

Chapter 1

Excited About Data—Really?!

When the first edition of this book was published, who knew that so many people would get excited about data—thinking it means more stuff on their phones? Or that “We do data differently” would be an annoying advertising slogan on television?

As noted in the Preface, the “D word” has had many connotations over the years. To avoid the negative ones, advocates have switched emphasis to synonyms like *results* and *evidence* and *outcomes*. Various adjectives have been substituted as attempts to make “data-driven” processes sound less threatening by calling them *data-guided*, *data-enhanced*, *data-enriched*, or *data-informed*. Recommendations from studies have been parsed into those that are *scientifically based* versus *evidence-based* versus *sound theories*—somewhat in relationship to how “hard” their data are. Now that the word *data* is used to refer both to sets of information and the amount of capacity to access, store, or use the information, perhaps the advice that “you need to add to your data plan” is more exciting than “we need to add data to your planning.”

In this chapter, we’ll review critical sources and uses of data and celebrate those that are more common now. We’ll also explore the degree to which the progress made has been from a mindset of compliance and/or commitment. The chapter title “Excited About Data—Really?” prompts reflection on whether we’ve looked at data for our own real, authentic purposes—or because we did want to act as professionals in response to external mandates—or because we feared for our job security if we didn’t. And any of those responses is understandable. What this third edition hopes to do is add *more* excitement by providing examples of real school people *using* a variety of data based on a shared commitment to learning—of *course*, for our students . . . *all* of them . . . **and** for ourselves . . . **and** for our colleagues. At the time of the second edition, the strategic plan of the

Association for Supervision and Curriculum Development (ASCD) included a goal about developing educators' capacity to address complex problems with this description:

The 21st century educator will thrive in a work culture that stresses collaboration, knowledge creation, and a respect for diversity. No longer working in isolation, teachers and administrators will . . . examine ways to meet individual needs through the sophisticated and recurrent analysis of data. School communities will commit to long-term, ongoing, school-specific professional development that builds both individual and community capacity. Wisdom, after all, develops only when knowledge is viewed through the lenses of keen judgment, insight, interwoven relationships, and wide experiences.

There's been a lot of progress, but I'm not convinced we're quite there yet. But, then, I never expected to be excited about data *myself* either.

UNEXPECTED EXCITEMENT

I had just been appointed to my first principalship. I stopped at the district office and asked for any materials I could pick up that would help me prepare for the coming school year. I was given a large wad of keys of all sizes and three notebook binders of district policy and procedures, each four inches thick, covered with light blue canvas cloth, threadbare at the corners, unraveling along the spine (that's how it was done before flash drives). As I headed for my car, the heavy, pointed keys tore through the lining of my suit pocket and fell to the ground. As I bent to retrieve the keys, the stack of notebooks in my arms became unbalanced, and they tumbled to the ground; nine rings popped open, fanning their contents across the parking lot like a deck of cards in the hands of a gambler. I was not off to an auspicious beginning. I never found the locks to match some of those keys, and the time it took to reassemble the policy notebooks exceeded the total number of times I opened them in the next three years.

The only other thing the district gave me was a registration form for some training called Effective Schools. That small brochure turned out to be the real key that unlocked doors for me and provided principles of leadership that have guided me for many years. My school served students who were Caucasian, Native American, Vietnamese, Cambodian, Hmong, and African American. Their parents were blue-collar workers at the nearby meatpacking plant or state prison. Many lived with assistance in low-income housing projects and some alternated time in town and on the reservation. Their test scores were second lowest of the elementary schools in a district of 47,000 students. I was delighted to learn that Ron Edmonds and other researchers in the United States and England had found schools where student achievement exceeded the levels typically associated with their demographic profile. These schools that defied the findings of the Equality of Educational Opportunity report, or the Coleman Report, were characterized by seven factors that became beacons to light my way:

- Strong instructional leadership
- A clear, focused mission
- A safe, orderly environment
- Teaching oriented to time-on-task and opportunity-to-learn
- High expectations for student success
- Frequent monitoring of student progress
- Home-school communication and parent involvement

I was excited about the potential for strengthening these characteristics at my new school, but I was the only one who knew about them. I lacked an ally, and I had a Title I certificated position to fill. With only three days to go until the start of school, my yet-unknown ally fortuitously moved into town and applied. We began to study together and to look at how Title I services had been delivered in our school. It was a typical program, with small groups of students pulled out of the classroom for remedial skill drill, delivered by instructional aides, and supervised by the certificated teacher. There was almost no interaction between the Title I aide and the classroom teacher, except an occasional note in the staff mailbox that would read this way: “Suzie Student needs to work on . . .” or “Peter Pupil is failing in . . .”

With varying degrees of support, we changed from “pull-out” to “push-in” and assigned the aides to work in the classrooms. We identified a set time each week for the classroom teacher to conference with the Title I teacher about the content that would be taught in the *coming* week. We switched from “fix after failure” to “prime the pump” and helped students review their prior knowledge and practice prerequisite skills in advance of the whole class instruction.

Some teachers were resistant to having another adult in the room, or, as some admitted, didn’t like having “those children” in their rooms the whole day without a break from them. Some students became uneasy because their stereotypes were being challenged. One day, a sixth grader made an appointment with me to discuss the cheating that was going on. He claimed to be representing a “lot of us” who think the teachers are giving away the tests to certain kids. His evidence of this crime was this: “There’s some kids who never got anything but Ds and Fs and now they’re getting Bs, and there’s no way that could be.” Even the state Department of Education became suspicious when we reported our standardized test score gains from fall to spring a year after the changes. They came for an audit, validated the gains, and a state department newsletter declared Bancroft Elementary “the best kept secret in the state.”

That is the simple story of how I got excited about the power of data. How could staff, students, or the state argue with the evidence? Our results allowed us to continue with our change process and, in turn, raised our expectations of student capability—and our own efficacy. Being a “best” kept secret in a state was a lot more exciting than being the “worst” performer in the district.

THE URGENCY REMAINS

Since that early experience, some things have stayed the same while others have changed immensely. The underlying need for use of data continues

to be emphasized. A review of twenty-five national and state studies is synthesized in Figure 1.1. Some were reviews of other research conducted over a period of years on the same topic. Others examined high-performing schools with specific populations and settings. Nine characteristics emerged as themes in multiple studies:

- Clear and shared focus
- High standards and expectations for all students
- Effective school leadership
- High levels of collaboration and communication
- Curriculum, instruction and assessment aligned with standards
- Frequent monitoring of teaching and learning
- Focused professional development
- Supportive learning environment
- High levels of family and community involvement

One of the studies reported on sixteen elementary schools outperforming schools with similar levels of poverty and mobility, proportion of English language learners (ELLs), and other factors. Those schools that beat the odds had four things in common:

- A caring and collaborative professional environment
- Strong leadership
- Focused, intentional instruction
- The use of assessment data to drive instruction

When I first reviewed these findings—and on many occasions since—I am struck by the similarity between these characteristics and those seven correlates of Effective Schools that first began to light my way. Strong instructional leadership has grown into shared instructional leadership. A clear, focused mission has evolved into being equity-minded. A safe, orderly environment has expanded into the realization that it's about relationships as much as routines, and new resources have been created to help educators adopt culturally responsive practices. Opportunity to learn is still just that—made clearer with references to guaranteed, viable curricula and access to skilled, experienced teachers and up-to-date materials and technology. High expectations for student success are stated more overtly (but still too often questioned covertly). Frequent monitoring of student progress has surged for some students and been replaced by once-a-year high-stakes testing for many. And the need for home-school communication and parental involvement remains a huge challenge.

From all three research sources, use of assessment and data to drive instruction and monitor student progress frequently (not annually) emerge as critical. The bottom line is the importance of data—up close, formative assessment data that teachers can use to make decisions about student learning and plan instruction that meets their needs.

More recently, as part of the waiver process from the worst sanctions of the No Child Left Behind Act (NCLB), many states have adopted teacher and principal evaluation systems based on years of solid research on effective teaching. Three common models arise from the work of Marzano, Danielson, and the Center for Educational Leadership (CEL) at the

Figure 1.1 Synopsis of National Research Reports									
Research Base Summary									
Characteristics of High Performing Schools									
National Reports	Clear & Shared Focus	High Standards & Expectations	Effective School Leadership	High Levels of Collaboration & Communication	Curriculum, Instruction & Assessment Aligned with Standards	Frequent Monitoring of Teaching & Learning	Focused Professional Development	Supportive Learning Environment	High Levels of Family & Community Involvement
Comprehensive School Reform	X			*	X	*	X		X
Dispelling the Myth		X			X	X	X		X
Educational Reform and Students at Risk	X		*	X	*	X	X	X	*
Hawthorne Elementary School	X	X	X	X	*		X		X
Hope for Urban Education	X	*	X	X	X		X	X	X
Key High School Reform Strategies		X		X			X		X
Leave No Child Behind	X	X	X	X	X	X	X		X
Org. Characteristics of Schools that Successfully Serve . . .	X	X	X	X	X		X	X	X
Profiles of Successful Schoolwide Programs	X	*	X	X	X	*	X	*	X
Promising Practices Study of High-Performing Schools	X	*	X	*	*	X	X		
Promising Programs for Elementary and Middle Schools	X				X	X	X		
Schooling Practices That Matter Most	X		X		*	X	*	X	X
Schools That Make a Difference	X	X	X	X	X	X	X	X	X
Stories of Mixed Success	X		X	X	X		X		X
Successful School Restructuring	X	*	X	X	X	*	X	X	*
Toward an Understanding of Unusually Successful . . .	X	X	X	X	X	X	X	X	X
Turning Around Low-Performing Schools	X	X	X	X	X	X	X	X	X
Washington Reports									
Bridging the Opportunity Gap	X	X	X	X	*	X	X	X	X
Make Standards Meaningful	X	X						*	
Make Standards Stick	X	X	*	X	X	X	X		X
Make Standards Work	X			X	*		X		X
Organizing for Success	X	X	X	X	X	*	X		X
Reality of Reform			O	*				O	O
School Restructuring and Student Achievement in WA	X			X			X		X
Washington State Elementary Schools on Slow Track . . .	O		O	O	O		O		
Total	22	16	18	21	21	15	23	12	21
X Explicitly identified as key finding, or in discussion of findings * Inferred or identified indirectly in descriptions O Identified as important by noting the absence or lack thereof									

Source: Shannon, G. S., & Bylsma, P. (2003). Nine characteristics of high performing schools. Olympia, WA: Office of Superintendent of Public Instruction.

University of Washington. Two elements in the Marzano Teacher Evaluation Model refer to tracking student progress and providing students with recognition of their status on learning goals. Danielson's Framework for Teaching Evaluation Instrument refers to assessment or data in three of its four domains, including components based on knowledge of students' skill levels, designing student assessments, using assessment in instruction, and maintaining accurate records. One of the 5 Dimensions of Teaching and Learning (5D) undergirding the CEL Teacher Evaluation Rubric is completely devoted to Assessment for Student Learning with six indicators reflecting both teacher and student use of data. In Washington State, principals evaluate teachers in the model chosen by their district and are in turn evaluated under The AWSP (Association of Washington School Principals) Leadership Framework. Thirteen of the twenty-eight elements in their rubric refer to use of data.

The importance of data remains unchanged—with increased accountability for its use. But the context has shifted dramatically.

EXCITEMENT—KILLED BY COMPLIANCE

In the intervening years since the second edition, educators have lived through increasing levels of sanctions of NCLB. They have “raced to the top.” They have hoped their states sought waivers. They have adopted Common Core State Standards. They have implemented high-stakes tests—sometimes several different ones in just a few years. Amidst these external mandates, many have sincerely sought to create professional learning communities. And they have been impacted by new technologies for instruction, assessment, and data management. *Some* have lived through these challenges, but some have left the profession in despair. I feel this keenly. A close family member—exactly the type of person we most need in the profession—was among the departing.

The basic components of NCLB included annual testing of reading and math for all students in Grades 3 to 8 and once in high school, plus science at one Grade 3 to 5, 6 to 8, and 10 to 12; identifying rigorous standards for those assessments; and setting targets on a pace for 100 percent proficiency by 2014. Nonparticipation would essentially mean no federal funding. But not meeting the annual targets also raised the spectre of an escalating set of sanctions. Parents had to be given the option to attend another school. Principals and teachers could be replaced. Eventually the state or a designated entity could take over the school or district. As it became clear that the goal of 100 percent proficiency by 2014 would not be met, a process was created to seek waivers from the most draconian sanctions. These waivers focused attention on the educators themselves by requiring new teacher and principal evaluation systems based on research and including links between teacher performance and student growth.

The impact on schools and teachers will be explored in more depth in subsequent chapters. Some aspects of the requirements had positive potential, which will also be noted. But in general, priority was shifted to focus on “THE TEST” itself. As states developed or adopted new academic standards, time and energy was devoted to curriculum realignment. Explicit instruction in the necessary knowledge and skills was replaced

by “test prep.” As new assessments were piloted and flaws were discovered, tests were revised or replaced—keeping educators in a state of uncertainty and making use of longitudinal data difficult and suspect. The sheer management of the testing requirements required so much time and energy that designated assessment coordinators at the school and district levels spent weeks away from their usual roles of instructional coaching, curriculum work, professional development, and other supports to teachers. On a recent day in a high school, the professional in this role had over 6,000 steps on her fitness bracelet by 9:15 a.m. The test with all its technical and accommodations requirements had resulted in the necessity for 88 separate testing groups—and none could be conducted in the same room at the same time. The hyperemphasis on preparing for and being judged by results of one high-stakes assessment contributed to a jaundiced view of assessment and data in general. Serious attempts to incorporate and use formative assessment faced increased competition for time and motivation.

The mandates did include some components with promise that should not be left behind as NCLB is replaced by the Every Student Succeeds Act (ESSA). Common Core State Standards, while vague in some areas and overwhelming in sheer numbers, did—at least—become common. Thus, they had some potential for equity of expectations for learning across states. Disaggregation of data by student subgroups forced all stakeholders to be aware of gaps in student success. Development of teacher and principal evaluation systems based on instructional frameworks grounded in years of research provided rubrics showing growth paths in critical teacher behaviors. In states that did not link student growth to once-a-year scores on a fluctuating series of high-stakes tests, many educators were prompted to work on collaborative student growth goals using benchmark assessments and common formative assessment that more directly measured, and could more promptly guide, their instructional decisions.

Concurrent with the timing of NCLB, the Individuals with Disabilities Education Improvement Act (IDEIA) was reauthorized and introduced the term *Response to Intervention (RTI)*. Both NCLB and RTI require research-based models that include reliable screening and progress monitoring of student responses to evidence-based instruction. They also require the use of data to match instructional interventions to areas of specific student need as soon as those needs become apparent. Data-based decision-making is the essence of good RTI practice; it is essential for the other three components: universal screening, progress monitoring, and multileveled intervention. This last component evolved as tiers of intervention and then levels of support with a newer acronym MTSS: Multi-Tiered System of Supports. All components must be implemented using culturally responsive and evidence-based practices.

During the intervening years, two other aspects of teacher practice grew in strength voluntarily. More and more schools aspired to become professional learning communities, building on the original research of Shirley Hord and expanding through the auspices of the Learning Forward organization and other consultants and publications. Fidelity to critical components of the research is mixed but can grow forward in a less punitive, more authentic environment. A second factor affecting teacher practice has been increasing use of technology in instruction, assessment,

and data management. The quality of decisions about data management systems and the amount and type of implementation support have resulted in these products being perceived as valuable tools or inflexible tyrants.

Meanwhile, as NCLB ruled at the macro level and classroom teachers served valiantly at the micro level, two national professional organizations pushed for change. ASCD launched its Whole Child initiative to maintain visibility and advocacy for the student as more than a test score, with her future dependent on a broader range of knowledge, skills, and experiences than reading and math proficiency. Learning Forward pursued an agenda of supporting student learning through powerful professional learning opportunities for educators. One clear result of their efforts is the inclusion of this definition of professional development in the full text of ESSA itself: “activities that are *sustained* (not stand-alone, 1-day, or short term workshops), *intensive*, *collaborative*, *job-embedded*, *data-driven* and *classroom-focused*” (p. 205, italics mine). Many of those adjectives stand in sharp contrast to what teachers experience as well-meaning attempts to help them improve student learning.

EVERY STUDENT SUCCEEDS ACT ENTERS AMID CONTINUING CHALLENGES

This new federal act contains many familiar requirements, while leaving more autonomy to states and districts and strictly prohibiting some powers of the U.S. Department of Education. (A detailed chart comparing components of NCLB and ESSA is available on the ASCD website.) Annual testing of all students in reading and math will still occur in Grades 3 to 8 and once in high school, plus science once at each school level, but states may select interim benchmark tests instead of one annual megatest, may allow districts to choose their high school test, and may limit the total amount of time for mandated testing at each grade level. The secretary of education may *not* specify any aspect of assessments. Results from assessments will still be disaggregated by socioeconomic status (SES), limited English proficiency, diagnosed disabilities, and racial and ethnic group. Three additional subgroups include homeless students as well as those in foster care or with parents in the military. In response to curricular areas and programs that had found themselves left behind in NCLB, districts must use 10 percent of any Title IV funds to support counseling, music and arts, foreign languages, history and environmental education—and another 20 percent for nutrition, physical education, bullying and harassment prevention, and similar needs. This review of disaggregation requirements and recognition of whole child needs raises the gut-wrenching question of where we now stand on those criteria—and what data should be collected and used as we move forward.

The ASCD Whole Child initiative provides a yearly national and state-by-state snapshot of related indicators. The most recent report described 22 percent of America’s children living in poverty but only 14 percent of white children compared to 39 percent of black children, 37 percent of American Indian children, and 33 percent of Hispanic children. About one-third of high school students are overweight or obese, and 20 percent

were bullied at school in the past year. Only 52 percent of children surveyed reported that they always cared about doing well in school. Thirty-four percent of fourth-grade students had scored proficient on the most recent National Assessment of Educational Progress (NAEP), and the same percentage of eighth graders reached proficiency in math. Clearly, NCLB did not achieve its targets.

The distribution of poverty among racial groups reflects recent findings about achievement gaps in America—narrowing somewhat by race and ethnicity but widening by income level. Synthesizing twelve nationally representative studies, Reardon (2013) noted that the income achievement gap has grown 40 percent larger over the past three decades. The college completion rate for higher-income students has grown sharply, but the completion rate for students from low-income families has barely moved. Taking a longitudinal look at student data, Reardon reported that the income achievement gap is wide when students enter kindergarten but changes little during the K–12 years, prompting recommendations to invest more heavily in preschool and the earliest grades and “ensure that all students have equal access to high-quality teachers, stimulating curriculum and instruction, and adequate school resources (computers, libraries and the like).”

Rimmer (2016) referred to these factors as opportunity gaps, noting that “a quality education is for many, particularly our most vulnerable students, the *only* pathway out of poverty” but that these students “often don’t have full access to such resources as quality pre-school education, the highest quality teachers, maximum amounts of instructional time, enriching life experiences, college preparatory curriculum, engagement with rigorous content and authentic learning” (p. 1).

When Kati Haycock (2016), CEO of the Education Trust, testified on ESSA implementation before the Senate Committee on Health, Education, Labor, and Pensions, she reported that during the NCLB years, “achievement among black, Latino and low-income students has improved.” Haycock reported the percentage of fourth graders below basic proficiency in math was reduced by more than half between 2000 and 2015, with similar improvement among students of color. At the high school level, graduation rates improved from 59 percent of black students to 73 percent and from 66 percent of Latino students to 76 percent. However, she also emphasized that “. . . elementary reading is one of the most important predictors of high school life opportunities, yet almost half of our black, Latino, and Native children are still reading below the basic level” (p. 2). Like Rimmer, Haycock spoke about teacher quality, citing a pattern in which low-income students and students of color are assigned to ineffective, out-of-field, or inexperienced teachers. In a similar vein, Sparks (2015) referred to a thirty-three-country study of 15-year-olds’ scores on the Program for International Student Assessment (PISA), which specifically identified unequal access to rigorous math content as a driving force behind performance gaps. In spite of various gains in other measures and grade levels, Hanushek’s analysis of 2013 NAEP data (Camera, 2016) revealed that the average twelfth-grade black student placed only in the 19th percentile in reading and at the 22nd percentile in math. Looking back over the fifty years since the Coleman Report, he predicted that—at the current incremental rate—“it will be roughly two and a half centuries

before the black-white math gap closes and over one and a half centuries until the reading gap closes.”

The Coleman Report did not shock the nation into adequate voluntary action. NCLB, with its mandates and sanctions, had some positive effects but mixed with other kinds of losses noted in this and subsequent chapters. ESSA will not be a panacea either. That is why this chapter title challenges readers to get excited about data “real-ly” . . . from real commitment, compassion, and curiosity and not from a focus on how much or little can be done to comply with a newer federal act.

WHAT DATA MATTERS NOW

The data that matters now is—as it has always been—much more than the state test scores that have taken center stage in recent years. Previous editions of *Getting Excited About Data* included a list of sources of data available in most settings and useful for addressing important aspects of teaching and learning, the staff and school culture, student engagement, and family and community involvement (see Figure 1.2). The only category no longer in widespread use is national norm-referenced achievement tests. Italicized items in the figure show the few additions that have emerged in the past ten years. The increase in use of benchmark (or interim) assessments has been a response to the focus on RTI and the inability to use changing state assessments in any legitimate way to track longitudinal progress of individual students. Common formative assessments have gained visibility through the work of Doug Reeves, Larry Ainsworth, and Solution Tree’s trademarked model of “PLCs at Work.” The bolded bullets under Demographics represent the three new categories for disaggregation included in ESSA.

Findings from these multiple sources are often compiled into categories that represent a balance of focus: on academic and cultural conditions, on both cognitive and affective domains of students’ experiences, and on staff characteristics and community involvement. In Chapter 7, Figure 7.1 (p. 108) displays four bullet points in the section “School Portfolio.” These bullet points represent use of four types of data: Academic Student Data, Nonacademic Student Data, Staff Data, and Parent/Community Data. The last three sections should incorporate both quantitative (or objective) data and perceptual (or subjective) data that provides insight into how students, staff, and stakeholders experience that school. Writing about a school system change in Hawaii, Victoria Bernhardt (2015) refers to four data types as Demographics, Perceptions, Student Learning, and School Processes. In his article on data dashboards, Rothman (2015) reports that Monroe County, Georgia, organizes data around student learning outcomes, organizational effectiveness, public engagement, and professional learning while California tracks eight categories that include student achievement, student engagement, college and career readiness, school climate, parent involvement, basic services, implementation of state standards, and access to rigorous coursework. In Alberta, Canada, the six categories are safe and caring schools; student learning opportunities; student learning achievement; preparation for lifelong learning, the world of work, and citizenship; parental involvement; and continual improvement.

Figure 1.2 Sources of Data

- College Entrance Tests
 - SAT
 - ACT
 - Other
- Criterion-Referenced (Standards-Based) Tests
 - Mandatory State Assessments
 - National Assessment of Educational Progress
 - *Benchmark/Interim Assessments (e.g., MAP, AimsWeb, STAR)*
- Beginning- and End-of-Year Tests
- Midterm, Semester, and Course Exams
- Local Unit Tests
- *Common Formative Assessments*
- Grades and GPA
- Graduation Rates
- Status of Graduates
 - 2 years out
 - 5 years out
- Local Unit Tests
- Team Projects/Exhibitions
- Performance Checklists
- Individual Student Work
- Homework Monitoring
- Student Attendance Data
- Student Participation Data
 - Extracurricular activities
 - Community service
- Student Behavior Data
- Student Demographics
 - Gender
 - Racial/ethnic group
 - Home language
 - Socioeconomic status
 - Mobility
 - **Homeless**
 - **In Foster Care**
 - **Parents in Military**
- Climate/Perception Surveys
 - Staff
 - Students
 - Parents
 - Community
- Career Interest Surveys
- Questionnaires
- Focus Groups
- Interviews
 - Staff
 - Students
 - Parents
 - Community
- Checklists, Rating Scales, and Inventories
- Observation Logs
- Journal Entries, Anecdotes
 - Staff
 - Students
- Staff Attendance
- Staff Qualifications
 - Teaching in area of major
 - Graduate degrees
 - Years experience
 - Students
- Professional Development Participation
- Parent Involvement Data
 - Conference attendance
 - Volunteer participation

But there is a difference in motivation between a mandated list and a collection of data chosen by the school as having significance for students, staff, and constituents. An alternative to organizing data under headings or categories is to raise critical questions that matter to the participants and provide the data needed to address them, as in Figure 1.3. However the data is organized, decision-making and planning must be based on a combination of data sources: information on outcomes achieved, as well as the conditions and opportunities provided, and feedback from those involved.

PROGRESS IN DATA USE

In their mega-study for the Wallace Foundation, Louis and colleagues (Louis, Leithwood, Wahlstrom, & Anderson, 2010) reported that all districts and schools now have adequate and similar data sources *and* that the greatest variability occurs in the way those data are used. Over the past thirty years, through various official and unofficial roles and channels, I've been privileged to work with schools in over thirty states and several countries. I have reviewed successful and unsuccessful applications for grants and awards and noted the differences in responses related to assessment and data use. The previous edition outlined eighteen critical tasks that differentiated the extraordinary from the ordinary based on the perspective of my observations and study.

Figure 1.3 Critical Questions and Data Sources

Are students learning?

- State assessment data
- Districtwide assessments
- Curriculum-based classroom assessments
- Collaborative analysis of student work

Are students connected and engaged?

- Disciplinary actions
- Attendance
- Truancy
- Graduation/dropout rates
- Co-curricular participation
- Survey results

Are teachers/staff engaged and productive?

- Teacher attendance
- Professional development participation
- Survey results

Are parents and community confident and supportive?

- Parent-teacher conference participation
- Survey results

Those eighteen uses continue to surface as descriptors related to high data-use schools. The good news is that progress has been made on all! Figure 1.4 reviews the list and adds an informal reflection on whether the progress has been limited or laudable. Developments on each data use are briefly discussed next, followed by additional points of emphasis from recent studies. These are tasks that high-performing schools do with data:

Create a culture of collective responsibility for all students. Progress: Limited. NCLB and RTI have increased awareness of student needs, but changing a culture is more difficult than adding a structure or activity, because it's about beliefs and a history of "how we've always done things

Figure 1.4 Progress in Data Use		
	Limited	Laudable
Create a culture of collective responsibility for all students	X	
Understand that assessment is an integral part of the instructional process	X	
Test their results against their espoused mission	X	
Make clear distinctions between inputs (by adults) and outcomes (for students)		X
Use both objective and subjective (perceptual) data appropriately	X	
Focus on most critical priorities to conserve time, energy, and money		X
Drill down for student- and skill-specific data in priority areas		X
Plan forward as students rise—to respond to individual skill gaps	X	
Plan backward to fill gaps in the instructional program	X	
Look around at research, best practices, and exemplary schools		X
Look within to analyze curriculum and instructional strategies	X	
Select proven strategies for implementation		X
Identify and plan for student populations with specific needs		X
Identify formative assessments to balance large-scale, high-stakes tests	X	
Monitor rates of progress over time—student and cohort	X	
Gather evidence of both implementation and impact of improvement strategies	X	
Consolidate multiple plans	X	
Take the initiative to tell "the rest of the story"	X	

around here.” A laudable rating would include a total absence of comments about “those kids,” or “they’re not my kids,” or “Mr. Smith’s kids.” Coteaching models would not create a single section of each course in which every student with an individualized education program (IEP) is placed. Chapter 2 explores more about beliefs and efficacy, and Chapter 5 emphasizes collective action on behalf of struggling students.

Understand that assessment is an integral part of the instructional process. Progress: Limited. The emergence of instructional frameworks and common formative assessments has increased the focus on assessment as an early part of unit planning instead of the last step. Educators understand in theory that curriculum, instruction, and assessment are an interrelated set of constructs and that assessments should be developed based on the established learning targets. In reality, the term *assessment* still brings a first reaction related to the implications of a high-stakes test.

Test their results against their espoused mission. Progress: Limited. Through various school improvement initiatives dating back decades now, schools have been “writing” mission statements. It’s still hard to find a setting where conversations are frequent around what the mission (or vision or beliefs or collective commitments, etc.) would look like and sound like and what would be changing in measures of learning and satisfaction.

Make clear distinctions between inputs (by adults) and outcomes (for students). Progress: Laudable. A decade ago, reports of success in school improvement efforts too often focused on what the adults had done, such as trainings provided and attended. NCLB did provide momentum to focus more on student results.

Use both objective and subjective (perceptual) data appropriately. Progress: Limited. Objective data tell us *what* needs attention. Very often, excellent ideas for *how* to resolve concerns are embedded in responses from students, staff, and other stakeholders. Unfortunately, many schools and districts are reducing their use of surveys and interviews because they “already have more data than we can deal with.”

Focus on most critical priorities to conserve time, energy, and money. Progress: Laudable. As more schools strive to become professional learning communities, “staff members, with their school leaders, are using data to make decisions about what to learn, how to learn it, how to transfer and apply it to their classrooms, and how to assess its effectiveness” (Hord, 2009, p. 43). However, the reality is that high-stakes testing in reading and math has defined those as the “priority areas,” when the intention of this data use is for educators to determine *their* priority areas—which might include needs like student engagement that cross content areas and also impact nonacademic measures like attendance and discipline.

Drill down for student- and skill-specific data in priority areas. Progress: Laudable. The emphasis of RTI on use of data for screening and progress monitoring has been a (mostly) positive force in progress, with a few unintended consequences pointed out in subsequent chapters.

Plan forward as students rise—to respond to individual skill gaps. Progress: Limited. This data use focuses on moving individual student data from grade to grade so there can be seamless focus on the support that struggling students need. Because it relies on more local data than state tests, it has not received as much attention.

Plan backward to fill gaps in the instructional program. Progress: Limited. Both of these data uses have been impacted by the NCLB-era focus on high-stakes tests, which have not remained the same year to year. The result has been an annual review of areas of low performance at each tested grade level, with less time for vertical articulation.

Look around at research, best practices, and exemplary schools. Progress: Laudable. Emphasis in recent years on implementing research-based practices has contributed to more use of clearinghouses that vet research studies and the emergence of publications and consulting services that provide information and training on effective strategies—the first two parts of this statement. Exemplary schools in terms of their results on state tests can be found on state websites. It can still be very difficult to identify the top-performing schools with similar size and demographics—“schools like ours”—in order to learn from their practices and progress.

Look within to analyze curriculum and instructional strategies. Progress: Limited. It is now fairly common practice to study best practices, but progress is limited in the rigor applied to analyzing what is actually occurring in classrooms. To what degree has the curriculum realigned to standards resulted in a realignment of unit plans? To what degree have the strategies “taught” in professional development been effectively and consistently added to student experiences? The promising practice that will move this forward is use of a research-based instructional framework to conduct learning walk-throughs, gather and analyze the data, and provide both feedback and targeted support based on the data (Rimmer, 2016).

Select proven strategies for implementation. Progress: Laudable. As noted in the previous paragraphs, it has become easier and more common to access sources that describe strategies with evidence to support their value and *select* one. As also noted previously, the necessary follow-up and support for consistent *implementation* of a proven practice is not as consistently provided.

Identify and plan for student populations with specific needs. Progress: Laudable. Screening and progress monitoring in RTI has increased the use of data to identify specific needs of students. Multidisciplinary MTSS teams plan interventions for struggling students and monitor their progress. Although laudable, these endeavors do not seem to include systemwide focus on subgroups with achievement gaps based on SES and race or ethnicity.

Identify formative assessments to balance large-scale, high-stakes tests. Progress: Limited. The use of formative assessments is becoming more prevalent—but with mixed degrees of consistency and commonality. Chapter 2 will discuss how a balanced assessment system can influence beliefs about data and provide powerful information for teachers and students.

Monitor rates of progress over time—student and cohort. Progress: Limited. The primary focus on high-stakes tests, which have changed too frequently, has made it difficult to monitor longitudinal data. As schools and districts increasingly use and track their own assessments in their own data systems, this task will be more manageable.

Gather evidence of both implementation and impact of improvement strategies. Progress: Limited. Before student results change, teacher

practice has to change. A school improvement plan that promises to “teach one new evidence-based practice per month” is well-intended, but if it does not provide support and data-gathering for implementation, it may also be unable to demonstrate an impact on student learning—with the unintended consequence of further discouraging the staff.

Consolidate multiple plans. Progress: Limited. More mandates have required more kinds of plans to be written and reports generated. I have seen no decrease in the number of “Now, why are we doing this?” and “So where does this fit in?” questions asked at professional development sessions and team meetings.

Take the initiative to tell “the rest of the story.” Progress: Limited. This data use involves documenting, sharing, and celebrating progress that is being made locally—regardless of what the state may be reporting on a larger scale. The limited progress may be attributed to sheer fatigue and the vicious cycle of working so hard to make something happen that there’s no energy left to report and celebrate it, when that very celebration could be the source of renewed energy to continue the effort.

More recent studies of data use have provided support for these eighteen data uses and added new perspectives. The Learning from Leadership studies that encompassed nine states, forty-three school districts, 180 schools, and 312 classrooms (Louis et al., 2010) described high data-use schools as those that were as follows:

- Actively using data to monitor the outcomes of school improvement plans
- Using formative assessments of student progress at regular intervals throughout the year
- Using data in making decisions about professional development plans
- Using data in conversations with parents about student performance and programming
- Using data to move beyond problem identification to problem-solving [and] gathering additional data to better understand the causes or factors related to the problems in question

Three of the previously stated findings reinforce data uses already addressed in Figure 1.4 and previous editions. Two additional uses are now added to Figure 1.5 in bold italics. Figure 1.5 also references the chapters that provide tips and examples for each data use. For example, discussing data with parents is introduced in this edition in Chapter 5. Use of data in professional development planning is described as one of the “appropriate supports” in Chapter 12.

Use of data as a critical component in professional learning has been emphasized by the Learning Forward organization, making it one of six *Standards for Professional Learning* (Learning Forward, 2011).

At the classroom level, teachers use student data to assess the effectiveness of the application of their new learning. When teachers, for example, design assessments and scoring guides and engage in collaborative analysis of student work, they gain crucial information

about the effect of their learning on students. Evidence of ongoing increases in student learning is a powerful motivator for teachers during the inevitable setbacks that accompany complex change efforts. At the school level, engaging teams of teacher leaders and administrators in analyzing and interpreting data for example, provides them a more holistic view of the complexity of school improvement and fosters collective responsibility and accountability for student results . . . Ongoing data collection, analysis, and use, especially when done in teams, provide stakeholders with information that sustains momentum and informs continuous improvement.

Figure 1.5 A Further Look at Uses of Data

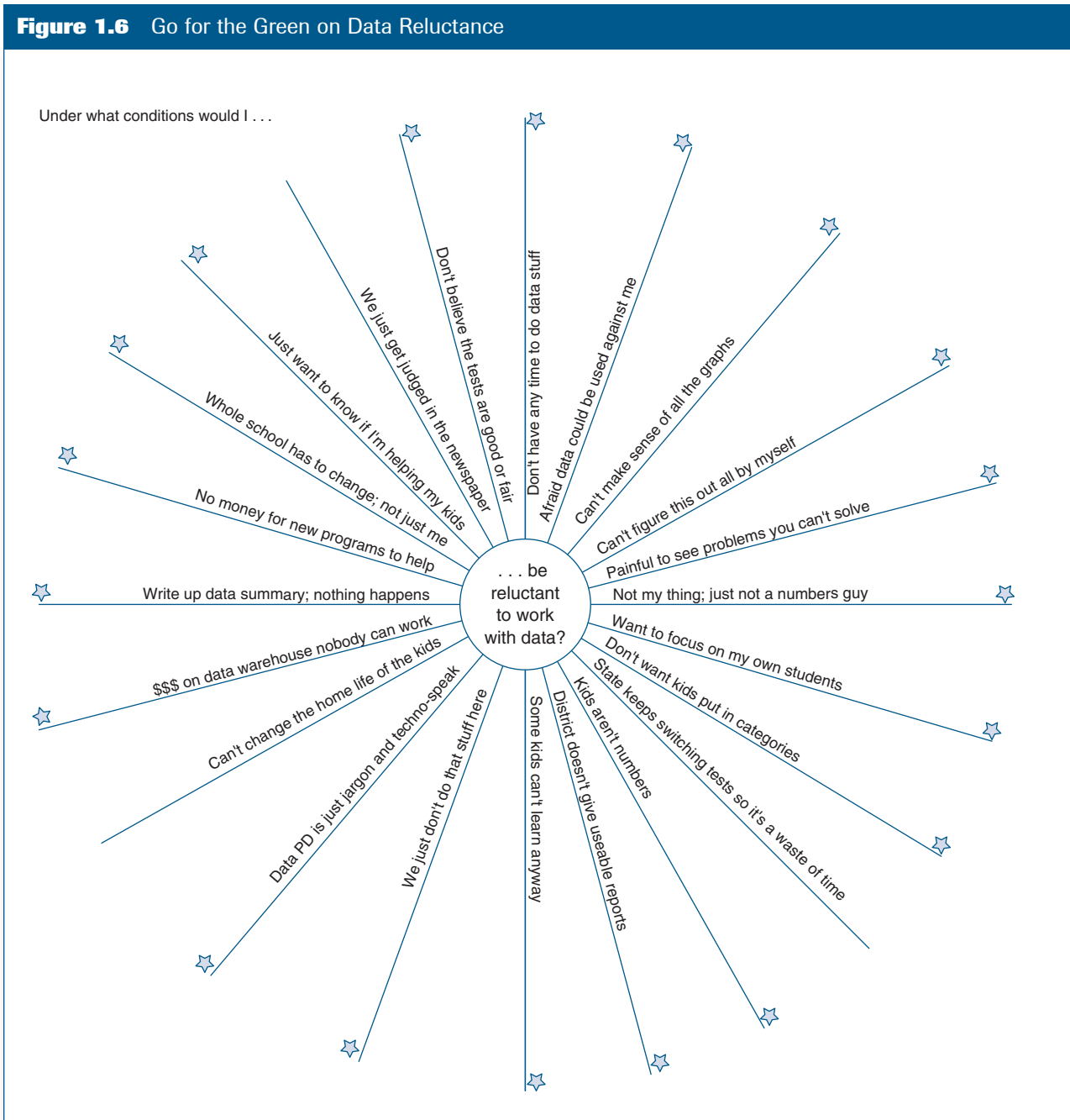
Use data to:	Learn how in:
Create a culture of collective responsibility for all students	Chapters 2, 3, 4
Understand that assessment is an integral part of the instructional process	Chapter 2
Test their results against their espoused mission	Chapter 2
Make clear distinctions between inputs (by adults) and outcomes (for students)	Chapters 2, 11
Use both objective and subjective (perceptual) data appropriately	Chapters 1, 5, 11
Focus on most critical priorities to conserve time, energy, and money	Chapters 8, 9, 10
Drill down for student- and skill-specific data in priority areas	Chapter 5
Plan forward as students rise—to respond to individual skill gaps	Chapter 5
Plan backward to fill gaps in the instructional program	Chapter 9
Look around at research, best practices, and exemplary schools	Chapters 8, 9
Look within to analyze curriculum and instructional strategies	Chapter 9
Select proven strategies for implementation	Chapter 8
Identify and plan for student populations with specific needs	Chapter 7
Identify formative assessments to balance large-scale, high-stakes tests; <i>use formative assessment of student learning at regular intervals throughout the year</i>	Chapters 1, 2, 7
Monitor rates of progress over time—student and cohort	Chapter 5
Gather evidence of both implementation and impact of improvement strategies	Chapters 7, 9, 11
Consolidate multiple plans	Chapter 10
Take the initiative to tell “the rest of the story”	Chapter 11
<i>Use data in conversations with parents about student performance and programs</i>	Chapter 5
<i>Use data in making decisions about professional development plans</i>	Chapter 12

The imperative features of the data we use and how we use it are these. First, we must have multiple sources of evidence that help us understand our results and our practices, our students, and the learning environment we are creating. Second, we must analyze the data to determine that all students are learning. Data must be disaggregated and the results made transparent to everyone. Names must be connected to numbers so the focus is on individual students, not categories. Third, we must take action on the data. Teams of teachers must work together at frequent intervals to assess student learning and plan classroom instruction to move all students forward and add support for those who struggle. Fourth, schools as communities must attend to the culture and conditions in which staff and students work, including the systems and processes that cross all classrooms.

EXCITEMENT EXTINGUISHERS

Every use of data outlined in Figure 1.4 has shown some degree of progress, but many are still discussed in the literature as exemplary rather than typical practice. What's been getting in the way? We've already noted the chilling effect of the sanctions in NCLB and the distraction of time, energy, and money to the logistics of high-stakes test preparation and administration. But we can't assume that the changes from NCLB to ESSA will automatically break down whatever barriers have been slowing the progress. The second edition listed six barriers, but the list is actually longer now. In my work with schools and districts, I often use an activity I learned from Bob Garmston. It is called Go for the Green and can be used to identify points of entry into a problem. It can help deepen understanding of perceptual data. It can develop greater empathy and help participants move from a "blaming" mode to a more strengths-based stance. Figure 1.6 provides an illustration that is pertinent to our question about barriers to progress with data use. The process of facilitating Go for the Green starts with large chart paper as well as black, green, and red markers. Start with a *red* circle in the middle of the paper. Let the participants know that you are using that color deliberately because this is the target. It reminds us of a stop sign because it prevents accomplishment of their task or goal. Help the group decide how to phrase the concern or problem and write it in *red*. Then switch to the *black* marker and write this at the top: Under what conditions would I . . . ? In Figure 1.6, this creates the following question: Under what conditions would I be reluctant to work with data? The usual rules of brainstorming apply: list all possibilities without judgment. In this activity, the ideas generated are placed on rays or spokes from the central question. A final stage in the process is to use the *green* marker to circle, star, or highlight the items that are within the control or influence of the group. These are the areas where energy can be spent productively and can be rephrased in positive language as actions to pursue—thus Go for the Green.

In Figure 1.6, the statements on the spokes are statements that have been made in multiple discussions in schools—even within the past few months. Those that are starred (although not green in this black-and-white



format) are within the scope of influence of a school and district. They are combined and turned into positive statements that frame each of the next twelve chapters. People get excited about data work when it fits their beliefs, feels safe, is a collaborative effort, reflects their own students, is accessible and understandable, fits a bigger picture, saves resources, is actionable, is given time and support, and yields the satisfaction of having made a difference.