

Meeting 39 Summary

Using Data to Support Improvement: Building Systems, Changing Culture

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Stockton, California

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***Note:** This meeting summary was developed as a resource for members of the California Collaborative on District Reform. We are making this document publicly available in an effort to share the work of the Collaborative more broadly to inform the dialogue and decisions of educators throughout the state. This summary does not, however, contain the background and contextual information that might otherwise accompany a product created for the general public. For more information about the meeting and other Collaborative activities, please visit www.cacollaborative.org.*

Undergirding much of the work of the California Collaborative on District Reform over the past few years has been a desire to understand and support continuous improvement processes in local school systems across the state. Meanwhile, continuous improvement has also pervaded discourse at the state level and has influenced policy in a number of areas, including the state’s approach to supporting districts identified for “differentiated assistance” through the California School Dashboard. Governor Newsom’s interest in expanding the statewide longitudinal data system potentially takes this work to a new level and creates an opportunity to explore local continuous improvement strategies in the context of state-sponsored approaches to collecting and using data. The Collaborative took up the intersection of these topics in its 39th meeting, held in Stockton in June 2019. Over two days of dialogue and collective exploration, participants first examined what it means to use data for improvement at a local level and then considered how the state might best address local needs in its pursuit of a more effective data system.

Data Use in a Continuous Improvement Culture

The meeting repeatedly addressed the role that data and data systems play in a culture of continuous improvement.

Making Use of Robust Data Systems Through Culture and Practice

Data systems can provide critical evidence of progress and areas for attention within schools and school systems. However, meeting participants repeatedly cautioned that data

¹ Thanks to Marina Castro, Linda Choi, Candice Handjojo, and CoCo Massengale for taking careful notes during the meeting and thus making this summary possible.

systems alone will do little to advance improvement efforts unless they are accompanied by strong cultures of data use. One participant, whose organization has done extensive work to collect and share data with educators, described the organization's encounters with "the misplaced assumption that people will figure out data just because you have it." Another participant advised, "A robust data system is critical, but insufficient. The real work is changing data practice and use."

Participants further elaborated on the role that data play in the broader context of an improvement culture. A school principal reflected, "I used to think that data motivated. Now I think it just informs people. The real work is around the goal setting and the action, and the opportunity they have in grade-level meetings is to create action based on the data." An observation from a presentation slide during the meeting offered an additional insight about the factors that enable data to inform improvement: "Most problems don't require more data. They require more insight, more innovation, and better eyes."

Developing a Culture of Data Use in Sacramento

District leaders and principals from Sacramento City Unified School District (SCUSD) joined the group to describe their evolving work to use data as part of a broader approach to continuous improvement. District leaders espoused the belief that robust data systems have been necessary but insufficient to advance their goals related to instruction and student learning, and have therefore turned their attention to developing a culture that facilitates the use of data to inform the strategies for best meeting student needs.

Existing Mindsets That Have Stalled Progress

As SCUSD leaders approached their work, they found existing mindsets among administrators and teachers that too often stood in the way of improvement. According to district leaders, educators in the district frequently took an "endure and exit" approach to new strategies, believing from their previous experiences that most of these efforts—and the leaders who spearheaded them—were fleeting and could be outlasted with patience and minimal commitment to change. In addition, the multiple contextual factors that shape student opportunities to learn could serve as an excuse for unsatisfactory student outcomes, meaning that educators often did not consider the problems to be within their locus of control. District leaders also observed a mechanistic or vernacular approach to improvement approaches, meaning that they often adopted the terminology of a particular effort without truly understanding or embracing the work underway. Finally, district leaders found approaches to data use that were at odds with the culture they hoped to promote. They characterized one of these as "prove versus improve," meaning that educators turned to data primarily to prove that their existing work was adequate rather than to highlight areas for attention and growth. Moreover, educators in the district too often saw data as a hammer—information to trigger negative attention and intervention—rather than as a flashlight—evidence used to highlight areas of need and design supports.

The School Plan for Student Achievement as an Entry Point for Culture Change

In their efforts to motivate and support the shift toward a data-informed continuous improvement culture, district leaders decided to use the annual School Plan for Student

Achievement (SPSA) a vehicle for change. District leaders saw principals as critical leaders for change, so a required planning process offered a way to directly engage them in the district's evolving work. Moreover, by using a reporting document that all district principals submit on an annual basis, district leaders could collect concrete evidence of principals' understanding and commitment.

SCUSD has shifted its expectations for the SPSA from a mechanistic compliance process to a living document that demonstrates the principles of continuous improvement. The district now requires each SPSA to reflect a root cause analysis, articulate an improvement aim based on data, identify a problem statement, and establish plan-do-study-act cycles through which school sites will explore solutions to the problem they have identified. In the first year of using this process, district leaders asked principals and schools to follow these steps for one of their three SPSA goals. The expectation will increase to doing so for two goals, and then three goals in subsequent years.

A locally developed database allows administrators within the district to access the information entered into each SPSA. Through a partnership with the University of California at Merced, SCUSD has been able to create a system that houses each SPSA, including the information related to continuous improvement. Through this database, district leaders can examine the quality of school plans and the evidence behind them. This helps them to gauge the level of understanding and commitment to the process across SCUSD schools and to deploy supports to principals from principal supervisors.

Early Experiences of Principals

A panel of SCUSD principals and principal supervisors described their experiences so far with the new SPSA expectations and the broader efforts at cultural change to promote continuous improvement.

The panelists' most frequent observations addressed the knowledge and skills that principals need to lead the work in their school sites, including their mindsets and priorities as leaders. For example, SCUSD administrators described a tension between a traditional approach to budgeting that leads principals to say, "I need to buy this," and an orientation that prompts a discussion about: "Here are the needs of my students, and here are things that really need to be funded." Panelists also described the skills needed for principals to effectively collaborate with staff and parents at a school site. Principals need not only the technical budgeting skills but also the interpersonal skills to guide the new SPSA process with school site councils. One principal emphasized that conversations with members of the school community need to focus not just on examining data but also on developing relationships and building trust with community members: "Displaying the data is just one part of it, but triggering a moral response is a tough thing. Getting to know the families and sharing their stories is important—knowing kids not just as a number, but by name, and that means strong trusting relationships with families and with community partners."

Panelists also described the benefit of discussing data with peers. Regular meetings among principals and within grade-level teams provide opportunities for educators to discuss

data, enabling them to identify and address areas of need, as well as build their comfort level in having data-based conversations.

Data availability can nevertheless present a challenge. The areas of focus that a school or grade level identifies do not always have relevant state indicators available, forcing teachers and administrators to identify sources of evidence to measure progress toward their local goals. In SCUSD, a provision in the collective bargaining agreement that restricts the use of common assessments limits the ability of administrators and educators to measure and discuss progress across classrooms and schools.

Data Systems to Support Improvement

Having explored cultures of continuous improvement, meeting participants turned to the kinds of data systems that can support those cultures.

Existing Local Data Systems Demonstrate Promise

Presentations about the work in two school districts helped to demonstrate ways in which local education systems can develop data systems that inform improvement efforts at multiple levels of the system.

Customized and Actionable Access to Academic Data in Long Beach

Long Beach Unified School District (LBUSD) has developed a data system with a tailored dashboard that enables users in a variety of roles to access academic information about the schools, classrooms, and students that they support. Several design principles informed the development of the system. First and foremost, the data system had to prioritize the needs of students, classrooms, and schools. To do so, district leaders believed it needed to highlight “live” data that change regularly, align with the district’s goal metrics, and are multifaceted and actionable. LBUSD also developed a set of use principles for the data system, stipulating that it must facilitate accessibility, transparency, professionalism, and continuous improvement.

The LBUSD data system features a dashboard with an overview of student progress according to measures relevant to the district, customized to the role of a given user. The system shows school goals and the measures that provide evidence of progress toward those goals. It also generates “watch lists” for areas of need, including lists that show the most at-risk students, and can generate messages to parents whose children are on the list. Users have the flexibility to drill down into the data, based on the indicators and the level of the system (e.g., school, classroom, teacher). Taken together, these options enable users to see nine different academic metrics with 99 different displays of data. While that volume of information could be overwhelming in other contexts, meeting participants observed that the flexibility available for users to access the information most relevant and actionable to them minimizes that perception.

Efforts to Facilitate Healing-Centered Engagement in San Bernardino

At the heart of the theory of action guiding the development of the data system for San Bernardino City Unified School District (SBCUSD) is the belief that optimal conditions for learning exist only when students' basic needs are met. Work related to data systems in SBCUSD has therefore expanded beyond academic-centered metrics in an effort to create "healing engagements" with kids.

An SBCUSD representative shared some of the data tools in use to help educators in the district recognize and respond to a broad range of student needs. A Positive Behavioral Interventions and Supports (PBIS) dashboard developed in collaboration with principals and counselors provides monthly updates to schools about office referrals, suspensions, and expulsions. The dashboard includes details about the student behaviors and the referring teachers, as well as breakdowns for student subgroups for whom there have historically been disparities.

Another district platform shares student-level social and emotional learning (SEL) data collected through student surveys. The data tool shows overall trends in student responses and also allows users to drill down to see more detailed information about those responses. Among the features of the system are opportunities to take action on the data. The platform enables users to create student groups for intervention based on similarities in their survey responses. For example, teachers might bring students together who demonstrate a need for growth in the same SEL competency to specifically work on skills in that area. In addition, a *Playbook* embedded in the system provides users with strategies for taking action on the data trends they observe and functions as a personal learning network where teachers can share ideas and experiences.

Finally, SBCUSD's work with data seeks to leverage its Collective Impact work among community partners to share data among agencies.² These efforts are still in their early stages, but one strategy is to create a "Handle with Care" designation that other agencies (e.g., social services, mental health services, law enforcement) and the district can use for any given student to communicate that they should be treated with special care. In deference to privacy protections, such a designation does not include detailed personal information about the reason for the designation, but it can alert the school and partnering agencies that there are additional circumstances at play that might indicate a need to provide additional supports.

Schools and School Systems Cannot Operate in Isolation

In discussions of the LBUSD and SBCUSD data systems and those from other local districts, meeting participants frequently acknowledged the need for coordination among student-serving organizations. Students who have been historically underserved in public education often face a host of challenges in their lives outside of school. As one individual

² For more information about the Collective Impact work in SBCUSD, see resources from the Collaborative's March 2017 meeting, *Leveraging Partnerships to Improve Community Outcomes: Collective Impact*, at <https://cacollaborative.org/meetings/meeting32>.

reflected, “The challenges facing a kid can’t be dealt with by a great teacher alone.” In response, several participants suggested that students in need require “braided” supports from multiple organizations that work with them during different aspects of their days and lives. This kind of coordination might involve efforts both to share and analyze data and to provide supports and services. As an example of this kind of approach, one district leader described a nascent effort to establish a “children’s cabinet,” a coalition of organizations in the community that touch the lives of children and whose efforts can better serve students when designed in alignment with other organizations.

Areas for Attention in Collecting, Sharing, and Using Data

Based on the morning’s discussions and on their own experiences, meeting participants broke into smaller groups to explore in more depth some of the key issues related to data systems and data use to improve opportunities and outcomes for students.

Developing Capacity to Use Data Effectively

As school, district, and state leaders develop systems to more effectively share data, administrators and teachers often need to build new knowledge and skills to use those data as part of their improvement efforts. Such capacities can range from the technical details of accessing information to the application of those skills to understand evidence and use it to guide action on behalf of students.

Challenges: Time, Trust, and Common Orientation

Small-group participants identified several barriers that can stand in the way of building educator capacity to use data. Time is a persistent challenge; finding space to take on new responsibilities can be daunting when teachers and leaders already feel overwhelmed by their current workload. Finding time to meet with peers to build these skills is likewise difficult, especially when there are limited opportunities to do so within the school day.

Trust among colleagues can also present a challenge to fostering productive data use practices among educators. Examining data often means exposing one’s practice, and requires a willingness to be vulnerable by acknowledging and addressing areas of weakness. To feel comfortable engaging in this process, teachers and administrators need to believe that others will not use this information to criticize or punish them, and that everyone in the conversation is committed to using it for improvement. The trust that the work requires may not yet exist in many schools and districts, and can make authentic engagement in data-based conversations difficult to achieve.

Related to trust, teachers and administrators often struggle to orient their conversations about data in a productive direction. Data can have different purposes and different audiences. One challenge is helping people to understand these different uses and how to orient a conversation around improvement. Another is to facilitate discussions about data that are productive, not destructive conversations that levy blame and apply negative labels based on observed shortcomings in the data. Examining challenges can feel personal, especially when it happens without an established foundation of trust, so finding ways to

orient those conversations with a learning stance oriented toward problem solving is critical.

Possibilities: Tools and Approaches

The small group highlighted some possible strategies to address the challenges related to capacity building among educators. Some of these suggestions focused on framing the conversations appropriately. New data tools can often prompt new users to focus on the use of those tools; participants advised instead that educators should focus on culture and habits of mind—which data tools can then inform—rather than the tool itself. Group members also advocated for asking teachers what would be useful for them in building knowledge and skills.

Participants also discussed several ideas for helping teachers see value in data use. An approach that allows educators to see a tangible improvement in their work through use of data can help them recognize the value of the new approach. To this end, starting small with manageable tasks and modest goals can produce more immediate results that can help change adult beliefs. In any of these efforts, celebrating small victories can help educators recognize progress and invest in continued use of new strategies and tools.

Selecting Metrics to Inform Improvement and Foster Equity

Discussions about data systems addressed the kinds of evidence that such systems should collect and share.

The Identification and Prioritization of Metrics

Across small groups and other meeting conversations, participants emphasized the need to identify and discuss the purposes for using data when deciding what data to collect and share. The most useful indicators may be different depending on the audience and the context in which users examine those data; designers of data systems should therefore be strategic about what they incorporate into their systems. Similarly, meeting participants further emphasized the importance of gathering data that address their goals and needs, not necessarily the data that happen to be easiest to access. Finally, participants advocated that data should be a resource not only for shining a spotlight on areas of need but also on areas of possibility. Data are important for identifying areas that require attention; however, providing hope and ideas for next steps is just as important if educators are to use the data to advance student learning.

National Research Council Report on Defining Equity and Determining Equity Indicators

A National Research Council panel released a report in summer 2019, *Monitoring Educational Equity*,³ that explores the challenges of tracking disparities in educational opportunities and outcomes. A member of that panel joined the group to lead a small-group discussion about metrics related to equity. Among the key findings from the report, the panel stressed the importance of indicators of not only key student outcomes but also of the conditions that shape student opportunities for success. To that end, the report called

³ See <https://www.nap.edu/catalog/25389/monitoring-educational-equity>.

for more research to identify metrics addressing “the existence and effectiveness of cross-agency integrated services that address context-related impediments to student success.”

In recognition of the call for indicators that extend beyond the public education system, the panel representative also recommended that institutions work together to explore key indicators, and then develop and disseminate lessons learned from their efforts.

Challenges in Creating and Using Equity Indicators: Metric Selection, Collective Ownership, and the Role of Mandates

Small-group discussion identified some of the key challenges related to equity indicators. A primary challenge is selecting and collecting metrics appropriate to an individual or an organization’s goals. There is currently limited research consensus on the indicators of greatest value. Compounding this challenge, data consumers tend to lean on key educational outcomes—some of which are readily available across contexts—even when there are clear exogenous factors that shape students’ prospects for classroom success. In the face of these standardized but often limiting data, a further obstacle to using data appropriately is acknowledging differences across contexts and capturing the key contextual variables that can illuminate the reasons behind differences in outcomes.

An additional set of challenges relates to building collective ownership over equity issues. Students’ lives are profoundly shaped by events and opportunities both inside and outside of school, yet the organizations that touch young people’s lives frequently operate in isolation from one another. When data are collected and shared only within these isolated systems, it can be difficult for individuals and organizations to build a sense of collective ownership and see one another as partners in the service of young people.

The small group also explored the tension between goodwill and mandates. Many efforts to address inequity grow out of a spirit of goodwill among individuals and organizations deeply committed to addressing disparities in opportunities and outcomes. As leaders of these efforts attempt to broaden their influence, or as they encounter bureaucratic obstacles, goodwill alone is often insufficient to continue forward momentum. Although mandates can generate a compliance mentality, some group members argued that they are often necessary to bring everyone on board and to navigate the roadblocks that get in the way.

Possibilities: Incentives for Working Together

Small-group members identified some possibilities that can facilitate the kind of cooperative data collection and sharing required to confront longstanding inequities. System leaders can create incentives for different organizations to work together—perhaps by enhancing budgets for organizations that can demonstrate improvement, or holding organizations collectively accountable for results across their spheres of influence. The children’s cabinet idea—introduced by a district leader earlier in the meeting—represents one approach to bringing actors together across sectors to share responsibility for student success.

Developing Structures That Support Effective Data Use

Members of another small group explored the systems, structures, and strategies that districts can create to promote and support the use of data in classrooms and schools.

Challenges: Mindsets, Misalignment, and Isolation

Educator mindsets can stand in the way of establishing and implementing structures to promote data use. For example, a compliance orientation to districtwide expectations can lead to superficial changes that fail to penetrate administrator and teacher thinking and behavior. Similarly, a “this too shall pass” reaction born of waves of abandoned reform efforts often prompts educators to wait out new ideas rather than embrace them as part of their professional practice. Another challenge is mindsets that promote the use of one-time solutions and steer away from ongoing reflection and improvement. One participant used the analogy of painting the Golden Gate Bridge to describe an ideal learning stance for educators. Work on the bridge is not complete once a single coat of paint has been applied. Rather, an ongoing process of repainting helps to reinforce earlier coats and address gaps that emerge between the coats. Similarly, student and adult learning is not a one-time process, but an ongoing cycle of introducing, reinforcing, and refining improvements in instruction and student learning.

Small-group participants also described misalignment of district activities as a barrier to developing and growing effective structures for data use. Mixed messages and competing expectations from departments of curriculum and instruction, human resources, and business can undermine efforts to improve. Similarly, the isolation of teachers and schools that has historically characterized education makes it difficult to build systemwide expectations and routines. As one participant observed, “As long as we continue to nurture a culture of isolation and autonomy then what happens with data is meaningless.”

Possibilities: Focus on Learning Shifts, Alignment Among District Leaders

Some promising strategies for supporting data use include routines that focus attention on teacher practice and desired learning shifts. In some contexts, for example, professional learning communities with clear expectations for incorporating data into conversations about student learning can be effective vehicles for change.

Small-group participants also discussed approaches to improving alignment across a school district. Senior leadership stability—both on the school board and within the central office—is one contributing factor to maintaining consistent areas of focus over time. Fostering alignment between the superintendent and the board, and across departments in the central office, is also important.

Addressing Technical Issues

Creating data systems introduces a host of technical challenges for system developers to navigate. Participants in another small-group discussion worked to address some of these issues.

Challenges: Ambiguous Purposes, Limited Resources, Misaligned Data Systems, and Will to Change

One of the primary challenges that can stall progress toward system development is a lack of clarity about what data are needed and for what purpose. Key stakeholders often make assumptions about the goals for a data system but struggle to have explicit conversations about what is important to include. Without a shared understanding, any resulting product is likely to leave at least some of those stakeholders dissatisfied with the result.

School systems also navigate limited resources when developing data systems. Districts and states rarely have the money to fund all of the desired data elements and system features. They may struggle to find time to create the systems, especially in the face of impending deadlines and competing priorities. Capacity issues can also be problematic. School systems may not have the knowledge and skills to create what they need, and although outside vendors can be part of a solution, money may not be available to secure these services.

System developers also confront disparate data systems that do not easily connect with one another due to a lack of alignment both vertically and horizontally. Conversation about a statewide longitudinal data system has highlighted some of the vertical challenges—there are several details to navigate in connecting student data across the early childhood, K–12, higher education, and workforce systems. The barriers can also be horizontal in nature. Even within districts, most data systems have trouble linking academic information with metrics about human resources or school finance.

Finally, meeting participants pointed to barriers of will in addition to skill. Even beyond the capacity needs for making progress in developing data systems, critical agencies within and beyond education are often reluctant partners in the work. When leaders of these systems do not yet see value in combining information, and when they fear that sharing data could reflect poorly on the contributions of their organizations, they may not invest the time, resources, or commitment needed to navigate some of the technical challenges.

Possibilities: Common Student Identifier and Ed-Fi Data Standard

Despite the barriers for data system developers, some promising possibilities exist. The first is to create a statewide student identifier that could be used to link data across organizations and throughout a student’s education and employment trajectory. The Ed-Fi Alliance has created a data standard to get systems to talk to one another, and could provide ideas and guidance for navigating the challenges in California.⁴ Although the technical challenges present in the state can appear daunting, meeting participants also pointed to the California Department of Motor Vehicles as an example of a high-quality data system established at the state level, which can offer hope and promise that the state can successfully overcome challenges in this area.

⁴ For more about the Ed-Fi Alliance, see <http://www.ed-fi.org/>.

Communicating With Stakeholders

Throughout the meeting, participants asserted that data do not speak for themselves. People require some capacity to access and understand data, and some context to make use of them. Effective data use therefore requires an ability to communicate about data to a variety of stakeholders. Meeting participants had an opportunity to review emerging examples of student reports as one mechanism for sharing data with community members, as well as to address broader efforts to communicate about data.

In these discussions, meeting participants consistently recommended attending to the multiple users of data. From central office administrators to board members to principals to counselors to teachers to students and parents, a range of actors in a school district play critical roles in the improvement process. However, these roles can vary significantly, and the data needs for each are also different. Designers of data systems and the accompanying communication tools should create those systems and tools in direct response to the needs of the end users they seek to serve.

Student Reports

Over the course of the meeting, participants had the opportunity to review prototypes of student-focused data reports from two different school systems. Both report prototypes had the goal of sharing information with individual high school students about their academic progress in a way that enabled students to understand their current status and take proactive steps to prepare for their desired postsecondary plans.

Both prototypes included basic personal academic information, such as grades, test scores, and course-taking history, and then indicated the degree to which a student was currently on track for college. They highlighted schools within California's public higher education system whose entrance requirements aligned with a student's current academic performance, and one even combined that information with the student's stated personal interests to suggest possible good match schools. The reports also outlined next steps that the student could take to maintain or improve preparation for postsecondary options.

Meeting participants offered several considerations for maximizing the potential impact of the student reports by calling out both strengths and areas for improvement in the two prototypes. One of the most consistent areas of consideration was to ensure that information in these reports is actionable for students. In addition to knowing where they currently stand, students need to know what they can do next. That means providing not just generic information about next steps but also opportunities for obtaining more tailored advice; one district's report format, for example, provides the phone number and email address of the student's guidance counselor with times to meet together. The timing of the reports is also important. If there are implications for course-taking decisions, for example, students must receive the report at a time when they still have the ability to modify their class schedule.

Several meeting participants also advocated for sharing data in a way that provides hope. Accurate information about students' preparation for college will necessarily mean sharing

negative news with some students, and in the absence of a path forward, such information could be dispiriting. “[If] there’s nothing they can do specifically to alter what’s on there,” one person cautioned, “all it’s going to do is make them feel like crap...I would be extremely careful about giving this to any child in any school without the counseling of a highly qualified counselor.” Another participant echoed the need to provide students with clear next steps for improvement: “Data is only empowering if the person on the receiving end feels that they have the power to do something about it.”

To supplement concrete evidence with hope, some participants suggested sharing stories of students who turned things around. A student who sees a peer who was off track, but took proactive steps to get back on a college-ready trajectory, might gain hope that they can do the same. Even better, providing contact information for that peer can give the student an opportunity to access advice and mentorship in their own journey. Another individual advised the group to be careful about college readiness indicators that flow directly from the University of California and California State University (CSU) systems. Private schools do not have to abide by the same hard-and-fast rules, and a student who doesn’t meet the explicit cutoffs for CSU may still be eligible for admission and generous financial aid packages from other higher education options.

Finally, meeting participants argued that in the development of any student- or parent-facing report, district leaders should turn to students and parents for their input and feedback about the information they want to see and what they believe could be helpful. One district, for example, pointed to specific aspects of its student reports that had come directly from students themselves and that the district administrators would not have thought of without student input. If the goal of a student report is to inform students and parents, the perspectives of the end user(s) are essential to gauge the degree to which district leaders have achieved that goal.

Attentiveness to When and How Stakeholders Access and Find Value in Data

In the discussion about student reports and in other comments made during the meeting, participants advised that school systems need to be attentive to how and when stakeholders will look at data.

Meeting participants regularly observed that the level of burden to access data needs to be low. Teachers who already feel overburdened may not have time to jump through a lot of hoops, and the same is true for parents or students who have similar time constraints and may feel uncomfortable navigating the nuances of information provided by their district or school. One individual reiterated a point raised throughout the meeting about the ability of educators to access and process data: “We can have amazing data systems, but without time for teachers to sit and talk and think, it’s not going to move the needle anywhere.” One requirement across school systems is that teachers record their students’ attendance on a daily basis. Because this activity is already a part of teachers’ daily routine, some participants suggested that using attendance as an entry point to access other student information may be a good way to minimize burden and meet teachers where they already are. Districts can also generate and deliver periodic reports to principals, teachers, or

others so that these audiences have direct access to key information without having to hunt it down elsewhere.

Participants also emphasized that people need to find value in the data they see. If data help educators and other stakeholders do their jobs more effectively, they will return repeatedly to that information. As one person explained, “Teachers care about data when it’s related to their kids and when they feel there’s something they can do about it.” If any stakeholder does not perceive the data as being useful, that stakeholder will not seek it out.

Finally, conversation during the meeting suggested that data systems should reinforce desired behaviors without encouraging unintended negative consequences. This may mean a balance between data that reinforce measures of importance to the central office—but could promote a compliance mentality if others do not see value in those measures—and the adaptability of a system to provide information relevant to a user’s interests. One participant also cautioned that data systems that drill down to the classroom level (but not to grade level or course teams) could drive the focus away from collective problem solving and instead promote unhealthy competition among teachers. Summarizing his perspective on the kinds of behaviors that data systems should facilitate, one participant posed this question: “How do you impact the hearts and souls of the people doing the work?”

Promising Approaches for Communicating About Data

In the group’s collective exploration of these communication issues, participants highlighted several promising approaches. Some of these approaches related to data system features: systems accessible on mobile devices that are interactive and searchable help to lower the burden to access and increase usability. A Data Equity Walk, a 45- to 90-minute activity that enables stakeholders “to engage with education data and discuss equity issues,” is an interactive strategy to engage a variety of individuals in exploring education data.⁵

The discussion of communication possibilities also turned to issues of messaging. According to participants, communication should include both challenging data and bright spots. Schools and school systems that have historically struggled do not want to be berated for continued underperformance; highlighting areas of promise while also emphasizing the urgency of continued growth can help keep stakeholders engaged in the conversation. Just as important, education leaders should tell communities what they plan to do in response to the data and how they will address those areas of ongoing need.

Cross-Cutting Observations About Assembling and Using Data

Between the first and second days of the meeting, discussion shifted from local efforts to use data for improvement to ways in which the state can guide and facilitate those efforts. Across

⁵ For more information about The Education Trust—West’s approach to leading Data Equity Walks, see <https://west.edtrust.org/data-equity-walk-toolkit/>.

the two days of conversation, several themes emerged about the development and use of data systems as part of those efforts.

Start With the Purposes for the Data

After years of grappling with a state data system characterized by many flaws and shortcomings, parents noted, education stakeholders may respond to the prospect of change with a laundry list of desired metrics and features. Each of these introduces promise and possibility, but collectively these wish lists could call for a system that is infeasible to develop and maintain, and overwhelming for educators and other stakeholders to actually use in a meaningful way. In discussions throughout the meeting, participants therefore advised that designers of any data system start with a clear understanding of the purpose(s) of the data. Any subsequent design decisions should aim to advance that purpose or purposes. This clear articulation is important in part for technical reasons. As one person explained, “The reason it’s so important to articulate the ‘why’ is that there are different infrastructure needs based on what the data are used for.” A shared understanding of goals is also important, however, for effective data use, so that all members of an education community know why different pieces and displays of data are important and how they can inform ongoing improvement efforts.

One key tension in the purpose of data use, highlighted by participants, is between data use for accountability and data use for improvement. Data in California and across the country have historically been used to classify districts and schools as successes or failures and to trigger consequences for student performance. The conversation about external accountability in the state has shifted noticeably in recent years, and the appropriate role of data in this process remains an area of controversy and further refinement. Nevertheless, data for accountability takes a very different form than data for improvement in the frequency of data collection and sharing, the metrics of interest, and the users who need access to information. Designers of data systems must be clear about their intended purpose(s) for those systems and ensure that the product they create can appropriately meet those needs.

Design for the End Users of Data

Along with the purpose of the data, participants emphasized the need to consider the individuals and groups who will actually access and use data. Participants noted that too frequently in education, individuals with content expertise or positions of political influence design strategies and interventions in isolation from those individuals and groups who will actually implement their decisions. Consumers of data in education can range from district leaders to school administrators to teachers to parents and students to researchers or policymakers. As system designers create tools designed to inform those closest to the ground—especially teachers, parents, and students—it is imperative to integrate their needs and priorities into those tools. At various points during the meeting, participants emphasized the need to solicit feedback from these end users or—better yet—to actively engage them in the design process. In doing so, state, district, and school leaders can create systems that best meet the needs of end users while identifying and avoiding missteps that might undermine their success.

Address the Contexts That Enable Data to be Effective

Participants emphasized that data alone will not solve problems. The most comprehensive and well-designed data system will do nothing to improve student outcomes without attending to the context from which data emerge, the ways in which educators and other stakeholders interpret those data, and the culture through which those same individuals and groups access and use data. The logistical details of developing and accessing data systems are crucially important, but building these systems is not merely a technical issue. The work requires equal attention to developing a culture in which educators see data use as an essential component of their jobs, and building relationships so that people feel comfortable with sharing and addressing the challenges that data might expose. Meeting participants likewise emphasized that although various forms of data can help to improve interventions and supports at multiple levels of the system, they are ultimately tools for supporting the growth and development of human beings. As one person reminded the group, “This is about data, but in education, we’re dealing with people.”

Current State Approaches to Collect and Share Data

Turning from conversation about using data for improvement at the local level, meeting participants explored ways in which California currently collects and shares data about student opportunities and outcomes.

Historical Efforts to Collect and Share Data

The Newsom administration’s stated desire to develop a statewide longitudinal data system is not a new goal in California. However, a participant has studied prior efforts noted that they have fallen prey to politics and a lack of perceived value. Some participants suggested that reluctance to contribute to this effort—especially from institutions of higher education—may stem from a fear that connecting the dots of students’ education trajectories might expose shortcomings in California’s higher education systems. “It’s threatening,” one person observed. The implication of the discussion was that just as school districts may need to explore a culture change to embrace data for improvement, higher education might also need to shift to a mindset of using data to inform productive solutions rather than to apply shame and blame to other individuals and organizations.

Existing Approaches to Collect and Share Data

A series of briefs from the Education Insights Center, two of which were included as background reading materials for the meeting, describe the current state of data systems in the state of California.⁶ Overall, the series finds many strong examples of regional work to collect and share data. However, the briefs find that organizations are hamstrung by the limitations of operating only on a regional basis. These organizations have often developed workarounds and hacks to make up for the activity that is not happening at the state level, but these solutions are often flawed and inefficient. Moreover, even the best local solutions

⁶ See <https://cacollaborative.org/meetings/meeting39> for the full set of background readings. For the full Education Insights Center series, see <http://edinsightscenter.org/Publications/Research-Reports-and-Briefs/ctl/ArticleView/mid/421/articleId/2198/California-Education-Policy-Student-Data-and-the-Quest-to-Improve-Student-Progress>.

are isolated examples in a large state where many education leaders remain unable or unwilling to collect and act upon evidence of student experiences and progress across institutional lines.

One of the more prominent ways in which educators and the general public can access information about student performance in K–12 education is the California School Dashboard. District leaders and other meeting participants shared some of their impressions of working with this fairly new display of student progress. Reflections on the Dashboard included an appreciation that, in contrast to the previous Academic Performance Index, it includes multiple measures to give a more comprehensive picture of what is happening in districts and schools. Some participants also characterized the Dashboard as a good initial window into district performance.

However, participants also identified several shortcomings and opportunities to improve the Dashboard. For example, the college- and career-readiness indicator offers so many pathways to satisfying the criteria for readiness that a school heavily focused on its Advanced Placement program has no incentive to improve its career and technical education program, or vice versa. The possible result is that school responses could perpetuate inequities. Participants also observed that because the Dashboard features changes in student outcomes from year to year—how a school’s fourth-grade students from this year, for example, compare to the different set of fourth-grade students from the previous year—rather than growth—how a group of students’ performance in one year compares to the same students’ performance in a previous year—it can offer a misleading view of student progress. Another reported area for improvement is the accommodation of local indicators. Although the stated commitment to honor the specific priorities and activities in school districts is helpful, in practice these are often little more than variations on the already-collected state indicators. Finally, if the state hopes to measure attainment of important education milestones, participants advocated for the inclusion of both a 4-year and a 5-year graduation rate.

Challenges With Existing Approaches to Collect and Share Data

Meeting participants identified several shortcomings in the state’s current data systems and communication tools. The overriding opinion was that the existing structures are insufficient to support continuous improvement efforts at the local level. Part of the challenge is the quality of indicators themselves, including the ability for educators to see information at the student level for measures of importance for immediate action. Timing poses another obstacle for educators to use the state data system to inform improvement efforts. The delays between data collection and availability, combined with the staggered release of different indicators, make it difficult to incorporate information from the state system into improvement activities. With respect to the Dashboard and its role in the statewide system of support, participants noted that the state calls for differentiated assistance based on a small window of activity: Districts learn that they have been identified for support in December, then begin a process of a root cause analysis. Any improvement ideas begin after the root cause analysis has been completed, and then the state administers its summative assessments in the spring. This means that the designation

of districts requiring support the following fall might rely on results of an intervention that has been in place for only 1 to 2 months.

Participants also highlighted the potentially misleading messages offered by existing state systems and tools. The guidelines for some state indicators—for example, suspensions—are prone to misinterpretation and might therefore reveal inconsistencies in data entry rather than true underlying differences among schools and districts. Local indicators, because they frequently derive from state indicators rather than high-quality metrics reflecting local goals, often measure outcomes that are different than the specific aims of a particular strategy or intervention. And once again, measuring change in academic performance rather than growth can reflect demographic changes in the student population rather than actual increases or declines in academic performance.

Efforts Underway to More Effectively Collect and Share Data

In the face of persistent challenges to using data for improvement at the state level, education leaders in several domains have been working to push conversation and action forward for California. Representatives from some of these efforts joined the meeting to share updates on their plans and progress.

Values to Guide a Statewide Data System

The Education Insights Center series on data systems identified several values that should guide efforts to produce a more effective state data system:

- Such a system should be considered a *public good* designed to produce valuable information to policymakers, educators, students, and families.
- *Data security* is essential to protect student privacy and ensure compliance with state and federal regulations.
- Any state data system should address issues of *data quality* to guarantee that information is accurate and complete.
- In the face of aspirations that could spiral out of control, developers should also seek to produce a system within a *reasonable timeframe* at a *reasonable cost*.
- A state data system should be *technically feasible* today and flexible enough to accommodate technological improvements over time.
- *Political feasibility* is also an important consideration, as system developers will need to secure the trust and support of a range of political and organizational leaders.
- A data system should be *sustainable* so that it survives and thrives through the inevitable turnover of political and organizational leaders and cycles of financial abundance and scarcity.

California Education Data Collaborative

Since late 2018, a multistakeholder group known as the California Education Data Collaborative has met to address the design of a statewide longitudinal data system. A representative from the group joined the meeting to share some background on its work and the lessons learned so far. Members originally convened with the goal of convincing

California to adopt a new data system, but now that the governor has signaled his support for moving in this direction, members have shifted their focus to helping the state develop the most useful data system possible. The group comprises representatives from a range of research, data sharing, and advocacy organizations. Its meetings feature dialogue among participants as well as guest appearances from experts in California and other states.

Through its work to date, the California Education Data Collaborative has identified several lessons about the design of a state data system. Some of these relate to the purposes of data. First, not every indicator available needs to be included in a state data system. The state should start with questions that stakeholders want answered, and then design a system to answer those questions. Echoing sentiments from other discussions in this meeting, the California Education Data Collaborative has also recognized that a state data system will have many different stakeholders, users, and purposes, each of whom will interact with data in different ways. As designers navigate the technical details of a system, everyone in the state who has a stake in that system must find it useful for their purposes.

Lessons have also emerged about system governance. As different institutions work together to share data with one another, key issues about data ownership and security emerge. The group has concluded that in order to be most effective, the data need to live outside those contributing systems. A representative from the group emphasized that this does not mean that the system must be created through an external vendor. Washington and Kentucky are two states that have produced their own data system, offering precedent for California to develop a system in house if it chooses.

The group has also highlighted the need to manage expectations. For all the benefits that a statewide longitudinal data system can bring to California, it will not be a “silver bullet.” The system will only be able to provide data as recent as from the previous academic year. Education leaders may need other data systems to inform their full range of improvement needs. In addition, a data system alone will not solve problems for schools and districts. Using data effectively requires an understanding of the context from which those data came and interpretation of what they mean.

Efforts From the Governor’s Office

Since the governor’s budget proposal in early 2019 laid out plans for a statewide longitudinal data system, plans have also been underway within the administration for moving the system forward. From the governor’s perspective, collecting and sharing data across students’ life trajectories is an important part of his cradle-to-career agenda. A representative from the administration joined the meeting to share some background on these plans.

Echoing comments made at other points throughout the meeting, the administration’s approach starts with a clear sense of why a data system matters in the first place. The vision for the state identifies purposes for a data system at three levels. At the cross-systems level, the opportunity exists to conduct research and evaluation to help stakeholders understand key statewide and regional trends in student development. For

example, the presenter described the Rhode Island Innovative Policy Lab efforts to combine data from the health sector, K–12 education, and postsecondary education to connect birth weight to college enrollment and discover that a \$4,000 investment early in life could yield a 17 percent enrollment increase. At the institution level, data enable administrators to engage in program planning and optimization. In Los Angeles County, for example, a combination of birth, child protection, and home visitation data have enabled the Children’s Data Network to create heat maps that identify high-priority communities to receive targeted supports. And at the individual level, a data system can offer tools to support students, families, and educators. As the state approaches the development of a statewide system, it is taking into account all three of these levels.

The administration’s solution framework is to create the conditions for adults in California to figure out how best to add value for the state while minimizing risk. As one person observed, “Data moves at the speed of trust.” In a state where lack of trust, territorialism, and political obstacles have historically stood in the way of progress toward a more effective state data system, the Administration’s representative described the state as trying to build a case for a data system and bring key stakeholders together to work through the biggest obstacles.

Three categories of next steps characterize the administration’s plans for moving forward. Track 1 is the “doing track,” a set of actions that can be taken now without any regulatory or cross-institutional barriers to stand in the way. For example, drafting model data-sharing agreements can provide a resource to local education leaders who want to make progress on their own local data systems. Track 2 is the “planning track.” Language in the 2019 budget trailer bill lays out some of these plans, which revolve primarily around a working group of “data stewards,” the people currently obligated to collect and administer data over time. That work will begin with K–12 and postsecondary education, as those systems have established and standardized data collection approaches in place ripest for integration, likely followed by workforce and early childhood data. Finally, Track 3 is the “buy-in track,” a set of activities designed to engage the data stewards, potential beneficiaries, and the general public. Articulating the vision behind this approach, one person explained, “Our intention is to use the governor’s political capital to share the data so that people see the value and then come back and open up more.”

Considerations for State Action

Meeting participants raised several considerations for state action as California pursues a statewide longitudinal data system. Some of these observations emerged directly from conversations about state plans on the second day of the meeting. Others emerged as implications for the state during small-group conversations on the first day.

Establish the Purpose(s) of a Data System

Repeatedly throughout the meeting, participants emphasized the importance of understanding the purpose(s) of data, and using needs in the field to design a data system. For example, the administration is considering needs at a cross-system, institutional, and individual level. The Education Insights Center also laid out a set of hopes for a state data

system. Among these are understanding student progression throughout the educational pipeline, responding to state and federal reporting requirements, supporting students better, and adding value without recreating what districts already have.

Participants suggested that one of the first steps the state can take is to understand, articulate, and communicate the purpose(s) of data that underlie any new system it sets out to create. This might start with outreach to the California education community's various end users to understand what they want. It might also include an explicit set of criteria for an effective state system through which stakeholders can understand what the state is trying to accomplish and evaluate the degree to which an eventual system meets those goals.

Consider the Appropriate State Role

Comments during the meeting suggested that the state plays a vital role in collecting and sharing data, but not the only role. As key stakeholders determine the purpose(s) of a data system, they should also consider the appropriate role for the state to play in relation to that system. As much as the state has embraced the rhetoric of continuous improvement, for example, one perspective suggests that the state is not equipped to do continuous improvement well due to its limited organizational agility and the various constituencies it must please. Local education agencies and other youth-facing organizations will continue to play a critical role in developing and using data systems and advance the work of continuous improvement. Thoughtful conversation and decisions will be important to determine how the state can best lead and support that work without supplanting or complicating it.

Participants also observed that if the California Department of Education is to have a substantial role in various aspects of the state data system, it needs adequate funding to perform these responsibilities at a high level.

Coordinate With Other Concurrent Policy Developments

Meeting participants observed that discussions about a state data system are not happening in a vacuum. Ongoing developments across the state continue to shape the context in which such a system will emerge and how it will contribute. For example, California's early childhood education master plan is due in October 2020. Any efforts to incorporate early childhood data into the data system should align with those efforts. Similarly, one participant observed that one of the initial responses to higher-quality data about postsecondary transitions may be that school systems better identify and support students on the cusp of higher education eligibility, leading to increased student eligibility rates. What are the implications of these increases on a statewide level for California's higher education master plan?

Put the Pieces in Place Now for Long-Term Success

Conversation during the meeting featured attention to both near-term and long-term actions. Trailer bill language for the 2019 budget spells out long-term plans for developing a data system, but there are actions the state can take now. For example, a statewide

agreement between school districts and community colleges could enable educators and administrators to track and address student progress without having to wait for the new system to go live. As another example, one topic for cross-institutional discussion is the creation of a unique student identifier that can connect students across early childhood, K-12, higher education, and the workforce. Developing a student identifier for preschool students now could enable system designers to work out any issues while building that identifier into the system, without having to wait for the completed data system to launch.

Provide a Repository of Local Exemplars

Even with a high-quality statewide longitudinal system in place, local systems will continue to play key roles in providing real-time access to data on student opportunities and outcomes, tracking indicators not available on a statewide basis, and sharing data with local community partners. Some school districts have been on the leading edge of developing these systems. Others struggle to see the possibilities these systems offer, and many lack the capacity to develop similar systems themselves. By creating a repository of local exemplars, the state can foster the acceleration and spread of innovation through cross-system learning.

Maximize Benefits While Minimizing Risks

Data security and privacy issues are of paramount importance in developing and maintaining large-scale data systems. Too often, however, the fear of what could go wrong stands in the way of important steps to take advantage of the potential that data offer. While minimizing risks is important, participants noted that there should also be a focus on removing obstacles and maximizing benefits.

System designers should also beware of the potential unintended consequences of any design decision. In addition to privacy concerns, participants noted potential unintended consequences with respect to incentives for educators and administrators, and communication and trust with students, parents, and communities. Stakeholders at all levels should take care to anticipate, avoid, and address the unwanted side effects that a state data system might introduce.

Consider How Stakeholders and Systems Respond to Data

Participants also raised several concerns about what educators and others do in response to the information they receive from data systems and the tools associated with them.

One topic of intense conversation was the use of data for accountability purposes. Most of the meeting focused on data use for improvement, and the state has been trying to shift in recent years to a more improvement-oriented approach. In light of this shift, some participants asked: How does the state ensure high-quality experiences for students? Local Control Funding Formula statutory language calls on the superintendent for public instruction to intervene in cases of persistent failure, yet the parameters for intervention are not articulated in detail and are as yet untested. As one person argued, “There has to be some sense of accountability or else kids of color and other vulnerable kids get screwed.” In that vein, some participants talked about striking a balance between external

accountability—which can hold a clear standard across contexts, but can also engender a compliance mentality—and internal accountability, where educators feel accountable to their peers for meeting a shared obligation to serving students well. This conversation about accountability was brief, but may be the subject for further exploration in a future Collaborative meeting.

Next Steps for the Collaborative

The location, date, and topic of the next Collaborative meeting are yet to be determined. Collaborative staff will share this information as soon as it is available so that members can arrange their schedules to attend. In the meantime, the Collaborative staff will continue to pursue publications and activities that share key lessons from our core meetings with the broader field of California educators. As always, resources from this and previous meetings, updates regarding Collaborative members, and information concerning upcoming events are available on our website at www.cacollaborative.org.