WestEd

Designing Curriculum-Based Professional Learning

Decision Considerations for District Leaders



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Executive Summary

Curriculum-based professional learning (CBPL) is widely viewed as a critical support for successful implementation of high-quality instructional materials. Drawing on information from 10 middle-grades mathematics districts, this report examines how district leaders design CBPL systems and navigate key implementation decisions.

The districts made markedly different choices about professional learning (PL) time, coaching, leadership involvement, centralized versus local decision-making, implementation monitoring, and long-term planning. No single model emerged as best. Instead, successful systems appeared to align CBPL structures with local goals, resources, and stages of implementation.

Across districts, recurring and job-embedded learning opportunities such as professional learning communities (PLCs), collaborative planning, coaching, and learning walks were the most common supports. Coaching was nearly universal, although districts differed in whether support was provided to all teachers or targeted to priority schools and educators. Leaders who participated directly in PL, coaching, and classroom observations described stronger opportunities to build a shared instructional vision.

Districts also varied in how tightly they coordinated PL. Some emphasized consistent curriculum-focused messages across all supports, whereas others allowed greater site-level flexibility. Walk-throughs and implementation data were most effective when used to inform coaching, feedback, and future learning priorities rather than simply to monitor activity. Many districts also recognized that CBPL must evolve as educators' familiarity with the curriculum grows.

The findings suggest that district leaders should focus on building coherent systems rather than trying to meet specific marks with respect to CBPL format. Considerations include how to

- protect recurring curriculum-focused learning time,
- clarify coaching priorities,
- engage leaders as active participants in implementation,
- define nonnegotiable instructional expectations,
- use implementation data to guide improvement, and
- develop long-term plans that adapt CBPL supports as expertise deepens.

Introduction



Curriculum-based professional learning (CBPL) is theorized as a critical element of effective curriculum implementation, which in turn has been theorized as one pathway toward improved instructional practice and student outcomes (Lynch et al., 2025). Even stopping short of student outcomes, there are many decision points in this causal chain that can introduce significant variation—or completely broken links—into the processes of teaching and learning. If CBPL is a starting place for successful implementation of high-quality instructional materials (HQIM), what decisions can and should district leaders make that best position their staff and students for success?

WestEd took up this question of how districts are navigating decisions about CBPL as part of our study of the implementation and impact of HQIM in middle grade mathematics (see Perry et al., 2026). We wanted to understand decisions leaders make about how much time to devote to CBPL, who receives coaching, how leaders participate, what content is required, how implementation is monitored, and how support changes over time. To answer our questions, we collected information about CBPL systems in 10 districts that participated in our larger HQIM mathematics study. (For more information about the study, see WestEd's Illustrative Mathematics Efficacy Study website.)

Methods and Sample

Ten districts completed a questionnaire (Appendix 1) to describe their CBPL activities during the 2025–26 school year. The questionnaire allowed us to document self-reported design choices across districts and compare how leaders approached common implementation challenges. The districts used a range of mathematics curricula—including Illustrative Mathematics (IM), Amplify Desmos, Carnegie Learning, i-Ready, Mathspace, and Savvas—and were at different stages of implementation (Appendices 2a and 2b).

Key Decision Points for District Leaders Who Are Designing CBPL

The questionnaires revealed a number of design tensions that emerged across districts and that reflect practical decisions leaders make when designing CBPL systems. We organized this report around these six decision points.

How Much Dedicated CBPL Time Is Needed, and How Should That Time Be Organized?

There is not yet much empirical research about how much time districts should devote to CBPL. However, research shows that 30–60 hours of professional learning (PL)—including PL that has not necessarily been designated as CBPL—can have an impact on student outcomes, with larger effects on student outcomes for PL programs that exceed 80 hours (Darling-Hammond et al., 2017; You et al., 2025). Research also tells us that more time is not automatically better if the PL does not meet certain features of effectiveness, such as being sustained and well embedded in teachers' daily work (Darling-Hammond et al., 2017) and focused on content (Hill & Papay, 2022). "Enough" time for PL, how that time is organized, and whether it is protected and recurring are all critical regarding how educators might leverage their CBPL to guide their curriculum use and mathematics instruction.

What the Districts Show

The districts in our sample illustrate how leaders make practical decisions about time allocation, often within constraints that make research-based benchmarks difficult to achieve. These districts designated a broad range of hours for math CBPL, with estimates from as little as about 6 hours per year of formal math-specific CBPL in Smythe to well over 30 hours in Marshall. Marshall's hours combine stipend-paid optional summer sessions, districtwide PL days, and substantial classroom-observation time by teachers and leaders. Bridgeton guarantees 17.5 contractual hours and an additional optional 24-hour paid summer institute, guaranteeing a floor of CBPL time for all staff while also offering more if desired. (Appendix 2a provides information about three different formats and structures for

CBPL reported by district leaders. Information about audience, dosage, key activities, and facilitators for the PL within each of these structures is presented, with limitations shown as "n/a" if the district contact did not provide information.)

Across districts, the most common support structure is collaborative time so teachers can learn from and with each other about how to implement their curriculum. These included professional learning communities (PLCs), "cluster" meetings, or common planning time. Firesweep requires weekly cluster meetings that total roughly 4 to 6 hours monthly, and Smythe provides approximately 2.25 hours monthly for PLCs. Some districts like Firesweep and Bentwood assign facilitators—math master teachers in Firesweep and site-based associates in Bentwood—to help structure collaborative learning.

Districts differed not only in how many hours they allotted for CBPL but also in the consistency of participation. Kingsford reported that weekly building-level PLCs felt more meaningful than once-monthly district conversations did. Bridgeton's districtwide collaboration sessions were optional by site, and 3 of 11 schools did not participate.

District leaders who reported feeling that the time they were able to allocate for CBPL made them more effective, such as Gatesman and Bridgeton, combined a defined annual block with recurring weekly or monthly touchpoints rather than relying on either approach alone.

Guiding Questions for Your Context

- What is the minimum number of CBPL hours we can provide for our educators in a given year?
- Is our CBPL time for mathematics protected and recurring, or does it compete with other PL priorities?
- Are we counting embedded time (PLCs, common planning) as real CBPL time, or are we counting only more formal sessions—and do teachers experience their collaborative time as CBPL?

How Should Coaching Be Allocated and Activated?

Coaching can be an effective PL structure (Kraft et al., 2018), but districts can struggle with the human and fiscal resources needed to implement coaching successfully. Universal coaching spreads resources thinly, and targeted coaching can concentrate impact but leave some educators unsupported. Moreover, voluntary coaching comes with the risk that the teachers who might benefit most from coaching will opt out and receive no coaching at all.

What the Districts Show

Nearly every district paired collaborative time with individualized coaching, but districts differed in who received coaching, how intensive it was, and whether participation was voluntary. Gatesman guarantees every school an instructional coach and pairs new teachers with a coach immediately, and experienced teachers cycle through coaching roughly once every other month. Teachers can reach out to an administrator, an instructional coach, or a district teacher on special assignment for additional tailored support, although teacher uptake depends on how comfortable teachers feel with others. Bentwood and Louiston both contract with external providers for coaching support. Bentwood provides a two-tiered model of some coaching for all and more coaching for teachers in the district's "priority schools." Firesweep relies heavily on cluster meetings and, as a result, concentrates its efforts on coaching priority teachers. The district's coaches use a data-based system (Bullseye) to help structure classroom walk-throughs for teachers who are being coached, and they use data to prioritize support and guide feedback.

Other districts reported candidly that differentiated CBPL support for teachers is still aspirational. Smythe acknowledges that there is not "enough time to do this as well as we need," and Louiston hopes to build additional differentiated supports in the future. In addition, coaching can strengthen teaching and learning only when teachers take advantage of it, and several districts are candid about uneven uptake. Fewer than half of Smythe's grades 6–8 math teachers opt into coaching, and Louiston reports that access to coaching is more consistent for general education teachers than for special education teachers. Blanchard has coaches for general instructional and math specialists to deploy for support, but the district lacks clear rules about which teachers receive these different coaching supports.

Several districts that embedded coaching within broader implementation expectations (such as Kingsford's expectation that teachers complete a full lesson-internalization[1] cycle with coaches) described relatively consistent participation. Kingsford's structure allows teachers to receive coaching that is focused specifically on preparing them to use their curriculum well for an exemplar classroom lesson. This type of coaching co-planning activity was mentioned frequently in other districts as key to helping prepare teachers for curriculum implementation.

[1] The blog post titled "The Key to Effective Teaching Through Internalization" (Wolfe, 2024) provides more information about lesson internalization in teaching.

Guiding Questions for Your Context

- If coaching is voluntary, do we know who is opting out and why?
- Do we have the capacity to coach everyone well, or would a tiered model serve more teachers effectively?
- What data are we using (if any) to decide who gets more intensive support?

What Role Should District Leaders Play in CBPL?

DeWitt & Nelson (2026) argue that three predictable struggles thwart leadership teams generally: a lack of shared understanding of priorities; collaborative work that is not focused on examining problems of practice, challenging assumptions, and learning together; and an inability to identify meaningful evidence of progress or collect data that have a true purpose. District leadership is probably one of the most important mechanisms for communicating a vision about HQIM instruction across roles. But it is no small matter to provide CBPL for district administrators, principals, and assistant principals who serve as instructional leaders in support of that vision. It involves having people in key instructional leadership roles in the first place and extending or adding to the knowledge and skills of busy people who may also be juggling other change efforts. How much and how should leaders be involved in CBPL to support successful HQIM implementation across the district?

What the Districts Show

Leadership capacity for implementation support is not evenly distributed across the districts, and several districts describe real gaps. Although Marshall's single grades 6–8 math coordinator seat was vacant, they can still rely on master teachers to fill the role of on-the-ground support at the district's middle schools. Bentwood was also navigating a coordinator's resignation.

As these examples show, districts enter CBPL work with different levels of leadership capacity, yet leaders consistently described direct participation in CBPL as important to sustaining implementation. Across districts, the data show that leader CBPL varies both in the amount of time allotted for it and in the ways the learning opportunities are structured. We heard primarily about three ways districts engage district leaders in CBPL:

- providing direct training for building leaders' curriculum knowledge
- preparing leaders to support teacher learning
- preparing leaders to conduct learning walks in order to monitor implementation

Direct training for district leaders—by external providers or internal staff knowledgeable about mathematics and the curriculum—was widely mentioned as the foundational CBPL support for leaders. Bentwood has site and district leaders attend two 3-hour summer institute sessions with their teachers, although each session had a limited number of spots for district leaders. Blanchard builds on a fairly short initial 3-hour summer training by adding additional vendor training for train-the-trainer sessions that help coaches build their CBPL facilitation capacity. Gatesman's leaders have 2 more CBPL days than teachers do, demonstrating the district's priorities for cross-role collaborative learning and providing leaders with more exposure to the content they are expected to support.

Leaders gain a second type of CBPL as they facilitate teacher learning in districtwide PL, as part of PLCs, with coaching, or in other formats. For example, Bridgeton's math curriculum lead personally leads and coordinates most PL, working with a small cohort of teacher-leaders to cofacilitate sessions. In Gatesman and Bentwood, district leaders serve as coaches, and both districts organize monthly working groups to support this site-based coaching.

Leaders gain a third type of CBPL as they engage in learning walks or other efforts to monitor or assess how well the curriculum is taken up in classrooms. All districts mentioned some kind of learning walk or monitoring system for a curriculum—with varying levels of frequency and staff engagement—but Firesweep's rationale was notable. The leader in that district described how all district leaders, including the district superintendent, personally conduct learning walks. She noted that all leaders are regularly "walking the walk" because "everyone has to be in classrooms to be able to make sound decisions."

In the districts that had the most stable leadership, respondents described a specific cadence of leaders' direct involvement in CBPL, such as Firesweep's weekly learning walks or Gatesman's monthly education services meetings among district coaches. With these districts, leadership involvement did not happen occasionally or informally.

Guiding Questions for Your Context

- How are district leaders engaging in CBPL similarly to and differently than how teachers engage with it?
- How will we know whether leaders engaged in CBPL have developed a shared understanding of the priorities for math instruction and curriculum use so they can communicate clearly with others?

- What evidence tells us that our leadership actions related to CBPL are helping us make progress and have an impact on student and adult learning within our schools?
- How do teachers experience the leadership from site- and district-based staff who have received CBPL?

Centralize the Content or Let Sites/Teachers Choose?

Leadership-driven and teacher-driven approaches to change both have strengths and weaknesses when it comes to implementing programs effectively (Sabatier, 1986), and the same may be true for CBPL. Centralized CBPL can set clear rules and expectations for many educators across a district. But in loosely coupled organizations (Weick, 1976), centralized messages or expectations can get reshaped as they move down the chain of command (Spillane, 2000; Spillane et al., 2002) and as individuals in different schools or classrooms make their own adaptations (Scott, 1998). This may result in few changes in teachers' practice (Fusarelli, 2002). On the other hand, site or teacher choice about CBPL can increase buy-in and relevance but can dilute a curriculum-specific focus and shared understandings about what mathematics is supposed to look like for all students. What is nonnegotiable is a shared vision for math instruction that district leaders need to communicate clearly. But what is the best way to organize CBPL to achieve that?

What the Districts Show

Districts made different choices about how much PL content was determined centrally versus locally, and differences in terms of total time and delivery structures matter for what and how district staff are learning simultaneously about how best to use their curriculum. Some districts concentrate hours in a single summer institute (e.g., Blanchard's 3-hour session to Bridgeton's 24-hour optional institute). Others spread time across recurring districtwide PL days (e.g., Marshall's four 3-hour days, Bridgeton's monthly 90-minute sessions). Some districts (e.g., Marshall) provide stipends to increase the likelihood of educators' attendance for centralized learning sessions. Other districts (e.g., Louiston, Smythe) honestly report that math-specific CBPL is not clearly earmarked within a broader contractual PL total, making it difficult to pin down what CBPL offerings are being provided and for whom.

Firesweep provides one example of a more centralized system that implements an array of CBPL supports. Districtwide learning (consisting of an 8-hour summer institute in July and

another half-day learning opportunity in January) communicates expectations for curriculum use, and weekly cluster meetings, coaching, observations, and learning walks reinforce the same message. During weekly cluster meetings, teachers have structured time to collaboratively annotate lessons, share student work, and receive feedback from master teachers and administrators about curriculum implementation. Cluster meetings may result in further instructional assignments for teachers, and how these assignments are implemented becomes the focus of master teachers' observations and data gathering during learning walks. This information is provided as feedback to teachers and may also be reviewed by district administrators. The message across these CBPL opportunities is to stick to the curriculum in order to be able to make sense of what is working and what is not and avoid "curricular chaos" that might affect a students' math learning experiences if teachers do not follow the curriculum.

Gatesman offers a middle path with respect to centralized messaging and site or teacher adaptation. The district builds one districtwide "skeleton" PL session that every teacher needs and then layers in site-specific content identified by site leadership teams. Requests for additional learning opportunities are evaluated against district priorities.

At the other end of the continuum, Smythe offers teacher-selected PL options. Leaders acknowledged that this flexibility sometimes creates tension between curriculum-focused learning and other PL interests.

Guiding Questions for Your Context

- When teachers have choice, are we still getting curriculum-specific depth, or does choice dilute it?
- Do we have a stated principle for deciding what is nonnegotiable districtwide versus PL left to site adaptation?
- What CBPL content should be repeated centrally year after year to support new and continuing educators alike?

How Should Districts Use Walk-Throughs and Other Implementation Data?

Research on measuring improvement in schools points to the need for both process measures (whether the intervention is happening) and quality measures (how well it is happening) (Bryk et al., 2015; Takahashi et al., 2020). This is also true of CBPL, which is an

especially resource-heavy intervention for any district. Understanding the return on investment of CBPL requires the further investment of time and an array of decisions about what data to gather and how best to establish routines for gathering, reviewing, and acting on these data—because data are "only as good as how they are used" (Coburn & Turner, 2011, p. 173).

What the Districts Show

Although districts referenced several sources of implementation data, classroom walk-throughs emerged as the most common mechanism for translating CBPL goals into observable evidence of practice. One distinction across districts seemed to be that in some districts, walk-throughs were operationalized as part of a data-generating, action-triggering system, whereas in others, walk-throughs were more a way for leaders to remain visible in schools. Making a choice about the purpose of a walk-through is a concrete decision leaders can make regardless of their district's size or implementation stage. In our sample, the formality, ownership, and frequency of these systems varied widely.

For example, some districts have a named practice ("learning walks" in Firesweep and Bentwood) and clear signals about who is doing learning walks and how the data are used to support teacher feedback or coaching. Firesweep master teachers take primary responsibility for learning walks and teacher feedback, but others, including the superintendent, regularly join learning walks as a way of building common understanding and shared vision. Bentwood's system is similar to Firesweep's, with school-based associates collecting data with a common learning walk tool at least once a week; they are joined occasionally by the district coordinator or assistant superintendent. Piper has a shared "look-for" tool that aggregates data districtwide from classroom observations so leaders can see, teacher by teacher, how instruction is progressing and what action steps have been assigned. This approach pairs a common data source with individual accountability. Gatesman holds walk-throughs about twice a month, with a combination of district-level and site-level staff visiting their own or other sites' classrooms. After these visits, site teams participate in "fidelity informed assessment" meetings to review implementation data. In addition, the district runs biannual "core days" to compare districtwide data and share best practices across sites.

Other districts are still building these systems. Blanchard's interview did not reference any measurement related to curriculum use or CBPL. Smythe reported that site and district leaders do classroom walk-throughs about 1 hour every month, and they make an effort to review student data during common planning time. But they are still developing their system

for using data for continuous improvement even well into their HQIM implementation. Louiston, in their 1st year of implementation, described the walk-through system as an area still being refined.

Guiding Questions for Your Context

- How frequently are individuals in different role groups reviewing implementation data and using that information to adjust ongoing CBPL?
- When we say we are data-driven, can we point to a specific recent decision that data actually influenced?
- Do our data structures reach struggling teachers and students, or are they used primarily in the aggregate at the district level?

How Should Districts Plan for CBPL as Curriculum Familiarity Grows?

The PL needs of educators are likely to change as curriculum implementation matures. During adoption and early implementation, CBPL often focuses on curriculum orientation, lesson preparation, and the development of initial instructional routines. As familiarity grows, leaders may shift attention toward making decisions at a deeper instructional level, analyzing student work, refining adaptations, and sustaining implementation over time. This raises an important design question: How should districts adjust CBPL as educator expertise develops rather than repeating the same learning experiences year after year?

What the Districts Show

Most of these districts are in the early to middle stages of implementing a curriculum, and leaders describe CBPL as something that must be staged deliberately, not repeated identically year after year (a finding we described in an earlier report; Hannan et al., 2026). Louiston, in Year 1 of a Savvas rollout, frames this 1st year explicitly as a learning year whose lessons will reshape Year 2's design. Similarly, Blanchard frames its 1st year of CBPL explicitly as "cultural and structural adoption," shifting teachers from "deliverers of steps" to "facilitators of thinking" before later years that will focus more on deepening the work. Marshall is still in an early stage of its implementation and has a system for addressing immediate identified needs at the next scheduled districtwide PL day. Marshall's leader acknowledges that there is not yet an articulated plan for how CBPL will look different over time.

Firesweep, well into their implementation of IM, recently switched IM providers, so they are now using Imagine Learning. As a result, their CBPL shifted to supports that are more at the installation stage. This year they have been focusing on curriculum pacing, lessons, and common assessments, and the district lead builds in "step-outs" during training to pause and ask teachers to notice and reflect on specific curriculum features or routines that look different now that they have a new IM provider. They plan to bring in an outside "refresher" vendor trainer next year once teachers become more familiar with the current IM curriculum.

Gatesman was the only district that talked about long-term planning. They have a documented CBPL plan over 3–5 years that was cocreated and vetted by teachers, site leaders, board members, and the superintendent. Naming a specific multiyear plan appears to have positioned Gatesman leaders to be intentional in their CBPL design.

Guiding Questions for Your Context

- Do we have a plan for how support will change next year, or are we treating this year's model as permanent?
- Based on prior constraints, what is our best-case scenario CBPL design for the next 3 years, and what contingency plans should we put in place?
- In what areas are teachers receiving more individualized feedback on their curriculum implementation, and in what areas are they receiving training on more general best practices?

Conclusion: Designing a Coherent CBPL System

The 10 districts in this study approached CBPL in different ways. Each allocated different amounts of time for PL, organized coaching differently, varied the role leaders played and the amount of CBPL leaders received, made different choices about centralized versus localized learning, built different implementation-monitoring systems, and planned for implementation over different time horizons. Yet beneath these differences, a common question connected nearly every decision: How much consistency should we expect across classrooms, schools, and educators, and how much flexibility should we allow?

This question sits at the center of the tension between fidelity and adaptation. Some districts, such as Firesweep, leaned toward consistency by building PL, coaching, observation, and leadership systems around a common curriculum-first message. Other districts created more opportunities for teacher choice, site-based customization, or differentiated support. Neither approach emerged as universally preferable. Rather, the districts in this study illustrate different ways leaders balance coherence and flexibility within their local contexts.

For district leaders, one key takeaway is that **CBPL decisions are interconnected rather than independent**. Decisions about coaching affect what data leaders need. Decisions about data collection influence how leaders participate in implementation. Decisions about PL content shape the degree of consistency expected across schools. The districts that described the most coherent systems were often those in which these decisions reinforced one another around a shared instructional vision. For example, Firesweep's curriculum-first approach appeared not only in PL sessions but also in coaching priorities, leadership actions, collaborative structures, and implementation-monitoring routines.

A second takeaway is that **recurring routines may matter more than individual events**. Across districts, PL was rarely limited to workshops or summer institutes. Leaders consistently described PLCs, coaching cycles, collaborative planning time, learning walks, and leadership meetings as the mechanisms through which curriculum implementation was supported throughout the year. This PL was most often embedded in ongoing work rather than delivered as a stand-alone activity.

A third takeaway is that **CBPL stays most relevant when it remains connected to classroom practice**. Many districts anchored CBPL in lesson internalization, student-work analysis, classroom observations, coaching conversations, and collaborative planning. These structures allowed teachers and leaders to connect PL directly to curriculum use and instructional decision-making.

Finally, the districts in this study suggest that CBPL design is less about finding the "right" structure than about making deliberate choices and understanding the trade-offs those choices create. Every district operated with different resources, histories, staffing patterns, and implementation goals. Rather than being a checklist, CBPL appears to be a process of building a coherent system in which decisions about time, coaching, leadership, content, data, and long-term planning work together in support of a shared vision for mathematics teaching and learning.

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Appendix 1. Professional Learning Questionnaire

Documentation of District Curriculum-Based Professional Learning (CBPL) for Grades 6-8 Mathematics
[adapted from Alicea et al., 2025]

Overview: To contribute to the field's understanding of how districts implement professional learning to support high-quality instructional materials (HQIM) implementation, we want to learn about curriculum-based professional learning (CBPL) opportunities in your district and schools.

Curriculum-based professional learning (CBPL) is professional learning that supports the implementation and sustained use of a specific curriculum to ensure teachers' effective use of these materials in their classrooms. It aligns with the curriculum's content and instructional strategies, enabling teachers to provide instruction to students and facilitate learning with integrity to what was designed while adapting to the needs of their students.

Our intention is not judgment, but authentic inquiry and learning. We acknowledge that CBPL is dependent on so many factors, foremost of which are time and funding! Please follow the prompts below by checking boxes or filling in blanks (_____) throughout the document as prompted.

Facts about your district

This section asks for basic information about your grade 6-8 mathematics teachers and leaders and their CBPL.

1. How many Grade 6-8 mathematics teachers (FTE listed as class instructor of record) are in the district for the 2025-26 school year? _____
2. How many hours of professional learning per teacher is built into the union agreement? _____
3. Approximately how many of those hours are curriculum-based professional learning (CBPL) for mathematics? _____
4. What are the goals of your CBPL for the 2025-26 school year? _____
5. Which of the following professional learning structures are offered in your district **to help support math curriculum implementation**, and how much time is allocated, on average, for each group of learners (i-iii)?

Types of professional learning structures	Does your district offer this CBPL support? (Check the box if yes.)	i-Average monthly time for classroom teachers	ii-Average monthly time for site-based leaders (instructional coaches/ administrators)	iii-Average monthly time for district-based leaders (instructional coaches/ administrators)
(a) Summer institute	☐			
(b) Formal group professional development sessions (for example, an institute day or a staff meeting dedicated to professional learning). (Staff meetings should not include PLCs, asked about in (d) below.)	☐			

Types of professional learning structures	Does your district offer this CBPL support? (Check the box if yes.)	i-Average monthly time for classroom teachers	ii-Average monthly time for site-based leaders (instructional coaches/ administrators)	iii-Average monthly time for district-based leaders (instructional coaches/ administrators)
(c) Self-directed professional learning activities (e.g., online courses or book studies)	☐			
(d) Formalized professional learning communities (PLC) or lesson study (including collaborative lesson planning)	☐			
(e) Instructional or leadership coaching	☐			
(f) Centrally-organized (i.e., cross-district) work time or activities to develop or adapt curriculum (i.e., creating district pacing guides or researching/ adapting curriculum)	☐			
(g) Classroom observations and/ or walk-throughs (separate from coaching activities) to understand curriculum implementation	☐			
(h) Other activities that your district classifies as CBPL, but which may not be listed above. **Please specify here**: _____	☐			

6. We understand that PL as it is designed can vary substantially from PL as it really happens. To help us better understand the features of your district-provided CBPL for teachers (labeled in bold in each row below), select either "yes" or "no" on each row of the following table and describe its design and the reality of its implementation in columns i and ii.

	yes	no	i. Describe how your PL design includes this feature.	ii. Describe what *really happens* with regard to this feature (including variety across sites)
a. **Regular, sustained, and substantial?** Teachers have access to CBPL throughout the year that helps to sustain their learning about and engagement with HQIM implementation.	☐	☐		
b. **Individualized?** CBPL includes personalized, job-embedded support, responsive to teachers' individual instructional contexts and needs regarding how to use HQIM.	☐	☐		
c. **Equitable?** Middle school teachers have equitable opportunities for CBPL.	☐	☐		
d. **Coach-supported?** More than 50% of middle school math teachers in the district receive regular individual coaching support.	☐	☐		
e. **Aligned?** All CBPL is based on guiding principles, a vision statement, or a common framework.	☐	☐		
f. **Familiar?** CBPL is provided by facilitators familiar with the district and its unique assets and challenges.	☐	☐		

	yes	no	i. Describe how your PL design includes this feature.	ii. Describe what *really happens* with regard to this feature (including variety across sites)
g. **Expert?** CBPL is provided by facilitators with deep expertise in or knowledge about the HQIM.	☐	☐		
h. **Supportive of both near- and long-term improvement?** Teachers' CBPL addresses teachers' immediate and more contextual needs as well as implementation and reflection support to guide shifts in teachers' instructional practice.	☐	☐		
i. **Student-focused?** CBPL provides teachers with strategies for using the curriculum to meet varying student needs.	☐	☐		
j. **Grounded in student data?** CBPL focuses on students' understanding (e.g., understood from reviewing student work or progress data) and instructional next steps to address student needs.	☐	☐		
k. **Data-informed?** CBPL design draws on data about both immediate and long-term outcomes (e.g., impacts on teacher learning, coaching success, student experience and academic outcomes) to inform improvement of the CBPL.	☐	☐		

7. How would you rate CBPL and HQIM curriculum implementation for each school in your district?

List each school teaching grades 6, 7, or 8	**Teachers in this school consistently receive [more/ less/ the same amount of CBPL than] what is provided at the district level. Select one response for each school:** **1. "more CBPL than"** **2. "less CBPL than"** **3. "the same CBPL as"**	**Teachers in this school consistently use the math curriculum as their primary instructional resource.** **1. Strongly disagree** **2. Disagree** **3. Neutral** **4. Agree** **5. Strongly agree**	**Teachers in this school implement the math curriculum with minimal supplementation or omission of units and lessons.** **1. Strongly disagree** **2. Disagree** **3. Neutral** **4. Agree** **5. Strongly agree**
	[drop-down response menu]	[drop-down response menu]	[drop-down response menu]
	[drop-down response menu]	[drop-down response menu]	[drop-down response menu]
	[drop-down response menu]	[drop-down response menu]	[drop-down response menu]
	[drop-down response menu]	[drop-down response menu]	[drop-down response menu]

Appendix 2a. Self-Report CBPL Formats and Structures: 10-District Comparison (2025–26 School Year)

District, curriculum, school year of adoption	Site-based collaborative learning	Instructional coaching	Centralized, ongoing PL
Bentwood, Carnegie Learning, 2021–22	Common Planning Time (CPT) **Audience:** all content teachers **Dosage:** five times per week for 45 min each time **Key activities/topics:** lesson internalization, accommodations and linguistic support, discussions of state test data **Facilitated by:** site-based associates with running agendas for continuity	**Audience:** content teachers **Dosage:** 25 coaching days for entire district, resulting in ~2 hours for teachers identified by district leadership, with more coaching provided for teachers in priority schools; priority teachers also receive additional coaching using state funds, but the frequency or duration of coaching was not provided **Key activities/topics:** individually targeted based on teacher needs, to support improvement **Facilitated by:** external provider, District Math Coordinator	**Audience:** all teachers, limited spots for site and district leaders **Dosage:** two 3-hour summer institute sessions plus 4 half days (including 2 hours of independent work and 4 hours of school-based, teacher-led PD)

District, curriculum, school year of adoption	Site-based collaborative learning	Instructional coaching	Centralized, ongoing PL
Blanchard, MathSpace, 2025–26	PLCs **Audience:** classroom teachers and district leaders **Dosage:** n/a—"Formal trainings occurred while ongoing support was not as consistent." **Key activities/topics:** classroom implementation, especially task-selection depth and discourse **Facilitated by:** instructional coaches	**Audience:** all teachers have coaching through PLCs, but not all received coaching cycles beyond the PLC **Dosage:** n/a **Key activities/topics:** n/a **Facilitated by:** math specialists and instructional coaches	**Audience:** middle school math teachers **Dosage:** 3-hour group PL session, with two vendor-provided follow-up sessions (duration not provided)
Bridgeton, Illustrative Mathematics, 2018–19	PLCs **Audience:** teachers and site-based coaches **Dosage:** ~3 hours per month **Key activities/topics:** reviewing student work against rubrics to inform instruction, scaffolding for rigor, using culturally responsive teaching practices, instructional planning for academic language criteria and content knowledge, facilitating student discourse, assessing student learning **Facilitated by:** coaches	**Audience:** 8 of 11 middle schools have a site-based math coach (0.4–1.0 FTE); approximately 75% of teachers are at schools with coaching support **Dosage:** intensity and frequency of coaching varies **Key activities/topics:** data-informed (including evidence of student work) lesson design on topics similar to PLCs **Facilitated by:** site-based math coach, who themselves learn through a coaching collaborative and 1:1 monthly meetings with district math coordinator	**Audience:** middle school math teachers whose schools choose to opt in (3 of 11 schools did not participate) **Dosage:** 17.5 hours of PL built into the teacher contract, plus an optional 24-hour paid summer institute; monthly 90-minute "Second Wednesday" meetings plus 2 PL days/year (3.5 hours each); district also organized 20 hours of optional centrally organized curriculum work time

District, curriculum, school year of adoption	Site-based collaborative learning	Instructional coaching	Centralized, ongoing PL
Firesweep, Illustrative Mathematics, 2018–19 (Imagine Learning 2024–25)	Cluster meetings **Audience:** general education and special education teachers **Dosage:** 1–1.5 hours per week or about 4–6 hours per month, PL cycles differ by school (some 9-week, some shorter) and are tied to periodic assessment of school-based needs cycles **Key activities/topics:** reviewing upcoming lessons and planning differentiation strategies from data (assessments, exit tickets); vertical alignment (all based in the National Institute for Excellence in Teaching's [NIET's] Five Effective Steps of Learning) (NIET, 2020) **Facilitated by:** Math Master Teachers and mentor teachers as needed	**Audience:** coaching happens for all middle school teachers in cluster meetings; additionally, outside of cluster meetings, identified "high priority" teachers (identified by student test scores, teacher years in content, or Bullseye learning walk feedback) receive intensive 1:1 coaching **Dosage:** about 1 hour per week for high priority teachers **Key activities/topics:** coaches use a "one next thing" approach and a common data collection and feedback tool (Bullseye) in classroom walk-throughs that are part of the coaching cycle; for example, student grouping has been a previous coaching focus at middle school **Facilitated by:** Math Master Teachers	**Audience:** middle school math teachers **Dosage:** about 12 hours per year (including an 8-hour summer institute and a half day in January)

District, curriculum, school year of adoption	Site-based collaborative learning	Instructional coaching	Centralized, ongoing PL
Gatesman, AmplifyDesmos, 2024–25	PLCs **Audience:** teachers and site leaders; district leaders join irregularly **Dosage:** ~9 hours per month for classroom teachers **Key activities/topics:** review of student data to inform next steps; intervention and differentiation **Facilitated by:** site-based instructional coaches	**Audience:** middle school math teachers **Dosage:** new teachers meet with one weekly while established teachers engage in coaching cycles about every other month; there is variation—some sites require a certain number of coaching cycles per teacher; other sites provide coaching on an as-needed basis **Key activities/topics:** n/a **Facilitated by:** every site has an instructional coach; math Teachers on Special Assignment also coach, though teachers are encouraged (not required) to go through their site-based coach first	**Audience:** middle school math teachers, site leaders **Dosage:** about 1.5 days of dedicated math CBPL within a broader 6-day district PL allotment, supplemented by about 3 days of summer institute and up to 3 days of centrally organized curriculum work time; site leaders receive 5 days of PL compared to teachers' 3 days

District, curriculum, school year of adoption	Site-based collaborative learning	Instructional coaching	Centralized, ongoing PL
Kingsford, i-Ready, 2024–25	PLCs **Audience:** teachers, with principals and district leaders joining irregularly **Dosage:** three times per month (~1 hour each) over a 9-month cycle, blending building-level (2x) and district-level (1x) meetings **Key activities/topics:** focusing on assessments within the curriculum, student performance on the curriculum (e.g., whether they understand), and next steps based on a review of whether or not they have grasped the material, strategies for multilingual learners (meaningful discourse and vocabulary), division of common assessments (to balance standards coverage and depth of knowledge against time constraints) **Facilitated by:** teacher facilitators, with support from administrators and coaches	**Audience:** middle school teachers opt in; about 50% of teachers participated **Dosage:** coaching cycles ran three times per year; these included four or five visits and about 12–15 hours per participating teacher; coaching intensity tapers off after the initial lesson-internalization phase **Key activities/topics:** co-planning, and then a further step is with lesson internalization, coach watching, teacher and coach pairing up to look at work and make decisions **Facilitated by:** building-level coach	**Audience:** middle school math teachers **Dosage:** of 30 hours of total PL, a 6-hour summer institute focuses on intervention tools (using assessments), 9 hours focus on meaningful math discourse and vocabulary (emphasizing multilanguage learners), and 3 hours focus on curriculum features and reports and the use of them to drive instruction

District, curriculum, school year of adoption	Site-based collaborative learning	Instructional coaching	Centralized, ongoing PL
Louiston, Savvas, 2025–26	PLCs **Audience:** classroom teachers; site leaders participate about once per month **Dosage:** four times per month for 45 minutes each week **Key activities/topics:** PLC time is used for data review, pacing, and implementation discussions **Facilitated by:** n/a	**Audience:** general education teachers get consistent coaching; SPED sometimes were able to attend coaching cycles **Dosage:** coaching cycles occur roughly once per quarter with either the district team or an external consultant **Key activities/topics:** co-planning with teachers, then observation of implementation and brief feedback **Facilitated by:** district leader and external consultant	**Audience:** middle school math teachers and site leaders **Dosage:** 3 hours in summer, led by curriculum developer
Marshall, Illustrative Mathematics, 2024–25	No information provided about site-based collaboration	**Audience:** teachers may receive coaching support from the district-level, but a vacancy in math coordinator position currently limits this; teachers in each school receive on-going support from Master Teachers **Dosage:** n/a **Key activities/topics:** support for new teachers with initial implementation; support for veteran teachers with needs identified through site visits and student work **Facilitated by:** Math Master Teachers	**Audience:** middle school math teachers, site leaders, and district leaders **Dosage:** 31.5 hours of CBPL in 2025–26, including a stipend-paid optional summer session (16 hours), districtwide PL days (3 hours each for 4 days across the year), and classroom-observation time (12 hours per year for teachers)

District, curriculum, school year of adoption	Site-based collaborative learning	Instructional coaching	Centralized, ongoing PL
Piper, AmplifyDesmos, 2025–26	PLCs **Audience:** cross-role, inclusive of classroom teachers, site leaders, and district leaders **Dosage:** weekly for 45 minutes **Key activities/topics:** looking at data—formative, summative, benchmark **Facilitated by:** n/a	**Audience:** all teachers **Dosage:** about 1 hour per month; schools might add additional coaching, although the allocation is intended to be consistent across buildings **Key activities/topics:** supporting teacher understanding; providing feedback on instruction to follow the lesson structure effectively **Facilitated by:** curriculum vendor and district leadership	**Audience:** middle school math teachers, site leaders, district leaders **Dosage:** totals about 2 full days (1 day in October plus 2 half days later in the year)
Smythe, Illustrative Mathematics, 2018–19	PLCs **Audience:** classroom teachers, site-based leaders, and district-based leaders **Dosage:** 2.25 hours per month **Key activities/topics:** problem-based instruction and effective teaching practices **Facilitated by:** n/a	**Audience:** offered for all grades 6–8 math teachers, but fewer than 50% opt in **Dosage:** n/a **Key activities/topics:** n/a, but likely similar to PLC topics **Facilitated by:** K–8 STEM coordinator and external contractor	**Audience:** middle school math teachers **Dosage:** 6 hours per year of department PL

Appendix 2b. Self-Report CBPL Walk-Throughs and Observations: 10-District Comparison (2025–26 School Year)

District, curriculum, school year of adoption	Walk-throughs and observations
Bentwood, Carnegie Learning, 2021–22	**Audience:** teachers **Dosage:** one or two observations/year, about 10–15 minutes each, plus informal walk-throughs; facilitators dedicate about 1 hour of monthly observation time across teachers **Key activities/topics:** data collection with a common learning walk tool, used to plan further support **Facilitated by:** district leaders and site-based associates; Assistant Superintendent visits every 6 weeks or monthly for priority schools
Blanchard, MathSpace, 2025–26	**Audience:** teachers receive walk-throughs **Dosage:** site leaders devote 2–4 hours monthly for walk-throughs **Key activities/topics:** data collection to assess implementation with respect to district foci like mathematical discourse **Facilitated by:** district leaders
Bridgeton, Illustrative Mathematics, 2018–19	**Audience:** teachers **Dosage:** varies per site, on average about 1 hour per month **Key activities/topics:** n/a

District, curriculum, school year of adoption	Walk-throughs and observations
	Facilitated by: math coaches, district math lead
Firesweep, Illustrative Mathematics, 2018–19 (Imagine Learning 2024–25)	**Audience:** teachers **Dosage:** ~twice/month, 15–30 minutes per observation; more for priority teachers **Key activities/topics:** curriculum implementation and feedback for teachers **Facilitated by:** Math Master Teachers, with additional walk-throughs by District Math Coordinator and other district administrators
Gatesman, AmplifyDesmos, 2024–25	**Audience:** teachers **Dosage:** twice per month **Key activities/topics:** how teacher is leveraging student voice and strategies during instruction **Facilitated by:** once per month by site instructional coach; once per month by district leaders; walk-throughs enable teachers and site leaders to see instruction in other sites
Kingsford, i-Ready, 2024–25	**Audience:** teachers **Dosage:** one building gets weekly walk-throughs; other buildings have formal walk-throughs twice per year **Key activities/topics:** some lesson lab type opportunities where some teachers observed and others taught; student work, especially for multilingual learners **Facilitated by:** Site principals and district math coordinator
Louiston, Savvas, 2025–26	**Audience:** teachers **Dosage:** once per quarter as part of the coaching cycle **Key activities/topics:** n/a (see coaching) **Facilitated by:** n/a (see coaching)

District, curriculum, school year of adoption	Walk-throughs and observations
Marshall, Illustrative Mathematics, 2024–25	**Audience:** teachers **Dosage:** [no time was allocated for teachers, but 12 hours/month was allocated for site leaders and 24 hours/month for district leaders] **Key activities/topics:** student work; what students are doing, learning, misconceptions; information to inform subsequent PL sessions **Facilitated by:** Master Teachers
Piper, AmplifyDesmos, 2025–26	**Audience:** teachers **Dosage:** [as part of the coaching cycle, and also additional walk-throughs, but frequency or duration not provided] **Key activities/topics:** modeling; observers use a common look-for tool **Facilitated by:** curriculum vendor, district leadership
Smythe, Illustrative Mathematics, 2018–19	**Audience:** teachers **Dosage:** [no time was allocated for teachers, but 1 hour/month was allocated for site and district leaders] **Key activities/topics:** n/a **Facilitated by:** site and district leaders