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# Preface

In the United States, we are in the midst of a painful transition from a manufacturing-based economy to a knowledge-based economy. Most of us know full well that the knowledge, skills, and dispositions that were required for the industrial era are different from those that are required by the new economy, but few of us seem ready to actually learn and do something different. The institution of education sits squarely in the middle of the storm. Our citizenry needs to be retooled, but the people who are largely responsible for this—educators—are also trying to figure out how to retool themselves. Given this conundrum, the most pressing questions for educators today may be, How do we get started?, How do we focus attention on improvement?, and How do we change the face of education so that the face of our economy can also change? These are complicated questions that require thoughtful, practical answers.

One potential answer comes in the form of a relatively recent innovation in education: value-added analysis. By conducting a robust statistical analysis of longitudinal test data it is now possible to reliably estimate the contribution of a district, a school, or even individual teachers on the academic gains of students. For the first time, many educators have a reasonably reliable measure of productivity. This sounds like a small thing, but it is not. Because productivity measures connect processes to outcomes, they are essential for any kind of deliberate systematic improvement. This is why value-added analysis is one of the best levers available to help educators move from where they are to where they want and need to be. But what is value-added analysis? How can it be used to influence educational improvement? How can it help educators to build on their strengths and address their areas of weakness? How can value-added analysis be used to help more teachers help more students?

This book has been written to answer these and other essential questions about value-added information. This is *not* a book about

testing or statistical modeling. It is also not a book about whether value-added information should be used for teacher evaluation or for differentiated compensation. Instead this book is about *improving student learning*. It is a book written for educators and for those who work with educators to improve the quality of education that K–12 students so desperately need and deserve.

## How This Book Is Unique

We wrote this book because, at this time, there is nothing like it available to educators. Much of the current discourse about value-added analysis is about the policy implications, the methodological concerns, or the evaluative uses of this tool. What has remained largely unexamined is the power of value-added information to inform and shape educational improvement. We believe in educators and in their capacity to transform themselves. We also believe that value-added information is the right tool to start the crucial conversations to make this happen.

This book gives us the opportunity to address the all too common gap between *having* value-added information and *using* value-added information (McCaffrey & Hamilton, 2007). Perhaps we can diminish the *knowing-doing* gap by first bringing clarity to what value-added analysis is and then by providing concrete guidance to use value-added analysis that is grounded in the real-life stories of educators who are actually doing this work. We used this approach because stories tend to be powerful educational tools (Rossiter, 2002).

Further, our intention is to help educators think about what they can do to improve the focus and the quality of all the learning that goes on in their building. In our work with educators across the country, we have experienced firsthand how value-added information can be used to improve both the breadth and the depth of student learning. We have seen educators transform their practice when they have had the opportunity to access, comprehend, and respond to their value-added information. We have seen schools turn their results upside down when leaders have instituted the mindset and the structures necessary to carefully examine and act on data. We have seen school districts boost their performance to unprecedented levels when value-added information has been thoughtfully and systematically inserted into the school improvement process. And in many places, student engagement increases, office referrals go down, and teacher self-efficacy skyrockets.

These stories are worth telling. They provide the impetus that most of us need to try something new and different. In this book you will meet Katie and Heather, teachers who used their value-added

information to enrich the learning of all their students. You will be introduced to Kimi, a teacher leader whose school dramatically improved its results by carefully analyzing and responding to its value-added information. You will also hear about Tina and Bobby, principals who led their schools to remarkable levels of improvement.

Finally, and perhaps the most important reason we wrote this book, was to bring a fresh perspective on educational improvement. Improvement should not be an activity reserved solely for those who have poor performance evaluations. It should also not be an activity owned and led by outside experts. Instead, educational improvement must become a routine activity that defines what it means to be an educator. The good news is that ongoing educational improvement is not any more difficult than improvement in any other area of your life. It's about straightforward processes and continuous disciplined conversation and experimentation. It is about liberating and sharing the knowledge and the know-how that already exists in most schools. The value of data, and especially value-added data, is that it can help you identify and take advantage of the heretofore-undiscovered islands of excellence.

Whether value-added analysis is new to you or you are interested in putting your value-added information to better use, this book will help you think about and put in place the things you need to improve.

## Overview of the Book

To provide a clear pathway for readers, we have organized this book around a common-sense, five-step improvement cycle shown in Figure P.1. Based on years of working with teachers and principals, we designed this cycle to be simple enough to provide meaningful support, yet complex enough to capture the real issues associated with improvement at the classroom, the building, and the district levels. The iterative process depicted below is not unlike other improvement cycles that have been employed in the education and business fields for years. Here we elaborate on the classic Plan-Do-Study-Act cycle that W. Edwards Deming put forth beginning in the 1950s. The Value-Added Improvement Cycle consists of the following:

Step I: Jump Into Value-Added

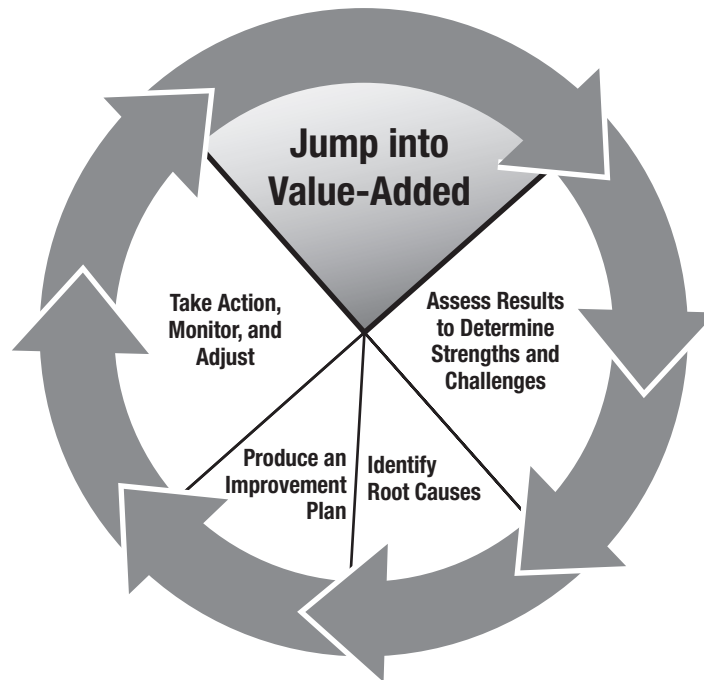
Step II: Assess Results to Determine Strengths and Challenges

Step III: Identify Root Causes

Step IV: Produce an Improvement Plan

Step V: Take Action, Monitor, and Adjust

**Figure P.1** Value-Added Improvement Cycle



Source: © 2011, Battelle for Kids.

### Step I: Jump Into Value-Added

The first step of the cycle, Jump Into Value-Added, is covered in the first three chapters of the book. There is no magic formula for how to get started other than making a commitment to fully delve into it with purpose and zeal.

In Chapter 1, we begin by defining value-added analysis and differentiating it from achievement data. Making this distinction is critical to your understanding about how to interpret value-added results. It is also important that you come to appreciate the summative assessment role that value-analysis plays in a balanced assessment system. This chapter also addresses some of the implications of value-added analysis and points to some significant research findings that have emerged from this metric.

Chapter 2 focuses on how to develop the conditions for success with value-added analysis, including how to create a data-driven culture, provide effective professional development, and gain access to value-added reports. In this chapter you'll also learn how some of our school partners have jumped into their value-added reports.

This chapter includes practical tools to help you and your colleagues hit the ground running with value-added analysis.

In Chapter 3, the focus is on systemic educational improvement and how value-added analysis provides a unique starting point for improvement at the district, school, and classroom levels. We introduce you to our educational improvement framework that we call BFK·Focus. This framework takes the form of a multilevel nested funnel designed to take educators through a data-based goal-setting process. Through the course of this book, you will systematically advance through each of the three stages of the funnel at each level of your organization.

### **Step II: Assess Results to Determine Strengths and Challenges**

Chapters 4, 5, and 6 engage you in the second step of the cycle—Assess Results and Determine Strengths and Challenges. In these chapters you will learn how to read district-, school-, and classroom-level value-added reports; produce a matrix to assess the results of those reports; and analyze disaggregated data to determine strengths and challenges of your district, schools, and classrooms.

### **Steps III and IV: Identify Root Causes and Produce an Improvement Plan**

The third and fourth steps of the value-added improvement cycle—Identify Root Causes and Produce an Improvement Plan—are presented in Chapter 7. The primary purpose of this chapter is to describe a process for probing the root causes of your system's core strengths and most pressing challenges. Our intention is to lead you through a guided root cause analysis that results in a useful improvement plan.

### **Step V: Take Action, Monitor, and Adjust**

Chapter 8 brings the value-added improvement cycle full circle. In this step, Take Action, Monitor, and Adjust, you will learn how to implement your improvement plan by acting on value-added information; monitor your implementation and make adjustments where needed; evaluate the success of your improvement plan; and then begin anew with fresh data. Along the way, we will share stories of teachers, schools, and districts that have moved from data to analysis to planning to action. These stories make clear that improvement is,

in fact, a consequence of thoughtful leadership, systematic action, and continuous improvement.

## Special Features

This book offers a unique, five-step, implementable approach to value-added analysis that will ensure a solid, robust plan based on your own specific strengths and challenges and inspired by the root causes of your own singular set of issues. Embedded in this approach is guidance on how to produce an improvement plan and then implement it, monitor, and adjust it as needed over time. Each chapter describes how to use the steps in the spirit of school improvement.

To support you in your implementation of the five-step process, we have included useful features in each chapter: case studies, real-life examples, end-of-chapter action steps, and reflective questions. The action steps and reflection questions will lead educators and professional learning communities in discussions about how to incorporate successful data analysis practices into their schools and classrooms.

A hands-on resource guide at the end of most chapters will include samples, protocols, and other tools to accompany the action steps for using value-added analysis. These will be short, one-page pieces that can be reproduced and used by teachers and leaders.

## Suggestions for Using This Book

The learning-doing gap is a formidable obstacle that has stood in the way of many well-intentioned improvement initiatives. Perhaps this is because we have historically spent more time in the learning and not as much time in the *learning how to do*. Learning how to do is best when we can learn from and with others. Children do not learn language without others who encourage their speech and shape their verbalizations through modeling. Likewise, it is best to commit to weight loss by engaging in a program designed to teach us new behaviors and hold us accountable for measureable results. In that vein, we encourage you to engage a professional learning community to read and discuss this book with you. Together, the members of your community can not only learn about value-added information, but also make plans to put their learning into action. We recommend that one chapter be assigned each month to each member. Then, as a team, work through the discussion and reflection questions and action steps at the end of the chapters.

## Putting Value-Added Reporting Into Context

By now you may be wondering where value-added analysis is available and whether you have access to this information. There are many places around the United States where value-added analyses are being produced, but districts that currently use value-added analysis to link student progress to classroom teachers are still ahead of the curve.

At this writing, sixteen states have value-added information available, and as a result of the Race to the Top (RttT) competition, there are many other districts interested in the possibilities that value-added analysis offers. States such as North Carolina, Ohio, Tennessee, and Pennsylvania provide value-added reports statewide. The System for Teacher and Student Advancement (TAP) partners with schools in 14 states and in Washington, D.C. and uses value-added analysis to support its approach to school improvement that involves multiple career paths, ongoing professional development, instructionally focused accountability, and performance-based compensation.

Several large cities also produce value-added reports. San Diego Unified School District and Eagle County Schools, Colorado, produce annual measures of student growth. The New York City Department of Education issues teacher data reports to show teachers how effective they are compared to other similar teachers across the district. Recently, the Los Angeles Unified School District began issuing value-added measures of teacher effects. Texas school districts—including the Houston Independent School District, Forth Worth Independent School District, and Longview School District—use value-added analysis to determine which teachers are eligible for additional compensation. As well, several recipients of federal Teacher Incentive Fund (TIF) awards also rely on value-added estimates to inform teacher award models.

## Reform Initiatives

In a 2009 address to the National Conference of State Legislatures, Bill Gates, former Chairman of the Microsoft Corporation, shared his foundation's interest in identifying highly effective teachers. He observed that "when you see the power of the top quartile teachers, you naturally think: We should identify those teachers. We should reward them. We should retain them. We should make sure other teachers learn from them."

Gates's statement signals the high priority that the Bill and Melinda Gates Foundation has given to identifying, rewarding, retaining, and

sharing the lessons of the most effective teachers. Its interests run parallel to reforms encouraged by the Obama administration. In 2009, President Barack Obama and Secretary of Education Arne Duncan announced the \$4.3 billion RttT educational innovation fund. In order to compete for the funding, states needed to accelerate educational innovation and embrace bold improvement efforts. The RttT winners of 2010 include the District of Columbia, Delaware, Florida, Georgia, Hawaii, Maryland, Massachusetts, New York, North Carolina, Pennsylvania, Ohio, Tennessee, and Rhode Island. A key component involves teacher effectiveness and evaluation reform, and as such, connects directly to value-added analysis. RttT states are adopting student growth measures as one component of a multiple-measure evaluation design. Value-added analysis is a growth measure that links teacher practice to student growth and can potentially be used to identify and reward effective teachers and schools, as well as to inform teachers and principals on how they can improve their practices.

To give some idea of how value-added analysis has been put into action, we can look to the Benwood schools of Chattanooga, Tennessee. Once considered the worst in the state, Benwood, a collection of elementary schools, has achieved well-documented success by using professional development and strategic teacher placement and retention strategies to turn their school system around. "Benwood schools went from 53 percent of their 3rd graders scoring at the advanced or proficient level in reading on the Tennessee Comprehensive Assessment Program to 80% scoring at that level in 2007" (Haycock & Crawford, 2008).

What did they do to improve? Benwood principals and teachers began to routinely review value-added reports to determine areas of strength and challenge. Teachers observed and sought guidance from teachers who were strong in particular areas based on value-added results. The highest-performing teachers were recruited to teach the lowest-performing reading students in a privately funded after-school program. Those teachers and principals whose students grew more than expected received a monetary bonus. Throughout this book we provide other examples of how value-added information has been a centerpiece of school improvement. Your path to increased student achievement and overall school improvement can start right now as you begin to tailor these five steps to meet the needs of your own school setting.