As a new assistant professor in 2006, Ben taught Study of Teaching, an introductory education foundations course for undergraduates in the School of Education (SOE) at Syracuse University, where we both work. Each week, the course included two class sessions on campus and three hours of field placement in a local K–12 school. During class discussion of an article on teacher engagement with families, one of the course topics, Ben asked candidates about their experiences interacting with parents and caregivers in that placement or any others they had completed. Visibly frustrated with the question, Sarah, a sophomore mathematics education major, responded, “I don’t know how to find parents.” As Ben reflected on that statement, he realized, with a start, that he didn’t know how to find them for her, either—at least not in the context of an introductory field experience.

We and our colleagues think about how to design, support, and improve candidates’ placements a good deal in SOE, which is known for its historical commitment to field-intensive educator preparation. Most of our programs have longstanding partnerships with local school districts and community agencies, and faculty work hard to codesign meaningful experiences that support growth for our candidates and offer value for our partners. Many of our undergraduates in teacher education tell us the opportunity to engage in fieldwork in their first year on campus serves as a key factor in their decision to matriculate. As many scholars have
documented, however, it is difficult, labor-intensive work to launch and sustain field placements that offer consistently high-quality opportunities to learn, and such efforts are often fragile.¹

Ben’s foundations course presented these complexities in microcosm. Between twenty and thirty teacher candidates took the course each semester, with each needing to log a minimum of twenty-five hours in schools as partial fulfillment of our state’s pre–student teaching field requirement. That one course placed candidates in half a dozen local school districts, each with different bell schedules, grade-level configurations, curriculum priorities, and instructional approaches. Despite regular communications with cooperating teachers and assignments designed to link course content with the placement, there was considerable variance in what candidates could observe and do. Ben learned quickly that he could neither predict nor guarantee any number of factors, including (1) who would actually engage with students, parents, or other teachers beyond the host, (2) what the circumstances of that engagement would be, (3) whether that engagement would link to concepts from his course, and (4) if there would be any data to guide reflection after engagement. Sarah’s striking words suggested that Ben wasn’t the only one aware of these challenges; at least some candidates seemed to be aware of the lack of consistent learning opportunities as well, judging from contrasting accounts of their experiences they shared in class.

A possible solution pathway opened up a few months after the exchange with Sarah when Ben met Steven Harris and learned about his work directing clinical simulations at SUNY Upstate Medical University, an institution in the State University of New York system that is Syracuse University’s neighbor. Ben began thinking about how to tap Steve’s standing roster of community theater actors who served as standardized patients for the simulations that Upstate, like nearly every other American medical school, runs daily to develop and assess the diagnostic skills of prospective doctors, nurses, and other health-care personnel.² Building from the conversation with Steve, Ben soon proposed an elective on parent and caregiver communications for SOE undergraduates. If he couldn’t guarantee teacher candidates that they could find and engage with parents in traditional field practica, then he would design live simulations that would approximate those experiences. When Ben taught that elective on course overload the following year, Sarah signed up. She and her classmates participated in multiple simulated encounters on topics such as supporting students in crisis, responding to peer-to-peer bullying, and addressing parental challenges to required curricular materials. Not long after the course concluded, Ben made the first of many overtures to colleagues teaching subject-specific
courses in the programs he served as a generalist teacher educator, and an ongoing line of inquiry into collaboratively designed simulations was born.

Flash forward nearly fifteen years, and clinical simulations are a fixture across multiple SOE certification areas. They have attracted funding from both public and private sources, including the Arthur Vining Davis Foundations, the Institute of Education Sciences, the National Science Foundation, and the Spencer Foundation. Ben’s introductory course now features six different simulations that supplement in-person fieldwork, allowing candidates to explore a range of complex professional interactions predictably, including but not limited to parent communication. Educational leadership, an advanced study program that leads to certification as an administrator for experienced teachers, integrates simulations in eight of its nine required courses, helping to prepare future school leaders to dialogue with parents about equity issues, facilitate a resistant colleague’s entry into a learning community, and provide responsive instructional supervision, among other areas of focus. To date, twenty-six colleagues who prepare educators for work in schools have collaborated with Ben to design, implement, and/or analyze data from at least one simulation, representing more than a third of SOE’s full-time faculty members.

This volume is an outgrowth of those collaborations. We editors initiated our simulation-related partnership when Ben invited Kelly to codesign some discipline-specific scenarios for use in the English methods course accompanying the first of two student teaching placements in secondary education. Not long after that experience, Kelly was appointed as SOE’s associate dean for research, and she helped Ben to organize a study group for faculty interested in learning more about simulations in educator preparation. The idea for an edited collection of multiple perspectives on simulations at Syracuse emerged from monthly meetings of that group over three years. All of the chapters that follow include at least one author who was a member.

The purpose of this book, then, is to argue, with examples from across our collective, that simulations enhance the preparation of educators. In our view, simulations allow faculty to support their respective cohorts of teacher, school counselor, or school leader candidates in ways that closely approximate authentic problems of practice but, crucially, reduce the complexity of the instructional context in manageable ways for novices; ensure all candidates have comparable opportunities to practice; and reduce the risk for K–12 students, families, and colleagues who interact with those novices before they master key skills and habits of mind. In addition, simulations help SOE faculty bridge traditional silos to examine vexing issues about communication, cultural responsiveness, equity, and community that
Clinical simulations as signature pedagogy are relevant to the preparation of educators across the disciplines. In the sections that follow, we unpack several of the components of our argument, starting first with how we define and enact simulations and then turning to a discussion of how we came to see them as what Lee Shulman calls a signature pedagogy for SOE and the field of education more broadly. We outline what we see as potential benefits of the volume for readers who come to it with different needs and interests before we conclude with an overview of subsequent chapters.

**WHAT IS A CLINICAL SIMULATION?**

Simulations have been used across a range of pedagogical contexts, including but not limited to education, for many years. They vary along a number of dimensions, including how long they last, the degree to which they allow multiple pathways for learners, and the number of simultaneous participants they involve. In some instances, learners engage in simulation with known classmates—a design feature that reduces implementation complications but can also threaten perceived authenticity when peers break character. In other instances, learners engage with interlocutors not previously known to them, a feature that tends to increase verisimilitude but usually requires recruitment, training, and sometimes even compensation for interaction partners. A recent wave of attention has explored the affordances of digital technologies in facilitating simulations, with some initiatives involving instructor-facilitated online communication and others utilizing digital avatars with which candidates have no other contact. What nearly all simulations have in common, however, is their designers’ interest in leveraging planned but unscripted interactions to help learners identify, use, and reflect on knowledge and skills relevant to success in a particular domain.

At Syracuse—and in this book—we define a *clinical simulation* as a live, recorded interaction between an educator candidate and a trained actor portraying a standardized individual in an attempt to approximate a challenging situation in schools. We use the descriptor *clinical* when we speak and write about our approach to simulations to acknowledge our conceptual debt to medical education, where the use of that modifier is pervasive. We also use that language to emphasize the applied and instructional nature of the simulated encounters, which are distinct, in our view, from typical instructional approaches in most campus-based education courses as well as from typical field placements in schools.

We use the term *educator candidate* (EC) to refer to a future teacher, school leader, or school counselor enrolled in a preparation program, as
these are the populations with which we have used nearly sixty different simulations so far at Syracuse. Depending on the programs offered by your institution, you may also opt to employ simulations with other preprofessionals in education or other helping professions where success hinges on interpersonal communication, including school psychologists, social workers, occupational therapists, and athletic coaches.

In our model, the other person in a simulated interaction besides the candidate is a standardized individual (SI), a phrase drawn from medical educator Howard Barrows’s original use of what he called standardized patients within clinical simulations. Standardized patients are actors who are carefully trained to present distinct symptoms and communicate questions and concerns to future medical professionals in a standard, consistent manner such that multiple medical professionals-in-training engage with the same set of patient circumstances, concerns, and medical data. Face-to-face with the standardized patient in an exam room, each physician is challenged to move beyond a traditional, distant analysis of the “case” and instead conduct a diagnostic assessment, communicate with the patient, and construct a plan of action or treatment regimen.

Adapted to the needs of educator preparation, standardized individuals are actors playing the role of a school stakeholder such as a parent, a student, or a colleague. In our context, multiple actors enact the same schools-based scenario, which we usually refer to by the first and last names of the SI, for a group of candidates in a program or a course. Whether we have as few as three or as many as ten actors playing the same SI for a given simulation depends on the size of the candidate cohort. Most SIs have considerable acting experience; some are theater majors at local colleges, while others participate in local and regional productions. On occasion, most often in our educational leadership program, a simulation requires specialized knowledge to maintain plausibility. In these situations, we recruit and hire individuals with expertise in the profession (such as a retired building principal to portray a veteran teacher resisting recommended collaborations with other colleagues). Whether we specify particular identity categories such as race and gender in hiring SIs depends on the content of the simulation. Some scenarios are designed to explore the impact of such constructs directly, leading us to ensure that all candidates interact with actors who portray them consistently. In scenarios where a construct such as gender is not foregrounded, we typically select a pool of actors with varied identifications, allowing candidates to consider the impact of that difference in their whole-cohort debriefing but not holding it constant across individual simulated experiences.
As part of their training, SIs receive a three- to five-page, single-spaced interaction protocol that provides extensive character-building information as well as specific verbal triggers—the exact background, statements, questions, and nonverbal mannerisms that each SI must present and embody. SIs meet for one to two hours as a group with Ben and/or a relevant program faculty member to review this document in advance of the simulated encounters. At this time, the actors ask clarification questions, flesh out aspects of character motivation, and sometimes make suggestions for improvement that are subsequently integrated into the protocol.

We should note that our use of the term standardized to refer to the role actors play is intended to emphasize our desire for multiple candidates—both within and across cohorts—to engage with the same important content in a given simulation scenario. In no way do we intend to suggest, to ECs or to readers of this book, that we see all K–12 students, parents, or colleagues (or even all actors) as the same. Indeed, it is worth emphasizing that the interactional nature of our model means that individual candidates have varied simulation experiences shaped by their own choices, creating comparable but distinct learning pathways that can subsequently be unpacked with peers and instructors.

In fact, because a key objective of all simulations is for candidates to develop their ability to think on their feet during real-time professional exchanges, their instructions are much less detailed than those for the actors. ECs typically receive a one- to two-page, single-spaced protocol about a week before the scheduled simulation that provides background about the school and classroom context as well as a limited rationale for the pending interaction. A few simulations include supplemental documents, although most do not. The protocol is intended to help candidates understand why they are about to engage with a particular SI but not to prescribe their actions, decisions, or communications. Instead, we encourage candidates to engage in the simulation using any prior training, experience, and professional judgment that seems relevant to them.

When we began implementing simulations, nearly all of the taped interactions took place in small conference rooms within Upstate Medical University’s Clinical Skills Center, which is equipped and staffed to support medical simulations. Basic subcontract and purchased-service agreements allowed us to utilize spaces wired with permanent cameras and microphones and to access actor rosters for SIs. As our simulation initiatives grew, we began to use other spaces, including traditional classrooms and faculty offices, for interactions we documented with portable devices such as iPads. Using multiple spaces and different recording technologies gives us flexibility in
implementing the variety of simulations you’ll read about in this book as well as reduces some of our implementation costs. The variety of our current approaches suggests that you need not be located near a medical school to pursue simulations, although reaching out to colleagues at such an institution may uncover useful resources and expertise if such a school is in proximity.

We allocate an eighteen-minute window for each candidate to engage in the simulated encounter—enough time, we have found, for the learning experience to take shape. Each simulation that we facilitate is digitally recorded and immediately available to the candidate. ECs then have seven to ten days to deconstruct their respective simulation videos, supported by debriefing guides that focus them on specific triggers presented in a given simulation or specific practices they may have used or referenced during the interaction.

With but few exceptions, all educator candidates in a given cohort engage in the same simulated encounter on the same day, uniformity that promotes shared analysis. In subsequent class sessions, ECs typically select and share segments of their videos with their classmates, prompting both individual and shared consideration of the simulated situation. These debriefing sessions provide candidates with time and space to reflect on their practice, grounding their reflections in clear data and seeking input from their peers to help them judge the effectiveness of their decision-making in the simulated encounter. Figure 1.1 offers a distillation of the process that candidates typically experience when participating in a simulation.

**FIGURE 1.1 Overview of the simulation process**

<table>
<thead>
<tr>
<th><strong>One Week Later:</strong></th>
<th></th>
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<tbody>
<tr>
<td>Candidates receive the candidate interaction protocol for review from their instructor.</td>
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<tr>
<td>Candidates complete a brief preinteraction survey.</td>
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<tr>
<td>Candidates engage in a videotaped interaction with a standardized individual.</td>
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</tr>
<tr>
<td>Candidates participate in an instructor-led debriefing session with other candidates who interacted with the same SI.</td>
<td></td>
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<tr>
<td><strong>One Day Later:</strong></td>
<td></td>
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<tr>
<td>Candidates receive access to digital video of their interaction with the SI.</td>
<td></td>
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<tr>
<td>Candidates receive instructions about how to reflect on their experience in writing, with timestamps to reference particular moments in the video.</td>
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<tr>
<td><strong>Seven to Ten Days Later:</strong></td>
<td></td>
</tr>
<tr>
<td>Candidates share and discuss video clips they have selected for review by the class or cohort.</td>
<td></td>
</tr>
<tr>
<td>Candidates submit final written reflections on the experience.</td>
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EMBRACING CLINICAL SIMULATIONS AS A SIGNATURE PEDAGOGY

In SOE, we trace our application of the term *signature pedagogy* to describe simulations to the transcript of a speech by Lee Shulman, past president of the Carnegie Foundation for the Advancement of Teaching, that many of us read and discussed during a study-group retreat in the summer of 2016. In that speech, Shulman explored how four professions—medicine, engineering, law, and the clergy—utilized distinct pedagogies to prepare their respective practitioners. In each preparatory environment, faculty implemented a pedagogical approach pervasively and routinely. Over time, the very routine and extensive use of these pedagogies resulted in signature status within each profession. For example, Shulman cited the clinical rounds of medicine, where small teams of medical residents attend to and carefully study various patients each day, discussing diagnoses, regimens of treatment, and communications with patient and family. Shulman also described Socratic seminars in the field of law, where a presiding faculty member guides a group of law students through the careful review of a legal case and a rigorous dissection of their peers’ arguments for or against the facts of that case.

Shulman argued that these signature pedagogies help novices move beyond the cognitive apprenticeship of thinking like a medical or legal professional to practicing like one. In this view, new practitioners must acquire a distinct knowledge base, but this knowledge is rote and inert if they are not also taught how to shift that knowledge into action. One must also learn how to *be* the professional; that is, to gradually develop the ethos, character, and identity of the medical, legal, theological, or engineering practitioner. Shulman’s emphasis on teaching preprofessionals the “knowing, doing, and being” of the given profession led him to articulate a set of design features. He proposed that signature pedagogies across the professions are designed to be “habitual, routine, visible, accountable, interdependent, collaborative, emotional, unpredictable, and affect-laden.” Linking these key features together, Shulman outlined his thesis—that signature pedagogies in education are pedagogies of uncertainty, engagement, and formation (tenets that Ben explores in more depth in chapter 2). As we discussed the article content in light of our program-specific efforts, it was clear to us that live simulations as we were enacting them represented all three of these constructs.

That others were seeing simulations as a potential signature of preparation at Syracuse was also becoming increasingly clear. Discussions with current students and alumni across several programs revealed that many viewed their simulation participation as a vividly memorable and
important rite of passage in becoming a professional. Our admissions personnel began to incorporate discussion of simulations into our student recruitment efforts, where it sparked considerable interest among prospective applicants and their families. Several faculty coalitions working on curricular revisions for specific programs or groups of programs made sure to embed simulations into their proposals.

Even as simulations were taking hold across SOE, they were not—and still are not—the only approach our faculty uses. Many of us employ and research other initiatives designed to serve as a bridge between campus-based coursework and fully contextualized practice in K–12 schools, including teacher educator–guided rehearsals by candidates in subject-specific methods courses; critically oriented, project-based field placements that allow faculty, candidates, and certified teachers to serve K–12 students in shared space; and lesson study. We see all of these approaches as theoretically compatible with each other—as all grounded in common assumptions about the need to “turn away from an intense focus on the knowledge needed” for teaching, leading, and counseling and toward the situated use of that knowledge that Pam Grossman and others characterize as “practice-based” preparation. We expect that a range of learning opportunities, including extended student-teaching apprenticeships in schools, will continue to be available to our candidates. But simulations have generated the most unifying traction across SOE as a whole, reaching more candidates and involving more faculty than any other practice-based initiative to date, suggesting that it is not a stretch to apply the signature pedagogy description in this case.

And we are not the only scholars to make strong claims for simulations’ potential in education. As we have deepened our local commitment to this work, we have also interacted, both directly and indirectly, with many others using simulations in their own contexts. Some of these connections are linked to Ben’s research collaborations beyond Syracuse—for instance, to subcontracts from an Arthur Vining Davis grant to colleagues interested in integrating aspects of our model into simulation work at Vanderbilt University and the University of North Carolina. Researchers from institutions as varied as the Massachusetts Institute of Technology, the University of Pittsburgh, and the Technical University of Munich visited our campus to observe simulated encounters. When they did, we learned more about the innovative aspects of their own simulation initiatives. And we read widely in the published simulation literature, to inform both particular research projects and our participation in the simulation study group.
We have been more apt to see simulations as a signature pedagogy as we have expanded our sense of how they might be used. As described above, our initial designs focused on simulations with parents and caregivers, with subsequent efforts exploring other kinds of discipline-specific interpersonal communication that are challenging for novices to navigate in schools. Cross-program discussions in the study group helped us realize it would be productive to focus our attention even more specifically on how such interactions implicate our longstanding, SOE-wide interests in inclusive schooling—which we define as schooling designed to support engagement and achievement for heterogeneous groups of learners, including but not limited to students with disabilities—in educative spaces where individual differences are seen as assets and not deficits.\textsuperscript{13} This exploration has taken—and continues to take—two forms: (1) reexamination of existing protocol documents and accompanying interaction data with an inclusive lens and (2) design of new simulations that foreground these concerns more explicitly and with more critical and intersectional nuance. Most recently, racially biased police brutality in the United States, disparities related to COVID-19, and consciousness-raising student activism on our own campus have led us to set a new common focus around integrating antiracist principles more systematically in our simulation work. We will be helped in that regard by joint reading and discussion of a new book by Elizabeth A. Self and Barbara S. Stengel, early collaborators of Ben’s from Vanderbilt, who have adapted a number of our procedures to this particular purpose.\textsuperscript{14}

We cannot be certain that simulations will become as central to educator preparation as Socratic questioning is to law school. But we hope the many examples of how they’re used at Syracuse will convince you of how generative they might be in offering your candidates opportunities to engage in authentic activity, develop aspects of professional identity and strategy, and recognize that their experiences are grounded within and hold implications for the larger classroom and school culture.

**HOW THIS BOOK MIGHT HELP YOU**

While planning, writing, and editing this book, we have found it helpful to envision you, our audience, as potential members of our simulation study group—colleagues like us who are committed to improving practice through experimentation, inquiry, and reflection. Such a stance reminds us to be invitational and candid in tone, as our best group discussions have typically been those in which participants felt welcomed to the table and free to speak directly without judgment. This stance also reminds us to
anticipate and to welcome differences in knowledge and experience related to simulations and other practice-based approaches to educator preparation. That our group has productively included both our newest and our most veteran colleagues across five SOE departments suggests that simulations are an approach with a lot of “flex” to them—a pattern that informs our hunch that readers with varying background knowledge about simulations will find useful insights in the text, even if they’re not the same insights.

What you gain from the book will likely depend on your positioning and your goals for reading it. If you are an individual teacher, leader, or counselor educator interested in integrating simulations into a particular course or sequence of courses you teach, we hope that the book will demonstrate the potential benefits of doing so and spark ideas about the aspects of your course content that might be generative to simulate.

If you are faculty or staff involved in the redesign or expansion of a teacher, leader, or counselor education program, shared reading and discussion of the volume may help you consider new angles on practice-based approaches that can unify the program. We hope the descriptions of collaboration threaded across the volume will also illustrate the value of undertaking simulations as a team.

If you are a graduate student in teacher education, leadership, or counseling, you might be reading this book as part of a course or seminar. We hope that it presents compelling ideas about how you and others may shape preparation of professionals in those fields in the future. Numerous graduate students have contributed to the efforts described in these pages, with several pursuing excellent dissertations about simulations that are themselves worth reading.15

And, finally, while we expect that our core audience is likely to be those who work primarily in postsecondary institutions, we see a role for simulations in K–12 contexts as well. Ben Dotger and chapter 7 contributors Joseph Shedd, Leela J. George and Diane Canino-Rispoli have worked with central-office and building leaders from districts in both New York and North Carolina to design and implement simulations that speak to in-service professionals’ pressing concerns and continuous learning needs. If you work in schools rather than higher education, this book may spark ideas about how to support adult learning that will help you avoid the passive pitfalls associated with persistent professional development models such as the one-day workshops led by external experts.

In our view, one of the strengths of this volume is that it presents the simulation experience from multiple perspectives. You will see across the
chapters how faculty working in different programs adapted our common processes to disciplinary and developmental agendas, which we believe will illustrate both the principled core that drives our design work as well as the implementation flexibility it offers. A constraint associated with this strength, however, is that space limitations prevent chapter authors from providing fine-grained details about such topics as funding simulations or training actors. If you desire additional information about what we call the “how to” explanations, we refer you to several of Ben’s texts already in print. If your interest in simulations is ignited, we also encourage you to follow the trail of the notes in individual chapters, as many of the authors have published findings from simulation-focused work in discipline-specific, peer-reviewed journals.

**HOW THIS BOOK IS ORGANIZED**

We’ve sequenced this book intentionally into three sections where the lens zooms out, then in, and then out again. Section I, Background and Conceptual Underpinnings, includes this chapter you’ve just read and chapter 2. The latter lays out the conceptual foundations that make Syracuse-based simulation work coherent while allowing for disciplinary and programmatic variation. It applies Shulman’s lenses of engagement, uncertainty, and identity formation to various efforts in SOE and offers multiple examples of how these lenses are enacted by our faculty.

Section II, Program-Specific Uses of Simulations, includes five chapters focused on how simulations can address interaction-based problems of practice anchored in varied disciplinary contexts. Each chapter draws on empirical data from one study or multiple studies conducted by the author or author team. Each shares at least one insight or takeaway related to the use of simulations that is discipline-specific and at least one other insight related to an issue of interest to faculty preparing educators in other disciplines.

The first three chapters in section II focus on different dimensions of single-encounter simulations for candidates seeking initial teacher certification. Chapter 3, by Duane T. Graysay and Joanna O. Masingila, focuses on the role of postsimulation group debriefing in developing candidates’ knowledge for mathematics teaching. Chapter 4, by Michael L. Norris, Luis Columna, and Benjamin Dotger, explores how simulations provide practice for candidates in assessing the skills of students with disabilities and considering appropriate modifications to support their participation in physical education. Sharon Dotger and Benjamin Dotger share design tenets
in chapter 5 for simulations requiring elementary education candidates to explore explanations of scientific phenomena, a practice at the center of the influential Next Generation Science Standards.

The last two chapters in section II expand the focus beyond classroom teaching to include other school professionals. These chapters also consider what happens when education faculty design multipart simulations enacted at two or more time intervals, rather than a single sitting. In chapter 6, Sharon L. Bruner and Melissa M. Luke demonstrate how nested simulations—candidates’ multiple encounters with newly unfolding aspects of the same scenario—permit robust and integrated attention to four key domains in counseling. Chapter 7, by Joseph Shedd, Leela J. George and Diane Canino-Rispoli, describes how carefully sequenced, and in some cases linked, simulations across the educational leadership program prepare candidates for what these authors call “difficult conversations,” including feedback and evaluation conferences with underperforming colleagues.

Section III, Cross-Program Perspectives on Clinical Simulations, includes two chapters that return to a wider-angled lens, drawing on data and offering insights that transcend any single SOE program. Chapter 8, by Christine Ashby and Megan E. Cartier, reviews candidate data from five different simulations with a common focus on disability and difference—an analysis that reveals several productive directions for multidisciplinary faculty collaboration around simulations. In chapter 9, Kelly Chandler-Olcott examines the intentions, processes, and outcomes of SOE’s simulations study group to inform recommendations for how you might undertake collaborative design, implementation, and inquiry into simulations in your own contexts.

We hope that this volume inspires you to launch that work soon if you are new to it or deepens your commitment if you have already begun.