

FOREWORD

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The Thomas B. Fordham Institute has long observed the state of U.S. education data from two perspectives. As ardent users of this information for our own research, we have often struggled to find accurate and timely data on important questions that we seek to answer. Several years ago, for example, we undertook to answer what seemed like a straightforward question about charter school funding: how many per-pupil dollars do charters receive in various states in comparison to district-operated schools? To our dismay, answering that question turned out to be anything but straightforward. Our team of analysts wound up devoting 18 months and a sizable budget to arrive at a set of defensible numbers. The existing data, in other words, were nowhere near equal to the rather obvious analytic and public policy use we wanted to make of them. In that instance, they were elusive, non-comparable, out of date, very confused and sometimes misleading.

From our other perspective—that of observer, commentator, booster, and sometimes critic of education reform across the United States—we have witnessed hundreds of policymakers struggling to make decisions in the face of incomplete information; school leaders in need of better, clearer, and more actionable data about the performance of their teachers and pupils;

taxpayers and public officials puzzled by why more resources keep pouring into a system from which little more pours out by way of learning; and fellow analysts frustrated by their inability to draw clear conclusions from muddy or outdated statistics.

Fordham president Chester Finn and trustees Diane Ravitch and Bruno Manno have particularly strong and long-standing interests in solving this problem, dating back to, indeed before, their own stints in the U.S. Department of Education as well as their scholarly work. Keenly aware that what gets measured and reported in education is what gets taken seriously, mindful that few problems are correctly diagnosed without good data and even fewer solutions successfully implemented absent accurate information, they encouraged a close examination of this topic.

And so we did. With the generous support of the Robertson Foundation, we set out to examine the state of education data in 21st century America and to shape a vision of how this crucial yet seldom studied enterprise might be done differently and better. We knew going in that a small think-tank-style project would not, in and of itself, redirect U.S. education data, but we believed we could usefully lay out the problems, air some alternatives, help get this issue back on the policy agenda, and do a bit of stirring of this important pot.

Every once in a while, it's necessary to do for education data what data and those who compile and disseminate them are supposed to do for education itself. Historians know that Congress's charge to the original federal "Department of Education," shortly after the Civil War, was "for the purpose of collecting such statistics and facts as shall show the condition and progress of education in the several states and territories, and of diffusing such information respecting the organization and management of schools and school systems, and methods of teaching, as shall aid the people of the United States in the establishment and maintenance of efficient school systems, and otherwise promote the cause of education throughout the country."

That enterprise is even more vital today—and not just for Uncle Sam. Education data in modern America represent a multi-dimensional, multi-layered undertaking with the power to do great good. The assignment we gave ourselves was to appraise its own "condition and progress." Toward that end, we enlisted an esteemed set of scholars, analysts and writers whose contributions appear in these pages.

What's in This Book

Paul Manna of the College of William & Mary begins by mapping the landscape of data providers and users and suggesting why the data made available by the former are not always the data needed by the latter.

Chrys Dougherty of the National Center for Educational Achievement then initiates a trio of chapters on “Why We Don’t Have the Data We Need,” as he offers a perceptive analysis of the role of privacy laws in general and FERPA (the Family Educational Rights and Privacy Act) in particular in restricting what information is available, particularly to policymakers and analysts. (The FERPA landscape could soon be modified by revised federal regulations now underway.) Kenneth Wong of Brown University details the problems posed by federalism, by the multiplicity of government units and agencies with data responsibilities, and by institutional and bureaucratic self interest. Journalist RiShawn Biddle then depicts California’s struggles to develop a statewide data repository, illustrating how policy, politics, and human foible can conspire to limit the availability and dissemination of high-quality education statistics.

Lest the reader despair, those critical chapters set the table for five authors who offer a tantalizing menu of possible alternatives and solutions, under the banner of “Innovations and Promising Practices.”

Nancy Smith of the Data Quality Campaign shows how two states, Kansas and Virginia, have found ways to overcome political and technical challenges to make solid advances in their education data systems.

Stanford’s Margaret Raymond dares to dream of an entirely new system of achievement data management, a “student backpack” of information that accompanies individuals from place to place, separate from the oft-vexed state and district systems. Frederick Hess of the American Enterprise Institute and Jon Fullerton of Harvard offer a vision, too, showcasing the potential uses of data to manage schools and school systems more efficiently and effectively.

To add perspective on these issues from beyond the usual U.S. education space, we enlisted three creative and knowledgeable authors. Daniele Vidoni of the Italian National Institute for Educational Evaluation (INVALSI) and Kornelia Kozovska of the Centre for Research on Lifelong Learning (CRELL) explain how school systems in the United Kingdom, Italy and South Korea use education data in powerful ways, while Public Impact’s Bryan Hassel explains how other vital sectors of the American economy have ingeniously deployed data to effect valuable advances.

Finally, “The Way Forward” offers two future-oriented chapters that integrate much of what came before. Aimee Guidera of the Data Quality Campaign urges states and education leaders to take specific steps to use their newly built data systems thoughtfully and constructively. Fordham’s Chester Finn closes the volume with a vision for the year 2025, in which Washington joins with schools, districts and states to collect and deploy education data in ways that most benefit those who depend on this information.

What We’ve Learned

The authors’ tireless work and steady flow of ideas, commentary and insights over the last year have given us new appreciation for longstanding problems in U.S. education data, as well as for progress made over the past decade and the opportunities and challenges that lie ahead.

We’ve also spoken with a number of people—administrators, teachers, parents, policymakers, analysts—who have first-hand experiences with education data. This mini-tutorial has underscored and amplified both the important advances that America has recently made on the education data front and the sizable problems that remain.

Let us share our ten key takeaways:

First, America has made significant gains in data collection and use—and a small army of organizations is pressing for further gains.

We hope that readers come to share our appreciation for the significant progress that the country has recently made in education data collection and use. The much-criticized No Child Left Behind Act (NCLB) has in fact led to important strides in the quantity, timeliness and potential uses of pupil (and school, subgroup, district, and state) achievement data. This added transparency has raised the level of public awareness and debate about school performance in general and achievement gaps in particular. According to a veteran teacher in an urban school to whom we spoke, “NCLB was a wakeup call for our state. It forced us to recognize and spotlight the achievement gap in our state, the largest gap in the nation.”

Nor is NCLB the only force driving improvement in this sphere. Emerging technologies are changing how such information is collected and used by making data entry, correction, analysis and dissemination far easier than before. States that wish to can now look at their data from multiple perspectives

and for a variety of purposes: for holding people and programs accountable, for informing policy, for evaluating programs, for rewarding performance, and for identifying necessary interventions. “We can now ask many questions that we could not previously investigate,” observed a state-level analyst. Advances in technology generally, and web-based applications in particular, make what were formerly a pipe dream—real-time data—a possibility.

Many groups have been pressing for further improvements. At the risk of overlooking others who deserve plaudits, let us salute the Data Quality Campaign (DQC), a venture of the National Center for Educational Achievement (NCEA), originally founded by Tom Luce and formerly known as Just for the Kids, which has been skillfully nudging states toward longitudinal databases. We’re also impressed by the Schools Interoperability Framework (SIF) Association, whose 1,400 members are working on common software rules and definitions for seamless data sharing. Greatschools.net and SchoolMatters.com provide parents and policymakers with more school-level data than have ever before been accessible (or intelligible). Note, too, that SchoolMatters.com is run by Standard & Poors, an encouraging example of a for-profit firm’s interest in education data—and capacity to improve them.

Nonprofit funders such as the Bill and Melinda Gates Foundation, the Walton Family Foundation, the Eli and Edythe Broad Foundation (all three of which support the Fordham Institute) and many others are infusing resources into these and kindred reform efforts.

In the public sphere, the U.S. Department of Education’s *EdFacts* initiative is streamlining and centralizing the many state data submissions it receives. Under former commissioner Mark Schneider’s expert leadership, the National Center for Education Statistics (NCES) strengthened its performance (and its helpfulness) on a dozen fronts. The Council of Chief State School Officers (CCSSO) is working with state education leaders to improve their databases, including tighter connections between K-12 and higher education, while CCSSO’s SchoolDataDirect provides comparable state education data and presses for additional reform. Grants from the federal Institute for Education Sciences to support statewide longitudinal data systems are enabling some of the advances urged by the Data Quality Campaign and others.

In sum, progress has been made and lots of praiseworthy efforts are underway. Our hope with this volume is to complement and build upon them so that the U.S. can overcome the great challenges that remain.

Second, despite the improvements, today's education data are far from adequate.

Many of America's education data systems remain archaic. They are exceedingly slow and frequently non-comparable from place to place. For example, pre-K information systems typically don't "speak" to the K-12 systems, which in turn don't "speak" to the higher education systems. Some important information (e.g., the cost of teacher benefits) isn't even systematically gathered. Seemingly obvious questions (e.g., where does the money come from and how is it spent) are all but unanswerable. Key definitions (e.g., dropout) remain unsettled. And because most of the data systems are institution- rather than student-based, they're ill-equipped to "follow" individuals who move from school to school or "graze" their way through college on multiple campuses. Nor are systems based on traditional institutions well-suited to such innovations as charter schools, "virtual" learning, proprietary colleges and part-time students (or faculty).

Amid the boatloads of data that *do* exist, moreover, identifying useful information—especially about "what works"—sometimes resembles seeking needles in really big haystacks. That kind of analysis typically requires joining data of more than one sort, a task that is often painfully difficult. A common problem is the misalignment between "administrative" data (meaning those generated in the course of a school's daily affairs, such as attendance, fiscal information, and test results under state accountability systems) and "survey" data (meaning those collected *outside* the course of a school's daily affairs, such as test results generated by National Assessment of Educational Progress or Programme for International Student Assessment or teacher data collected by the Schools and Staffing Survey). Without careful planning, administrative and survey data cannot be mapped to each other, limiting the analyses that can be performed on each set of them.

Meanwhile, privacy concerns have given rise to restrictions on data gathering and use, constraints that, however well-intended, are yet now out of whack with reality and arguably do as much harm as good to the conduct of American education.

Third, we need more longitudinal data and value-added analyses.

While NCLB and most state-level accountability systems focus on snapshots of student achievement, typically at year's end, what educators crave, in the words of one observer, are "[data] that tell us about individual student achievement over

time.” These data would allow one to examine trends, compare subgroups, and investigate the reasons for progress, or lack thereof, with the aim of mounting instructional improvements or institutional interventions. And the kinds of “value-added” analysis that become possible with multi-year data on student achievement are far more precise (and fairer) gauges of school (and teacher) effectiveness than the year-end snapshots.

Yet even as NCES undertakes more and better longitudinal studies, and despite heroic efforts by the DQC, too many states still lack longitudinal databases that deal with student achievement. One obstacle is nervousness about using “unique student identifiers” (which allow records from different years to be connected without names being revealed), compounded by the technical challenges of “tracking” individuals over time.

Fourth, educators crave — and deserve — more formative data.

In our conversations with principals and superintendents, many voiced the view that NCLB and state-level standards-based reform efforts have led to “huge emphasis” on summative data, disproportionate to the role that such information can play in improving instruction. As one superintendent argued, “if you’re ever going to change the culture of schools, you have to improve and use formative assessment information.” Swift “formative” feedback loops provide practitioners with information that enables them to solve problems before these are compounded. Yet the capacity to develop and use effective such assessments remains underdeveloped in many places, in part because such systems are relatively costly and require concomitant investment in professional development. These are investments worth making, though, as we begin to see examples, from Virginia to Connecticut and beyond, of schools and districts making regular and savvy use of data to improve their practice.

Fifth, we need better means of investigating the sources of school effectiveness.

Educational progress depends on not only tracking the performance of students and schools but also understanding what drives achievement at the several levels (individual, classroom, school, district, and state) that matter most. As an urban superintendent summed it up, the primary question is, “what variables affect student growth?” Some jurisdictions are using improved data systems, with variables measuring characteristics of the school environment, to probe the factors that produce educational results. As a

result, said one district leader, “we can then begin to think about relationships and correlation.”

Data can be mined to investigate (for example) the relationship between changes in curricula and student performance by subgroup, or to examine whether different investments in professional development or common planning time yield changes in pupil achievement.

Some jurisdictions have begun to develop data-driven management systems that seek to boost achievement by “distilling the myriad of performance indicators the school system generates down to key leverage points.” The Montgomery County, Maryland, M-Stat system and the Western States Benchmarking Consortium are two such examples. In Montgomery County, leaders have found seven “leverage points,” including reading skills in K-2, fifth grade advanced math, and Advanced Placement participation and performance—areas that now receive additional attention. These sorts of analyses should be common practice, but today they’re exceptional.

Sixth, we need, in particular, to link student and teacher data.

A critical data gap in most jurisdictions is the relationship between pupil performance and individual teachers. Creating such a link will allow comparisons of how students fare in different classrooms and enable us to pinpoint what (and who) is making the difference. Yet such linkages also demand protections against misuse and misinterpretation, in order to create school cultures that are comfortable with, even crave, comparisons of how students fare in different classrooms. As one long-time education advocate observed, “I am conceptually very interested in teacher-level data, but also very nervous about whether that data will be good or fair.” Fears that such information will be used in a punitive fashion, the belief that teachers should not be held accountable for deficiencies that students bring to class, and a general resistance to transparency all feed the reluctance to explore teacher effectiveness via data on student learning.

Seventh, we need to link K-12 and other databases.

To know for sure whether children are getting the education they need to succeed, we must start with better information about what they do before and after their K-12 schooling. What sort of preschools, if any, did youngsters attend, and what did they learn there? Who gets in to college, how well are they

prepared, how do they fare there, and how does any of that tie back to their experiences in the K-12 system? What jobs do graduates take—and can we discern how these are shaped by their K-12 and postsecondary experiences? Analysts and policymakers don't need names, but they do need the capacity to link aggregate information about students with data about their subsequent educational and work lives.

Eighth, academic achievement isn't the whole story.

The focus of NCLB and other accountability systems is, of course, on pupil performance—what one might call “the bottom line” in education. Yet that single-minded focus may lead us to overlook innumerable measures of how a school or district is functioning: how well it is keeping the lights on and the buses running, how safe its hallways and classrooms are, or how knowledgeably and efficiently it is hiring teachers for its classrooms. In several urban districts, analysis by the New Teacher Project showed that inefficient human resources processes were driving away many of the best candidates before they could even be employed.

To spot, much less fix, such crucial management breakdowns, schools need “measurement *for* performance” as well as “measurement *of* performance.” This becomes possible if educators adapt such corporate management tools as “balanced scorecards” and customer satisfaction surveys. Absent such information, school and district executives are struggling in the dark.

Ninth, data are only useful when people know how to use them.

Some schools and districts have more and better data than they do practiced and eager users. A common concern was voiced by a district leader: “The majority of our schools do not have a data specialist. If schools are evaluated on data, then schools need people who are responsible for making sense of that data.” It is clear that a critical corollary of having data is developing teachers and administrators who are adept at analyzing and applying them.

Tenth, and finally, parents need information, too.

Today's parents may have access to ample information about their child's school, but too few know how their own daughters and sons are doing there, what to do about problem areas, how to compare their school to others nearby, and what they can do at home to help. As one principal put it, “these parents

need reports that are easy to read and easy to understand. The information needs to be prescriptive. Right now parents and guardians aren't getting suggestions on specifically how to help."

Whether one's child has mastered this week's lessons or this year's curriculum is only the start. Parents also need data about college preparation, enrollment and retention, and career readiness, presented in understandable ways.

Education data have innumerable clients and potential clients, as well as suppliers, aggregators, and analysts. One goal of this volume is to provide a clearer perspective on that sprawling and diverse population as well as the condition of the data themselves. Though the education world is awash in clients, interest groups, and reformers, the cause of better education data has far too few advocates. It's not a high profile issue, and many people settle for today's inadequate information because they can't quite picture the ways in which tomorrow *could* be different. The editors of this volume want to change that situation—to assist readers to visualize how our education data could and should be better, and the good that such improvement would do for America and its children.

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