

Preface

We wrote this book for the very busy mathematics coach (by the term *coach*, we include all who provide leadership to others who are teaching mathematics in K–12 classrooms). We imagine that a busy coach may not have time to read a preface! But we want to introduce you, as briefly as we can, to what this book has in store for you and why we wrote it in the first place. So let's start there.

Why did we write this book?

We think—in fact, we know—that mathematics coaches make a positive difference in students' mathematical learning experiences. We also know that coaches often function in relative isolation, having to invent, create, react, and respond in myriad situations, often with little time to prepare. There are many resources out there, and it is tough to know which ones to use and for which purposes. Meanwhile, you might be providing professional development, facilitating professional learning communities (PLCs), or leading a coaching cycle and wondering many things: What format might you use? How might you identify a focus for that professional development or lesson cycle? Once a topic is chosen, what aspects of that topic might be most impactful? This dizzying list only scrapes the surface of what crossroads you might come to in your journey toward improving mathematics teaching and learning in your setting.

What do we have in store for you?

We hope this is your go-to resource to navigate your journey as a mathematics coach! We have surveyed many coaches and leaders to identify must-know topics, skills, and issues and then used those insights in selecting topics for this book. Think of it as a compendium of mathematics coaching *Reader's Digests*! In other words, each chapter is a condensed explanation of critical mathematics coaching actions and critical teaching actions along with tools, tools, and more tools to help you do the work: tools for navigating a coaching conversation; tools for planning, facilitating, and evaluating professional development; and so on. Finally, the back of the book includes an Appendix with two bookmarks for your use and a glossary of key words used throughout the chapters (many education words/phrases take on multiple meanings, so we wanted to make sure you knew how we use terms in this book). Words that appear in the glossary are bolded the first time they are discussed in the text. Here, we share the book's features in a little more detail.

Part I: Creating a Road Map: Big Ideas of Coaching, Teaching, and Learning

What is the purpose of your coaching? We hope your answer is something like “helping teachers to develop mathematically proficient students.” Learning goals for students *must* be the clear purpose of all things coaching. So we begin with our Leading for Mathematical Proficiency (LMP) Framework, which positions student outcomes as the focus of your work as the coach, as well as teachers' professional learning goals. The Framework explicitly connects Mathematical Practices for students with Effective Mathematics Teaching Practices for teachers.

Important to Part 1 of the book is our *Shifts in Classroom Practice*. If you know our first book, you know that these *Shifts* are a guide for teachers as individuals or as part of a PLC, reflecting on where they are on the continuum and then working to move toward more effective practices. Our *Shifts in Classroom Practice* in this book are now a one-to-one match to the NCTM Effective Mathematics Teaching Practices (NCTM, 2014). All of this is explained more clearly in Chapter 1.

Discussions and tools in Chapter 2 focus on the big ideas of the Framework—helping teachers think about the Mathematical Practices and Effective Mathematics Teaching Practices. These tools—all available online—are flexible. You may like one for a particular teacher and not want to use it with another. These tools may also be used in connection with any of the Part II chapters.



To download the coaching tools for Chapter 2, go to resources.corwin.com/mathematicskoaching.

Part II: Exploring Zones on the Journey: Professional Learning Focus Areas

Once you have engaged teachers with the big goals, it is time to start exploring an identified focus area, or focus zone. Focus Zones include topics such as engaging students, using formative assessment, and differentiating instruction. If you have our first book, *Mathematics Coaching: Resources and Tools for Coaches and Leaders, K–12*, you will see that these focus areas have not changed much (we added a new chapter on engaging students), but the format of each chapter has changed quite a bit, and the tools are new or improved. Each of these chapters (3–10) has an identical format, shown here:

In the Coach's Digest ...



To download the Overview for each chapter to share with teachers, go to resources.corwin.com/mathematicskoaching.

Overview. This section is unique in that the audience is you *and* your teachers. You can read it for your own learning and can also download a version of it for sharing with your teachers. Remember it is a *Reader's Digest*-style coverage, so you may want to supplement or simply use it as a springboard to hear from teachers what else they know about this Zone!

Coaching Considerations for Professional Learning. Here, we offer ideas for how you might engage teachers in learning about this particular Focus Zone. Some of the ideas refer to professional development sessions, while others refer to coaching cycles. We tried to provide a “menu” from which you might find something that sounds good.

Coaching Lessons From the Field. We have heard many stories from many coaches during the five years that our first book has been “out there.” This book has similar focus areas, so these stories provide you with some ideas about how coaches are supporting teachers in their settings.

Connecting to the Framework. It is worth saying again: The journey to mathematics proficiency must include consistent and frequent connections to the big goals of effective teaching (our *Shifts*) and student outcomes (Mathematical Practices). We share important connections between the *Shifts* and the Focus Zones and the Mathematical Practices and Focus Zones, along with some ideas for helping you engage teachers with these important connections.

Coaching Questions for Discussion. Just as it sounds, this section provides a menu of discussion questions. They might be used in professional learning or one-on-one coaching. And the final set of questions connects to the *Shifts* and the Mathematical Practices.

Where to Learn More. This section might provide sources for more reading for you or might point you toward readings that you want to use in a book study, lesson study, short course, or otherwise. Brief descriptions are offered—we hope they do justice to the fantastic articles, books, and websites on these Focus Zones!



To download the coaching tools for each chapter in Part II, go to resources.corwin.com/mathematicskoaching.

In the Coach's Toolkit ...

Each chapter has a set of tools to support teacher learning. The first tool in every chapter is a self-assessment tool, and it includes selected *Shifts in Classroom Practice* (in contrast to the self-assessment in Chapter 2 that focuses on all the *Shifts*). We designed the remaining tools to help plan, gather data, and reflect. If you are engaged in a coaching cycle, then you can pick one from each category. Guidance for which ones you might put together is provided on the cover page. Also, a tool in one chapter might be a great fit for efforts in another Focus Zone. Use it! Adapt it! We offer some suggestions of ones we don't want you to miss, but there are many tools, and that is so that you can find ones that you think will work best for you and your teachers.

A final note: These Focus Zones are in no particular order. They are just zones on the journey. As you will see from the *Shifts* and Mathematical Practices addressed in each Focus Zone, they all have the potential to increase effective teaching practice and student mathematical proficiency.

Part III: Navigating a Successful Journey: Strategies and Tools for You, the Coach

How does one avoid or minimize road bumps along the way? This is hard to do when the journey may be in uncharted territory, but this part of the book is here to assist!

The first chapter (Chapter 11) offers you guidance on communicating with colleagues. If you have not established rapport or good listening skills, for example, your journey will be long and difficult. Chapters 12 and 13 are designed to help you *lead* the way (i.e., lead a professional development session) and *guide* teachers along the way (i.e., facilitate a professional learning community). More tools? You got it!