data and assessment terms confuse you? Can you tell the difference between a norm- and a criterion-referenced test? What are benchmark data and why are they so important? What are school abilities tests? What is Adequate Yearly Progress (AYP)?

As your curriculum team clicks through these various phrases, are your eyes starting to roll up in the back of your head? Don’t worry; you are not alone. Understanding assessment data is a complex task, but it’s one that we can make easier. While this article can’t answer all your questions about assessments, it will give you some of the background you need to be an informed board member.

Nature of assessment data

Assessment data are observations or facts that must be collected, organized, and analyzed to become useful. The key point to remember is that data are merely numbers or words that do not have meaning in and of themselves.

Data only acquire meaning when educators and board members sift the numbers through their personal experiences and place them within the context of their school or the district as a whole. Because your personal and social filters are different, don’t be surprised if your perception varies from the superintendent and school staffs.

At one time, schools lacked sufficient assessment data to make good instructional decisions, but now many are snowed under with information. Organize your data discussions around a series of questions, such as:

- Where do assessment data come from?
- Why do schools collect assessment data?
- What, exactly, is being assessed?
- Against what criteria are assessment results being measured?

Asking each of these questions provides a useful framework to increase your understanding of what you are discussing.

Where do assessment data come from?

According to Jonathan Supovitz and Valerie Klein, authors of the widely respected Mapping a Course for Improved Student Learning, there are three major sources of assessment data: external data, school-wide or district-wide benchmark data, and classroom data.

External assessment data are standardized norm- or criterion-referenced tests that originate and are scored outside the school. Terra Nova, SAT, Stanford 10, and each state’s No Child Left Behind (NCLB) test are examples. Results from external assessments can suggest an initial focus for a school’s attention, but they are not designed to be frequent enough or to provide specific enough data to give precise instructional guidance for a whole year.

School-wide or district-wide benchmark data are collected frequently and systematically across an entire grade, content area, or course, perhaps over an entire school district, at several predetermined points in the year. These common assessments can provide guidance for instructional adjustments, interventions, and professional development.

Most importantly, if scored and analyzed collaboratively by teachers, discussion about common assessment results can reinforce a culture of inquiry, based on data, among the staff. However, these are often the most underutilized type of data in a school because teachers don’t have the time to analyze them or the training and experience to collaborate.

Classroom assessment data include quizzes, unit tests, essays, performance assessments, and personal communica-
New assessment tools help analyze learning, refine teaching

Joetta Sack-Min

Forget about filling in circles with No. 2 pencils and waiting months for test scores. Dozens of new technologies are making their way into classrooms to help analyze student learning.

These tools, most of which provide instant feedback, seek to give teachers more time to spend on instruction rather than grading and evaluating student work. Used correctly, some assessment devices can give teachers a more detailed look at how students are progressing, what areas require more time, and where they should adjust lessons or teaching strategies.

“The real potential is to be able to meet a student and meet their needs,” says Mary Ann Wolf, executive director of the State Educational Technology Directors Association. “We are seeing growth and jumps in these different technologies. These are more comprehensive systems, more formative, and seem to be improving and connecting to the standards.”

But assessment technology won’t take the place of a savvy teacher, experts agree. Some caution that these systems may require more work up front by administrators and teachers to understand the systems and the data they produce.

“You can’t assume that because you have the databank that teachers can interpret the data correctly or modify the curriculum without adequate training,” says Don Knezek, the chief executive officer of the International Society for Technology in Education. “This may require a culture change on campus, and that’s where leadership comes in.”

The following is a partial list of some types of devices to use in assessing student performance.

- A “student response system,” such as Quizdom, allows students to record their quiz or test answers on a handheld device that instantly grades and delivers an individual score or class report. The advantages are instant scores, less grading time for teachers, and a format that ensures that everyone participates. Students in the back of the class can’t slack off, and shy students have a voice. The systems provide class reports so teachers can see the questions or areas where students struggled.

- Writing samples and essays can take days to grade, so many schools are now turning to computer-based programs. Students type an essay or assignment, and the software grades the punctuation, grammar, language use, and organization of the sample. One popular program is Vantage Learning’s My Access!, which compares a student’s sample to hundreds of others and gives a written review and grade of its focus, content, organization, language, and mechanics.

- More recent models of computerized whiteboards, which are becoming commonplace in classrooms, include interactive functions that can be used for informal assessments, such as polling students.

- Videos and interactive software are designed to better engage students and can also assess their critical thinking and problem-solving skills. ThinkLink, a subsidiary of Discovery Education, has designed a series of episodes with characters that need help with real-life problems. Students must extrapolate data and perform mathematical equations to find solutions.

- Other programs present data and materials for students to analyze as part of a more comprehensive test. The Educational Testing Service offers the iSkills Assessment, which requires students to glean information from a database, develop a spreadsheet, or compose presentations explaining their findings as part of an online assessment. Learning.com offers a similar product, the TechLiteracy Assessment, which also delves into social and ethical issues related to the use of technology.

While it may seem that artificial intelligence has taken over assessments and grading, these devices may only be the beginning (although most experts agree that bubble tests will be around for a few more years, so don’t throw out the No. 2 pencils yet).

Knezek says more assessment will be based on the technologies that schools often deem to be nuisances—cell phones, PDAs, and other devices that allow text messaging and access to social networking sites such as Facebook.

“Some of the things people are really fearful of—we’re just going to have to figure out how to use those effectively and safely, or we’ll be putting students who don’t have access to technology at a disadvantage,” he says.

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job). State and national external assessments are considered the most important for accountability purposes, while classroom assessments are the least important.

The second major use of assessment data is for instructional decision making—data collected explicitly to improve the job that educators are doing. State and national assessments are the least helpful here. Classroom assessments provide the most useful ongoing data that teachers need to impact instruction, while common assessment data help teachers benchmark student progress against peers in other classes or schools.

To have an effect on the NCLB state test (accountability data), benchmark and classroom assessments (instructional improvement data) must measure student performance using the same content, format, and level of rigor. This will not happen automatically. Teachers need carefully designed assistance to align their classroom assessments with the state standards.

**What exactly is being assessed?**

There are four general types of external assessments.

General achievement tests assess the wide spectrum of student knowledge and skills. These tests usually take several hours on multiple days to administer. However, the tests can provide data on vocabulary word analysis, listening and reading/reading comprehension, language (such as spelling, capitalization, punctuation usage, and written expression), math (concepts estimation, problem solving, and computation), science, and social studies. Each commercial series—such as the Iowa Tests of Basic Skills, Terra Nova, and the Stanford 10—includes aligned tests for all grade levels.

Special area achievement tests center on one subject area, such as reading or mathematics. Because of this focus, they can provide more detailed information, such as data on phonemic awareness, decoding skills, letter/sound correspondence, word meanings, and fiction and nonfiction reading comprehension. The Gates-MacGinitie Reading Test is a well-known example. Most state NCLB assessments fall into this category because they focus solely on reading and mathematics.

A subcategory of special area achievement tests are diagnostic assessments. While all assessments have some diagnostic value, these tests are specifically designed to highlight the strengths and weaknesses of students in greater detail. The Stanford Diagnostic Reading Test, the Diagnostic Assessment of Reading, and computerized tests such as the STAR Reading and Math Assessments are examples.

The first three types of assessments are all achievement tests because they provide data on the knowledge and skills students can demonstrate. School abilities tests, which measure abstract thinking and reasoning abilities, provide information on students’ potential to learn in school.

Tests such as the Cognitive Abilities Test (CogAT) and the Otis-Lennon School Ability Test (OLSAT 8) measure verbal abilities, such as sentence arrangement, verbal classification, and verbal analogies, as well as nonverbal abilities, including figure classification, pattern matrices, and number inference. Results may be correlated with achievement test data to relate students’ actual achievement to their ability to perform in school.

**Against what criteria…?**

Assessments are standards- or criterion-referenced (CRTs), norm-referenced (NRTs), or a combination of both.

On CRTs, student performance is measured against the content standards (the criteria) that all students should know and be able to do. Standards have been written by each state, usually modeled after national standards documents developed in the 1990s. Some state content standards are very precise and concrete, while others are more global and vague. All test results are reported as the percentage of students at the advanced, proficient, and basic levels in relation to the state’s content standards.

States also vary in their performance standards, or the percentage of students the state expects to be in the advanced and proficient levels at each school each year up to 2014. Also called the “cut score,” this percentage is known as the annual measurable objective (AMO) in reading and math.

Each state has different content standards, a different state test, and a different “cut score.” It is, therefore, impossible to compare scores from state to state on their NCLB tests.

AYP is based on the combined school performance for all grades on the state’s NCLB tests. AYP is calculated separately for reading and math. A minimum percentage of students must score “proficient” or “advanced” (at or above the AMO) each year for the school to meet AYP.

The percentage needed to meet AYP will increase each year until it gets to 100 percent. In 2014, under the present NCLB law, all students are expected to meet content standards by scoring at the advanced or proficient levels. All subgroups in the school (including all races, special education students, and children living in poverty) must score at or above the annual measurable objective for the school to meet AYP.

Norm-referenced tests (NRTs) compare student performance to that of a similar group of students who took the test when it was normed—the “norm group.” This may have been several years before. Results are often expressed as percentiles (the percentage in the norm group that scored lower than students in your school). Many NRT test developers also report standard-based data in relation to major objectives included in the test.

Too many concepts to make much sense? Many school leaders are struggling with the same issues. As we work together to sort out the uses, value, and importance of assessment data, we can be in a better position to use them effectively and capture the power of data-based decision making.

Ronald S. Thomas (rathomas@towson.edu) is the associate director of the Center for Leadership in Education at Towson University in Towson, Md. He has worked with more than 100 school improvement teams over the past 15 years.
U.S. students are over-tested but under-assessed, charges Douglas Reeves, director of the Denver-based Center for Performance Assessment. Standardized tests provide data on large groups of students, such as how all fourth-graders fared on state reading tests, but the scores from these tests fail to capture the true measure of an individual student’s learning.

That’s why Reeves urges schools to adopt performance assessments as an essential component of curriculum and instruction.

But what exactly is performance assessment? The Chicago Public Schools offers a clear definition on its instructional intranet: “Unlike a multiple-choice or true-false test in which a student is asked to choose one of the responses provided, a performance assessment requires a student to perform a task or generate his or her own response. For example, a performance assessment in writing would require a student to actually write something, rather than simply answering some multiple-choice questions on grammar or punctuation.”

Teachers seldom use standardized test scores to improve classroom teaching and learning, Reeves says, but those who use performance assessments throughout each curriculum unit can gauge students’ progress and are more likely to raise student achievement. That can’t happen unless teachers know where each student stands in terms of progress—exemplary, proficient, progressing, or not meeting standards—and uses that information to decide whether to reteach lessons, try different instructional strategies, or give students extra time and more guided practice to learn and learn well.

**Teacher exemplars**

In a November 2002 newsletter, Reeves describes two teachers who use performance assessments this way. Every day Patrick Rock, a math-science teacher at Elkhart Elementary School in Aurora, Colo., records his students’ accomplishments, problems, and levels of understanding on individual index cards. Rock relies on this information to plan the next day’s instruction, form small student groups, and focus on district and state standards. His system, he says, helps students “get more involved and enjoy their work more.”

Lorrie McCartney, an art teacher at Lake Forest High School in Felton, Del., gives her students scoring guides that describe performance standards in both art history and writing. (Lake Forest High has adopted a “writing across the curriculum” program that requires students to write in all subjects.) Recently McCartney’s students used the scoring guides when they wrote essays describing art styles in the time of Michelangelo. Giving
Assessments are part of the curriculum. Teachers use multiple assessment systems to monitor progress to different levels of mastery. Performance assessments will result in better teaching and learning, planning observations that are the basis for analyzing teaching and learning, planning lessons, and diagnosing students' needs; and (4) checklists that contain the criteria and components students need to know in order to strive for high achievement.

Principles of performance assessment

BEFORE DRAFTING performance assessments for your school, be sure teachers, principals, and others involved in the process agree on several basic principles. The Center for Performance Assessment offers the following guidelines for designing performance assessments that will help students learn:

- Assessments are part of the curriculum. Think of assessments as support and reinforcement tools teachers can use to help students reach proficiency—not as a replacement for tests.
- Assessments are known to everyone involved. Share assessments and scoring guides with students and parents, and make expectations for learning clear at the beginning of new curriculum units.
- Teachers use multiple assessments. Use more than one measure to determine students’ learning and achievement. Multiple tasks and scoring guides encourage teachers to give feedback to students as they build skills, acquire knowledge, and arrive at understanding.
- Students have multiple opportunities to achieve proficiency. Give students several opportunities to assess their own knowledge and understanding and to demonstrate mastery of important curriculum concepts. Ideally, every student should achieve proficiency. If some do not, they should be encouraged to revise, redo, and resubmit their performances. Those who reach proficiency should be given enrichment opportunities and encouraged to strive for mastery on related topics.
- Students are expected to “show what they know.” Hold students accountable for doing more than simply completing a project or performance. Hold them accountable for demonstrating their knowledge and understanding, in considerable depth and breadth, of essential curriculum concepts, but don’t overreward those who do clever or neat projects.

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cooperative, and teaching and learning did not improve.

Finding the time
If performance assessments hold so much potential, why don’t more teachers use them? Many cite an overcrowded curriculum. “Look at my curriculum notebooks,” a beleaguered middle school science teacher said to me when we met in her classroom. “This month I’m covering two big topics—the digestive system and the respiratory system. I don’t see how I can cover everything and have time for my students to do demonstration projects and performances.”

Reeves acknowledges the time crunch most teachers face, but he cites a number of Advanced Placement teachers he’s worked with who are responsible for what he calls “a formidable curriculum” but who refuse to turn their unit studies into a race to the finish. These teachers, he says, have learned how to determine which standards and topics deserve high priority. And they’ve learned to organize teaching and learning around these “power standards.”

Many teachers simply “teach, test, and hope for the best,” write Jay McTighe, director of the Maryland Assessment Consortium, and Grant Wiggins, director of the New Jersey-based Center on Learning, Assessment, and School Structure, in Understanding by Design. Such “surface coverage” defeats the aims of having students learn and understand essential curriculum concepts in depth and breadth, they write.

McTighe and Wiggins recommend that teachers design instructional units by following these three steps:

1. Identify results. What should students know, understand, and be able to do? Which curriculum topics and goals deserve priority and are worthy of understanding? At the end of the unit, what are the enduring understandings students should remember?
2. Determine acceptable evidence. How will you know if students have achieved the desired results and met the standards? What will you accept as evidence of students’ understanding and proficiency?
3. Plan learning experiences and instruction. Which activities will help students learn? How should you teach so students will gain necessary knowledge and skills? How can you help students demonstrate their deep understanding of important and enduring theories, concepts, and ideas?

When students truly understand, McTighe and Wiggins say, they’re able to perform in the following ways:

1. Explain: Provide thorough, supported, and justifiable accounts of facts and data.
2. Interpret: Tell meaningful stories,

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Seven steps toward performance assessment

WHAT SHOULD you know as you develop performance assessment systems for students? The U.S. Department of Education’s Office of Educational Research and Improvement bases the following recommendations on a study of 16 school districts that have experimented with performance assessments:

1. Clearly define the primary purpose of the student assessment system.
2. Design a performance system that includes a mix of different tasks and scoring procedures.
3. Communicate the theory and purpose of performance assessment to school board officers, administrators, teachers, students, parents, and community residents.
4. Involve teachers in the design and implementation of the new assessment system. Give them adequate time and training to know and understand the purpose and methods of performance assessment.
5. Prescribe new assessment systems loosely so teachers can innovate, experiment, and design methods that work in their classrooms.
6. Coordinate assessment reform with other school improvement plans, especially in the areas of curriculum and instruction.
7. Grant waivers from testing and reporting requirements to schools that are designing and adopting innovative assessment practices.


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School Law

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Wardlaw’s majority opinion about the EAA. But she dissented from the majority’s free speech conclusions. In Berzon’s view, the analysis of student/staff time under the EAA should also hold true under the Free Speech Clause. That is, the Free Speech Clause should not be interpreted to give students the right to engage in religious activity at times during the school day when student attendance is mandatory.

As for World Changers’ use of school supplies, audiovisual equipment, and school vehicles, Berzon wrote that the Establishment Clause prohibits the expenditure of public funds for religious activities. The judge acknowledged that in recent years the Supreme Court has ruled that public funds may be used to pay secular expenses of private religious schools (see Mitchell v. Helms in 2000), and that religious clubs at public universities have a right to use money raised from student fees (see Rosenberger v. Rector and Visitors of University of Virginia in 1995).

However, Berzon explained that Wardlaw’s opinion goes beyond the scope of those rulings and gives religious clubs the right to use public money to fund religious activities—a violation that goes to the very heart of the Establishment Clause.

Simple theory, difficult case

Although the EAA is simple enough in theory, this case shows how complicated it can be when it’s applied to actual cases—especially when the Free Speech Clause enters the picture.

Although Congress enacted the EAA to protect what it considered to be the free speech rights of students, I believe that Judge Wardlaw is right in concluding that the students’ rights under the Free Speech Clause in regard to religious clubs might be broader than their EAA rights. And I agree with Wardlaw’s application of the Free Speech Clause to student/staff time. Even though student attendance is mandatory during that period, a student’s participation in a World Changers meeting during that time would be entirely voluntary.

But I agree with Judge Berzon’s dissent about the right of World Changers to use school supplies, audiovisual equipment, and school vehicles. While the Free Speech Clause certainly gives religious clubs the right to meet on school grounds under the same terms and conditions as other noncurriculum-related clubs, I believe that free speech rights end, and Establishment Clause prohibitions begin, when it comes to spending public money to pay for religious activity. That’s regardless of whether that activity comes in the classic form of church worship or in the more modern form of student evangelical activities in a high school.

The EAA itself wisely honors that line by prohibiting the use of public funds—other than for incidental expenses—for groups covered by the statute. That’s one issue on which I believe the EAA, the Free Speech Clause, and the Establishment Clause are in complete harmony.

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Research

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offer accurate translations, and add personal images, anecdotes, analogies, and models to their new learning.

3. Apply: Effectively use and adapt new knowledge to different contexts.

4. Think openly: Have a broad perspective that takes in the big picture rather than a narrow viewpoint.

5. Empathize: Find value in what others believe and be sensitive to others’ ideas.

6. Self-assess: Develop self-knowledge that includes introspection about one’s own style, prejudices, beliefs, and habits of mind.

Much of the work that goes into adopting performance assessments falls to teachers. But school leaders and other policy makers have an essential role in ensuring the success of assessment reforms. Neill calls for school leaders to provide a “foundation of high-quality schooling” that includes an understanding of how students learn, clearly defined learning goals and standards for all students, high-quality teachers, adequate learning resources, and dedication to helping all students learn at high levels. Just as important is providing time and money for ongoing teacher training in curriculum development, instructional improvement, and assessments.

Susan Black, an ASBJ contributing editor, is an education research consultant in Hammondsport, N.Y.

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Making Data Work for You

New, even veteran, board members find it intimidating or confusing. But you’re now expected to make decisions based on numbers and percentages. How do you make sense of it all?

That has to change. Data is a powerful tool for school boards, says Katheryn Gemberling, a nationally known consultant on data-driven leadership and retired deputy superintendent of Maryland’s Montgomery County Public Schools. “It’s really important to understand exactly what data you need as a board—and how you can use that data well.”

Where to start?

One way to look at this issue is to consider the various roles a board can play in the use of data. Even the most novice board members understand, for example, that one of their key roles is to be good stewards of the district—and to hold school personnel accountable for students’ instructional success.

So how does data help the board fulfill this role? What benchmarks or criteria do you use to evaluate the successes and failures of your superintendent and district leadership? And how do you determine whether good instruction is occurring in your schools? If 70 percent of third-graders at your elementary school are proficient in reading, is that a huge success or a disturbing failure?

Such questions help you narrow the selection of data you’ll need. No doubt your board already has determined what information it thinks is important, but you may have your own ideas of what data matters. Or you may be at a
total loss in analyzing the data you’re already given.

Not to worry. The first place to start is to ask for someone to sit down with you and bring you up to speed. If you believe additional data might be revealing, raise your ideas at an appropriate time.

Joe Wehrli, director of board development for the Oregon School Boards Association, says any data—and particularly any benchmarks or goals—used for accountability must be mutually agreed on by the board and superintendent.

“They need to be very specific and laser-focused in their discussion with the administration about what achievement expectations they are after ... to identify specifically what types of assessments they’ll use,” he says. “If you’re holding district personnel accountable for their work, you’ve got to set expectations ... and you have a responsibility to provide the resources for the work.”

Consistency also is important. A school board shouldn’t hesitate to look at new data if it can be useful, but it’s important to track the same data over time. Any progress on test scores—or any evidence of success with a new remedial program—only will be revealed with time.

And apples cannot be compared to oranges. Data needs to include what the district leadership agrees is important. If individual board members start making too many personal requests for data, it’s easy to inundate the central office with additional work.

“There is a tendency to get data in a million different areas,” says Susan Rountree Salter, director of board development for the Alabama Association of School Boards. “But we caution boards to work with their leadership team to figure out what data they need and to prioritize where they want to start looking at data. You can overwhelm a central office in a red-hot hurry.”

Consider the basics
To determine which data is the most useful, experts say, it’s important to understand a few basic concepts: One is the power of comparisons. Consider that earlier example of an elementary school where 70 percent of third-graders read at grade level. What does that really tell you?

Every time you look at data to determine how your schools are doing, you need to ask, “Compared to what?” Gemberling says. “What was your target? How does this compare to the last time we took this same measure? Are we improving, maintaining the status quo, losing ground? If we didn’t make our target, are we closer than before?”

How information is presented to the board also makes a difference, says Steven Ultrino, a former board member for Massachusetts’ Malden Public Schools. His doctoral studies looked at how school boards can impact student learning. In his former district, he says, school officials use a common format when presenting data, which is useful, for example, in tracking the efforts of principals as they work on their school improvement plans.

That consistency extends to such details as color coding on charts and tables—such as using green for proficient levels of academic achievement or red for below-proficient levels. It is one of many practices, he says, that allow board members to more quickly grasp what the data is saying.

“Data needs to be clear,” Ultrino says. “It needs to be consistent.”

Guiding the future
Accountability, however, isn’t enough. It’s one thing to put the superintendent on the spot after a three-year effort to boost reading test scores; it’s another to use data to help determine why that effort failed—or what to try next.

Astonishingly, school boards frequently fail to take that extra step. They complain about the results and leave it to the administration to fix, or they set aside the data and turn to anecdotal evidence, gut feelings, or staff recommendations to decide the district’s next response. They don’t recognize how data can help understand the root causes of low test scores, make clear why an intervention strategy isn’t working, and decide whether to revamp or abandon an initiative.

“That’s the biggest ‘ah-ha moment’ I’ve had in 20 years in working with data—that there’s accountability data and instructional improvement data,” says Ronald Thomas, associate director of the Center for Leadership in Education at Maryland’s Towson University. “School boards need [data] to deeply delve into the next set of questions ... what do students know, what do they not know, and what are we going to do about it.”

For some, this observation will seem obvious. But it won’t surprise you to learn that few board members have any training in data analysis, so they don’t always know what data to request or how to look at it. Even administrators can be uncertain about how to present the data that will help guide the board to an effective strategy.

It can be a challenge. A simple test score chart, for example, can be sufficient to identify where schools are failing to make adequate yearly progress. But what are the real factors at work? Is it student mobility? A young and inexperienced teaching staff? An incompetent principal? Gemberling says board members need to be cautious when looking for cause and effect.

“There’s not necessarily a correlation that one factor is the cause of another,” she says.

That’s why it can be useful to look at data in different ways. Using a chart known as a scatterplot—and comparing school poverty levels against academic growth—might provide some surprising findings. A school serving an affluent neighborhood might report high test scores, yet its students may be making minimal academic gains each year. Meanwhile, a
Data can be intimidating, but it’s a fact of life for every public school educator. As a teacher and principal, I constantly used data to guide my work with students and staff. Today, as a school board member, I don’t have access to the same detailed information that I once had, so I look for different ways to use data to inform policy decisions.

In the fall of 2001, I was principal of Fifer Middle School in Delaware’s Caesar Rodney School District. The state instituted its own pre-No Child Left Behind (NCLB) accountability system that worked on a two-year testing cycle, but I was far too impatient to wait two years for my school’s rating. A central office colleague helped me develop a spreadsheet that mimicked the state’s calculations, allowing me to tell my staff what our adequate yearly progress rating would have been if the cycle ended after one year instead of two.

That was the beginning of creating a data culture at Fifer. With NCLB, the spreadsheet grew into a much more comprehensive package that I called the School Data Packet. Each year’s packet contained graphs of data pulled from the state department of education’s website; it was included in my welcome back packet to staff. I wrote a one-paragraph analysis next to each graph to inform my staff and to model how I wanted them to use the data.

Over the years, the packets became a rich resource, with new graphs that compared our school scores to each year’s accountability targets, so we could see how well we had done and how much we needed to improve. As a staff, we worked our way through aggregated data—information combined from several different groups—to data disaggregated by group. Finally, we started examining individual student scores and instructional needs indicators.

I retired in July 2006 and almost exactly 10 months later was elected to the school board. The transition had its challenges, but I felt my 30 years as a teacher and principal prepared me to consider the educational issues our board would face. I was not, however, prepared for the transition from practitioner to policymaker.

The board’s bigger picture
At local and state levels, I found that many board members did not have a deep understanding of the data teachers and administrators use. Some board members were largely unaware of the amount and types of data available. Few, if any, knew what it was like to work in a school with a strong data culture.

In my first few months on the board, I asked the Delaware Department of Education about getting “trainer” access to the data that I used as a principal. I was informed, gently but firmly, that I did not need it in my policymaking role. For 30 years, I had access to data about my students, but now that access was restricted.

As I gained more experience on the board, I had to admit that Department of Education officials were right. Board members don’t need to know the specific test scores or instructional needs of individual students. We did, however, need to know enough about the data to monitor the progress of our schools and the district to make good decisions about how to support our staff’s work to improve student learning.

After a career of moving from whole-school aggregated data to individual student data, I needed to back off and look at the big picture. As school board members and district leaders, we must be data informed, but not in such a specific way. For us, data serves as a leadership tool that helps us answer larger, broader questions.

This, of course, is the most important point: It’s not the data itself, but the questions it raises that are most important. We also need to think about our schools and ask our own questions, with answers provided by the administration and supported by data.

The data questions
Here are some data-related questions school board members can and should ask. All of these questions and many more can be raised by the data that is available to you, and for that matter, to the public.

- In each grade, what percentages of our students are not meeting the state performance targets? Are those percentages acceptable?
  - Do we have schools or grade levels that consistently break the patterns? Why are they better or worse than the others?
  - If our district is devoting extra resources to K-3 reading instruction, are all students reading on grade level by the end of third grade? If not, why not? If so, do students stay on grade level through graduation or do they fall behind once the extra support ends?
  - Does the data indicate that the longer students go to our schools, the better they perform? If not, why not?
  - What percent of students come to us with the knowledge and skills they need to succeed in kindergarten? If the percent is low, what resources do we need to provide to get those few students on track by the end of the year? If the percent is high, do we need to consider providing pre-k programs? Would it be more effective and more economical to spend money on bringing students up to age-appropriate performance before they get to kindergarten than to rely on remediation programs that provide help only after students come to us several years behind in their skills?
  - As cohorts of students move through our district (third to fourth grade, fourth to fifth grade, and so on), does the percentage of those performing at or above grade level increase steadily?
  - Do we see a correlation between report card grades and student test scores?

When we understand the data, we are equipped to lead—to lead by keeping the district focused on answering critical questions, by constantly requesting information to answer our own questions, and by making the data inform fiscal and policy decisions that will move our schools forward.

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school serving a low-income community may score poorly on tests but is advancing children by a grade and a half each year.

“When you look at a scatterplot, you look at a pattern,” Gemberling says. “There may be many factors [at work] … Nothing is a simple answer in any of this work. But the more comparisons you can make using the data, the better chance you have of getting a handle on what’s happening.”

It’s not always so complicated. Data can take many forms. William Parrett, director of Boise State University’s Center for School Improvement and Policy Studies, tells a story about a district that took a closer look at its calendar and subtracted vacation days, holidays, and classroom time lost to professional development, teacher-parent conferences, early dismissals, athletic events, school assemblies, and the like.

“What this district found, when they counted it up, was that their schools ended up with 13 to 15 eight-hour days of instruction per subject per year,” Parrett says. “Is that enough time to meet your state standards?”

No one expects board members to become experts in data analysis. “The board does not need to be designing this data and then choosing programs or finding solutions to fix problems,” Salter says. “The board needs to say, ‘Let’s look into the problem.’ … Then the board turns it over to the administration to [find the right data], to create a solution—a plan for attacking the problem. The board’s role is to consider whether it can afford those things and allocate the resources to make it happen.”

**Capacity building**

That sounds great as a general principle, but it doesn’t improve your ability to analyze data. So how do you read the data? What are the tricks and techniques to find the answers you need?

Your answers are found in training—and not just for you and your fellow board members. Even if school boards could identify the district’s challenges and develop the best responses on their own, they still need to make sure teachers and administrators can use data to turn the board priorities into day-to-day instructional practices. Your staff needs to understand how to look at data to fix campus problems.

“One of the board’s roles is to enable the superintendent and staff to build up the capacity of teachers to do the kind of data work we’re expecting them to do,” Thomas says.

That’s even more important given the findings of Harvard University’s Ronald Ferguson, who says the widest variations in classroom instruction aren’t found among different schools—but among different classrooms in the same school. That’s true even in your highest-performing schools. Much of the work to bring about instructional change will depend on what happens within the schools.

“The story is inside the buildings,” he says. “It’s how the stronger classrooms differ from the weakest. We spend so much time talking about great schools and troubled schools, yet we’ve got great and troubled classrooms in every building.”

So building human capacity—the ability of principals and teachers to analyze data and put it to use—is a key role of the school board. What’s more, you need to be willing to create a structure that allows staff the time to sit down together and do this work. To make effective use of data, you may need to modify school schedules to create time for teachers and principals to work together to review their data. Your district may need to upgrade its instructional management system or data warehouse to provide the tools for staff to pull it together in a useful way.

The toughest battle may be convincing your board colleagues to invest in their own training, as some undervalue data’s usefulness or their need for training. That’s a huge mistake, Ultrino says. Some of the most valuable training he’s received from the Massachusetts Association of School Committees was in data-driven decision-making.

“All of my work on my doctorate over four years didn’t address what I learned in three hours,” he says. “Professional development is key for board members.”

Such efforts will pay big dividends, but Salter notes board members shouldn’t be surprised if they face some staff pushback. “If the board has not been using data, and suddenly they begin to want the data to make decisions and hold people accountable, that can be a very scary thing for your administrative team. That’s why it’s critical for the board and leadership team to have some discussions—work sessions or retreats—to look at why you want to look at the data, what you will do with it, and then reassure the staff that you’re not on a witch hunt.”

It’s a discussion you can’t have too soon, Gemberling says. State and federal policymakers are increasingly intrusive in their school reform efforts, and that should raise some concerns.

“Who is the driving force in education? Traditionally, we’ve seen it as a local [matter] but people are beginning to question that. So one of the things that I’m really convinced of is a local school board that knows how to use data—how to interpret it, and how to communicate its importance to constituents—is the board that will stay in control of its own local governance.”

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**Notes:**

1. Sometimes, the board’s role is to enable the superintendent and staff to build up the capacity of teachers to do the kind of data work we’re expecting them to do.

2. The toughest battle may be convincing your board colleagues to invest in their own training. So building human capacity—the ability of principals and teachers to analyze data and put it to use—is a key role of the school board. What’s more, you need to be willing to create a structure that allows staff the time to sit down together and do this work. To make effective use of data, you may need to modify school schedules to create time for teachers and principals to work together to review their data. Your district may need to upgrade its instructional management system or data warehouse to provide the tools for staff to pull it together in a useful way.

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Eight Traits of Effective School Boards
Research is clear: High-achieving boards exhibit different habits and characteristics

Patte Barth

What makes an effective school board—one that boosts student achievement? From a research perspective, it’s a complex question that involves evaluating virtually all of a board’s functions, from internal governance and policy formulation to communication with teachers, building administrators, and the public. But the research that exists is clear, according to a brief published by NSBA’s Center for Public Education (CPE) in late January. The brief, which examined seven research studies conducted between 1993 and 2008, says high-achieving boards exhibit habits and characteristics that are markedly different from those of their low-achieving counterparts.

What makes a board effective?
Here are eight characteristics found in the research:

High expectations, clear goals: Effective school boards make a commitment to a vision of high expectations for student achievement and quality instruction. They define clear goals to meet the vision, make sure the goals remain the top priorities, and allow nothing to detract from them.

Belief that all children can learn: Effective school boards have strong shared beliefs and values about what is possible for students and their ability to learn, and of the system and its ability to teach all children at high levels. In high-achieving districts, poverty, lack of parental involvement and other factors are described as challenges to be overcome, not as excuses. Board members expect to see improvements in student achievement quickly as a result of initiatives.

Focused on achievement: Effective boards are accountability driven. They spend less time on operational issues and more time focused on policies to improve student achievement.

Collaboration and communication: Effective boards have a collaborative relationship with staff and the community. A strong communications structure is in place to inform and engage key groups—internal and external—in setting and achieving the district’s goals.

Data savvy: Effective school boards embrace and monitor data, even when the information is negative, and use it to drive continuous improvement. In high-achieving districts, board members identify specific student needs through data, and justify decisions based on that data.

Goals and resources aligned: Effective school boards align and sustain resources, such as professional development, to meet district goals. This occurs even during the most severe budget challenges, such as the ones districts now face.

Team leadership: Effective school boards lead as a united team with the superintendent, each from their respective roles, with strong collaboration and mutual trust. Boards in successful districts define an initial vision for the district and seek a superintendent who matches this vision.

Team training: Boards that are effective take part in team development and training, sometimes with their superintendents, to build shared knowledge, values, and commitments for the district’s improvement efforts. Training is formal, deliberate, and often on specific topics.

Danger signs
The CPE did not set out to specifically focus on what makes boards ineffective. However, some descriptions—we call them “a dozen danger signs”—of ineffective boards emerged in the research review.

Ineffective school boards:
• Are only vaguely aware of school improvement initiatives, and are seldom able to describe actions being taken to improve student learning.
• Focus on external pressures as the main reasons for lack of student success, such as poverty, lack of parent support, societal factors, or lack of motivation.
• Offer negative comments about students and teachers.
• Micromanage day-to-day operations.
• Disregard the agenda process and the chain of command.
• Are left out of the information flow, with little communication between the board and superintendent.
• Describe a lack of parent interest in education or barriers to community outreach.
• Look at data from a “blaming” perspective, describing teachers, students and families as major causes for low performance.
• Have little understanding or coordination on staff development for teachers.
• Are slow to define a vision.
• Do not hire a superintendent who agrees with their vision.
• Receive little professional development together as a board.

Though the research on school board effectiveness is in the beginning stages, the studies included in this report make it clear that school boards in high-achieving districts have attitudes, knowledge, and approaches that separate them from their counterparts in lower-achieving districts. In this era of fiscal constraints and a national environment focused on accountability, boards in high-performing districts can provide an important blueprint for success. In the process, they can offer a road map for school districts nationwide.

Patte Barth (pbarth@nsba.org) is the director of NSBA’s Center for Public Education. The full report, The Eight Characteristics of Effective School Boards, written by researchers Chuck Dervarics and Eileen O’Brien, is available at www.centerforpubliceducation.org.

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System Approach to Student Achievement aka Assessment Literacy

Eight Characteristics of Effective Boards:

1. Commit to a vision of high expectations for students. What are your expectations for your students?
2. Members share beliefs about students’ abilities to learn. What do you believe about the students in your district? What do your fellow board members believe?
3. Accountability driven: do you know if the actions the district is using to improve student learning are working?
4. Focused on student outcomes: How is the SYSTEM doing, do you know? Are you fulfilling your core purpose? Do you know what your core purpose is? Do you know WHY you do what you’re doing as district?
5. Collaborative relationships: Does your board, the entire board, meet regularly throughout the year with groups of staff and groups from the community? Do those groups ever meet together to talk about improving student learning outcomes?
6. Data savvy: Where do assessment data come from? Why do schools collect assessment data? What, exactly, is being assessed? Against what criteria are assessment results being measured?
7. Align and sustain resources to district goals: What will it take for your district to realize its goals? What resources are dedicated to that purpose and how are you the board sustaining those resources over time to ensure you can meet your goals?
8. Is your board a united team with the superintendent? Are you co-leading?

Five roles of the board from Lighthouse research:

1. Team development and training: What is the board’s role in student learning? Is regular board learning time a part of your yearly calendar? Is the board modeling the learning it expects of others?
2. Setting clear expectations for student learning outcomes is a primary role for the school board. (Do you expect all your 3rd graders to be reading at grade level by the end of 3rd grade? Do you expect all your 9th graders to graduate high school in four years?) What kinds of conversations have you had on your board about what is expected for students?
3. Creating the conditions for success: What resources are needed to meet your expectations? These are resources that the board approves and decisions that only the board can make. As you contemplate these decisions, are you discussing how the resources will enable the district to meet its goals?
4. Accountability or holding the system accountable: Are your resources bringing you the results you expect? What evidences are you looking at and when are you discussing those findings? If expectations are being met what’s next? If they’re not being met, how are you problem-solving collaboratively? What can others do to help you realize your dreams for your students and their schools?
5. Create the public will to succeed: Are you having conversations and making decisions that help the public (internal and external) want to join with your efforts to succeed?