

Principals in Partnership With Math Coaches

Catherine Miles Grant and Linda Ruiz Davenport

Principals have a significant role to play in enabling coaches to support the implementation of a sound math curriculum.

One of the most promising developments in math education is the fact that many districts are hiring math coaches—also called math resource teachers, math facilitators, math lead teachers, or math specialists—to assist elementary-level teachers with math instruction. What must not be lost, however, is that principals play an essential role in supporting math coaches' work. While it might be assumed that the math coach is hired to “take care of” math teaching and learning in the school, thus freeing principals for other responsibilities, schools actually make the most progress when principals work in close partnership with math coaches.

The Boston Public Schools is in its ninth year of a math plan that includes teachers using a standards-based math curriculum, a comprehensive program of professional development for teachers and administrators, a system of formative assessments designed to monitor and inform instruction, and school-based support from math coaches. Principals play a key role in supporting these efforts, particularly when it comes to taking full advantage of what a math coach might offer. Here are four important ways that a principal can partner with a math coach:

1. *Work with the math coach to set priorities.*

- Set up regular meetings to discuss coaching priorities across the year, taking into account the

demands of the curriculum calendar and schedule of assessments, the importance of cultivating teacher leadership, and the need to support new or struggling teachers;

- Get to know what is happening in classrooms during math lessons by jointly conducting classroom walkthroughs, observing lessons, and attending grade-level team meetings focused on math;
- Identify needs for strengthening math teaching and learning in the school, based on multiple sources of quantitative and qualitative data, including results of both formative and summative assessments, observations during walkthroughs, discussions from grade-level team meetings, and conversations with teachers; and



- Determine grade-level teams and individual teachers in need of support, and decide what kinds of support to offer.

2. Be strategic about putting support structures into place that are designed to strengthen math teaching practice and student performance.

- Ensure that teachers are able to participate in seminars and institutes focused on the specific mathematical content of the elementary grades, how students think about this content, and instructional practices and structures to support their learning;
- Schedule opportunities for teachers to collaborate with their math coach to integrate the learning fostered in seminars and institutes, and make

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connections to their own classroom practice;

- Ensure that teachers and grade levels identified as priorities have ongoing access to the support of a math coach through individual and team planning and debriefing meetings;
- Create opportunities for collegial classroom observations with pre-visit

and post-visit discussions facilitated by the math coach;

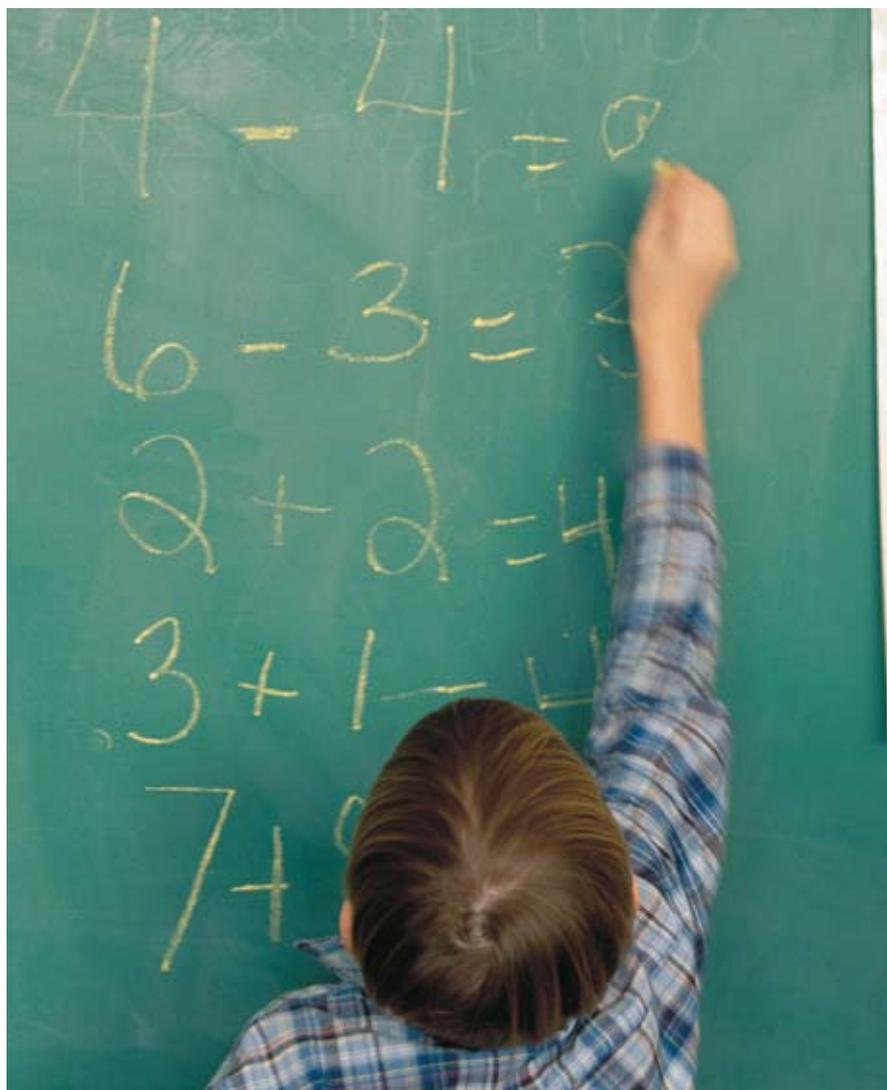
- Offer logistical support (e.g., arranging for any needed substitute coverage) as well as conceptual support (e.g., being able to think along with the coach about what each structure offers and why it is important); and
- Broaden your leadership base by identifying and nurturing a math leadership team to focus on and support math teaching and learning.

3. Work with the coach to set norms for teachers' participation in math professional development, as well as their collaboration with the math coach and each other.

- Recognize that you convey strong messages to teachers about the importance of math teaching and learning through your presence in classrooms, your involvement in professional development, and your participation in structures that involve collaboration among teachers and the math coach;
- Be clear that you expect teachers to participate fully in professional learning opportunities, coming prepared with any needed materials, and being actively and thoughtfully engaged during small-group and whole-group discussions; and
- Follow up with any teachers who may not be engaging in these learning opportunities to identify any obstacles or issues that might need to be addressed.

4. Participate as a fellow learner.

- Seize the opportunity to extend your own understanding of elementary math, children's mathematical thinking, and math instruction;
- Model what it is to be a continual learner;
- Gain insights into the strengths, needs, and dynamics of your faculty;
- Participate in professional development initiatives for principals and other school and district leaders; and
- Speak up about what you are learn-



ing about math teaching and learning when meeting with other district administrators.

It Works in Boston

As we have learned in Boston, this principal-coach partnership provides the central underpinning for a complementary set of supports that strengthen math teaching and learning. Other components are also key: a sound math curriculum; a cohesive program of professional development for teachers and administrators; and a system of formative assessments used to monitor and inform instruction.

Since the inception of the math plan in Boston, the number of students passing the fourth-grade math assessment has increased from 56 percent to 77 percent. At the same time, the number of students scoring in the proficient and advanced categories has increased from 15 percent to 30 percent. Finally, the results of the Trial Urban District Assess-

ment (TUDA) of the National Assessment of Educational Progress (NAEP) show that between 2003 and 2007 Boston made a 15 percent point gain in the number of students scoring at or above the proficient level, demonstrating the highest improvement when compared with 10 other large urban districts.

Partnerships between principals and math coaches have been key to the progress Boston is making as it strengthens math teaching and learning in its elementary schools. These partnerships have brought into focus the need for principals to learn to become instructional leaders in math, a content area that had been unfamiliar and uncomfortable for many elementary principals in the past. In order to prepare for providing instructional leadership in math and collaborating productively with their math coaches, Boston elementary principals have participated in Lenses on Learning (Grant et al., 2002, 2003) seminars, attended Principal Breakfast

Meetings, and participated in Principal Learning Walks.

Lenses on Learning. All Boston elementary school principals have completed the first module of Lenses on Learning as part of the district's required professional development for administrators, with sessions held during the school day. Subsequent modules are offered through after-school sessions. The Lenses on Learning seminars provide opportunities for principals to reflect on important ideas about mathematics, learning, and teaching, and implications for their own leadership practice, so that they can better support the mathematics program at their site. The director of elementary mathematics attends all of these sessions in order to be able to hear the questions that principals are asking and to help them make connections between what they are learning and the district context.



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Principal Breakfast Meetings. These are held every six weeks from 8 to 9:30 a.m., and provide principals with opportunities to come together with their colleagues and staff from the elementary math office to discuss math teaching and learning in their schools. Generally, principals have opportunities to examine results of state and formative assessments, samples of student work, and portions of the district's curriculum materials in order to be better prepared to examine math teaching and learning in their buildings and consider implications for their own work with teachers.

Principal Learning Walks. During the first few years of the math plan, Principal Learning Walks took place at selected schools in the district and included a discussion of mathematics teaching and learning at the host school and a group "learning walk" around the school with commentary by the principal. In addition to discussing what they observed,

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visiting principals had opportunities to hear how the school analyzed data related to state and district assessments to identify where teachers and students needed additional support, how they developed plans to strengthen mathematics teaching and learning, and how mathematics teaching and learning was improving over time as a result.

While there is much that principals learn through these activities, there are equally important, and complementary, opportunities to learn through school-based professional learning activities

that are facilitated by the coach, such as participating in grade-level team meetings and joining in collaborative classroom visits.

Grade-level meetings. When principals attend grade-level team meetings where coaches and teachers are exploring the important math ideas of a unit, debriefing a lesson, or examining samples of student work, they learn more about the math concept and the student thinking about that math. They also learn from the questions teachers ask and the ways in which coaches address those questions. These grade-level meetings also create opportunities for principals to see how teachers at particular grade levels can collaborate to support one another's practice by drawing on others as resources, thinking through critical issues together, and sharing their insights.

Collaborative classroom visits. When principals (and teachers) participate in



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collaborative classroom visits, organized by coaches to include pre-visit and post-visit discussions focused on the important math of a lesson and how students engage with that math, they learn what it takes to plan and enact strong lessons that engage student thinking and learning. While grade-level visits help build coherence within that grade, cross-grade level observations can develop an appreciation of collaboration across grade levels.

Principals have a significant role to play in enabling coaches to support the implementation of a sound math curriculum, teachers' professional learning, and a system of formative assessments designed to monitor and inform instruction. In addition, principals' involvement with their schools' math programs can also provide them with the kind of ongoing opportunities for learning that are so important in enabling them to become strong instructional leaders, well pre-

pared to collaborate with the mathematics coach. 

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WEB RESOURCES

The Mathematics Leadership Program (MLP) is a collaboration of the Education Development Center and SummerMath for Teachers. This site focuses on the MLP's work with principals and other school and district leaders: www.mathleadership.org/lo!; and this site focuses on the MLP's work with math coaches: www.mathleadership.org/cmcp.

The Summer 2008 issue of *Research Roundup* focuses on math instruction. The resources highlighted in this edition can help you and your teachers ensure that math instruction in your school is providing strong support for student learning. www.naesp.org/research_roundup.aspx



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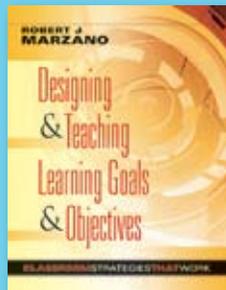
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