

Roadblocks and Routes: Professional Development in Math in Common Districts

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This report is part of a series summarizing learnings from the five-year Math in Common (MiC) initiative. During MiC, teams from 10 diverse California school districts engaged in learning about and sharing best practices for implementing the Common Core State Standards for Mathematics (CCSS-M) in grades K–8.

Findings on Professional Development

In working to build the understanding of different staff groups about implementing the CCSS-M, MiC districts faced several common “roadblocks” — specific challenges related to how to provide effective and scalable professional development (PD) to staff, administrators, and teachers in support of CCSS-M implementation. Despite the challenges that these roadblocks presented, they also created rich environments for innovation, problem solving, and learning across the MiC community of practice. This report describes some of the more common roadblocks that MiC districts faced in their early years of CCSS-M implementation, along with the “routes” that the districts took around those roadblocks in order to support teacher and student learning. Descriptions of these roadblocks, and their associated routes, follow.

ROADBLOCK #1 — New standards demand deep changes to instructional practice

- Route: Build knowledge of the mathematical standards, pedagogy, and content through opportunities to study and interpret with peers; focus this learning on a few important concepts at a time
- Route: Focus on a manageable set of initial goals for changes in instruction and track progress toward them; then build on success with a new round of deeper goals
- Route: Increase teachers’ access to sources of mathematics expertise, including coaches and technical assistance providers

ROADBLOCK #2 — High-quality standards-aligned instructional materials are not available when the CCSS-M are adopted

- Route: Until suitable, aligned instructional materials become available, review existing materials and provide teachers with support for adapting them
- Route: Once quality, aligned materials are available, adopt the materials and help teachers see how the materials reflect the standards (and where and how they need to be adapted or supplemented)
- Route: Where commercially available materials fall short, create new materials, curriculum maps, and pacing guides — this process can provide participating staff with valuable learning about the standards

ROADBLOCK #3 — Districts need strategies to reach every classroom teacher with PD about the shift to the CCSS-M

- Route: Start PD with teachers who are interested and willing, and use their positive experiences to build word-of-mouth and scale up the PD over time
- Route: Create structures for site-based PD connected to teachers’ everyday practice

- **Route: Encourage principals, coaches, and teacher teams to follow up on the PD to sustain and deepen new practices over time**

ROADBLOCK #4 — PLCs may exist, but are not considered valuable PD

- **Route: Structure teachers' collaborative time thoughtfully and focus it on the district's or the site's key instructional goals**

Recommendations for the Field

Expanding on our discussion of roadblocks and routes, we draw on our years of conversation with MiC participants and our observations in their districts' classrooms to offer a set of recommendations about providing effective PD to support new standards implementation:

- **Develop an array of PD strategies for differentiating in-service support, to enable useful learning for all teachers.** MiC districts demonstrated the importance of following multiple routes to providing effective PD, rather than using one-size-fits-all PD. Because teachers' prior experience and training may not adequately prepare them for successful CCSS-M implementation, districts should organize many different PD formats and experiences, reflecting the diverse ways in which people learn.
- **Examine ways to reallocate or augment funding in order to provide additional time and resources to support teachers' collaborative work.** Building educators' capacity and professional capital is one of the most time-intensive, and therefore expensive, undertakings in education. Yet we saw in the MiC districts how enabling teachers to take the necessary time to understand and practice specific instructional strategies can help teachers implement what they have learned through PD.
- **Build greater math expertise across the district to support deeper learning for teachers.** The MiC districts demonstrated the value of having staff with math expertise at all school sites. It is also critical to build math expertise more broadly in staff across the district so that these staff can serve as resources to their colleagues and provide clear, consistent messages about math standards implementation.
- **Consider how to evaluate the impact of PD activities, to ensure that they are helping staff to implement the district's mathematics vision.** Careful documentation enables a district to keep track of and learn from its own implementation story — what worked, what did not work, what changed, and why it changed. Without documentation, it may be unclear which PD strategies are working for whom, or how.

WestEd's formative evaluation over the five-year initiative draws on an array of data sources, including annual surveys of teachers and administrators, focus groups on topics of interest, classroom observations, district grant reports, student achievement data, and observations of learning events held across the five years. This report draws primarily upon grant reports, focus groups, and observations.

WHAT IS MATH IN COMMON?

The Math in Common initiative provided funding to 10 school districts to support their efforts to implement the CCSS-M. With support from California Education Partners and WestEd, the 10 districts were organized into a community of practice, to accelerate their learning about standards implementation. The best practices identified by the community of practice are intended to be shared broadly to support standards implementation and math improvement in all California districts. For more information about the Math in Common evaluation, see <https://www.wested.org/project/math-in-common-evaluation/>.

