodologies with direct reports. In general, leaders of organizations where continuous improvement was spreading beyond a single team were far more than cheerleaders—they made clear that continuous improvement was valued by personally modeling continuous improvement mindsets and practices. In the process, they inspired others to take up the work, became an example for how to do continuous improvement, and prioritized structures and processes (e.g., meeting times) that supported others to use continuous improvement.

Creating safe spaces. Creating safe spaces for learning and risk-taking is a critical part of leadership in a continuous improvement environment. This is because a willingness to temporarily and publicly accept failure is key to two parts of the process: 1) explicitly recognizing a gap between current and desired performance, and 2) potentially testing change ideas that either do not lead to improvement or need to be adapted to create improvement. A core feature of continuous improvement—understanding that failure is a learning opportunity—is diametrically opposed to traditional supervisory roles where the leader rewards success and punishes failure. To create a safe space for improvement, leaders need to shift their own perspectives and broadly demonstrate their mindset shift to others.

One way of creating safe spaces for continuous improvement was for leaders to acknowledge their own knowledge gaps and model and support public vulnerability. One principal, whose school is profiled in our third case, excelled in this area. In addition to being explicit about areas where she sought professional growth, this principal celebrated when teachers were willing to go public with their questions and doubts. One teacher explained:

Just knowing that it's okay if we make a mistake because [our principal's] okay with it. She knows that we're learning. Just being open and comfortable with her, and her being open and comfortable with us, which she has been. She's shared with us, 'I've made mistakes, but we need to fix these mistakes.' Or, 'I've made mistakes and it's okay.' Being vulnerable with

each other, I guess is what I'm saying, from her as a leader as well as us, and we feel safe to be vulnerable with each other. I think that speaks volumes for leadership. If a person has that as a leader, then I think the staff is more willing to work.

This school expanded from one improvement team in 2017-18 to three in 2018-19 partially because of teachers' consensus perspective that it was safe to take the risks involved in continuous improvement. Leaders who intentionally display their own vulnerability and engage with teachers (or others they supervise) as partners help to lay a strong foundation for continuous improvement work.

Building improvement capacity. It is the responsibility of leaders at each level of the system to continually develop the skills of the staff they support. Within the CORE districts, school and district leaders were able to take advantage of CORE to gain access to new knowledge about continuous improvement or support for implementation. Leaders also worked to build others' capacity by themselves engaging directly in improvement projects, modeling continuous improvement by leading, or participating in a continuous improvement team. In one district beginning to adopt continuous improvement strategies, the superintendent and senior district leaders worked together on a project using continuous improvement methodologies to set a vision for the district. With this shared experience under their belts, the senior leaders were expected to use the strategies learned to lead projects to teach their own teams about continuous improvement, creating layers of modeling that filtered down through the district.

Providing necessary resources. In addition to creating psychologically safe spaces for improvement work, leaders also are responsible for prioritizing continuous improvement by leveraging organizational structures and processes to support improvement efforts. The most common way we saw this happen was by leaders taking existing structures (e.g., grade-level common meeting times), dedicating those to an improvement project, and ensuring that other competing priorities took a back burner during that time. One superintendent, who epitomizes the ideal of a champion for continuous improvement, repurposed existing district processes in an attempt to further continuous improvement by directly replacing a compliance-oriented exercise in his district's School Planning for Student Achievement (SPSA) process with a continuous improvement approach. For 2019-20, all principals in the district need to analyze data, choose one SPSA goal, and use a continuous improvement approach to work towards that goal. As the next two lessons describe, leaders also play a critical role in building a culture of continuous improvement and creating structures and processes that support continuous improvement.

Lesson 5: Districts can take deliberate steps to build a culture conducive to continuous improvement.

The culture of an organization significantly impacts its ability to engage in continuous improvement (Hough, et al., 2017). In this section we examine how districts work to maintain a clear and steady vision and how that and other approaches can nurture a culture that supports continuous improvement.

Steady focus. Districts and schools that are able to sustain focus avoid initiative fatigue and have a higher capacity to engage in reform. The history of school reform efforts is full of efforts that failed because the necessary resources were not invested to properly provide educators with time to prepare, practice, and implement reform efforts (Tyack and Cuban, 1995; Labaree, 2012). Districts and schools must be able to maintain focus for multiple years to achieve substantial improvement.

Mid- and senior-level district leaders readily acknowledge that their positions require prioritizing among a nearly constant barrage of concerns. One district leader expressed her perception of the constant churn of initiatives that flowed through her district and the impact it had on her ability to lead trainings for the schools they supported.

It's just a lot, and I feel like every six weeks we're changing to something new, and it's stressful for me... I feel like a lot of the great efforts—unless you have a site that has a savvy [principal who] knows how to navigate through all the living parts—I feel like some of the stuff falls not on deaf ears, but it falls flat because there's so much else going on.

To keep a steady focus, leaders needed to prioritize among competing needs so as not to over-extend an organization's resources. In one district, leaders referred to "listening to the noise in the system" when thinking through priority areas, but not trying to solve all of the problems at once. In another district, several leaders described how they regularly "turn over rocks" to identify underlying problems, but then carefully select which to address at any given time. One of the leaders explained:

I really think it's that we recognize dysfunction, we recognize bad practices, and then figure out how we're going to fix it... Sometimes you have to change; and you [also] have to say, 'How much can you change on one period of time?'...We [can] only tolerate so much change and so much work.

Identifying potential areas for intervention is an essential component of continuous improvement work, but pressing pause on emergent concerns to let staff master emergent practices in high-priority areas is key to long-term success.

Two of the CORE districts have a sustained trajectory of improving student outcomes. Staff in both emphasized consistent goals and slow intentional movement when new initiatives were introduced.

Leader in District A: "...[we have a] kind of a 'go slow to go fast' sort of approach in general. We'll take on new initiatives, but we'll roll them out very carefully and slowly, so we'll be innovative around the work, but it's done with not the kind of latest fad of the work. It is, 'We're going to build this in, and it's going to be built into something sustainable within the system."

Leader in District B: "...our team here believes that we can affect change. I feel like we're very careful and cautious. What I have been taught... [is that we're] a big ship and [it could]... tip over if you move too fast. We know that any decision we make impacts a lot of schools... our continuous improvement has to be very thoughtful."

Change in educational systems requires patience and persistence. Using metaphors such as "going slow to go fast" and slowly turning "a big ship," these leaders emphasized that their districts regularly assess how teachers are implementing new instructional approaches to keep change at a pace that gives district and school staff time to adapt and learn new practices.

Districts and schools that want to establish a culture conducive for continuous improvement used some of the time in the "go slow" phase of reform to conduct pilot tests of new approaches. In one district, the process begins with a team consisting of the superintendent and the assistant superintendents analyzing district data to identify performance gaps. Cross-departmental teams then work together to research and subsequently develop potential solutions for use at school sites. District support staff then train staff at selected sites where initial implementation is tested. The process of thoughtfully piloting a program takes time and requires leaders to look carefully for early indicators of success that suggest it is worthwhile to persist with a pilot long enough for it to achieve desired outcomes. Throughout this process, the district continues to work with these sites to refine the intervention strategies and only when the structure or process is proven to positively impact student outcomes is the intervention pushed out to all district sites. Once an effective intervention is discovered, it can be quickly shared with all sites because it has been refined and the staff supporting the rollout have experience supporting teachers in adopting the reform. The process takes time and may require multiple iterations; and any pilot may be abandoned entirely if the change is not leading to desired improvements. However, this process prevents the district from wasting the time and energy on reforms that prove ineffective.

Building trust. Rolling out initiatives with deliberate speed pays dividends by building a culture of trust between district leaders and frontline educators. Teachers are more willing to engage in a new initiative if they trust that the approach has merit and they will have the time and resources necessary to change their practices. One teacher explained that in spite of initial skepticism about a district initiative, she was willing to try to shift her practice because she trusts the district's track record.

There's a big push in math that I'm not happy about, but [the district] has done some big pushes in the past and they've always been good. They've always worked out despite my saying, 'No way would it ever work out.' I'm struggling with this new change. I'm not liking it, but I am saying in the back of my head, 'Okay, you thought this before on two other big things and turned out you were wrong.' I am keeping an open mind even though I want to be really resistant.

Districts that are able to maintain a constant purpose and move deliberately from one reform to another can build a culture of trust and provide time for learning, both of which are necessary for successful reforms.

Another aspect of building trust is prioritizing the development of supportive relationships. One of the CORE districts profiled in our case studies has increased the amount of time principal supervisors spend supporting school leaders. Increasing the amount of time these principal supervisors spend at schools with the explicit purpose of expanding their role as leadership coaches enabled them to become a part of school communities. District staff were aware of the importance of building trusting relationships with principals and teachers so that they could engage in safe conversations around practice and areas for improvement. As a principal supervisor explained:

I feel like [the shift from experts to partners has] really been a big part of our success. I think that when I look at the history of where our instruction office has been, I think at the very beginning, there was always the sense that someone from the instruction office was here to tell you what to do. Like, you're either messing up, so I need to come and give you help, or someone's telling me that I need to come and work with you. I think over the years our office has been really building a relationship and the respect in order to say, 'Look, what I'm here for is to support you...' And the fact that [principals] can see that is what really makes it work.

The district staff working to establish strong relationships alluded to a paradigm shift that had to occur to create the necessary culture of trust. District staff needed to approach relationship-building with site staff as co-learners there to help, not as experts coming with all of the answers ready to punish failure. Framing relationships between districts and schools as thought partnerships created a valuable culture of trust within districts instead of the paternalistic relationship of top-down governance that existed throughout the accountability era. Building this trust required consistent support on the part of the district to the schools and sustained focus on specific initiatives long enough for staff to build the necessary capacity to implement even as competing priorities arise.

Lesson 6: Structures and processes to break down silos and share information across organizational units do not inherently create continuous improvement, but they are foundational components that can support or hinder its progress.

In prior decades, policymakers designed accountability guidelines based partly on the idea that clear rewards and sanctions would motivate schools to attain performance goals. In these systems, the lowest-performing schools typically received strong mandates and knowledge was assumed to flow from the top of the system down into classrooms where teachers would implement programs with fidelity. Continuous improvement places new demands on systems around the collection, integration, and interpretation of information across multiple actors in a system to ensure coherence. As we looked across the districts and schools where continuous improvement approaches had a greater foothold, we found examples of structures and processes that broke down traditional silos and built top-down, bottom-up, and horizontal communication. This is in line with research that suggests that creating cross-functional teams can improve the ability of an organization to learn and develop solutions that would not have arisen otherwise (Brown & Digid, 1991; Burt, 2004; Kadushin, 2012; March, 1991). While structures and processes to integrate work across multiple district departments does not inherently create improvement, they support the information collection and sharing required for improvement to be attained and spread.

Several CORE districts are actively working to reduce the barriers between traditionally siloed departments and personnel. Structures and processes that bring together staff from different departments create coherence, ensuring consistent messaging around district initiatives. For example, one district leader reported, "We want to make that [strategic planning process] more cross-collaborative versus before it was done in silos, like within your departments... [M]oving forward, there is peer-to-peer accountability." Creating an increased number of touch points between departments promotes coherence across the districts and can change how staff solve problems. Our data show, however, that many districts have deeply siloed departments that ought to be working closely together; perhaps this is a residual effect of categorical funding (e.g., different district positions oversee principals, curriculum and instruction, and special education). Creating true cross-functional collaboration at the district level will require overcoming norms of departments defending their "turf."

We also saw TOSAs used to bridge what is sometimes a gap between the district and its schools, simultaneously supporting implementation of the district's vision of instructional quality and providing feedback from the ground level that shapes decision-making. The district profiled in our second case has a large cadre of TOSAs that push out information about district initiatives to school sites through trainings, provide ongoing individualized support at schools, and collect feedback from school staff around the quality of supports provided and remaining needs. The information from TOSAs (and other

sources) is used by the district to assess progress towards district goals, identify other potential issue areas, and provide adequate resources—training, time and other supports—to meet schools’ needs.

Another structure that facilitates bottom-up as well as top-down information sharing is the altered role of principal supervisors described previously. One of the principal supervisors explained, “I’m not an assistant superintendent where you have so many meetings. Our time is freed up to be in the schools. That’s the priority... and so we know our schools.” In addition to providing supports for developing principals’ instructional leadership, this staff allocation ensures that senior district leaders feel the pulse of the work at individual schools and that principals have ready access to those actively shaping the district’s vision and priorities.

Another barrier to coherence in traditionally organized districts is the lack of connections across schools. Several districts have created structures and processes for collecting learning from school sites and sharing it across the district, including:

- Building collaborative planning into TOSA’s roles,
- Developing cross-school meeting structures for principals, teacher leaders (e.g., grade-level chairs) and Instructional Leadership Teams (composed of principals and teacher leaders), and
- Creating procedures for regular site visits and observations between schools.

Each of these structures facilitates the flow of information across school sites. Additionally, they provide opportunities for the district to reinforce its priorities and instructional vision and to have district-level staff interact with school administrators and teacher leaders so they could gain insights into how schools are progressing on district initiatives.

One challenge to effective use of information-sharing structures—and, in fact, to continuous improvement more broadly—is competing demands for district and school staff time. Taking advantage of the structures and processes for collaboration requires protecting and prioritizing the time groups need to do the work. Consistent collaborative meetings signal to others across the organization that this is the new way of doing work and encourages active engagement with continuous improvement activities. Without protected, consistent structures and processes to share information, organizational units will continue working in isolation and ultimately limit the amount of learning that can be collected and shared across the district.

Conclusion

The general consensus is that standards-based reform led to some improved student outcomes, but also created compliance-oriented responses in many schools, impeding their ability to achieve desired outcomes for all students. Proponents of continuous improvement argue that continuous improvement's combination of disciplined investigation of how systems produce outcomes, cultural shifts to shared ownership for outcomes, and methodologies for systematically testing and adapting change ideas could lead to better results. California bet heavily on this approach and in the past few years has revamped its school funding and accountability policies. PACE's research on *CORE* and the improvement efforts of the eight participating districts help us understand how these efforts are progressing in some of the largest districts in the state.

Overall, what we learned in 2018-19 gives us hope that California districts and schools can use continuous improvement to steadily improve student outcomes. As we looked across all eight districts, however, we came to believe that realizing the potential of continuous improvement will require an overhaul of how many California districts are run, how district leaders work, and how districts invest in developing their staff. Districts are struggling to address the technical and logistical requirements of continuous improvement work (e.g., new tools, new trainings, time necessary for teachers to do this work), and to support needed cultural changes. We do not want to sell short the importance of developing educators' skills in continuous improvement work, but we see a general over-emphasis on teaching specific improvement tools. We saw that leaders often underemphasized how to create and maintain a consistent vision oriented towards student outcomes, how to create an improvement culture, and how to develop the organizational conditions that support knowledge-sharing about effective practices. Although we saw many challenges, we also learned from exemplary practitioners who gave us insights into approaches that we believe could be implemented by many districts and schools. Based on this, we recommend:

- Senior district and school leaders need to build broad-based support around a North Star that consistently guides their organization towards a vision of strong and equitable student outcomes. This means avoiding the temptations of quick fixes, which create initiative fatigue and lead teachers to believe "this too shall pass" whenever new ideas are broached. This is one area where past standards-based accountability policies are hampering progress in some districts and schools. Educators are accustomed to looking for silver bullet answers and superficially complying, rather than digging deeply into data to analyze problems and thoughtfully taking risks as they try possible solutions. Our case on Garden Grove Unified School District provides an example of one district that is strong in this area.

- Administrators need to empower others at all levels of their organizational hierarchy to feel agency and internal accountability for steadily working towards the North Star. This requires leadership skills that many administrators did not see modeled when they were in the classroom and that they may not have been taught. For improvement work to take root, administrators need to create safe spaces that empower teachers and other staff members to have agency in working towards better outcomes. Leaders need to understand that this process is slow and that it is not possible to improve without trying new approaches, some of which will not pan out. If failure is punished rather than used as an opportunity for learning, the organizational culture will not be able to sustain efforts towards continuous improvement over time. This patience must be balanced with a sense of urgency and active engagement in examining data to see if expected early indicators of the desired improvements are present. Our case on Ayer Elementary School in Fresno Unified School District describes one leadership team with exemplary practices in this area and the resources that support that work.
- Organizations need to attend to their structures and processes to make sure that knowledge flows in all directions; from the top down (so that everyone is on the same page), the bottom up (so that leaders' decisions are informed by a realistic understanding of the realities on the ground floor), and laterally (so that there is consistency across departments, grade levels, and schools). These structures and processes must carry a clear vision for instruction and be used to provide supports for teachers to enact that vision in ways that match the local context (e.g., subject area, grade level, student needs). For non-instructional departments, structures and processes should convey an understanding of how their work contributes to broader organizational goals and knowledge about excellent practice in the relevant area. The case of Long Beach Unified School District describes how one district's structures and processes orient educators towards a consistent shared vision of high-quality instruction.

As described above, we saw both exemplars and frequent challenges in these areas, which leaves us with three questions for the field:

1. How do we take excellent practices in continuous improvement from relatively isolated pockets (a team within a school, a school within a district, a few districts in the state) and scale them into normative practices?
2. How do we rapidly build skills in continuous improvement and educational leadership that supports continuous improvement when there are currently few expert practitioners to teach others?

3. How do we both create internal accountability within districts and schools so that educators collectively hold themselves accountable for improved performance, and provide them with the supports they need to improve their practice?

We hope to examine these questions in later years as *CORE* continues striving to improve outcomes for all students.

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Author Biographies

H. Alix Gallagher is the Director of Research-Practice Partnerships at Policy Analysis for California Education (PACE) at Stanford University, where she leads the developmental evaluation for the CORE-PACE Research Partnership and other projects. Before joining PACE, Alix was an Associate Director at the Center for Education Policy at SRI International. There she led large-scale randomized controlled trials and policy studies and was fortunate to be part of two successful long-term research-practice partnerships. Alix's expertise is in improving instructional quality and student outcomes. She holds a Ph.D. in Educational Administration from the University of Wisconsin-Madison and a B.A. in History and Growth and Structure of Cities from Bryn Mawr College. Alix began her career in education as an elementary school teacher.

Benjamin Cottingham is a Policy and Implementation Analyst with PACE focused on the development of organizational conditions that support the continual improvement of student outcomes across California's education system. He earned his M.Ed. from Stanford University. He previously worked in high-needs schools as a nonprofit director and high school teacher.

About

Policy Analysis for California Education (PACE) is an independent, non-partisan research center led by faculty directors at Stanford University, the University of Southern California, the University of California Davis, the University of California Los Angeles, and the University of California Berkeley. PACE seeks to define and sustain a long-term strategy for comprehensive policy reform and continuous improvement in performance at all levels of California's education system, from early childhood to postsecondary education and training. PACE bridges the gap between research and policy, working with scholars from California's leading universities and with state and local policymakers to increase the impact of academic research on educational policy in California.

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- Publishes policy briefs, research reports, and working papers that address key policy issues in California's education system.
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- Works with local school districts and professional associations on projects aimed at supporting policy innovation, data use, and rigorous evaluation.



Stanford Graduate School of Education
520 Galvez Mall, CERAS 401
Stanford, CA 94305-3001
Phone: (650) 724-2832
Fax: (650) 723-9931

edpolicyinca.org