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A Plan of Action

Turning Around Low-Performing and Enhancing High-Performing Schools

- Garden Grove (CA), Long Beach (CA), Aldine (TX), and Boston (MA) have all doubled student performance in reading or math over a four- to six-year period during the past decade. A central element of their improvement plans was a systemic view of effective instructional practices.

- Rosalia (WA), a small, rural district in Washington with high concentrations of students from non-English-speaking backgrounds, and Abbotsford (WI), a similar district in rural Wisconsin that experienced a large influx of students born in Mexico, doubled student performance in reading even as the demographics of their student body changed.

- Madison (WI), Richmond (VA), and several other urban districts have dramatically increased student performance in reading by implementing a structured reading program across the district, supported by ongoing professional development, instructional coaches in reading, and one-to-one tutoring for struggling students.

The fact is that scores of districts and schools across the country in all kinds of communities have produced large, measurable gains in student performance in reading and mathematics by using extant dollars more effectively. The issue is whether these success stories can be expanded even during these times of tight and falling budgets. The book shows how such success stories can continue.

The fiscal context for education has changed. Whether called a new fiscal normal or the new era of austerity, the fact is that the twentieth-century pattern of continued rise in education revenues and resultant education spending is over. The fiscal crisis of 2008–2011 is shining a fiscal accountability light on public schools, and neither political leaders nor the public are happy. Fairly or unfairly, more and more people point to rising school spending and continued flat—or only modestly rising—student achievement and ask, "Why?"

In early 2011, the fiscal side of school reform created two new pressures on schools. The first pressure was the likelihood that the stimulus funds that had blunted funding cuts for the previous two years were spent and would not be replaced by state (or local) dollars, thus presenting school districts with significant new funding cuts, called *the funding cliff*. The second pressure involved the claims that, in general, public sector salary and benefits—more specifically those for educators—were too generous. Though the bulk of workers in the private sector had experienced various combinations of salary freezes, salary cuts, and increased contributions to benefits—to wit, compensation cuts—most public sector workers, including most educators, had experienced few of those realities. In fact, too many educators and their organizational leaders up to that time had refused to even consider a salary freeze, let alone paying more for benefits.

Regardless of one's view on these various issues, the fact is that school budgets will be tight for several years—if not decades—to come. Compounding the above issues are two related facts: First, the public and most political leaders seem to be unwilling to raise taxes to continue expanding public services; second, demands for other services such as health care, programs for senior citizens, support for increasing numbers of persons in poverty, and other public commitments (including prisons) mean tight state and local budgets are pressured by multiple noneducational issues as well.

The bottom line is that revenues for schools, which has tracked higher and higher every decade for the past 50 years, are unlikely to continue that pattern. A rosy prediction would be for education revenues to keep pace with inflation; a more reasonable scenario would be level education funding (which has no increase in absolute dollars); the actual reality might be a decline in dollars per pupil—not just real (i.e., inflation-adjusted) numbers but actual dollar-per-pupil declines. Indeed, Texas, which in early 2011 was growing by 60,000 students each year, cut state aid in absolute terms by hundreds of millions of dollars for the next biennium; California had to both cut education funding and raise taxes to keep cuts to a minimum, and the

bulk of other states simply had less in both state and local coffers, which made it difficult—if not impossible—to keep the education budget "harmless." Indeed, the June 2011 report of the Center on Education Policy found that 70 percent of school districts across the country had budget cuts in 2010–2011, and 60 percent said they had to cut in 2011–2012 as well. Most said that such cuts were hampering progress on school reform (Center on Education Policy, 2011).

Compounding these pessimistic fiscal realities are continuing pressures to increase student performance and close achievement gaps. Indeed, as more and more educators, policymakers, and leaders recognize the demographics of schooling (falling percentages of middle-income children and rising percentages of poverty-impacted children), the resulting stagnation—if not decline—in student achievement, and the knowledge demands of the brain-based global economy, the need to boost student achievement becomes not just an equity imperative but an economic imperative as well. Simply put, despite falling school budgets, educators must boost student learning. Falling education budgets cannot slow education reform; change must continue regardless of the budget situation.

Thus, though the initial responses to the fiscal crisis that started in 2008 and shook the country in 2009 were modest (with most states, districts, and schools continuing with business as usual and administering nonstrategic budget cutbacks), the educational fiscal game needs to change in the future. Schools can't continue to cut programs without changes in compensation levels for educators. Districts can't continue to cut across the board—fewer counselors, no librarians, less art and music, and higher class sizes—with no plan for moving forward. States can't continue to cut aid and maintain the rules and regulations for all categorical programs, especially with weak accountability systems for student learning.

States, districts, and schools must figure out how to set new strategic directions and align their dollars with programs, strategies, and systems that together boost student learning, whether the overall budget stays the same or must be reduced. The new era of fiscal austerity for public schools will require educators to rethink all aspects of the education system—how it recruits, compensates, and retains top teacher and educator talent; how it organizes curriculum and instructional services; how it uses technology to boost productivity (without simply raising costs); how it embraces accountability for student results; and most importantly, how it uses the education dollar more effectively and efficiently, regardless of the size of the education budget.

A Strategic Approach to Using the Education Dollar

Using the education dollar strategically is not accomplished simply by cutting budgets or increasing class sizes because it saves or frees up money or having educators pay more for their benefits while possibly taking a salary freeze or cut. Using the education dollar strategically is also not accomplished simply by decentralizing decisions about spending to schools or changing the governance of the education system. Using the education dollar strategically is not accomplished by saying that the dollars will be used only for programs and services that benefit the students, as that rationale has been used almost universally for decades.

A strategic approach to using the education dollar means aligning the use of resources to a solid, powerful, and comprehensive education-improvement strategy—a specific and delineated Plan of Action designed to boost student learning and proved as effective in doing so. For low-performing schools, this could be a turnaround strategy. For average-performing schools, this would be a strategy to move them from good to great. And for high-performing schools—of which there are too few in the United States—this would be a strategy to boost performance to world-class standards as well as to have high-performance levels exist for students from low-income backgrounds as well as minority backgrounds. Further, using the education dollar strategically would mean specific and clear links between the resource and staffing needs of the improvement strategy and the allocation of the dollars toward those resources and staffing needs.

Chapters 1 and 2 show how these resources specifications and dollar links can be accomplished. The remainder of Chapter 1 outlines a Plan of Action that has been used by scores of schools and districts across the country to successfully boost student achievement by large increments; Chapter 2 identifies the resource needs of these strategies. Much of the remainder of the book, then, anchors recommendations for changes in the use of resources—whether via resource reallocation or budget cuts—to the prescriptions for resource use that flow from these first two chapters. Put differently, this book begins with a discussion of what needs to be done to dramatically improve student learning and has these strategies and their resource needs drive most other suggestions in the book for more strategic fiscal use practices. In addition, however, the book also addresses the need to be smarter and more strategic about the

85 percent of funds spent on staff—dollars that are almost spent unconsciously. The book also points to how technology can be tapped to boost student performance. But the bulk of the book rests on the powerful education improvement strategy—Plan of Action—described here.

A Plan of Action for Dramatically Improving Student Performance

The main outlines of a comprehensive strategy to improve student learning and close the achievement gaps in schools with diverse student populations are not a secret. They have been described in countless case studies, books, articles, and now publications from school turnaround centers that have emerged during President Obama's and Secretary of Education Arne Duncan's administrations (Blankstein, 2010; Chenoweth, 2007; Education Trust, 2009; Fullan, 2010; Mass Insight Education, 2011; Odden, 2009; Odden & Archibald, 2009). The strategy includes about a dozen key elements[1]:

1. analyzing the current performance situation

2. setting high goals

3. changing curriculum and defining effective instructional practices

4. being strategic about core versus elective courses

5. using data to improve instruction

6. organizing teachers into collaborative groups

7. investing in ongoing, comprehensive, and intensive professional development

8. implementing linked and tiered strategies to help struggling students meet rigorous performance standards

9. distributing leadership across all levels and all roles

10. creating a professional culture

11. taking the acquisition, development, and retention of teacher and principal talent absolutely seriously

12. embracing a culture of accountability for student achievement results

Analyzing the Current Performance Situation

At some point, all districts and school that have dramatically improved student performance take stock of their current student performance situation. Often this is the first step. It is hard to craft a strategy to improve performance if little is known about the level and characteristics of a school's or district's existing student performance. Most schools engage in this process by analyzing the results of state tests, many of which now include not only reading and mathematics but also writing and science, and increasingly analyzing high school end-of-course exams in subjects such as Algebra 1, Algebra 2 (the minimum math level for most career technical programs), biology, and chemistry. The student performance data are analyzed for overall patterns—the percentage of students scoring at or above a proficiency or passing level, the percentage of students scoring at or above the advanced level, and so on; how the results vary by grade level and subject and within subject by type of question—fact and knowledge versus application and problem solving; and how the results vary by student characteristics—all students, students from lower-income backgrounds, students learning English, students with disabilities¸ and majority versus minority students.

In the most successful cases, these analyzes are conducted by teachers and administrators in each school; through this analytic process, they come to know the performance situation of their students in their school. Increasingly, districts and states have facilitated access to and analyses of this student performance data—the more the actual analytic process can be driven by and involve all faculty, the more the results permeate the school and its culture and the more the faculty will take ownership of the analytic results.

Most faculty data reviews produce surprises during this analytic process. One district discovered that the overall percentage of 60 percent of students scoring at or above grade level was composed of a much higher level of performance for white and a much lower level of performance for minority students—an inequity that was professionally embarrassing and that was discovered only by disaggregating the data by student characteristics. Other schools with very low overall performance levels discovered just how low those levels were, and when below something like 15 percent of students were discovered to have scored at or above proficiency, this produced a resolve to do much, much better. In one urban district, the results showed that performance was slowly rising overall for all subgroups when just analyzing the percentage scoring at proficient levels or above, but

when the percentage at advanced levels was analyzed, it showed that large and rising percentages of whites were performing at the advanced level, but that very small and stagnant percentages of African American students performed at the advanced level. This racial achievement gap had been missed until a new analysis (which analyzed both performance indicators) was conducted as part of a process to create a strategic plan.

During the process of analyzing the existing performance situation, few if any of the dramatically improving schools and districts complained about the state test. Most knew it was not perfect; most wished for more performance-oriented and problem-solving questions. But none disputed the overall findings, especially when they showed low performance levels, gaps between various groups of students, or modest improvements during the past several years. Most concluded that change was needed, that their students needed to do better, that they had it within their power to produce those changes, and that a "better" state test would not change the results and might even show the situation as worse.

Few places analyzed just student demographics; after all, schools cannot change the demographics of their students. They are what they are. What can be changed are curriculum and instructional practices that positively impact the students that attend the school. The noted anomaly here (Childress, Doyle, & Thomas, 2009) was Montgomery County, an affluent county in Maryland that borders our nation's capital. The then-new superintendent, Jerry Weast, led the district in a demographic analysis to show that the district's student characteristics were changing and that, if resource allocation and instructional practices did not change, the county would lose its reputation as a high-performing district. The analysis spurred multiple changes, including a macro-shift of resources toward schools with rising percentages of economically disadvantaged students. In short, the district responded positively to its demographic challenges, and Montgomery County now remains one of the highest-performing large districts in the country, including high performance of its low income and African American students. As one specific example, the district produces more minority students who take and pass Advanced Placement (AP) exams than any district in the country, and it is far from the largest district, so this accomplishment results from its educational initiatives and changes in the allocation of resources.

Analyzing student performance data requires few resources. It does require time for teachers and administrators to engage in the

analysis, but as argued below, if the district or school has a comprehensive and ongoing professional development program, there will be time for such performance analyses.

Setting High Goals

After analyzing the current performance situation, districts and schools that make dramatic improvement—sometimes literally doubling student performance on state tests—set very high and ambitious goals. They want to be the best urban district in the country. They want to be the best high school in the state. One such large, urban high school had a reputation for being one of the top high schools for African American students; a new principals said, "Why just [be] a good high school for minority students? Why don't we become one of the best high schools in the state (despite our demographics)?" And it did.

Others set eye-popping goals, such as doubling the number of students taking and passing AP classes (Long Beach, CA), doubling the number of minority students achieving at the advanced levels, or increasing the percentage of students performing at least at grade level to 90+ percent, regardless again of the demographics of the school.

Other goals are specific, numeric, and subject focused: increasing the percentage of students scoring at or above proficiency in reading from 55 to 90 percent, increasing the percentage scoring at the advanced level in mathematics from 25 to 50 percent, increasing the percentage of students passing Algebra 1 within three semesters from 50 to 75 percent, and so on.

I have studied schools and districts with less ambitious improvement goals, such as simply to improve student performance in reading and mathematics or to have a net of one student in the school improve his or her performance level—and those schools and districts made equally modest, underwhelming improvements.

It should be clear that these kind of ambitious, eye-popping goals are not just "stretch goals" that the motivational literature recommends. They are big, bold (some might even say overly ambitious) goals, but as study after study shows, these are the kinds of specific, numerical goals that improving and turnaround districts and schools set.

By setting such big goals, the people in these schools and districts implicitly (and sometimes explicitly in their beliefs statements) reflect a belief that their students can achieve to these high standards as well as a belief that what the school will do differently will lead to these student achievement gains. Particularly in the schools and districts with challenging demographics—high concentrations of students

from lower-income, minority, and non-English-speaking backgrounds—the ambitious goals show that the faculties do not feel bound or constrained by demographics; rather, they are propelled to overcome demographics by the comprehensive and systemic nature of the curriculum and the instructional and service practices they deploy after setting these high and grand goals.

Finally, the goals in almost every instance are focused on student performance in *core subjects,* generally defined as reading/English/language arts, writing, mathematics, science, and social studies. The goals then also serve as a driver of resource allocation, as I show in subsequent chapters. When resources are scare, the deciding principle is does the proposed resource-use practice support the goal of improved student achievement in core subjects? If the proposed resource practice does not serve that goal directly, its draw on resource use takes less priority and often the idea is dropped altogether.

Setting high goals does not cost money. Yes, there needs to be a process of goal setting at the district level, which then cascades to each school and grade level or department within the school, but the process itself does not require a budget. It requires ambition, leadership, professionalism, and relentlessly pursing goal attainment.

Changing Curriculum and Defining Effective Instructional Practices

After setting ambitious goals, schools and districts change their curriculum and instructional program. They conclude that their previous programs got them to where they were and that something more rigorous and ambitious is needed to help them attain their goals.

The research does not necessarily find a consistent pattern in the kinds of new curriculum adopted, although many urban districts adopt a more structured, phonics-based reading program, and many elementary schools adopt a mathematics program with more explicit problem solving, such as *Everyday Mathematics.* If a new book series is identified for purchase before its adoption time in the normal five- to six-year textbook adoption cycle, it would require more funding, but over time, a new book series is simply absorbed into the ongoing textbook adoption budget. Ten years ago, many of the schools adopted a whole-school reform program (e.g., Stringfield, Ross, & Smith, 1996).

An increasingly specific element of this new curriculum and instructional approach, moreover, is an explicit vision of effective instructional practices. As schools and districts move toward implementing a new curriculum program, they articulate—often in quite

explicit terms—the kinds of instructional practices that work in that school or district. Odden (2009) provides several specific examples of this aspect of a Plan of Action, and on reflection, it makes sense. The curriculum that is taught and the instructional approaches to teaching that curriculum (Odden, Borman, & Fermanich, 2004) are the key factors under the control of schools (and teachers) that impact student learning. Thus it makes sense that a detailed and well-articulated view of effective instructional practice would be characteristic of schools and districts moving the student achievement needle by large amounts. How this aspect of the Plan of Action can impact resource allocation is developed in subsequent chapters, especially Chapters 2 and 3.

A third element, which goes somewhat beyond what the studies reveal of school and district practices that produce large improvements in student learning, is the nature of the reading program, particularly—but not solely—the elementary reading program. The fact is that an ineffective reading program means that scores of children do not learn to read in elementary schools and have difficulty learning any subject after that. Effective reading programs include a systemic approach to teaching reading (especially for younger students coming from lower-income families), significant attention to phonemic awareness and phonics as well as word fluency, and writing and reading comprehension. In an overview of what research says about how to teach reading, I quote from a paper by Felton (2010), a reading expert working across the country:

> The *four-part processor* reading model is based on scientific consensus concerning how the brain processes information for reading. This consensus is based largely on the programmatic research efforts supported by National Institute for Child Development (NICHD) beginning in 1985 with a major emphasis during the 1990s and continuing on a smaller scale today. A major finding is that reading for comprehension depends on the ability of the reader to **accurately and automatically recognize words** and attach meaning to those words. Word meaning cannot be accessed unless the word is correctly pronounced or named (e.g., sacred is not scared). Naming words correctly depends on knowledge of the sounds within words (phonemic awareness) and the way those sounds are related to print (phonics). Thus, accurate and automatic word recognition is a critical skill for reading comprehension.
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> There are four major processing systems that support word recognition and the brain regions involved in these have been identified. These include:

1. The **Phonological processor**—speech-sound awareness (back of the frontal lobe)

2. The **Orthographic processor**—letter and letter pattern recognition; stores printed word images (occipital region)

Note: The phonological and orthographic processors communicate to support word recognition in a region called the angular gyrus, where sound-symbol associations are processed.

3. The **Meaning processor**—also called the semantic processor—interprets word meanings in and out of context (temporal region)

4. The **Context processor**—interacts with and supports the meaning processor; gives the referent for a word's meaning (temporal areas)

All of these areas are linked and must work together for efficient reading. NICHD-sponsored research has found that the majority of students who have difficulty *learning to read do so because of difficulties in the phonological processor* system that results in inaccurate word reading skills. This is not to say that beginning readers can't have problems in the other areas, because they certainly can, but these do not comprise the majority of the poor beginning readers. Note that poor word reading skills are also an important component of reading problems for older readers, but the other processors become much more important as students progress through school and the text demands increase.

On the basis of cognitive and brain research, a "simple view of reading" has been proposed to explain the reading process. In this view, there are two major domains of reading: (1) printed word recognition and (2) language comprehension. These two domains are supported by the five components of reading that have received so much press from the National Reading Panel; i.e., (1) phonemic awareness and (2) phonics which support (3) printed word recognition and (4) vocabulary and (5) reading comprehension, which are related to language comprehension and fluency, which is important in both domains.

The following implications for beginning reading instruction derive from well-designed studies of beginning reading instruction for all students (Kindergarten through Grade 3) and are also consistent with the four processor model.

- All children should be taught *systematic, synthetic phonics* in which they are taught sound-symbol correspondences *singly, directly and explicitly.* Blending of the sound spellings should also be taught directly and explicitly until students can decode almost any unknown word. Phonemic awareness, spelling

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patterns and rules, grammar, and other aspects of language structure should be taught along with phonics in an integrated fashion. Decodable readers should be used in the beginning of instruction ([Kindergarten] and Grade 1 for most students) to support the development of word recognition skills based on knowledge of language structures. Decodable readers are those that are written to provide abundant practice in reading words with the spelling patterns that are being taught (e.g., the silent-e pattern). Such readers are necessarily somewhat contrived but there exists many sources of these readers, which are entirely acceptable to children who are just learning to read. It is some teachers who have problems with such reading books because of their belief that only "authentic literature" should be used with children (see discussion below).

- All children also need exposure to rich literature, [both] fiction and non-fiction, [i.e., authentic literature], and attention to meaning, comprehension, vocabulary development, fluency and writing are essential.
- Along with developing reading skills, children's interest and pleasure in reading should be an equally important focus.

These recommendations are NOT equivalent to an eclectic combination of whole language and phonics often referred to as "balanced literacy," which is rarely truly balanced and which characterizes many reading programs around the country—and are not very effective. Classrooms that exemplify the four part processor reading model are those recommended in Reading First and Response to Intervention [RTI].

There are actually two options in choosing a core reading program. The *first* is to choose a core reading program that includes strong word identification and spelling instruction that is direct, explicit, and sequential. All aspects of language structure are taught in this way and word reading and word spelling are closely coordinated. In addition, the core has a strong intervention component that has been proven to be effective with at-risk students. The *second* option is for classrooms to continue to use a core that is acceptable in comprehension, etc., but weak in word identification and spelling and add in a separate, strong word identification/spelling program. Some separate programs are also appropriate for intervention (e.g., Fundations, Letterland) but others are not. If this option is selected, it is important for the "add-on" components to be carefully researched and used with fidelity. One of the problems seen in some schools who are using RTI is the tendency to focus intervention on separate word reading skills (e.g., letter-sound

knowledge or phonemic awareness) that have been shown deficient by probes and address these in a piecemeal way (e.g., through activities at centers). A much better approach is to select *standard protocols* (i.e., programs) that address word identification and spelling difficulties in a comprehensive way rather than bit by bit.

Another important aspect of using core programs effectively is recognizing which students need modifications in the pacing of instruction. It can safely be stated that most core programs move too fast (in terms of introduction of new skills) for the 15–25% of students who are struggling with reading. What sometimes happens is that such students are provided with additional instruction (e.g., in a small group) in the skill but taught new skills at the same pace as other students. This results in such students moving on the new skills before they have mastered the old and, consequently, never mastering anything. Teachers say that they have to "cover the content" and don't really understand teaching to mastery. One approach is to help teachers understand the reason for teaching to mastery for each specific skill set and give them permission, time and the tools to do so. One example is for all students to participate in whole-group core instruction that continues at a pace appropriate for the majority of the students (this will vary according to the composition of the classroom and should be based not just on what the manual says to do on day 5 but on actual data measuring student mastery). For those students who are not mastering the content at that pace, their small-group instruction should focus on previously taught skills until they are mastered and then moving on at a slower pace. This also requires differentiating the reading materials such students are reading (e.g., providing them with appropriate readers including decodable books, to give them the reading practice necessary for mastery).

The importance of an effective reading program at all levels, but particularly in Grades K–3, cannot be overstated. All districts that have made significant improvements in student learning have addressed their reading program and restructured it to be in line with the previously mentioned research-based characteristics of effective reading programs. And a good reading program has no extra costs, because all schools and districts spend money on a reading program.

Being Strategic About Core Versus Elective Courses

Aside from class size, which the book discusses at several points, the next major fiscal decision concerns the mix between core and elective classes. To make an important point early on: this book advocates

for a broad range of course offerings that would provide every student with a strong liberal arts program over their 12 to 13 years in the public school system. In addition to core classes (defined in the next paragraph), students need exposure to the arts, to physical fitness and wellness, and to emerging career-technical jobs in the evolving economy.

Core classes generally include the classes that are the foundation of the curriculum and which, in most cases, are tested at the state level: mathematics, science, reading/English/language arts/writing, history, and foreign language. Elective classes generally include art and music broadly conceived (e.g., painting, sculpture, jewelry making, chorus, band, theater), physical education/health/fitness, business, family and consumer education, and career technical education, which increasingly focuses on the health professions (e.g., nursing, doctor's assistants, medical technicians), biotechnology, and engineering. Exposure to and knowledge of the core classes usually serves as a foundation for many of the elective classes, which require knowledge of core education well into the high school years. For example, most career technical programs today require mathematical skills up to at least Algebra 2, which students usually take in the 10th or 11th grade. That is why, in part, the education goals identified today by the federal and most state governments are to prepare students to be college and career ready, with the general argument that the academic preparation for each is very much the same. This point is not to argue that all students should take AP physics; it is simply to say that achievement in core academic subjects is the foundation on which successful performance beyond high school—whether moving directly into a high-wage job or to postsecondary education—requires a substantially similar set of expertise in what are described above as core subjects.

So the first point here—and a focus for nearly all schools and districts that are dramatically improving student performance in the core subjects—is to say that all subjects need to be part of the curriculum, but some subjects (core subjects) have a higher priority than other subjects. So schools and districts moving the student achievement needle by large amounts focus resources on strategies and programs that positively and directly impact student performance in core subjects.

A related point, not emerging from the research on effective schools but being made more generally for the career component of elective classes, is the shift from the old vocational education courses (wood, metal, plastic, welding, and auto shop) to more career-technical

programs in areas such as computer-aided engineering, medical technology, biotechnical programs, software and computer programming, and so on. This shift in program and course offerings not only represent a break from the former conception of career offerings but can also be implemented with lesser costs, assuming the overall resource needs of the strategies to dramatically improve performance are provided; these points are discussed in the next chapter.

Chapter 2 discusses the financial implications of how schools can be organized in various ways to provide a liberal arts program, showing that there are more and less expensive ways to accomplish this goal, which also implicitly argues that most middle schools and high schools today have adopted more expensive and less effective approaches, providing the education system with substantial ripe opportunities for resource reallocation and cost savings by reviewing their extensive elective offerings—a change that will not negatively impact student achievement in the core subjects.

To underscore these points on electives: there are no studies that find that students taking more electives do better in core classes. Electives are important; all schools improving student performance offer a broad liberal arts curriculum, which has some but not a proliferation of elective classes.

Using Data to Improve Instruction

Not only do schools and districts that are significantly improving student learning and reducing the achievement gaps not complain about state testing, but also they do not complain about too much testing, because they engage in a wide series of data-based decision-making activities, all of which require additional and more detailed information—more test data, if you will—on student academic performance, again in core subjects.

Before proceeding, this section first provides some definitions of terms that are used here and throughout the book, as there is not yet agreement on the terms to use for the variety of assessments that are given throughout the academic year in addition to the end-of-the-year state summative and accountability-focused tests. One term not used in the book is *interim assessments*, mainly because this term is used across the country to refer to any student assessment given between the annual administrations of the state summative assessments, so is too imprecise.

The book makes distinctions among screener and diagnostic assessments, formative or short cycle assessments, and benchmark

assessments. Screeners generally take a short time to administer and are designed to screen students for possible problems in subjects such as reading and mathematics. If the screener suggests that the student might be at risk of reading failure or a reading problem, it is usually followed by a diagnostic test that probes, in more detail, the specific nature of the reading problem. Screeners and diagnostic assessments are used during the teaching of reading, often well into the secondary grades for students having reading problems. Northwest Evaluation Association Measures of Academic Progress (NWEA MAP), AimsWeb, and Dynamic Indicators of Basic Early Literacy Skills (DIBELS) are all examples of assessment systems that provide different versions of screener assessments.

Formative or short cycle assessments are used primarily to help teachers frame instructional practices both before a curriculum unit is taught and during the actual teaching of the unit, which is a two- to three-week period of integrated instruction designed to teach a concept in a subject area as well as its application and use. Short cycle assessments given just after a unit is taught indicate what the students in the class or grade know and don't know about the concept that was just taught and also provide background information for the next concept in the curriculum sequence; these data can be integrated with *pedagogical content knowledge*, which is knowledge already known about students vis-à-vis the concept to be taught, such as typical errors for various mathematics concepts or misconceptions for various science concepts. Short cycle assessment data are used by teacher collaborative groups to hone instructional strategies for curriculum units that the teacher teams will simultaneously teach to their classes of students.

The Wireless Generation (www.wirelessgeneration.com) provides a computerized version of formative assessments accompanied with web-based training for how the results can be used to frame instructional strategies; these assessments cover the elementary grades in reading and math, both of which are being enhanced to the middle grades in the future. Renaissance Learning STAR Enterprise assessments (www.renlearn.com/se/), available for reading and math from prekindergarten to Grade 12, are examples of short cycle assessments. The Renaissance short cycle computer-adapted assessments take a short time to administer (about 10 to 15 minutes) and are uploaded to a national database and provide immediate feedback to teachers and teacher teams.

Sometimes people use the term *formative assessment* to refer to any kind of teacher question or probe used during the actual teaching process, which provides additional and detailed information on

student learning. This book does not use the term *formative assessment* for this practice, though good teachers use such probing every day they teach—a practice that obviously should continue. The book uses *formative assessments* mainly to indicate the process of getting and using student assessment data to improve the instructional process (i.e., to help frame, hone, and focus teaching to the specific learning needs of the students in the class, grade, and subject).

Benchmark assessments generally are administered on a longer cycle basis, every six to nine weeks, for example. There are many benchmark assessment systems being used across the country; one of the most popular is the MAP assessments from the Northwest Evaluation Association (NWEA). These are taken online, are computer adapted, and provide feedback to teachers, schools, and districts the day after they are administered; further, education systems can ask for their students' results to be compared to local, state, or national norms. Generally, benchmark assessments are used to track student performance progress at multiple points during the academic year; in the bulk of cases, these assessments are given at the end of the first, second, and third quarters, with state assessments being used at the end of the fourth quarter, which is the end of the year. Results from the benchmark assessments are often used to place students into various interventions or extra help programs, with the benchmark data showing that the student is making insufficient progress.

The book uses these distinctions to help clarify discussion of assessments throughout the rest of the book. At the school and district level, these distinctions are often not so clear. There are districts that administer the MAP assessments only in early September and late May but call them *formative assessments*. Used in this way, MAP assessments are not formative assessments but give a fall-to-spring change score, thus functioning as an alternative to state summative tests that provide spring-to-spring achievement changes. Short cycle assessments, if given monthly, also can be used as benchmark data, as they track progress over the course of the year; as such, they also can be used at various points to provide information about whether certain students need interventions and extra help.

Thus, the book uses *short cycle* assessments for those student performance data given prior to or just after teaching a curriculum unit, which is used to help tailor the specific instructional practices of curriculum units and interventions to the students in the class. *Benchmark* assessments are those that track practice after every quarter or every nine weeks and are used primarily for placing students into extra help programs. State tests are *summative* assessments given at the end

of the year, used primarily for accountability but also, as discussed previously, used for initial analyses of the overall contours and characteristics of student performance.

Schools and districts moving the student achievement needle used a combination of short cycle (sometimes called *formative*) and benchmark assessments. The formative assessments usually were used by collaborative teacher teams to frame instructional practices that would then be used as each teacher simultaneously taught the jointly developed curriculum unit.

In addition, more recent cases of schools significantly increasing student achievement found that teachers also used *common end-of-unit tests,* thus having a comparable basis for determining how effective the unit was in producing student learning as well as for comparing student performance on the common tests across classrooms and students. In those instances where students were placed into heterogeneous classrooms, variations in classroom performance could then be explained by variations in individual teaching practice. The collaborative groups would then query the teachers whose students did well above the average, seeking to determine what else the teacher had done instructionally so those additional practices could be included in the curriculum unit the next year. The group would also provide assistance to teachers whose students lagged the average performance, and over time, put pressure on those teachers to seek jobs elsewhere—or in a different profession—if their classrooms' performances did not improve.

These schools and districts also then used benchmark data to slot students into various extra help programs, as discussed below.

But the prime point here is that the schools and districts making large positive impacts on student learning and closing achievement gaps need a range of student performance data (lots of testing data, if you will), including the following:

- short cycle assessments to hone instructional practices beforehand
- common end-of-curriculum unit tests to compare student performance results across classrooms
- benchmark assessments to guide provision of extra help services to struggling students
- end-of-year state summative assessments to assess overall progress and impact of the curriculum and instructional program

If student performance did not rise, schools and districts assumed they had gotten something wrong with the curriculum and instruction program and sought to fix it; if performance did rise, they attributed it to their hard, collaborative work and effective instructional practices.

Though there is a variety of research and case studies highlighting the importance of schools engaging in data-based decision making, a recent study of such efforts using the gold standard of research—randomized trials—showed that engaging in such decision making using interim assessment data improved student achievement in both mathematics and reading (Carlson, Borman, & Robinson, 2011).

The resource needs of formative or short cycle and benchmark assessments are not high. With $25 per pupil, schools and districts can use a wide range of such systems, including AimsWeb, the NWEA MAP assessments, Renaissance Learning STAR Enterprise assessments, and many others. Developing formative and benchmark assessments from scratch can be expensive, and few districts have done that (though most hone the systems they purchase).

Organizing Teachers Into Collaborative Groups

As already mentioned, schools and districts that impacted student performance in significant positive ways also organized teacher work in a different way than how it is currently done. Teachers were organized into collaborative instructional groups: grade-level teachers in elementary schools and subject and course groups in middle and high schools. Teachers did not work in isolation; they worked as part of collaborative teams. Using formative or short cycle assessments, the teams jointly created curriculum units, which all teachers in the team taught, usually simultaneously; the teams then also administered the same end-of-unit test so student performance could be compared across all classrooms. Over the course of the year, the members of the team might visit a class where the teacher was producing above-average classroom performance or having more success with struggling learners; struggling team members would also receive visits and assistance from both other members of the team as well as instructional coaches (discussed below).

The point here: teachers did not work on their own *and* viewed instructional practice as something that was jointly developed and systemically implemented. They believed that a more common approach to teaching—mentioned earlier as an articulation of instructional practices that worked with their students in their schools—was critical to the performance success of their students, and they put professional pressure on all teachers to get with the school's instructional program.

This more-systemic approach to the provision of instruction squares with emerging research on how to impact student performance and reduce achievement gaps. As Steve Raudenbusch (2009)

argued in a recent research analysis, the education system knows how to raise overall achievement and close the achievement gaps. *First*, he argued, there is strong evidence, from a wide variety of research studies, that teacher effectiveness varies substantially across classrooms and that the major reasons for the variation are differences in a teacher's instructional practice. *Second*, the way to reduce the variation in teacher effectiveness—to make teacher effectiveness more constant across classrooms, if you will—is to identify the core features of effective instructional practice and get that kind of instruction consistently implemented in all classrooms. And *third*, the way to attain that latter objective is to change the culture of schools from viewing instruction as individualistic, autonomous, private, and more idiosyncratic to individual teachers who use their own strategies and assessment items, to viewing instruction as more systemic, public, and professional and as something that grows from collaborative work using common instructional strategies and more common assessment tasks.

Principals and the teachers in the effective schools held the above suppositions and also believed that the way to change culture in a school and get a more uniform deployment of effective instructional practice into all classrooms was to organize teachers into collaborative teams to work together on an ongoing basis using student data to engage in the cycle of continuous instructional improvement. Their vision was to see teachers working in collaborative groups, sometimes called Professional Learning Communities (PLCs), using student data to constantly improve teaching practice while focusing on both individual and class learning needs.

Further, to facilitate this teacher work, there needs to be at least four items available for each core subject:

- a set of individual short cycle or formative assessments for each curriculum unit (and for discussion, let's assume that a *curriculum unit* is three to four weeks of instruction during which students learn a specific concept)
- common end-of-curriculum unit assessments (which would show the learning of each student and, when aggregated, could show the learning of each class of students)
- common quarterly or benchmark assessments given every nine weeks
- state summative tests

All of these were identified in the previous section as key elements of the Plan of Action in the effective schools and districts studied.

Put a different way, teachers were organized into collaborative teams as a way both to reduce teacher isolation in schools and to change the school culture from instruction seen as idiosyncratic to individual teachers to instruction viewed as more collegial and systemically deployed by all teachers. Faculties believed that this was the way both to improve student performance overall and to reduce achievement gaps—results that all these schools attained. Faculties further believed that this was the way to provide all students— especially students from low-income and minority backgrounds— high-quality instruction as the foundation from which extra help services, if needed, would evolve.

Once a school is staffed, organizing teachers into collaborative groups requires no additional resources. It does entail paying attention to the school schedule and ensuring that all teachers in each collaborative team have at least some time during the day, if not during the week, to engage in the collaboration described earlier—I suggest at least three 45-minute periods a week.

Investing in Ongoing, Comprehensive, and Intensive Professional Development

Analyzing state summative data to determine the existing performance situation, using formative data to hone instructional practice before it is deployed, working effectively in collaborative teams, and implementing new curriculum and instructional programs all require new knowledge and skills, so schools and districts that moved the student achievement needle by large increments engaged all teachers in ongoing, comprehensive, and intensive professional development.

The professional development often included two-week (or longer) summer institutes, shorter training sessions during the school year, and substantial collaborative work during the school day and week on the details of curriculum and instructional practice as well as work with instructional coaches. Instructional coaches, with multiple and various labels—coach, mentor, facilitator, professional development teacher, lead teacher, content expert, and so on—work with teachers in collaborative groups (often helping them analyze the instructional implications of the formative data from 25 students in a class or 125 students in a grade), use benchmark data to place student into appropriate interventions, and understand the instructional implications of screeners and diagnostic assessments as well as modeling effective instructional practices in individual teachers' classrooms.

A recent randomized trial study of coaching found significant, positive impacts of student achievement gains across four subject

areas—mathematics, science, history, and language arts (Pianta, Allen, & King, 2011), thus supporting this expensive element of the Plan of Action with research findings derived from the gold standard of research.

This professional development was not viewed as once and done but as an ongoing element of the school's program and as critical to the goal of getting more effective instructional practices more consistently deployed in all classrooms, which is the foundational strategy for improving student performance. Further, these approaches to professional development needed resources—non-pupil days for training, non-pupil periods during the regular school day for collaborative work, and funds for trainers and school-based instructional coaches.

Extra Help for Students Struggling to Meet Rigorous Performance Standards

Though the leading objective was to have every teacher deploy the highest-quality and most effective instructional practices as the core and foundational instructional treatment for all students, faculties and administrators in these schools also knew that no matter how excellent and effective core instruction could be, there would also be some students—in some classrooms, a substantial number of students—that would need extra help in order to achieve to proficiency if not advanced standards. Thus, the schools created and implemented a variety of extra help strategies.

Without getting into the formal definition of the term, at a general level, the schools implemented a Response to Intervention (RTI) approach to providing the full array of services that all students need. The first need was for the highest-quality core instruction to be provided to every student (except, of course, those students with multiple, severe, and profound disabilities, who were taught in separate classrooms). The second need was for classroom accommodations that could be provided by the regular teacher. Both were consider Tier 1 interventions in the RTI framework.

But these schools then followed the highest-quality Tier 1 work with a set of Tier 2 and Tier 3 services. Their Plan of Action was to expand instructional time and hold performance expectations steady for all students. Tier 2 consisted of a range of extra help strategies:

- extra help during the regular school day, including one-to-one tutoring for students with the most difficult learning problems as well as small groups (three to five students) for those

    with less difficult learning issues (which aligns well with the elements of interventions included in effective reading programs)

- extra help during the regular school year but outside of the regular school day, providing academic help in various forms before school, after school, and Saturday extended-day programs
- extra help outside of the regular school day and regular school year in summer school services

The combination of these extra help programs varied widely, with no common patterns except that schools that provided at least some one-to-one tutoring had strong, positive success with that intervention; related research shows that such intensive early intervention (also including small-group tutoring for groups up to a maximum of five students) can also reduce the incidence of students needing a "label" of being a student with a disability and a related Individualized Education Program (IEP) (Levenson, 2011).

    These extra help services require substantial resources, the details of which will be discussed in Chapter 2. Since the bulk of students struggling to achieve to high performance levels are from lower-income backgrounds and non-English-speaking families, providing the resources to schools to provide these resources mean districts (as well as states and the federal government) must allocate resources in an unequal but equitable manner; schools with more students from poverty backgrounds and more English language learner (ELL) students should receive more resources so these extra help programs can be funded. This is precisely the initial message Superintendent Weast made in Montgomery Country—the district's demographics were changing, and unless the district recognized these changes and changed how it allocated overall resources, the schools with the new demographic of students would not have the resources to meet their students' performance needs and challenges.

Distributing Leadership Across All Levels and All Roles

    As readers have already surmised, leadership in these schools and districts was not provided by just administrators; there was both a *density* of leadership (many leaders) and a *dispersion* of leadership (leaders at all levels) within the system, particularly in the school. Some might call this *distributed* leadership (see Spillane, 2006). The collaborative teacher teams were usually coordinated by a lead teacher who provided leadership at the team level. Instructional

coaches, in addition to principals, provided leadership at the school level. Central office administrators often conducted school walk-throughs, observing instructional practice and curriculum and text-book implementation and providing leadership from another location in the education system. The districts that moved student achievement upward had strong, performance-oriented superintendents as well as strong leaders in the academic and professional development divisions and, increasingly, in the human resource management divisions. Leadership also came from some—but not all—budget and fiscal divisions; this book hopefully will provide those fiscal leaders with ideas and fiscal strategies that empower them to contribute as much to instructional change as these other leaders by strategically deploying budget resources.

Assuming districts and schools have an appropriate array of individuals in leadership or coordination positions, leadership density and distributed instructional leadership are not additional cost items; they are approaches that define what individuals in leadership roles do.

Creating a Professional Culture

All of the schools and districts improving student achievement and reducing the achievement gaps created what the literature calls *professional school cultures* (e.g., Louis & Marks, 1998; Marks & Louis, 1997; Newmann & Associates, 1996). Professional school cultures are characterized by the following traits:

- common high expectations for the learning of all students
- common understandings of effective instruction and a systemic approach to deploying these instructional practices, often called the *deprivatization* of instructional practice
- teacher and administrator responsibility for student achievement results

As should be clear, these principles characterized these schools and districts. Additionally, the faculties and administrators in these schools keep abreast of ongoing educational research—looking for articles on what works—with both teachers and administrators bringing articles to school for everyone to read and discuss. Further, many also engaged in a continuous search for the best practices, whether those emerged from the more effective teachers in their own schools, from school practices in similar schools within the district, or from benchmarking with other schools and districts across the region or state.

These educators were professionals—they wanted to deploy the best, most up-to-date instructional practices in their school. They believed that doing this was the key to improving student performance. They believed that when performance rose, it was because of what occurred instructionally in classrooms. They believed that when student performance did not rise, or when various student groups did not keep up, the glitches were in the instructional programs, not the students, and then set out to find and repair the instructional shortcomings.

Taking Teacher and Principal Talent Seriously

The importance of teacher and principal talent is a more recent element of schools and districts turning around, boosting student performance, and reducing the achievement gaps (see Chapter 4 and Odden, 2011a). The experience of Hamilton County in Chattanooga, Tennessee, was a forerunner of this issue (Chenoweth, 2007). When the Chattanooga city school system, which had a concentration of students from low-income and poverty backgrounds, merged with the Hamilton County school system, leaders concluded that overall the teachers and principals from Chattanooga were not as effective as those in the surrounding country and were a major factor in the lower education achievement of the students in the city schools. Thus, through multiple initiatives, including some top-down decisions and other incentives, the merged district moved out the teachers and principals in the city's lowest-performing schools and brought in new principals, who were able to select the new faculties. Combined with changes in the curriculum program and intensive professional development, these human capital changes were major factors in the improvement in most of these schools.

Odden (2011a) shows how changes in teacher and principal talent also have been a key element of improved student performance in many of the urban districts around the country, including Atlanta, Boston, Chicago, Long Beach, and New York City, and have become a key element of new federal education initiatives, particularly those in the new competitive grant programs (e.g., Race to the Top, School Improvement, Innovation Fund).

The point here is that while a comprehensive and multifaceted education improvement strategy is needed, effective teachers and principals are also needed to successfully implement the strategy. Often, districts and schools must take a hard look at their existing talent pool and decide if it is up to the task and, if it is not, decide what

human capital strategies are needed to provide the requisite talent. This issue is so important that a separate chapter of the book—Chapter 4—is devoted to this topic.

Though there are some costs associated with acquiring, developing, motivating, and retaining top teacher and principal talent, the bulk of school district budgets is spent on staff, so generally, this element requires just a few additional resources—it primarily represents a different and more deliberate way to recruit smarter, more able, and more effective individuals into the lower-performing schools that need them the most as well as to move out those in the system that are not effective.

Embracing a Performance Culture of Accountability for Student Achievement Results

The last core element of the set of strategies schools and districts deploy to dramatically improve student performance and close the achievement gaps is creating a performance- and accountability-oriented culture. In many ways, this point already has been implicitly made, but it is wise to make it explicit. These schools are aggressively and relentlessly performance oriented—they want to boost student performance and will do whatever it takes to accomplish that core goal. They do not blame parents, political leaders, external events, or even budget shortages for lack of gains in student performance; if performance gains do not improve, they blame themselves. In short, they take professional responsibility for the results of their instructional practices.

As a result, they were rarely fazed by external accountability requirements, whether it was the flawed requirements for adequate yearly progress (AYP) under the federal No Child Left Behind (NCLB) program or any state accountability initiative. One reason was these schools and districts tended to meet those accountability requirements in part because their goals were much more aggressive than even AYP goals under NCLB. And if they did not meet them, they tried to figure out why and, if possible, to remedy the shortcoming in their instructional program.

In these ways, the educators in these effective schools displayed many of the characteristics and instructional approaches of the most effective teachers in the Teach For America program (Farr, 2010). They set very ambitious goals, and they focused all energies and resources toward attaining those goals; thus, being performance driven and accepting responsibility for results, they were comfortable with accountability for those results.

Summary

There are scores of examples of schools and districts across the United States that have dramatically improved student performance on state tests over a four- to six-year period. Further, there is a remarkable similarity in the overall strategies that such schools and districts have deployed:

- They analyze state test scores to determine their current performance situation.
- They set very high and ambitious (sometimes "eye-popping") goals for student performance.
- They change curriculum programs, define their version of effective instructional practices, and implement structured, systemic, and research-based reading programs. They also make sure the reading program at all levels is sound and works; an effective reading program is crucial for student learning in all subjects.
- They are strategic about the number of core versus elective courses.
- They use short cycle, benchmark, and common end-of-curriculum unit student assessment data to improve instruction.
- They provide appropriate interventions for struggling students.
- They organize teachers into collaborative groups.
- They invest in ongoing, comprehensive, and intensive professional development.
- They implement multiple strategies to help struggling students meet rigorous performance standards.
- They distribute leadership—for both teachers and administrators—across all school levels and all roles.
- They create a professional culture.
- They take the acquisition, development, and retention of teacher and principal talent seriously.
- They embrace a culture of accountability for student achievement results.

Finally, as noted in the text, there are increasing numbers of randomized trial experiments—the gold standard of research—that document the individual elements of this comprehensive Plan of Action. Further, in addition to the case studies cited at the beginning of this chapter (and from which the chapter draws), there are now randomized trials of the effects of comprehensive whole-school

approaches to improving student performance (see, for example, Borman et al., 2007). Put differently, the promise presented by case studies is now being more firmly documented by randomized trial research findings, both on the individual program elements of the Plan of Action and the Plan of Action as a whole. I would call this good news.

Note

1. More detail on all the points, specific school and district examples, and more research citations can be found in my most recent books: Odden (2009), Odden and Archibald (2009), and Odden (2011a).