Student Data

EDITORS NOTE
Schools continuously seek ways to improve and understand student data collection. In this Spotlight, discover how students perform on national tests, how experts project learning loss from school closures, and how educators expect inequities to worsen during the pandemic.

Even Before Pandemic, National Test Finds Most Seniors Unready for College Reading, Math

COVID-Related Learning Loss Will Hit Younger Students Differently


Nation’s Schools Get a ‘C’ Once Again, Even as Pandemic Turns Up the Heat

Pre-COVID Learning Inequities Were Already Large Around the World

OPINION
School Improvement Hinges on Access to Student Data

Data Doesn’t Have to Be a Dirty Word
Even Before Pandemic, National Test Finds Most Seniors Unready for College Reading, Math

By Sarah D. Sparks

Little more than 1 in 3 American 12th graders read proficiently and fewer than 1 in 4 performed proficiently in math on the National Assessment of Educational Progress in 2019, marking widening gaps for struggling students in both subjects.

The results of the latest round of tests dubbed the Nation’s Report Card, which were administered before the start of the pandemic last spring, found the average math score has been flat since 2015, while the average reading score dropped 2 points on a 300-point scale. All told, while 61 percent of high school seniors who took NAEP last year reported they had applied to or been accepted at a four-year college, only 37 percent performed well enough in both math and reading to be considered ready for freshman college courses in those subjects, according to the National Center for Education Statistics, which administers the NAEP.

The performance of students who were already struggling—in the 25th percentile or below—declined in 2019 across both reading and math in grades 4, 8, and 12 in 2019 compared to four years ago. The 10 percent of students struggling the most has dropped 20 points since 1992, a record low.

Peggy Carr, the NCES associate commissioner, said background questionnaires given with the tests showed deep uncertainty among students: “We asked students about their confidence in being able to respond to the questions and students were very clear that they didn’t know or feel very confident in some very basic fundamental skills when it comes to reading—being able to recognize the author’s purpose, being able to identify specific things—or being able to conduct some basic fundamental math operations.”

NCES found more students at all proficiency levels have started taking advanced math courses, such as calculus and trigonometry, but that more advanced study hasn’t translated to greater understanding of those topics. While 62 percent of students who performed below basic in 2005 took advanced courses, 81 percent of below basic students did so in 2019.

“This is a curious finding,” said Grady Wilburn of NCES. “You would think that more advanced courses would correlate with students moving out of the below basic category. However, our results don’t show that relationship.” In fact, the percentage of students below basic increased in math in grades 8 and 12 and in reading at all three grades in 2019.

“For students who are leaving high school when our democracy, economy, and personal safety all require more ability to understand, use, and apply math, holding steady is not success,” said National Council of Teachers of Mathematics President Trena Wilkerson in an email. “Each and every student must be equipped to use math to make sense of our world and to increase their opportunities moving forward.”

The 2019 NAEP included a representative sample of some 50,000 students from 1,800 schools nationwide. However, there was not a clear enough sample for NCES to break out data for low-income 12th graders as it did among students in grades 4 and 8.
Bounce Back from COVID-19 with Better Student Data

Extended school closures, a rapid transition to distance learning and an early end to instruction upended school learning last spring. End-of-year assessments were derailed or, in many cases, canceled due to waived requirements. The loss of assessment data as a guiding point for further instruction has created an information gap on student achievement.

How do you meet students where they are and close the gap?

Schools know students will be affected by learning loss associated with the COVID slide, but there are factors beyond that. As questions remain about which students will be most affected, how much learning loss they’re facing, and in what areas, making decisions about how to support students is difficult without ongoing data, like formative assessments.

In a webinar with PowerSchool and Ed-Fi Alliance experts, they recommend starting by bringing together all of your existing data points together, so you can see the whole picture. Once you have all the data, combining it into one integrated platform will give you a complete view of student performance. With an integrated platform, educators can see where students need support and plan the best ways to provide it. Integrated edtech gives you the secure, real-time data and analytics you need to personalize learning for each student, ensuring learning continuity in a uniquely challenging year.

Watch this webinar to learn how to use data insights for student learning.
COVID-Related Learning Loss Will Hit Younger Students Differently

By Sarah D. Sparks

Educators are bracing for students to return to school this fall with significant learning loss, after more than six months of disruption from the coronavirus pandemic. New research suggests schools will need to target interventions differently for students in different grades and subjects.

Researchers with the assessment group Illuminate Education analyzed more than 500,000 computer-adaptive test scores in reading and math from kindergarten through 5th grade students in reading and math between fall and spring tests in the 2018-19 and 2019-20 school years. The data were used to project the difference in growth between the two years and the extent of learning loss in each grade and subject.

They found students in all grades and subjects had learning loss during the pandemic school closures this spring, but they followed different patterns. Kindergartners and 1st graders lost the most ground in general reading development, but rising 5th graders lost the most fluency in reading aloud. Across every grade, students lost more learning in math than in reading, losing two and a half to four and a half months of learning, compared to a month or two in reading.

“It’s a little bit like riding a bike,” said John Bie lenski, a co-author of the study and Illuminate’s senior director of research and development. “If we were to start teaching a kid how to ride a bike and then stopped. And then three months later said, okay, can you ride a bike? They probably won’t be able to—they have forgotten what they learned—but once they’ve mastered riding a bike, if they don’t ride for few months, they probably can get on a bike and ride again.”

“So in K-2 we see relatively dramatic losses, from the foundational reading skills that kids build on to become proficient readers like phonics and phonological awareness,” he said. “By grade 4 and 5, reading is more about comprehension — and we see very little loss in reading.”

A similar Brookings Institution study of upper elementary and middle school grades showed that while the average reading growth did not change much from 4th to 8th grades, the range of students’ development widened, particularly in grades 6 and 8. In math, by contrast, students had lower math development as well as a wider range of achievement across the board. In math, too, the 6th grade transition year saw a particularly sharp learning loss.

The new study did not dig into which topics students were most likely to lose, but Rachael Brown, senior academic officer and co-author of the study, hazarded a guess: “From the standpoint of what’s happening in the curriculum, 4th-5th grade and into 6th grade is the introduction of fractions, decimals and all manner of rational numbers,” she said. “Well, we know that that’s where many kids struggle in mathematics, and take that together with COVID and things are just going to be at a difficulty level that they haven’t encountered before.”


By Stephen Sawchuk

Understanding how and why students disengage or are starting to slide academically is especially important, given emerging findings from last spring’s national experiment with remote learning. In surveys, educators reported falling levels of engagement last spring for the longer remote learning went on.

Unlike the other interventions in this series, an early-warning system doesn’t on its own help to re-engage students or fill in learning gaps. Like the lights on a dashboard telling you something’s wrong, an early-warning system uses indicators—missed days, falling grades, or a sudden rash of disciplinary actions—to identify which students need more help. And it provides a consistent framework district and school leaders can use to respond.

“It’s a nicely oiled machine, but it’s the seamless transitions from grade to grade and relationship building that really makes all of this work, so when you’re hit with a crisis, you can move and adjust,” said Jawana Akuffo, a middle school counselor in the White River school district in Washington state, about her school system’s robust early-warning system that spans both academic and social-emotional learning outcomes. “And by having that transition we can catch those kids who have fallen through the cracks.”

What indicators make up an early-warning system?

The purpose of an early-warning system is identification. The district selects a series of indicators—preferably ones that move in...
real time—that are statistically linked to dropping out, failing to complete major milestones in schooling, and other adverse effects. Generally, the indicators rely on data that districts should already be collecting.

Then, districts create thresholds for each indicator that are consistent across all schools. For example, Johns Hopkins University, home to many of the researchers who have written on early-warning systems, recommends these thresholds for absenteeism at the high school level: Nine or more absences in a quarter indicate a student is "off track," a student with five to eight such absences is "sliding," and one with four or fewer is on track.

For high school, there’s widespread agreement about what should constitute the indicators: Grade point averages, attendance, course completion, and sometimes behavior data. Tests, it turns out, are not as predictive of dropping out at the high school level as the other combined indicators.

At the middle and elementary levels, attendance, marking period grades, and report card grades are often chosen. Districts have also added indicators they’ve validated on their own. Several districts in Montana, for example, found that mobility was predictive of future academic performance and incorporated that into their indicators, according to Sarah Frazelle, the director of early-warning systems for the Puget Sound Education Service District, in Washington state. Others have chosen 3rd-grade reading ability.

Above all, the system must be simple for educators to use. Indicator data should be compiled in an easy format for educators to review; some districts have hired third-party vendors to do that work, while others cobble together a user-friendly interface on their own.

“We should not be something that’s complicated; it should not be something that’s going to take a lot of extra time. Early-warning systems worked because they were very easy to understand and use so it’s not asking a whole lot in terms of people’s mental bandwidth for learning how to use this new system,” said Elaine Allenworth, the director of the Consortium on School Research at the University of Chicago, which has developed indicators for the Chicago Public Schools and produced many research reports.

**What happens to students who are flagged under an early-warning system?**

The key to success is what districts actually do when a student is identified. Sometimes intervention means a “light-touch” approach; students who trigger more flags in the system or don’t respond to initial efforts may need more-extensive help.

In the White River district, part of weekly professional learning community meetings is devoted to quickly reviewing the early-warning indicators and planning supports for any students they’ve flagged who need academic help. Support staff, counselors, and mental-health experts participate in weekly meetings too, just as teachers do, to review data on attendance, behavior, and social-emotional learning programming.

For example, at the secondary level, teachers on Monday review the academic indicators and academic targets for the week. If a student is having problems, a teacher goes into the student’s online planner to reserve “Hornet Time” or “Grizzly Time,” periods named after the schools’ mascots. During these 30-minute periods, which are worked into the master schedule on Wednesdays, Thursdays, and Fridays, students work with the appropriate teacher to master the specific missing skill or content. (They don’t miss out on regular grade-level teaching.)

Other interventions schools can consider, listed in order from lighter-touch to more intensive, include:

- Having a teacher send text messages to a student, if he or she is absent several days in a row or earns low grades on assignments.
- Ramping up parent engagement, for example by notifying them of homework assignments and quizzes.
- Prioritizing certain students for counseling.
- Conducting home visits.
Assigning a staff person as a “case manager” to check in on a student several times a week.

Providing mental health services.

Providing extended learning time.

Providing individual or small-group tutoring.

Finally, once the district has intervened with a student, it needs to follow up over time to see if the extra help is making a difference, or whether further assistance is necessary.

Do early-warning systems work for all students?

The research on the systems in high school is solid, concluding that they are better than test scores for identifying which students are at risk of dropping out. High school GPA seems to be an especially powerful indicator.

But the evidence is sparser on other populations. (One study of English-language learners found that early-warning indicators didn’t do a good job of identifying newcomer ELLs who would later go on to drop out.)

There’s generally less research evidence about how to structure early-warning systems at the elementary level, where grading is less emphasized, though many districts have adapted them for those grades as well.

The COVID-19 pandemic raises new questions and challenges for early-warning systems. Certain indicators like attendance take on new meanings, and the White River educators say they are contemplating how to keep the tenets in place as they transition to remote learning. One idea is reserving some in-class time at school for small group interventions; another is learning how to spot new clues that students may need more help.

“How do you find that right balance of online instruction with students interacting with the teacher and with one another from an engagement level, and how are we going to measure it? Maybe it means tracking who is showing up, and who, when we get on a Zoom meeting, always has their camera turned off. Or who isn’t eating well, or isn’t very well kept, or who is saying, ‘I can’t show up to algebra because I have to work,’” said Cody Moth, the principal at the district’s high school.

Putting It All Together

Districts will need to be creative about the attendance indicator.

Attendance is one of the most basic data points every district collects, and a core element of early-warning systems. But in a remote setting, the notion of attendance has taken on a myriad of new meanings.

Some districts are now looking at whether students are logging into the synchronous portion of instruction or filling in a shared spreadsheet on attendance. The problem with those measures is that they don’t say much about engagement. Researchers suggest a more useful gauge could be tracking whether they are completing assigned work.

“I think that what they will have to track is assignment completion. Anything else is going to be really tricky—all the data about whether students are logging in and how long are they on, a lot of times that’s not very good data,” Allensworth said.

Plus, assignment completion has the advantage of being workable across both remote and in-person contexts.

In White River, at the elementary level, the district uses a screener to examine behavior concerns, both externalized (theft, quarreling) and internalized (withdrawn, being bullied). Teachers fill it out three times a year and schools’ teams use the data to plan. And the district provides special SEL programming in the difficult transition years of 7th, 8th, and 9th grade.

The City Year tutoring program, which deploys AmeriCorps volunteers in schools in nearly 30 cities, uses early-warning data to prioritize the students it works with. Part of its intervention relies on involving students in goal setting and recognizing those students when they’ve met goals for attendance or behavior.

Similarly, the systems only truly work through a combination of bottom-up and top-down buy-in. Superintendents need to support the data collection and reporting, but it’s the teacher teams and cross-sector communication that makes the interventions happen.

Don’t neglect social-emotional learning.

Isolation, lack of face-to-face contact, and other new challenges wrought by COVID-19 mean it’s critical to make an early-warning system responsive to SEL needs.

ELAINE ALLENWORTH
DIRECTOR OF THE CONSORTIUM ON SCHOOL RESEARCH, UNIVERSITY OF CHICAGO

Early-warning systems worked because they were very easy to understand and use so it’s not asking a whole lot in terms of people’s mental bandwidth for learning how to use this new system.”

Student Data
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Nation's Schools Get a 'C' Once Again, Even as Pandemic Turns Up the Heat

By Sterling C. Lloyd and Alex Harwin

As the nation’s K-12 schools struggle to open amid COVID-19’s disruption, the challenges that confronted them before the pandemic—weak academic achievement, big gaps between high- and low-performing states, and room for improvement all around—remain front and center.

That’s the composite picture painted by Quality Counts 2020’s final grading of the nation and the states based largely on the most recent federal and state data, which gives the U.S. a grade of C on a range of academic, school finance, and long-term socioeconomic indicators.

The underlying data—which captures conditions from 2017 to 2019 on a 50-state basis—translates into a national score of 75.9 out of 100 possible points, an increase of 0.3 points from last year. While it’s not a grade that’s likely to prompt a confetti-filled celebration, it does reflect modest gains over 2019 results in cradle-to-career opportunities and school finance.

For the second consecutive year, New Jersey earns the top overall ranking with a B-plus grade and a score of 87.3. Massachusetts posts the only other B-plus grade at 86.7. By contrast, New Mexico receives the nation’s lowest score of 66.3 and a D-plus. Three other states—Alabama, Nevada, and Oklahoma—also get D-plus grades.

This report provides overall grades and scores based on 39 indicators in three broad categories developed by the EdWeek Research Center: Chance for Success, School Finance, and K-12 Achievement.

The United States earns its highest grade (a C-plus, 79.2) on the Chance-for-Success Index, which evaluates opportunities for children to get off to a good start in early childhood, move successfully through pre-K-12 schooling, and ultimately achieve positive educational and career outcomes in adulthood. It posts a C (75.6) on the school finance analysis grading states on spending and equity in the distribution of funding across districts.

The nation receives its lowest score (72.8) and a C-grade on the K-12 Achievement Index, which gauges current performance, trends over time, and poverty-based gaps. The comprehensive report card reveals an array of strengths and weaknesses with substantial disparities between the highest- and lowest-performing states.

The overall results featured in this installment are the average of the scores for the three categories in the report card framework. The state-by-state results for the Chance-for-Success Index were published in January and School Finance scores were released in June. The K-12 Achievement grades are newly updated for this September installment based largely on 2019 data from the National Assessment of Educational Progress.

The research center identified four key takeaways from this year’s analysis:

Even the top performers have substantial room for improvement.

No state earns an overall grade of A. The top scorers—New Jersey and Massachusetts—garner less than 90 points and are about 15 points short of a perfect 100. States that are relatively strong in many respects can still use the report card to target specific areas that need work.

The pattern of indicator-by-indicator variability in performance holds true for all three of the major report categories. Results for the Chance-for-Success Index illustrate the need for even top states to aim higher. Massachusetts gets the nation’s highest grade with an A-minus, but it still finishes 45th for steady employment and 42nd for linguistic integration, defined as the percent of dependent children whose parents are fluent English speakers.

The national Chance for Success leaders generally have a soft spot in at least one broad component of the index. New Jersey finishes second for indicators measuring student achievement in the K-12 years and fifth for success in adulthood but 17th on metrics gauging the degree to which children are prepared to start school. Similarly, Vermont, second for preparation in the early-childhood stage and fourth in K-12 performance, drops to 13th for adult outcomes. No state makes it into the top five for all of the cradle-to-career stages.

When scores are averaged across the report card categories, states landing in the top 10 still fall near the very bottom on at least one of the report card’s specific indicators. For instance, New Jersey stands at 47th for the percent of dependent children whose parents are fluent English-speakers. Wyoming (5th overall) is 47th in postsecondary participation.

New York finishes eighth overall but ranks 43rd for parental employment. Vermont (6th overall) is 47th for kindergarten enrollment and 48th for school funding equity as measured by the per-pupil spending gap between its highest- and lowest-spending districts ($12,865).

New Jersey retains its crown as the top-ranked state largely due to its continued strength in school finance.

The Garden State expanded its razor-thin margin over Massachusetts, its nearest rival in the overall rankings, from a few hundredths of a point in 2019 to nearly a whole point this year. It maintained its 5.9-point advantage in school finance and cut into the Bay State’s lead in the two other graded categories. In 2019, it trailed Massachusetts by 2.4 points in Chance for Success and by 3.4 points in K-12 Achievement but now falls behind by 2.1 and 2.0 points, respectively.

New Jersey ranks second, nationally, for school finance while Massachusetts is in 10th place. Although New Jersey finishes in the bottom tier for finance equity (31st), it is apacesetter in the spending category where it trails only perennial standout, Wyoming. It ranks sixth for per-pupil expenditures at $17,707 once figures are adjusted for regional cost differences and 99.9 percent of its students are in districts spending at or above the U.S. average.

These results are anchored by the state’s commitment to education funding. It devotes 5.1 percent of its total taxable resources to education,
the third-highest share in the nation.

Large disparities between the overall scores of the highest- and lowest-performers continue.

Nearly 21 points separate the performance of New Jersey at the top of the scorecard from New Mexico at the bottom. Similar gaps define their widely differing results on each of the graded categories. New Jersey outpaces New Mexico by 21.9 points in Chance for Success, 19.1 points in School Finance, and 21.3 points in K-12 Achievement. New Jersey lands in the top 10 on 24 of 39 report card indicators. At the other end of the scale, New Mexico is in the bottom 10 for 22 of the metrics.

Some states have made encouraging progress over time while others have declined more than their peers.

The District of Columbia, Mississippi, and Louisiana all saw their overall scores improve by two points or more from 2019 to 2020. The District of Columbia gained the most with a jump of 2.8 points. Its score jumped by 3.9 points during that time propelled by increases in the percentage of 4th grade students proficient in math and reading on NAEP.

In some cases, 2019 to 2020 improvements bolster a trajectory that has been trending upward over more than a decade. Viewed from a longer-term perspective, the District of Columbia has seen the largest advances in the nation on the Chance for Success Index if 2020 results are measured against marks from 2008, the first year the index used its current scoring system. As its score jumped by 9.3 points, catapulting its letter grade from a C to a B, the District’s ranking surged from 33rd to seventh.

Like the District of Columbia, Mississippi’s gains contribute to a long-term climb up the mountain. Its Chance for Success grade was a D-plus in 2008. By 2020, it had improved to a C, with a gain of 6.2 points.

While some individual states made advances of two points or more in their overall scores, the nation saw increases of just 0.2 points in Chance for Success and 0.7 points in School Finance. Its score dropped by 0.2 points in K-12 Achievement.

Most states (34) receive overall grades between C-plus and C-minus, illustrating the complexity and difficulty of maintaining excellence across a diverse range of indicators.
Bringing Data Together to Move Learning Forward

In a webinar with Ed-Fi Alliance experts, strategic partnership managers Cesare Tise and Sean Casey spoke with PowerSchool Vice President of Product Joel Hames about finding ways to use data insights to provide uninterrupted student learning. Here are the top takeaways from the conversation:

- Areas to focus student support
- How to address and solve for data related challenges
- Where to find tools and support to pinpoint COVID-19 related learning gaps

Read on for their expert insights and advice.

Data Should Answer Questions About Equity, Content and Results

Data says a lot about student achievement, and that knowledge can significantly improve outcomes for all stakeholders, when used the right way. Knowing what questions you want to answer before diving into the data provides a baseline for connecting the data to student achievement in an intentional way. Baselines and benchmarks help form insights to see how far students have progressed from verified starting points, and ongoing monitoring allows you to evaluate progress and course-correct based on insights from connected systems.

Aggregating existing data sources to identify gaps in student achievement and standards proficiency will be critical in combating the COVID slide and information gap. According to Hames, this data should address several key areas.

"The first one is fundamentally about equity," Hames says. "Equity is about the set of services and educational opportunities that were present when you had daily interactions with all of your students. Equity was already a challenge, and it's even more so now that students are at home, where they may be struggling in terms of their daily schedule."

Hames says equity is affecting students with regard to loss of socialization in addition to access to technology that helps continue learning from home. "Equity is a massive milestone for us to address. It’s a key part of what we’re doing to support each other going forward, trying to understand what we’re learning and how we’re consuming that information and turning it around into actual improvements," he says.

Once immediate issues surrounding equality have been addressed, Hames says quality of content can help better engage students, aiding in participation and bouncing back from learning loss more quickly.

"Content is another one of those things that existed well before the current pandemic but is made even more critical now. It is important to focus on the digital content, the way we form that content, and the way we create digital interactions, since it is the primary way we are interacting with our students."

"Equity is a massive milestone for us to address."

But, Hames says, just having great content isn't enough. You also need to measure where that content is driving learning best. Getting students back on track with standards is critically important when making up for learning loss related to COVID-19.

"We want to be able to understand if we are making any progress. Is this actually producing some level of engagement?" Hames says. "We hear on a daily basis questions like, 'How do I understand whether what I'm doing is making a positive difference? What's the impact it's having, and how can I use that to improve the outcomes later on?'"
While your existing data can help answer some big questions, other challenges may still need to be addressed, Casey says. In spring 2020, system provisioning challenges and rostering challenges were two immediate data pain points he worked to support in his community. Once immediate issues were under control, Casey noticed a shift to solving for challenges surrounding engagement and participation.

When the focus turned to the 2020-21 school year, Casey says ingenuity was required to solve for data loss. "My state canceled our end-of-year exams, our summative exams, and the course exams," he says. "That was a huge piece of data that we would use for placement decisions or master scheduling changes in the fall. How do we still accomplish those important goals for our learners without that very critical piece of data we've come to depend upon?" he says. Instead, figuring out how to leverage local data such as formative and benchmark assessments as effectively as possible allows schools and districts to address some of the learning loss unknowns more quickly.

Tise says a large component of using existing data to answer questions and solve challenges quickly is having data that’s readily available in one interoperable system.

"Utilizing an API solution to streamline that flow of data is a big key part of what we're trying to do," Tise says. "We're collecting that data via API so there is a seamless flow of information from the source systems to the districts, so that there aren't a lot of time constraints behind trying to make sense of multiple Excel files or documentation that doesn't match up."

Casey says getting clean data to the right stakeholders without increasing the burden on them is important for efficiency and downstream efforts.

"For instance, a principal might need to know about how all the classrooms and teachers and students are doing, or at a district level, the roll up that's appropriate for people at the central office," he says. "The agility that has been required of you out in the field, we're trying to match with the agility of our own resources to provide things that can help an awful lot of folks that are struggling with similar challenges."
To get students back on track and minimize the effects of the COVID slide, educators need tools that empower them to quickly identify and address instructional gaps with the data they have readily available. Teachers need easy access to information that makes it simple to know what to prioritize when making curriculum adjustments throughout the school year and in the years to come.

Moving Learning Forward. Together.

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Students from socioeconomically disadvantaged schools also were less likely to have supports at home to enable remote learning, like a computer for schoolwork and Internet access.

“...in addition to the computer at home, the internet and the quiet space to work, as an individual learner, you need social validation from your family, from your peer group” to learn effectively online, according to Hilary Spencer, former director of the United Kingdom Government Equalities Office and chief executive officer of the nonprofit Ambition Institute in London, which supports education for disadvantaged students.

“So at times of COVID, that’s really problematic, because you can’t provide that homework and social support in school. So we need to look at how we can provide that social support to increase the effectiveness and the productivity of the use of the online platform, particularly for disadvantaged students.”

The analyses are based on data from the 2018 Program for International Student Assessment,
as well as its accompanying background survey for principals and more targeted surveys for teachers, parents, and students.

**Grouping, Digital Savvy**

Interestingly, OECD also found that grouping students by ability could help or hurt their reading skills, depending on how it was implemented.

In schools that grouped students within classes for individual subjects, the practice was associated with higher reading scores. However, on average students who attended schools that grouped by ability for all subjects—either through outright class tracking or by ability grouping within every class—had lower reading scores than students in schools without grouping. In the United States, nearly 70 percent of 15-year-olds are grouped by ability in some subjects.

More U.S. students than their global counterparts could distinguish fact from opinion when reading, but it was faint praise: more than 1 in 7 U.S. 15-year-olds showed reading savvy, compared to 1 in 10 on average for students participating in PISA. “Reading is no longer mainly about extracting information; it is about constructing knowledge, thinking critically and making well-founded judgements,” OECD researchers wrote.

**OPINION**

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## School Improvement Hinges on Access to Student Data

We need usable data to find out what works in education

By Chris Elmendorf and Darien Shanske

Consider the following scenario: You are a school superintendent very interested in expanding pre-K in your district. You review the literature on the subject and find it inconclusive. A veteran school board member tells you that the district did have a pre-K program 25 years ago; it lasted for three years and then was discontinued. You wonder how those children did, including after they left school. And you ask the state for help.

The state should know lots about those students: their standardized-test scores, whether they voted, their criminal records, their income, etc. The state replies that it does not have this information collected in a manner that is accessible. And, to add insult to injury, the state explains that it would not release the information anyway because of privacy concerns.

You decide to proceed with pre-K in your district regardless, but, so that future researchers can learn something, you ask the state if you can assign pupils to the pre-K class through a random lottery given that there will not be enough spots for everyone. The state refuses. A local education researcher asks if you can work together to at least keep track of key administrative data for the children within and without the program. To do that, you need help from the state, but again the state refuses.

That scenario is neither fanciful nor uncommon. Despite some improvements, many states do not maintain the data in a usable manner that education researchers need, much less do they use program rollouts as a regular opportunity to conduct controlled experiments. On the one hand, this failure makes sense. Organizing and managing administrative data is not costless, especially if privacy concerns are properly taken into account. Furthermore, as a matter of practical politics, not much of a constituency exists for the collection of good data that will yield conclusions many years in the future—a time frame that for most politicians or administrators makes no sense.

At the same time, the failure to generate high-quality data is untenable. Education is by far the biggest expenditure made by state and local governments. The cost of collecting good data and making the information available is not even a rounding error compared with state and local education budgets. It would be one thing if educational researchers were doing well enough with the data they have, but the expert consensus is that they are not. And this is not because there is a lack of researchers or analytic methods. (Indeed, something of a revolution is going on in the social sciences when it comes to the use of administrative data. For example, a much-celebrated recent study by Raj Chetty and colleagues demonstrated that social mobility in the United States depends greatly on where a child grows up, based on careful analysis of years of tax-return data.)

If education research is not to be left behind, states need to devote resources to collecting the data and making those data available to researchers. There are models for doing so. In some Nordic countries, each citizen is given an administrative-record number that is used throughout the government. When a researcher requests data, the government provides the data, but using a different set of numbers to protect privacy. That arrangement has enabled education research that would be difficult or impossible to carry out elsewhere, such as studying the effect of publicly provided day care on labor-market outcomes decades later—just the question our hypothetical superintendent was hoping to answer.

The policy prescription is clear: States should
aim to collect and disseminate first-rate educational data. A good place to start on this project is with the checklist provided by the nonprofit Data Quality Campaign, which emphasizes the record-keeping arrangements needed to track students over time and across administrative databases.

States should also organize themselves so that opportunities for controlled experiments are not squandered. In many cases, states already roll out programmatic changes in pieces; it would not cost much more to do so in a manner that enables credible inferences about the reform’s effects.

What if a state refuses to take reasonable steps to assess the effectiveness of its biggest outlay? Can the states be forced into self-reflection? We think the answer is yes.

Virtually every state constitution provides for a system of free public schools. Most states have been sued under those provisions, with the plaintiffs claiming that states are not distributing funds equitably or just not spending an adequate amount. Plaintiffs have a mixed record in such suits, though it should be noted that many states changed their educational system because of the threat of such a lawsuit.

As a result, there are many states where the constitutional provision concerning education has been litigated and in which the courts have held that the state has a legally enforceable “duty of care” with respect to education. We argue in a forthcoming law review article that if this duty of care means anything, it must at least mean that states take reasonable efforts to enable the assessment of how their public education systems are performing. That is, leaving aside whether states must spend more money or spend more fairly, they must at least have some reasonable system in place to assess their compliance with the constitutional command to provide a decent public education.

Especially in states with courts that have proven willing to impose dramatic solutions, such as spending and other mandates, we think that even the threat of litigation should motivate state officials to provide education researchers the data they need. To be clear, our vision of states’ duty of care with respect to education wouldn’t turn children into lab rats. States would still have to protect student records from privacy-compromising disclosures, and state officials—not researchers—would continue to set priorities. But whatever else the states may owe to disadvantaged children in particular, at least the states must make it possible to learn whether their efforts to better educate those children are doing any good.

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OPINION

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Data Doesn’t Have to Be a Dirty Word

By Starr Sackstein

It’s all about perspective.

Too often when we hear the word “data” we assume that the person speaking is talking solely about summative test results and the plethora of possibilities for learning we can take away from those numbers.

But this is NOT the only kind of data that exists, it is just the kind that gets the brunt of our ire and frustration as it is a solitary indicator of teaching and learning.

And that’s what I struggle with. Test data is one single area for determining what kids know and can do and there are often many challenges with these standardized tests that skew the data on top of that.

However, most classroom teachers and leaders are gathering data like masterful musicians in their classrooms every day and just don’t realize that is what they are doing.

Data can be all of the following, but not limited to:

- Notes gathered while taking the status of the class
- How long it took students to complete a task
- The results of that task
- Student questions
- Entrance tickets, exit tickets
- Reflective writing
- Self and peer assessment and feedback
- One to one conversations that happen over the course of the period
- Google form answers
- Classroom discussion
- Class trends or individual student learning growth and challenges
- Google Classroom conversations
- Twitter Chats

Like testing, data can be both formative and summative, but it should always be informing the instruction. It isn’t enough to gather data or review test results and do any kind of data analysis on skills or content learning if we aren’t going to use the data we explore to help student learning improve.

So what can we do to make data more meaningful?

- Always make sure to track the data in some way, making an analysis of what is happening in your classes a daily practice.
- At the end of each period or day, depending on what age group you work with, review lesson plans, making notations on what was accomplished and note what students know and can do and how you know.
- Memorialize feedback conversations. If you have students mature enough to maintain this information, make it their responsibility. For example, if I’m walking around checking in with groups working on a project, there are a couple of things that can happen. They can have a specific question I’m going to answer to them alone and they will be responsible for the direct instruction that comes from that question or I may decide to stop class for a second and share that information with everyone. It is important to make a note of this adjustment as it may be necessary to teach the skill again in a different way or provide a resource that may be helpful later.
- Be mindful of your wait time when opening up the floor to student questions and exploration of their learning, always making a note of who is first to share and the quality of the share as well as who habitu-
ally remains quiet even though there is a solid answer sitting on his/her sheet.

• Adjust the pacing of a lesson.

• Provide alternative kinds of learning opportunities that play to different kinds of intelligence. Get students moving and allow them to show what they know in ways that make sense to them.

• Give students choice and voice in their learning to support deepening of understanding as well as engagement.

Ultimately, everything we do in our classrooms can be used as data and we can make it as meaningful as we want it to be or we can let opportunities go by.

Every teacher wants his/her students to be successful and chances are, each teacher is doing so much already with the information he or she has to make that happen. As team leaders, we want to help our teachers leverage the information they have to create the most targeted and effective instruction possible, not just to do better on tests, but to be better learners throughout their lives.

Starr Sackstein is a secondary educator and school leader in New York. She is the author of several books on education, on topics such as going gradeless, peer feedback, and blogging.
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