

Meeting 55 Summary
Moving the Needle in Mathematics:
Promoting Instructional Quality in Santa Clara

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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 and 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.*

Santa Clara Unified School District (SCUSD) hosted members of the California Collaborative on District Reform in March for an examination of instruction and student learning in mathematics. California’s new mathematics framework and the upcoming adoption of instructional materials served as an opportunity for the Collaborative to explore excellence in mathematics Grades K–12 classrooms. Using SCUSD’s context to inform the group’s conversation, the meeting focused on the roles that teachers, students, and the systems in which they operate play in promoting inquiry-based, student-centered approaches to teaching mathematics.

Motivations for Improving Mathematics Instruction

For more than three decades, student achievement for California students in mathematics paints a picture of slow growth, stagnation, and even decline. Over that period of time, California’s fourth- and eighth-grade students have consistently performed below the national average on the National Assessment of Educational Progress in math. In 2024, eighth graders ranked in the bottom third of all 50 states, and fourth graders ranked in the bottom fifth.² On the 2024 California Assessment of Student Performance and Progress, only 36% of students met or exceeded standards. Performance lags even further behind for students of color (24% of Hispanic students and 18% of African American students met or exceeded standards) and students from low-income families (25% met or exceeded

¹ Thanks to Emily Agopian, Crystal Aguilera, and Linda Choi for taking careful notes to make this summary possible.

² <https://www.nationsreportcard.gov/profiles/stateprofile/overview/CA>

standards). Performance patterns only worsened in the wake of the COVID-19 pandemic and have not fully recovered.³

Math outcomes in SCUSD reflect these broader statewide patterns. While the district has performed better than the state overall since the introduction of the Smarter Balanced assessment in 2015, district leaders report that SCUSD underperformed compared to a group of similar, nearby districts. Disaggregated performance data reveals similar gaps as the state. White and Asian students are more likely to meet or exceed standards compared with Hispanic and African American students, and economically disadvantaged students also perform below their counterparts. Whereas 48% of all SCUSD students met or exceeded standards in 2024, only 29% of Hispanic students, 21% of African American students, and 24% of low-income students did the same.⁴

These challenges persist despite many structural advantages that should benefit the district. Between the 2019–20 and the 2023–24 school years, SCUSD spent from \$6,700 to \$10,000 more per student per year than the average unified school district in California.⁵ Moreover, SCUSD district leaders report that the SCUSD teaching force is highly experienced and compensated relative to the state overall. District leaders therefore do not feel their results are reflective of their students' capabilities. The gap between current and potential performance prompted district leaders in SCUSD to transform their approach to mathematics instruction.

Leveraging Course Pathways to Transform Instruction

District leaders believed that addressing the achievement gaps required cultural, structural, and instructional changes. They described SCUSD's culture as one characterized by decentralization and high levels of teacher autonomy in their instructional practices. District leaders further noted that educators did not regularly practice diving deeply into their performance data, allowing the performance gaps to stay hidden. Knowing that changing culture is extremely difficult, district leaders sought opportunities to transform mathematics in the district while navigating the existing district context.

At the time, many districts across the country were redesigning policies that dictated which math courses students take, when they are taken, and how students are assigned to those classes. The strategy of revising math course-taking policies was not new to SCUSD. District leaders had long recognized that their then-current system required students to skip full years of mathematics content to enroll in certain advanced courses by high school graduation, and the assessment process for placement into courses was opt-in and thus not equally available to all students. In fact, the district had previously attempted to change how and when their students take mathematics courses on two occasions. Both attempts were unsuccessful.

³ <https://caaspp.edsource.org/sbac/california-00000000000000>

⁴ <https://caaspp.edsource.org/sbac/santa-clara-unified-43696740000000>

⁵ <https://ed-data.org/district/Santa-Clara/Santa-Clara-Unified>

Not knowing if a third attempt would be successful, SCUSD teacher leaders led a nearly year-long community engagement effort to inform the creation of new math course pathways for Grades 6 through 12. In contrast to their prior efforts, these teacher leaders were able to facilitate the passage of the new pathways with little to no controversy, which district leaders credit to a deliberate process of soliciting and prioritizing the perspectives of teachers, parents, and other community members when designing the pathways. In October 2023, the SCUSD school board formally adopted the new math pathways to be implemented in the 2024–25 school year. One SCUSD district leader believed that the new pathways were a means to a broader change in mathematics: “We used the structural shift to justify the need for the instructional shift ... It was a form of leverage.”

Background on SCUSD’s Secondary Math Pathways

SCUSD has organized its math pathways with two key features:

- Students and families have the final decision on their students’ pathway, even if the district or a teacher recommends something different.
- All students take Math 6 in Grade 6, Math 7 in Grade 7, and Geometry in Grade 9. All three are purposefully heterogeneously grouped classes in which students of all skill levels learn with one another in the same classrooms.

Building on this common foundation for all students, the SCUSD pathways fall into four categories,⁶ each with several options for students to pursue more accelerated learning opportunities:⁷ pathways with no compaction points, pathways with a compaction point in middle school, pathways with a compaction point in high school, and pathways with one compaction point in middle school and another in high school. Options within each category differ depending on which classes a student takes in Grade 8, when students take Algebra I and II, what advanced courses students take (if any) in Grades 11 or 12, and other factors.

A Vision for Teaching and Learning Mathematics

In 2023, the California State Board of Education adopted a new Grades K–12 mathematics framework to guide districts’ continued implementation of the Common Core State Standards. The state released the framework, the first since 2013, to offer guidance to educators and the systems they work in to support high-quality math instruction. In conjunction with its pathways work, SCUSD is using the framework as a tool to facilitate the transition from more teacher-directed, exclusively procedural-focused instructional approaches to more inquiry-based, student-centered classroom practices. The objective is to ensure improved learning outcomes for all students while addressing the district’s longstanding differences in student opportunities and performance.

⁶ <https://www.santaclarausd.org/about-us/departments/curriculum-and-instruction/secondary-math-pathways>

⁷ In SCUSD, some pathway options include a “compaction point” in which content from multiple courses is combined into a single, accelerated course. For example, SCUSD offers a course that merges Math 8 with Algebra I, and another that combines Algebra II with Precalculus and Trigonometry.

The Components of Equitable and Engaging Instruction

Conversations about teaching and learning in mathematics are likely to be more productive when there is a shared understanding of what high-quality instruction looks like. To establish a common entry point, Collaborative members learned about the framework's development, content, and plans for implementation from Mike Torres, director of California Department of Education's Curriculum Frameworks & Instructional Resources Division. Following the overview, meeting participants broke into small groups to read and discuss excerpts from Chapter 2 of the framework,⁸ which outlines five components of equitable and engaging instruction:

- Teaching big ideas, which involves focusing on and continually returning to core mathematical concepts.
- Using open and engaging tasks that encourage students to explore diverse problem-solving approaches.
- Teaching toward social justice, or ensuring that all students have equal and equitable opportunities to gain content mastery.
- Inviting questions and conjectures to promote curiosity, conversation, and student inquiry.
- Prioritizing reasoning and justification in the math work students do to develop logical thinking and shared understanding.

Participants began by forming small groups, with each group assigned to read about one of the five instructional components. Each reading included a classroom vignette that illustrated how the component could be applied in practice. For instance, one vignette described a teacher presenting several mathematical equations and asking students to determine which were correct or incorrect and to explain their reasoning. When a pair of students proposed a shortcut for solving one of the equations, the teacher asked the class to test the shortcut and try to disprove it. This scenario demonstrated how teachers can invite student questions and conjectures by having students examine the evidence they use to believe something is true. After reading, participants discussed how the component was represented in their vignette. Finally, all groups came together to share insights across the different components.

Bringing the Framework to Life for Meeting Participants

In addition to learning about and discussing the framework, Collaborative members participated in activities throughout the meeting to help them more deeply understand what incorporating the five framework components into instruction entails and how it may differ from traditional classroom experiences. For example, a small-group exercise in which participants collaborated to solve simple mathematical puzzles required each member to contribute to the articulation of the rationale for their selected answer. Similarly, when working through a computer-based visualization of positive and negative numbers, one participant explained what she understood from the visualization, then asked the facilitator, "Am I reading this right?" Instead of answering the question, the facilitator asked

⁸ <https://www.cde.ca.gov/ci/ma/cf/documents/mathfwchapter2.pdf>

the question of the class: “Class, is she reading this right?” This prompted participants to articulate how they understood the visualization themselves and investigate how their understanding was similar or different than their peers’ responses. In this same activity, the facilitator continually probed participants for more precision and clarity in the language participants used (e.g., “When you say, ‘absolute values,’ what do you mean?”; “What do you mean by ‘going across?’”) to make learning accessible to all.

These activities enhanced participants’ understanding of what teaching in alignment with the framework means. For example, in the mathematical puzzle activity, participants demonstrated progress not by providing the facilitator with the correct answer but by each group member providing their reasoning and justification for their selected answer. In the computer-based visualization activity, the facilitator repeated every question asked of her to the group, encouraging the “students” to take ownership of their own learning by encouraging questions and conjectures.

Reflections About Implementing the Framework in Classrooms

After engaging deeply with the five components of instruction, meeting participants had small-group conversations about what implementing these components might mean for California students, teachers, and leaders.

Teaching in alignment with the framework is difficult compared with procedural methods.

Group discussions prompted the common reaction that teaching math in alignment with these five components is, in the words of one participant, a “tall order.” In contrast to traditional instructional approaches—for example, showing students one way to solve a problem and asking them to replicate the process multiple times or presenting close-ended tasks with low-cognitive demand—the practices described in the framework require more work from the teacher. The framework’s teaching practices demand more and substantively different effort than more procedurally oriented methods. A participant shared this reaction about teaching to big ideas: “It would be easier to be like, ‘I’ll show you [how to do this math problem].’ Far easier. This [component] takes a lot more work. ... This is so much more work for [teachers].”

Teaching in alignment with the framework requires high teacher capacity.

Because the framework pushes teachers to use a different and wider range of skills, they must apply their professional judgment about when and how to best to apply them. There was agreement in all small groups that teachers need to have a high degree of capacity to implement all five components with fidelity. One person listed what they saw as the multiple dimensions of teacher skills depicted in the vignettes used in their instruction: “The kind of content knowledge that is necessary to understand mathematics, the pedagogical content knowledge to teach mathematics, and how to manage all the different learning styles and learning modalities and the different students you have.” Participants noted that these skills encompass a broad range of competencies that are essential for effective teaching. Relatedly, participants raised questions about the degree to which

having these skills is a prerequisite to implement the practices promoted in the framework or whether engaging in the practices can help teachers build their skills.

Participants also noted that school systems have a responsibility to build educator capacity to meet the aspirations articulated in the framework. A teacher's practice often mimics what they experienced during their own Grade K–12 education journey, and educators who choose to teach math often do so because they were successful in that kind of learning environment. If school systems are to feature widespread practices that are meaningfully different than traditional math learning environments, they need to provide the guidance and support that can bridge the gap between our current reality and our vision for teaching and learning.

Learning in alignment with the framework requires a high capacity for productive struggle.

Like the teachers, the students depicted in the vignettes demonstrated a strong tolerance for productive struggle. To build tolerance for productive struggle, students need to have supportive learning environments that treat mistakes as opportunities instead of failures, adults who can support them in exploring a variety of problem-solving strategies, practice navigating the uncertainty and potential discomfort of struggling to find an answer, and a belief that growth is possible. Some meeting participants with recent experience working directly with students expressed concerns that students' capacity for productive struggle has diminished greatly over the last several decades, in part due to the instantaneous nature of getting answers from the internet. They had trouble imagining real-life students engaging in the math activities described in the framework because the students they work with may not have cultivated the patience to problem-solve in this manner. Collaborative members worried about what happens in real-life classrooms when educators assume their students have this skillset without providing support to develop it.

Inconsistency among teachers may be a breeding ground for pushback.

In one small group, participants envisioned potential parent and student resistance to the practices illustrated in the framework if some classrooms within the same grade or school fully implemented the five components while others were more traditional in their approach. Because learning environments that align with the principles articulated in the framework require shifts in mindset and practices for both students and teachers, students might have a hard time transitioning among teachers with different approaches. Put another way, if a student or parent is aware of another teacher whose approach is less demanding (and perhaps more similar to how the parent learned math themselves), then they might resist efforts to support framework-aligned teaching practices. One participant stated, "If that's not the agreement in district that these [components] are the non-negotiables, then it is exhausting" to constantly reiterate why a teacher is taking this approach and, as a result, teachers are likely to implement them less effectively.

Navigating Instructional Shifts

For SCUSD and other California districts to be successful in transforming math outcomes for all students, leaders need to ensure that educators have the knowledge, skills, and

mindsets to deliver high-quality learning experiences in classrooms. With a better understanding of what strong instructional practices can entail, Collaborative members turned their attention to the opportunities and challenges associated with building teacher capacity.

Insights From SCUSD Teachers on Challenges and Opportunities

Meeting participants heard directly from a panel of SCUSD teachers who shared their perspectives on the instructional shifts underway in the district and their experiences with the tools and supports they have received so far.

Teachers committed to more inquiry-based approaches to instruction may experience pressure to conform with tradition.

Many of the SCUSD teacher panelists reported that they were trained to teach math in ways that prominently feature student talk and inquiry, much like the framework encourages, but they often found themselves leaning into procedural, teacher-led methods so they could more easily work with their colleagues. The panelists described their challenges with employing teaching practices that are meaningfully different from a grade-alike or subject-alike teaching team that is supposed to use the same curricula, pacing guides, or assessments. One teacher said this was especially true for her as a novice teacher, because during “your first year, you want to make sure you are aligned with everyone else.” Panelists further noted that it is easier to rely on other teachers for support when teaching styles and priorities are similar. Another teacher shared that navigating “working with a grade-level team who didn’t agree with the value of [using more open-ended math questions] was really hard.” Similar to the small-group discussions on the five components of equitable and engaging teaching, the panelists’ remarks highlighted the tension between implementing innovative teaching practices and the practical consequences of misalignment with colleagues.

Teachers who teach in nontraditional ways may experience challenges with fostering a supportive home environment for learning.

When shifting their instructional practice to be more aligned with the district’s vision, the SCUSD teacher panelists also experienced challenges with how to best support students at home. In some cases, parents struggled to understand the way their students’ math teacher is teaching the content. One panelist recalled a student telling her, “My dad said you’re teaching wrong.” In other cases, panelists described parents asking them for resources they can use alongside their child to support them. Most times, however, the panelists felt limited in the resources they had to share. One panelist noted, “When a parent calls me and says, ‘I don’t know how to help my kid at home. He’s crying [because he does not understand the homework],’ I have nothing to give him. I tried creating my own resources at the beginning of the year but I was told to stop to prevent [my own] burnout.”

Teacher panelists acknowledged that there are some promising tools to support students and their families. For example, one panelist shared that a feature she appreciates is that the computer-based visualization activities are available to students in multiple languages, which could help a parent who does not speak English. Another panelist reported that

Algebra I and Geometry courses have a family version of the same packets of take-home problems students receive, which in her view is “not amazing but at least there were more resources for [those] class[es].” Still, panelists would like to see those same supports provided for more courses, with accessibility in mind.

Teacher collaboration can facilitate improvement but requires reflection and sharing.

Working alongside and collaborating with other teachers can help reduce the burden of what SCUSD teachers describe as a difficult transition in math instruction. However, for collaboration to be truly effective, it must be supported by structures that foster genuine teamwork and sharing. The SCUSD teacher panelists were all part of professional learning communities (PLCs) in their schools but felt strongly that these teacher teams lack the essential characteristics that make collaboration effective. For example, observations from the teacher panelists reflected a belief that they did not have sufficient agency to use the PLC structure to address the issues that were most relevant to them. One panelist explained, “There’s a lot of lip service on PLCs, but I don’t think it’s all that strong. Admin historically told us what our teams have to be, and what we had to collaborate on. I need collaboration on a different level. Being forced into a PLC is really a disservice.” Another panelist agreed: “I’ve been at a school district that had effective PLCs, and this isn’t it.” Complicating teamwork further, the panelists described a strong culture against sharing performance data with peers. Because evidence of student learning can play such a powerful role in diagnosing student needs and grounding conversations about lesson planning and intervention, the absence of these discussions poses an additional barrier to meaningful collaboration. These challenges highlight the need for authentic and supportive opportunities to foster effective collaboration and instructional improvement, particularly in incorporating more student-centered practices in math classes.

Problems of Practice Focused on Educator Mindsets

Following the teacher panel, meeting participants engaged in a pair of consultancies designed to address problems of practice related to addressing teachers’ beliefs on what math instruction should look like and what their students are capable of.

These problems of practice emerged in the context of two districts represented during the meeting but likely reflect challenges emerging in districts across the state. In one district that is making efforts to incorporate more student talk and inquiry-based learning in math classes, instructional coaches have encountered resistance from some educators who are uncomfortable relinquishing control and fear exposing their own gaps in content knowledge. This resistance could be indicative of a broader challenge faced by many districts nationwide in transitioning from traditional teacher-centered instruction to new student-centered approaches. District leaders acknowledge that most of their teachers are likely products of California’s education system. Given the state’s historic performance in mathematics, these teachers understandably could lack the deep content knowledge required for student-driven classrooms. Meanwhile, a leader from a different district believed that their district has a robust technical support system for teachers (e.g., observations and opportunities for feedback, regular pay raises, strong union relations) but they are not seeing the results they would expect to see because of a prevalent belief that

not all students are capable of high math performance. Because of a historic divide along race and class lines in the district, the presenting district leader perceived that some teachers do not believe that students from disadvantaged backgrounds are capable of excelling in mathematics.

The two districts received feedback from meeting participants about how to address their challenges related to educators' mindsets. Importantly, Collaborative members emphasized that shifts in mindsets are not the sole responsibility of teachers. Site and district leaders also need to adopt beliefs and practices supportive of the changes the district wants to see in their classrooms. The consultancy groups also challenged the presenting districts to question whether they fully understood the cause of their problems and thus hearing directly from teachers could help them better understand the root cause. For example, although district leaders may feel they have supports in place for teachers, perhaps teachers are not using them with fidelity, teachers do not perceive them to be effective, or teachers may feel there is not a safe enough environment to honestly share their struggles. Finally, the groups acknowledged that "the feel of overwhelm in schools is palpable," especially around state assessments. In an environment in which teachers feel intense pressure to produce improved student outcomes, it can be very difficult to take the risk inherent in trying new instructional practices. Addressing these issues requires a comprehensive approach that includes understanding teacher perspectives, fostering a supportive environment, and ensuring that all stakeholders are committed to the desired changes.

Differentiation to Support Students' Needs

Because SCUSD's has transitioned to a model of heterogeneous classes in Math 6, Math 7, and Geometry, classrooms now feature wider ranges in students' skill levels than in the previous approach of placing students according to their skill level. Although this represents a deliberate move for the district to expand opportunity and access for all students, it can also be difficult for teachers to effectively differentiate instruction or support students who have not yet mastered course content. In a context in which SCUSD is aiming for its math classes to feature both more rigorous content and higher cognitive demand that address diverse learning needs, Collaborative members explored the challenges and promising practices associated with effectively supporting students who do not meet grade-level mathematics standards.

Student Perspectives on Mathematics Teaching and Learning

Hearing directly from students on what supports they find effective or missing is critical to designing and adapting a more productive learning experience. To ground our conversation, participants again broke into small groups to speak directly with middle and high school students from SCUSD about what they enjoy, want, and need from their math education.

Students recognize teachers' challenges in managing diverse skill levels.

Most students acknowledged the difficulty for their teachers to work in a classroom in which students have a wide variety of skill levels. Students reported that their classrooms

typically featured the same small group of students who knew the content well taking up the majority of talking space in their classrooms, while others remain silent and ask to “pass” when called on. One student suggested that the quiet ones could be shy, but it was more likely that they did not want to reveal how far behind they were in understanding the content. Students also reported that the teachers’ attempts to work one-on-one with struggling students has limited effectiveness in a classroom of 20 or more students. For example, when asked what their teachers do when it becomes clear one student is further behind than they should be, a student responded, “Well, there are a lot of us. She can’t teach everyone individually, but she tries. But sometimes it’s really difficult to teach [individual students] in the middle of everything. And sometimes they’ll get one problem but not the one right after that.”

Students want more opportunities to collaborate with peers.

When asked what they would like to see in their math classes, SCUSD students reported having some positive experiences collaborating with their peers. One student shared a recommendation for what this might entail: “Start more group collaborations, because no one is learning individually. How cool would it be if two groups came together and each group quizzed the other? And make it a competition and have candy.” Two other students in the same small group agreed they would be engaged in an activity like that. In fact, several students described experiences in which they did not like a particular subject inherently, but their teacher’s ability to involve students in their own learning made the course enjoyable. When a student was asked what they wished was different about math class, a different student shared, “I wish for it to be more engaging. My teacher used to do a lot of activities incorporating the problems and I felt students did better when it was like that.” One student who had mixed opinions about working with peers said it was important for teachers to give the option for students to work alone when the circumstance or the student’s own preferences called for it.

Teacher guidance is essential for maximizing learning tools.

SCUSD students reported that they appreciated an online learning platform called Desmos that the district uses because it helps them visualize mathematical concepts, but they expressed a desire for more examples and deeper conceptual explanations from their teachers. In classes in which traditional paper packets are used, one student reported feeling bored in class because the packets “switch subjects too much and make it confusing. You go from page 5 to 15 randomly.” Another student summarized the importance of strong teachers like this: “I’d like more explanations on why things work. I feel like when teaching math, it’s not about the curriculum, it’s about the teachers themselves. I’d want them to explain all the theorems and why they work instead of telling us that they do work and have us do practice problems.” For students to learn effectively from the materials available to them, they need the guidance and expertise of their teachers.

Supporting Students in Heterogeneous Classrooms

As SCUSD grapples with both intended and unintended consequences of the change, Collaborative members engaged in small-group conversation about the role of the district

in providing students with the academic interventions they need and teachers with the necessary supports to serve a diverse range of learners.

One goal of the pathways redesign was to have more diverse skill levels in SCUSD math classrooms, particularly in sixth, seventh, and ninth grades. But as a result, some teachers do not feel they have adequate support for differentiating instruction or supporting struggling students. In prior years, the district required failing students to take an extra math support class as an elective. SCUSD discontinued this approach because it did not produce changes in student performance and because students considered the additional course punitive rather than helpful. District leaders shared that they want to develop a robust Multi-Tiered System of Supports (MTSS) that provides additional help to students and improves student learning without limiting access to elective courses or reverting to homogenous classrooms.

Multiple participants argued that any viable approach for supporting struggling students must begin with a strong foundation of high-quality Tier 1 instruction; without it, intervention alone cannot close learning gaps. Participants argued that key features of this Tier 1 model should include effective formative assessment practices and collaborative PLCs in which teachers feel safe to share data, discuss challenges, and operate with an “our students” mindset rather than a siloed approach. They further emphasized the importance of site administrators modeling data use for improvement, not evaluation, and fostering a culture that encourages and normalizes asking for help—for students and teachers alike.

Several challenges to “best, first instruction” stand in the way of providing these supports fairly and systemically. Many educators still operate within outdated paradigms that see intervention as remedial and disconnected from rigorous grade-level learning. Even when districts have established a stronger foundation for Tier 1 instruction, important obstacles remain when providing targeted and intensive supports through Tiers 2 and 3. Terminology misunderstandings (i.e., that intervention only means low-level remediation and not actually teaching to standards) can lead to inconsistent implementation. A lack of shared ownership—for example, Tier 1 teachers view struggling students as someone else’s responsibility—hinders progress. Cultural resistance to data sharing and fear of being judged also prevent productive collaboration. Finally, systemic efforts like MTSS often fail when simply layered on top of old systems without intentional shifts in beliefs, roles, and instructional practices, making meaningful, sustained change difficult without focused capacity building at every level.

Pursuing Quality and Coherence in Materials Adoption

A critical element to supporting classrooms systemwide is having materials that are aligned with the district’s instructional vision. Along with adopting the new math framework, California is also in the process of approving new math curricula that align with the principles of the framework; the State Board of Education (SBE) will formally approve a list of recommended mathematics instructional materials in November 2025. Many California school districts will use the list of approved curricula to guide decisions about math curriculum adoption for their district. Unfortunately, meeting participants

described the typical processes districts use to adopt materials as insufficient to ensure alignment with a broader instructional vision. Meeting participants discussed the roles the state, the district, and publishers have historically played in California and how districts might approach this upcoming adoption cycle in ways that support systemwide coherence.

The Role of the State in Materials Adoption

When districts undergo the process of adopting new instructional materials, the California Department of Education (CDE) offers several supports. In addition to developing instructional frameworks, the SBE will provide a list of approved materials that districts can (but do not have to) choose from. To determine which materials are approved, trained reviewers will rate materials across five categories to determine their quality: alignment to the standards, program organization, assessment, access and equity, and instructional planning and support.⁹ In 2024, the CDE also created a document for local education agencies offering guidance on how they can approach adoption.¹⁰

After the SBE releases the list of approved materials in mathematics, meeting participants emphasized the importance of district leaders making decisions about instructional materials that are well-suited for their district and not simply assuming that all materials from the list are a good match for what the district is trying to accomplish. As one state leader put it, “districts shouldn’t just put up a dartboard and pick” but instead use the guidance and resources from the state and county offices of education to make informed decision on which curricula would be aligned to their unique district context, needs, and goals.

In a context where California does not require districts to select materials from the approved list, there were varying perspectives about the degree to which prescriptiveness from the state is valuable. Other states with a heavily prescriptive model offer their districts limited materials options, but doing so enables tighter quality control and can also foster shared language about curriculum. Fewer options also means that the state can develop deeper expertise in the options they have. Consistency in instructional materials across the state can also enable the state to design ongoing implementation supports—an option that becomes impractical in states that feature wide variation in the materials used in classrooms. But, allowing districts more freedom (as California does) means districts can adopt materials in alignment with their unique contexts. This approach demands more preparation and expertise from the district to make an informed decision. Additionally, this approach means that the state is less equipped to provide support to districts if each one is using different materials. While California historically used to offer districts very limited materials options, the current approach is more consistent with principles of local control.

The Role of the District in Materials Adoption

Meeting participants also discussed some of the challenges built into the materials adoption process. One common misstep is the lack of clear communication to educators about expectations for when and how they will be involved in decision making and what

⁹ <https://calcurriculum.org/news/an-overview-of-the-2025-california-math-review-criteria-map/>

¹⁰ <https://www.cde.ca.gov/ci/cr/cf/glima.asp>

the adoption process will entail. Then, when decisions are made, educators might not believe their perspectives were heard or valued. The result can be teachers who are slow to embrace new materials and the classroom practices that bring them to life. Another common approach is to run a small pilot program, where a select number of teachers try using a strong contender for next year's curriculum and give a recommendation about whether to adopt it. This approach can have the benefit of giving educators hands-on experience with materials. However, its small scope can fail to represent whether the materials are well-suited for all student populations. Third, some districts allow educators to vote on their choice of materials, which in theory helps a district select materials that are best suited for use by its teachers. However, voting alone does not ensure that those materials align with a school's or district's broader vision of instruction.

To better achieve close alignment between instructional materials and a district's vision for teaching and learning, several meeting participants recommended that districts begin by incorporating a "Year Zero" into their adoption process. This period of time, which would take place before the traditional adoption timeline begins, offers an opportunity for districts to clearly articulate their aspirations for mathematics instruction and the kinds of criteria that would capture the connection between those goals and what a set of instructional materials has to offer. Year Zero would also give district leaders time to design a sequence to review, test, and select the materials in a way that incorporates a range of perspectives and ensures that any candidate materials are standards aligned, well-suited to support desired instructional practices, and meet the needs of a district's student population.

Participants further emphasized that leveraging high-quality materials in service of improved student learning is an ongoing process. Although the process of adopting has a definitive end-date, a focus on high-quality instructional materials needs to encompass materials *use* just as much as formal *adoption*. Typically, districts—often with the support of the publisher—offer trainings on how to use newly adopted materials during the first year of its use but not in subsequent years. Instead, meeting participants asserted that ongoing professional development needs to incorporate the materials that teachers are using so that pedagogical practices and content are mutually reinforcing.

Participants acknowledged that closely connected to a commitment to ongoing implementation support are the limitations and challenges associated with any instructional materials. As one participant reflected, "Materials will always be the materials. It's not going to be perfect." Even when a district has adopted high-quality instructional materials that leaders in curriculum and instruction believe are a good fit for its classroom goals, those materials will have limited value if teachers do not use them. Districts need to have systems for identifying when teachers believe the district-adopted materials are not suitable for all students after adoption has occurred. It is important to identify those experiences so the district can respond appropriately through supports and additional resources. These challenges also provide an opportunity for districts to work with teachers and highlight their professional expertise to promote using existing materials more effectively or identifying common supplemental resources that are better suited to the students. Without a mechanism for capturing teachers' experiences with the materials,

districts may see wide variation in materials use, and teachers may be overburdened by having to create (usually unvetted) curricular solutions themselves.

The Role of District–Publisher Relationships

The commercial aspects of materials adoption may be one reason why it can be challenging for districts to unify the adoption process with a broader sense of coherence. Publishing companies are eager to get districts to sign multiyear contracts to secure their materials in classrooms. Publishers will sometimes “court” districts by showing them new bells and whistles, but with much less emphasis on ways in which those materials promote a particular approach to teaching and learning. Furthermore, as soon as the contract is signed, publishers have no incentive to ensure that their product satisfies the district’s needs, so they often do not return until the following adoption cycle (usually several years later). This setup reinforces adoption as a one-time process, so even the publishers are not committed to ensuring that pedagogy and materials are continually seen as a unified, ongoing process.

Frustrated with the typical experience, a former administrator from a large California district shared that their district had begun signing only 1-year contracts with their curricula publishers. The 1-year contract is intended to “flip the script” between district and publisher so that publishers are incentivized to follow up with the district, learn about what challenges teachers experienced while implementing it, and revise materials in time for the following school year. While Collaborative members recognized that only a small number of districts have the kind of political or institutional power that they can leverage for change with a large and influential publishing industry, participants noted that district leaders may need to get creative about ways to make the materials adoption process better aligned with a broader instructional vision that supports all student learning.

Next Steps for the Collaborative

The Collaborative will meet next in fall 2025. Resources from this meeting, as well as resources from previous meetings and updates regarding Collaborative members, are available at www.cacollaborative.org.