

# Preface

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Throughout our years of experience in education—which has included classroom teaching, planning for and providing professional learning opportunities for teachers, and serving as mathematics leaders and teacher educators—we not only recognized but attempted to address many challenges related to assessment and, in particular, formative assessment. These include but are not limited to a lack of or limited awareness of the direct connection between planning, implementation, and assessment of instruction, as well as recognizing the well-documented evidence related to the impact of classroom-based formative assessment. And yes, we regularly confronted comments like those on the previous page. For close to a decade, while engaged in implementing the Elementary Mathematics Specialists and Teacher Leaders Project ([www.mathspecialists.org](http://www.mathspecialists.org)), we regularly engaged and supported teachers, mathematics specialists, and mathematics teacher leaders. During this period, we consistently heard teachers, mathematics coaches/specialists, and mathematics teacher leaders talk about the challenges of assessment. They were quite serious about wanting to truly understand how formative assessment should impact the teaching and learning process. This was our tipping point, and truly prompted our own thinking and analysis of in-the-moment classroom-based formative assessment, which led to the publication of *The Formative 5: Everyday Assessment Techniques for Every Math Classroom* (Fennell et al., 2017).

While pleased with the response to and related success of *The Formative 5*, we knew that our work had just begun. In our experiences, which have included presentations and work in classrooms related to *The Formative 5* and assessment in general, we learned that to truly anticipate how they would use any of *The Formative 5* assessment techniques (e.g., Hinge Questions), teachers had to be deeply engaged in their use. We therefore decided that there was more to say, more to do, and more to show.

Like the original book (Fennell et al., 2017), *The Formative 5 in Action* represents a distillation and validation of particular classroom-based formative assessment techniques that teachers can use on a regular basis. We think of the Formative 5 as a palette of five “colors” that represent techniques teachers can use, sometimes mixing these colors to find the best way to formatively assess as well as guide planning, teaching, learning, and feedback opportunities every day. The *Formative 5 in Action* modules include an introductory module that identifies issues, challenges, and opportunities related to the importance and use of assessment in general and formative assessment in particular. This module also introduces readers to the modules dedicated to each of the Formative 5 assessment techniques: Observations (Module 1), Interviews (Module 2), Show Me (Module 3), Hinge Questions (Module 4), and Exit Tasks (Module 5).

## WHAT'S NEW IN THIS BOOK?

You'll find a number of elements that have been added to this resource, building off of what educators found inspiring and useful in the original 2017 book.

- 1. A new focus on feedback and strengths-based teaching and learning:** Like *The Formative 5: Everyday Assessment Techniques for Every Math Classroom* (Fennell et al., 2017), *The Formative 5 in Action* has been guided by the pioneering research of Dylan Wiliam and his colleagues (e.g., Black & Wiliam, 1998, 2009; Wiliam, 2018) and emphasizes the importance of minute-by-minute and day-by-day or short-cycle formative assessment and particular techniques for classroom-based formative assessment. We also recognized that we needed to provide a much stronger connection between use of the Formative 5 techniques and feedback, as well as make stronger statements about both identifying and starting with student strengths when engaging in and analyzing student responses to the techniques. Our links between strengths-based formative assessment and feedback in *The Formative 5 in Action* have been influenced by the research of John Hattie and Helen Timperley (2007) and more recent contributions by our own Beth Kobett and Karen Karp (2020).
- 2. New and additional reflection, action, and implementation tools:** Each of the modules within *The Formative 5 in Action* is intended to function as a sort of playbook, truly engaging educators as they become familiar with suggestions for using a particular Formative 5 technique in the classroom. In addition, we offer many tools that can be used to guide planning, teaching, and recording of student responses for each of the Formative 5 techniques. You will also find blank versions of the tools that may be downloaded and adapted for your own use at the book's companion website, <https://qrs.ly/wsetnnz>. Finally, the last activity within each module of *The Formative 5 in Action* is titled "Your Turn," which seems like an appropriate phrase to launch *your* reading and engagement in *The Formative 5 in Action*.
- 3. Video:** The book's modules contain videos related to each of the Formative 5 techniques to both demonstrate and validate particular techniques and jump-start your thinking about their use. In Modules 2 and 3, you'll also find quick-response (QR) codes that link to audio and video samples we have captured of students engaged in Interviews and Show Me classroom moments so that you can see their work and hear their thinking. Collectively, these are meant to demonstrate what these techniques both look and sound like in the classroom.
- 4. Expansion to Grades K–12:** Finally, while we previously focused discussion of the Formative 5 techniques in Grades K–8, we saw the need to expand this discussion to address the formative assessment of mathematics teaching and learning to Grades K–12 and have added more discussion, teacher comments, and examples from high school mathematics to this volume.

So, think of this book, *The Formative 5 in Action*, as a more complete and more engaging opportunity to learn about and use Observations, Interviews, Show Me, Hinge Questions, and Exit Tasks in *your* classroom. We know that we will all continue to learn about the critical connections between planning, teaching, and assessment. We hope to continue to work with teachers at every level to determine our own next steps or additional tipping points as we continue to emphasize the power and importance of classroom-based formative assessment.