Introduction

The idea for this book arose after we had written an invited chapter for the *Handbook on Formative Assessment in the Disciplines* that focused on preparing preservice mathematics teachers to implement formative assessment.¹ In prior work, we had both independently advocated for coherence among preservice, induction, and in-service learning opportunities for teachers.² Our coauthored chapter gave us the chance to consider preservice education as the first phase for teachers in beginning to develop knowledge and skills about formative assessment, as well as a basis for continued professional learning throughout their teaching careers. In this book, we expand our thinking and explore more fully what can constitute a professional learning continuum from preservice through induction to in-service that uses discipline-based formative assessment as a critical lever to improve learning outcomes for students.³

We have framed our continuum of teacher expertise around three interactive phases, characterized by changes in teacher agency over time.⁴ First is the *externally supported* phase, the time in preservice programs when novice teachers are acquiring the initial skills needed for teaching. Second is the *transitional* phase, when the amount of scaffolding from external supports, such as program faculty and mentor teachers, is decreased. In this phase, teachers become more conscious of their practice, are better able to make judgments about what they do in the classroom, and are increasingly equipped to make decisions about how they can improve. The third phase, *self-regulatory*, is when teachers take more control over their own learning and choose the next steps of their development. Across all phases, teachers—whether in training or teachers of record—engage in deliberate practice and receive feedback on their efforts from peers, mentors, and colleagues. This phase corresponds to our notion of continuing
in-service, during which teachers never stop learning and continue to hone their expertise over many years.

Our exploration of these three phases is wide ranging, encompassing an in-depth examination of evolving teacher expertise in discipline-based formative assessment. The nature of knowledge and understanding within specific disciplines varies, and we emphasize that formative assessment is shaped and bounded by the discipline in which it occurs. Our premise is that teachers, in order to realize the potential of formative assessment, need not only to know the disciplinary content, but also to be familiar with analytic practices and have an understanding of the development of student learning in the discipline.

We also frame the development of expertise in discipline-based formative assessment in the context of ambitious teaching, which we believe includes formative assessment as an integral component. Ambitious teaching, a relatively recent construct, supports broad goals for student learning to achieve success in school, college, and the workplace. Teachers begin to acquire the practices of ambitious teaching, which we describe in chapter 1, in their preservice programs, and they continue to develop them along our continuum of learning.

In the book, we consider the interconnection of ambitious teaching, formative assessment, and disciplinary knowledge, and we illustrate how this interconnection plays out in practice using examples of actual classroom teaching. The quotations in the book are from actual teachers, unless otherwise stated. Some of the examples of practice are from observations of and interviews with teachers whom we encountered as part of other projects. In other instances, we met teachers who discussed their practice in ways that aligned with the major ideas of this book, and we asked them to supply us with specific examples. Finally, four county-level subject matter experts, who also reviewed the four disciplinary chapters, provided us with examples from their own experiences or observations.

OVERVIEW OF CHAPTERS

In chapter 1, we provide a foundational overview of ambitious teaching, disciplinary knowledge, and formative assessment. Chapter 2 presents the concept of a teacher learning continuum and the three phases that we consider most critical to teacher development: preservice training, induction (the first three years of teaching), and ongoing in-service learning.
opportunities, which may include teachers assuming a leadership role with colleagues. We then describe the framework we use for each phase of the continuum, containing the essential elements for cultivating teachers’ formative assessment expertise: formative assessment practices; disciplinary knowledge, including content pedagogical knowledge; and habits of practice. We also describe our approach to professional learning at all phases of the continuum.

Chapters 3 through 6 explore the implications for formative assessment in the context of specific disciplines: mathematics, English language arts, science, and social studies. These chapters focus primarily on the intersection between formative assessment and the disciplinary knowledge aspect of the framework presented in chapter 2.

In chapter 7, we take the three elements from the framework introduced in chapter 2—formative assessment practices, disciplinary knowledge, and habits of practice—and describe a set of knowledge representations and experiences that establish the groundwork for preservice teachers to begin developing expertise in discipline-based formative assessment. In this phase of the continuum, we examine learning opportunities through the lens of representations, decompositions, and approximations of practice.

Chapter 8 follows the extension of these elements into a teacher’s induction period and describes how new teachers, through mentor-mentee relationships, can build on their preservice learning once they have classes for which they are fully responsible. We explore the characteristics of effective induction programs and how they can support beginning teachers to integrate classroom management skills and instructional routines with formative assessment, and to continue on a trajectory toward ambitious teaching practices. We describe the components of a high-quality induction program that can support teacher engagement with formative assessment specifically at this phase of the professional learning continuum.

In chapter 9, we consider how more experienced teachers can develop their learning beyond the induction phase, focusing primarily on peer-to-peer relationships as a means of developing collective expertise. The nature of the proposed learning experiences differs from both the preservice and induction phases to reflect the ongoing learning needs and increases in expertise of in-service teachers. We examine environments in which teachers work that enable their ongoing professional learning, and we describe the opportunities that teachers can avail themselves of in such environments as they develop formative assessment expertise.
Chapter 10 is where we advocate for teacher leaders to support the professional learning of their colleagues, and we specifically address capacity building, distributed expertise, and the benefits to teacher leaders of assuming this role. We describe the qualities needed for effective teacher leadership and how teacher leaders can support their colleagues’ continued learning. We end with a consideration of the need for teachers to engage in continued learning, increasing their expertise to meet the challenges entailed in educating today’s students in a rapidly changing world.

**WHO SHOULD READ THIS BOOK?**

We believe the book will be valuable for those planning professional learning for teachers at any stage along the continuum (teacher educators, professional learning providers, teacher leaders), and particularly for those working to develop more coherent approaches to teacher learning, but also useful to teachers themselves.

We hope, however, that readers of this book will not be working in isolated groups according to the phase of the professional community that they are responsible for. Rather, we hope to motivate conversations and collaboration among all levels of professionals who support teacher learning, with the goal of developing a more coherent professional learning continuum.

There is limited value in defining the knowledge and experiences that preservice teachers are expected to have if those expectations differ from the expectations of the principals, grade-level team leaders, or department chairs who are working with those novice teachers. If school leaders incorrectly assume knowledge and skills that novice teachers do not have, students will likely suffer, as the novice teachers may not receive the support they need. On the other hand, if school leaders assume that the novice teachers know less than they do, they might provide too much support and frustrate the beginning teachers.

We would be delighted to learn that this book was being used to promote conversations among schools of education, other preservice providers, and school district personnel to create the necessary support for teachers at all stages of the continuum to develop and deepen their formative assessment practices. We hope that whatever your role in education, you will find value in our book.