

# INTRODUCTION

THE IMPETUS to write this book came from a monograph entitled *A New Era for Educational Assessment* that I authored for Jobs for the Future.<sup>1</sup> In it, I laid out the case for the limitations of many of the assessment models and tools that had been developed over the past hundred years and that remain in common use today. I outlined the evolution of new ways of thinking about human performance and how these new ways were driving the development of learning and measurement models based on fundamentally different premises. I also made the case for a combination of the two, the old and the new, in a sensible and thoughtful fashion that yielded the most information possible about students as individuals and schools as organizations.

Since the publication of the monograph in 2014, events have only continued to affirm the monograph's basic premises. States and school districts are developing and implementing more complex, multidimensional systems of assessments designed less to judge students and schools and more to guide improvement. Technology also continues to advance and bring about vastly more powerful tools to analyze, store, and report data on an ever-wider range of human behaviors and learning processes. This book reports on the state of this evolution of assessment models, methods, and techniques at a point in time when education may be approaching an inflection point where classroom practices and organizational structures for delivering education will be reshaped radically, and when new approaches to assessment and data analysis will be critical to the success of any new system.

The tendency in education is to look for the bright, shiny object that purports to hold the answer. This temptation will be amplified as new shiny objects appear. This book does not merely tout the new or the novel as the answer to all educational problems. Instead, it describes a wide range of promising and emerging methods, techniques, and tools that, when used properly, can support both incremental improvements in current practice and the reshaping of education toward new purposes and outcomes.

The book's message is how to think about assessment models and methods, individually and in combination, the data they generate, and the analytical tools available to translate all of the data into actionable information. This is the notion of a system of assessments, and it is woven throughout this book. The concept is a driving organizing force at the heart of the book's sometimes understated message, which is not to abandon the old and seek only the new, but rather to learn how to meld and blend results from a much wider range of sources. Some of these sources are easily recognized as familiar approaches to grading and testing, while others are not at all test-like or they approach testing from a new perspective, but they all yield critical insights about students and schools.

Many of the ideas contained here were first voiced elsewhere in publications I authored and in the works of others. My own research over the past twenty-five years has focused on what it takes to be ready to succeed in college and careers,<sup>2</sup> and the influence of that work will be evident in various places where I use college and career preparation or college admission processes as examples. One of the core insights from my research, conducted with my colleagues at the Educational Policy Improvement Center (EPIC) and the Center for Educational Policy Research (CEPR), has been that students have long been admitted to college based on eligibility criteria that did not establish well how ready they were to complete their chosen program of study successfully. Establishing readiness, in order to improve student postsecondary success, requires more information on more aspects of students and their performance than classic eligibility models provide. Readiness, as defined by my model, consists of forty-two different elements.<sup>3</sup> Schools directly gather and report to colleges information on, maybe,

three or four of the forty-two. How could that number be increased so that something was known about how ready students were on all forty-two eventually? This goal was at the heart of my initial interest in systems of assessments, because gathering such a wider range of information would require a much broader set of tools and techniques. Additionally, it would require a different philosophy about measurement, with a much greater emphasis on students as active participants in their preparation for postsecondary education and in their improvement as students and learners.

This realization led me and my colleagues at CEPR at the University of Oregon and EPIC in Portland and Eugene, Oregon, to engage in the creation of a variety of new tools and techniques and to partner with some of the leading thinkers and organizations in the nation with a shared interest in rethinking assessment. Some of the models and tools that grew out of research at CEPR and EPIC are mentioned in the book even if they are not widely available commercially. They are the result of rigorous, multiyear research and development processes and are worthwhile for what they teach not only about what new approaches could look like but also of the challenges inherent in moving new tools and techniques into practice.

## AUDIENCE FOR THIS BOOK

I designed this book to be accessible to a wide range of readers with an interest in this topic. Assessment experts might find many of the explanations of complex psychometric concepts and techniques to be lacking in detail due to my commitment to making them more accessible to a larger audience. At the same time, even such experts may find at least some of the ideas in the book to be provocative and potentially thought provoking.

For those developing their initial knowledge and understanding of psychometrics and measurement, the book provides a decidedly non-technical way to think about some of the big ideas in testing and assessment and about the kinds of techniques that might make the most sense in a world where the role of data analysis and data use is rapidly evolving.

The many practical examples offered are not intended to be prescriptive at all or to provide all the answers, but to illustrate ways to think about assessment design, purpose, and use from a different perspective.

For educators engaged in the daily life of schools and schooling, the intent is to offer insight without oversimplification and to build on educators' prior knowledge in the area of assessment in order to paint a picture of what the next generation of assessment may look like. What some may find frustrating is that the book does not lay out the one-and-only approach to successful assessment. Instead, readers are invited to participate in the process of understanding what makes the most sense in their own settings and are then given the opportunity to think about the process they would use to develop and implement an appropriate system of assessments approach that fits within their context.

At one point I had hoped to write a Malcom Gladwell- or Todd Rose-type of narrative,<sup>4</sup> built almost entirely around stories and storytelling. Alas, this topic (and my way of thinking about it) ended up precluding a full commitment to such a style. I have, however, attempted to include a great deal of description, examples, and the occasional story or illustration in order to put the many concepts and ideas included here into context and to suggest what they look like in practice. I have also assiduously documented in footnotes the appropriate sources that support assertions made and research mentioned along with websites where more can be learned about many of the sample tools and techniques I mention or describe briefly but that deserve deeper treatment than I am able to provide here.

## OVERVIEW OF THE BOOK

The book begins chapter 1 with an explanation of the rationale for the notion of a next generation system of assessments. Next generation assessment consists of multiple measures that all converge on the unit of analysis, whether that is a student, classroom, school, or system, and that provide insight into strengths and areas in need of improvement in addition to any ranking or judging of those being assessed. Information from next generation systems of assessments is actionable by those

who are assessed. The assessments are highly valid; that is, they measure what they purport to measure, and they measure multiple important aspects of the phenomenon being assessed.

Three main factors make this approach necessary. Education has much less need to sort students, new understandings of the brain and learning are driving a revolution in thinking about how best to teach and to measure learning, and the federal government has adopted policy that potentially permits more variation in assessment at the state level. The ways in which current generation assessment affects schools and how tests are used to make decisions about students and schools also contribute to the imperative for a next generation of assessment practices. The importance of formative practices is emphasized in combination with the use of limited, focused summative measures.

Chapter 2 takes an extended look at the assumptions underlying current and next generation assessment. Here, again, the role of modern learning theory is brought into focus as a key driver for new assessment approaches as well as retention of key existing practices. Current generation assumptions are reviewed through the lens of standardized testing, their uses and limitations, and an examination of current classroom grading practices. Next generation practices are then contrasted with current generation. Components of a next generation approach such as educational standards and learning progressions and social-emotional and noncognitive skills are explained. The importance of proper interpretation and use of assessment results in order to enhance validity is considered, as is the need to integrate knowledge across subject areas, rethink the ways in which the domains of knowledge used to identify what is tested are defined, and examine how item response theory has opened doors for possibilities beyond classical test theory.

Next, chapters 3 and 4 present a set of ten key principles that specify the elements of next generation assessments. These include focusing on the learner as an actor, not an object; viewing student development along a novice-expert continuum; determining learner understanding of the structure of knowledge; promoting student ownership of learning and identification of interests and self-knowledge; using data to create student profiles to aid individual development and goal setting;

producing actionable information; ensuring high cumulative value and validity; providing insight into the integration of knowledge and use of knowledge in context; harmonizing instructional improvement and accountability to a greater degree; and being conscious of equity issues in assessment and seeking to address them.

Chapter 5 examines the range of tools, instruments, and techniques that can contribute to a next generation system of assessments. They are organized into three categories: Who I Am, How I Learn, and What I Know. The Who I Am category includes measures designed to enhance insights into self such as self-reported information, goal setting, career option exploration, help seeking, observations from parents and caregivers, and the use of behavioral data in early warning systems. How I Learn captures information on how effective students are as learners. This effort is accomplished through personalized learning systems, observation of learners, and use of student self-evaluation. Finally, the What I Know category examines the continuum of instruments designed to capture content knowledge primarily, from bits and pieces of learning to more holistic measures. The continuum starts by analyzing the uses of traditional standardized tests and then considers tests that also include responses constructed by students. Next are standardized performance tasks that capture more complex and varied knowledge and skills. The final set of measures are those embedded directly in the curriculum that reflect more directly what was taught. These measures include performance tasks, projects, and demonstrations.

Chapter 6 provides examples of assessments that exemplify some elements of next generation assessments. They include a range of programs such as Panorama Student Success, which reports student data in actionable ways; International Baccalaureate, which employs more complex assessments tied directly to classroom instruction; the Cambridge Diploma Program, which links curriculum, instruction, and high-quality assessments; the National Academy Foundation (NAF) portfolio, which is a key example of career-readiness assessment; and the Advanced Placement® (AP) Capstone program, which combines AP courses and their exams with integrative courses that have their own course-based assessments.

The chapter then examines a range of multidistrict collaboratives, most notably the CORE districts in California; New Hampshire's PACE statewide pilot; and the Assessment for Learning project, with its dozen distinct activities at the state, district, and school levels. The chapter concludes with an in-depth profile of one group of schools, the Summit Public Schools, that have taken major steps toward developing a next generation approach to assessment that drives the school's instructional program and is consistent with the ten principles laid out in this book.

Chapter 7 takes up the implementation challenges and opportunities inherent in a next generation approach. Major topics addressed include integrating new assessment approaches and tools into what is already occurring in the classroom and at the school; the complexity and issues involved that attend to working with multiple measures; the challenge of conceiving of an integrated system of assessments in place of a series of stand-alone measures; and, finally, what's involved with using next generation assessments for ongoing systems improvement.

Chapter 8 continues the discussion of implementation issues by outlining a nine-step process that could serve as a template for districts to follow if they were interested in moving toward a next generation system of assessments. A district needs to begin by having a clear purpose for moving to a next generation system. This is followed by an analysis of the culture, history, and politics of the district, and how these will affect the way the idea of next generation will be received. When beginning to take action, districts need to start from where they are currently and move incrementally. At this point, it's necessary to identify all possible and desired uses of assessment in the district before moving to the next step, which is selecting a portfolio of assessments and data that will comprise the system of assessments. With this information in hand, the district can then determine the data storage, analysis, and reporting needs it must address. Finally, planning for how data from next generation assessments will be used for continuous systems improvement completes the initial implementation process. This nine-step process is followed by a case study that illustrates how this could play out in a typical school district. The chapter concludes by

addressing several other key implementation issues including developing assessment literacy in teachers and administrators (and students and parents), providing effective professional development, aligning with external accountability systems, using information from large-scale assessments productively, and building support for next generation assessments.

Chapter 9 presents an example of a profile approach to summarizing information from next generation assessments. The case in point is readiness for college and careers. Profiles are discussed as a means to provide better information to students and to admissions officers alike on how ready students are for postsecondary education. The idea of readiness in place of eligibility is discussed, and the Four Keys to College and Career Readiness model is introduced and explained as a potential framework for identifying the key data that need to be assembled in a readiness profile. The pros and cons of high school grades as indicators of readiness are considered. Student self-knowledge is highlighted as a key often-overlooked indicator of college and career readiness. Strategies for organizing and managing the type of complex information inherent in this sort of profile model are presented along with a sample readiness profile and examples of high schools and colleges that are moving toward or piloting profiles for college admission.

The book concludes with a brief discussion of the nature of personalization and how and why personalization is replacing collective measures. The goal is to understand individuals better rather than where people stand in relation to the average. The next section of chapter 10 considers what educators can do to move toward a system of assessments approach followed by a high-level consideration of the policy issues that need to be addressed for next generation systems of assessments to thrive and be implemented widely.