

Introduction

As she walked down the hallway toward the fourth grade classroom, Polly glanced at her watch. Two minutes until the start of another classroom observation. She stops, hoists up onto her shoulder a book bag teeming with papers and curriculum materials, and turns to tell me one last thing.

“I explained to her,” she said, “that it is a privilege to be in her classroom, to be with a teacher who cares so much about kids. I also told her that it took all the courage I could muster to tell her the truth.” I said, ‘It isn’t enough to love them and go page by page in the math book.’ I continued, ‘It’s November, and we are going to have to work hard together to help you really understand the math you are teaching and to help your students learn more deeply.’”

Polly hesitated again as she reached the classroom door. “Sometimes it’s a thrill to be a coach, and sometimes it’s so hard I just want to break down and cry—right in the middle of a grade-level meeting. Sometimes I really nail it, and other times I leave wishing I had listened more carefully. But”—she smiled—“I keep coming back.”

As I put my hand out to say my thanks for allowing me to shadow her for the morning, she held my hand and said softly, “Sometimes, I am stunned by how so very real this work is.”

Over the past decade, I have listened carefully to hundreds of stories of coaching. Stories, such as Polly Wagner’s, that were written and shared in formal district professional development settings and stories told in short bursts in hallway conversations. Stories written as a way to think through puzzling circumstances or to view, with a coach lens, a classroom math investigation . . . stories recounted with a sense of wonder or in a voice of despair in coach meetings, in chopped sentences and phrases online on listservs, and in large group gatherings such as math and coaching conferences. Each of these descriptions of coaching has engaged me enormously: I have developed a huge appetite for understanding this very intersection of learning where coaching is enacted, in this new form of on-site math professional development support for adults.

For many years, I have worked with coaches and with those who are responsible for organizing coaching programs and system structures that support coaching efforts. I have had the privilege of working on a weekly basis with elementary math coaches, over the course of many school years,

as they navigated uncharted waters. It is their work, and the wisdom and generosity of their district leaders, which set this collection of coaching materials in motion.

Math coaching is still relatively undefined. While successfully instantiated in some sites, it is in its infancy in education. Overall, we do not have a shared vision for coaching goals, for what the role implies—nor are we yet clear about the characteristics of the structures that make coaching an effective strategy for developing classrooms where children are deeply engaged in, and successful in learning, important mathematics. We do not have a clear sense of guidelines regarding the intersection of coaching and supervision. In fact, across a single district, we might even have different titles for the same job—or common titles for jobs with an entirely different focus.

We do know that coaching is not simply “fixing” or “advice-giving.” Indeed, one coach describes, with chagrin, the tendency to fall back on “seeking something to change and telling the teacher to change it.”

Coaching *is* a matter of listening intently in classrooms to articulate students’ ideas in ensuing discussion with the teacher and, at the same time, facilitating an exchange with the teacher that helps him sort out what he intends for students to learn, how his students’ ideas intersect with those mathematical ideas, and then, the implications for his next teaching moves and agenda. Coaching does not always occur after the math class is over; often, a coach is in a position to work with the teacher to examine the mathematics of the upcoming lesson, anticipate what is likely to occur, and make plans for how to construct and teach the lesson with math goals and his own students’ learning in mind.

To be well prepared to offer this level of support, collaboration, and guidance, a coach needs to understand her role deeply and engage frequently in opportunities that effectively build the knowledge that is required for enacting that role.

Given the rapid growth of coaching in schools, this is a very exciting time! We are just learning what coaches know, or need to know, and how they “get there” in terms of coaching practice and, then, what promotes the continued development of a coach’s work. There is much to be learned by observing coaching, collecting data about the ways coaching strategies function to serve teachers and students, and by listening carefully to coaches as they describe their challenges, insights, and ways they respond in their work.

Cultivating a Coaching Practice is a contribution to the effort to both strengthen and deepen coaching work. This professional development material includes math activities, focus questions for discussion, planning activities, extensive facilitator notes, and, most importantly, cases of practice authored by coaches. These authentic stories, recounted in the voices of novice and of experienced practitioners, provide us with a rich and complex landscape of images of coaching and learning.

Working with these materials allows us to explore and study significant principles and themes of practice that lie at the heart of math coaching. Selected from hundreds of cases, in these episodes and journals surface coaching themes typical across urban or suburban settings, across schools that represent a range of success with regard to student achievement, and across math curriculum programs. In using these materials, you will have an opportunity to carefully think through the implications of these themes for coaching within your own site and at your own level of experience.

THEMES OF COACHING

The cases and related activities in this book relate to the big ideas of coaching and what is entailed in successfully developing and supporting a strong math program in schools. The job of coaching is multilayered, engaging an assortment of individuals in a variety of district positions, and it requires leadership that is firmly grounded in mathematics and in the fundamental belief that learners have mathematical ideas. As teachers become teacher leaders and take on responsibilities outside of their classrooms, they discover a new vantage point from which to understand what is learned in math class and the very way learning and teaching works. The cases in this book relate to the following themes:

Learning Mathematics

Coaches encounter new math ideas through their careful observation and analysis of student learning and through the same observation and analysis of teacher learning.

Authority

Authority in coaching is a powerful aspect of enacting the role. Negotiating issues of authority and leadership and building relationships for collaborative work requires skills that, for many, develop over time.

Focusing on Mathematics

It's about the mathematics—coaches facilitate complex discussions with adults that require skills in maintaining a focus on mathematics, math learning, students' and teachers' math ideas, and math teaching practice.

Strategically Aligning Coaching Goals With District Structures

Coaches are charged with identifying opportunities and structures for aligning their coaching moves with their goals for teacher and student learning.

DEVELOPING A REPERTOIRE OF COACHING MOVES

To meet the needs of the different constituents with whom coaches work—and the varied entry places of these people—coaches need to develop skills for considering a range of moves and models of coaching based on a growing understanding of the mathematics in the classroom and the ways teachers learn and teach it.

Analyzing School Contexts and Learning Goals

Coaches build understandings of what it means to analyze and articulate school contexts well enough to develop workable goals for schools—and of what is entailed in differentiating coaching based on the school particular and the teachers and administrators in it.

Building Collaborative Relationships in Support of Learning Goals

Learning how to bring others in, to be successful in creating opportunities and invitations that align both with school collaborators' skills and potential with astute coaching goals is a foundation of the leadership skills coaches cultivate.

Each of these themes is surfaced through the case scenarios in this book. As you delve into the particular issues in your coaching site, the discussions and insights that grow out of understanding more deeply the themes and principles of the role will help guide your work in thoughtful and meaningful ways.

HOW TO USE THIS BOOK

Cultivating a Math Coaching Practice provides resources for 12 to 14 sessions that vary in length from two to four hours. The book is separated into two sections; the first section includes 12 chapters for participants' reading, so each participant will need her own copy of the book. The second section is a facilitator guide that describes timed agendas and offers detailed support for facilitation of every session. Successful facilitation of the cases and related activities is predicated on the idea that facilitators carefully prepare for each session by reading the case, doing the math activity or planning activity, and writing out responses to each of the focus questions. Engaging with the materials this way is essential for anticipating participants' responses and taking ownership of the session agendas.

Materials

A set of materials for each session includes:

- *Case*—Authored by a math coach, the case provides an authentic account of coaching practice, dilemmas, and insights. A Case Description and a Notes to the Reader preface the case and orient the reader to the case themes.
- *Session Activity*—Each case is accompanied by a related Math Activity designed to strengthen coach math content knowledge or a Planning Activity designed to support thoughtful consideration of next steps in one's coaching practice.
- *Focus Questions Activity*—Small- and whole-group discussions focus inquiry on important elements of each case.
- *Facilitation Notes*—Written for the session leader, these chapter-by-chapter notes provide bulleted session goals, case descriptions, session overviews, detailed agendas, and practical facilitation support. In addition, Facilitation Notes include specific examples of participants' questions, responses to cases and activities, and anecdotes describing facilitator responses.

Organization

The material in this book is designed to complement a variety of professional development settings. Time allotted for district coach professional development varies in length and in intervals between meetings; the flexibility of these materials is meant to address this. Each chapter represents a stand-alone session; it is not essential to move through the book chapter by chapter. The order of chapters set forth in the Table of Contents, while representative of the trajectory of a developing coach practice, is not set in stone. A facilitator can choose the order of cases in response to a particularly relevant topic at play at his site. Reading the case descriptions (prefacing each chapter and repeated in the chapter Facilitator Notes) and related Facilitator Notes will provide useful information with which to make these types of decisions. For instance, Chapter 8, *Cultivating Relationships with Administrators and Other Leadership Colleagues*, focuses on inviting collaborators into the work, communicating with the principal, and articulating learning goals for the teachers in the school. This material is most appropriate to use after the school year has begun—perhaps midyear—when coaches have had time to determine schoolwide coaching goals, establish relationships with teachers and administration, and are sure-footed enough to determine an agenda for leadership and collaboration with others. And yet, you may be working in a context where these relationships and goals have been established in the first year or previous years of coaching; in that case, it may make sense to begin a new school year with this chapter. The first six chapters include Math Activities that support establishing a practice that includes engaging in mathematics with colleagues and other teachers, while chapters that include Planning Activities may be most effective after new or experienced coaches become familiar with new school sites and have begun to develop goals for their work.

Whether you choose to begin by examining the issues highlighted in Chapter 1 or with Chapter 6, the accompanying Facilitator Notes will provide a comprehensive guide for every part of each session. To provide structure for the participant, the case is placed at the front of each chapter followed by Focus Questions and a Planning or Math Activity. Some session agendas, however, have participants begin with the Activity as groundwork for reading the case that is the central focus of the session. The Facilitator Notes describe the order of the agendas, the logic of how each session unfolds, and guidance for leading discussions.

These materials represent central issues in coaching and are offered as rich territory for discussion, reflection, and planning. These materials are designed to be accessible and challenging for novice teacher leaders with little coaching experience and also for practicing coaches with skill and knowledge gained over many years. The authors of these cases offer stories of practice to be mined for new perspectives and ideas at many levels.

If you are a coach using this book without benefit of formal group and facilitated sessions, you will find it helpful to read the Case Description and the set of Focus Questions before you read each case. This pre-reading will draw your attention to the themes and issues highlighted in the chapter and provide a useful orientation to the material.

The authentic voice of the coach runs through this book. We have a great deal to learn, still, about this new arena of teaching and learning, and so it makes good sense to listen with an attentive ear to coach voices telling their stories. Here, we return once again to Polly's voice as she describes the role of coaching—the practice this book is designed to cultivate.

A coach's role is to support teachers to be the best practitioners they can be, to watch for and share moments of brilliance from both teachers and students, to be curious about the mathematical ideas students and teachers have, to figure out ways of engaging in those ideas with teachers in dynamic ways—to push and to listen at the same time, to recognize and acknowledge the privilege of entering a teacher's classroom, to hold steady to what you believe is right for children and the school—even when it's hard.