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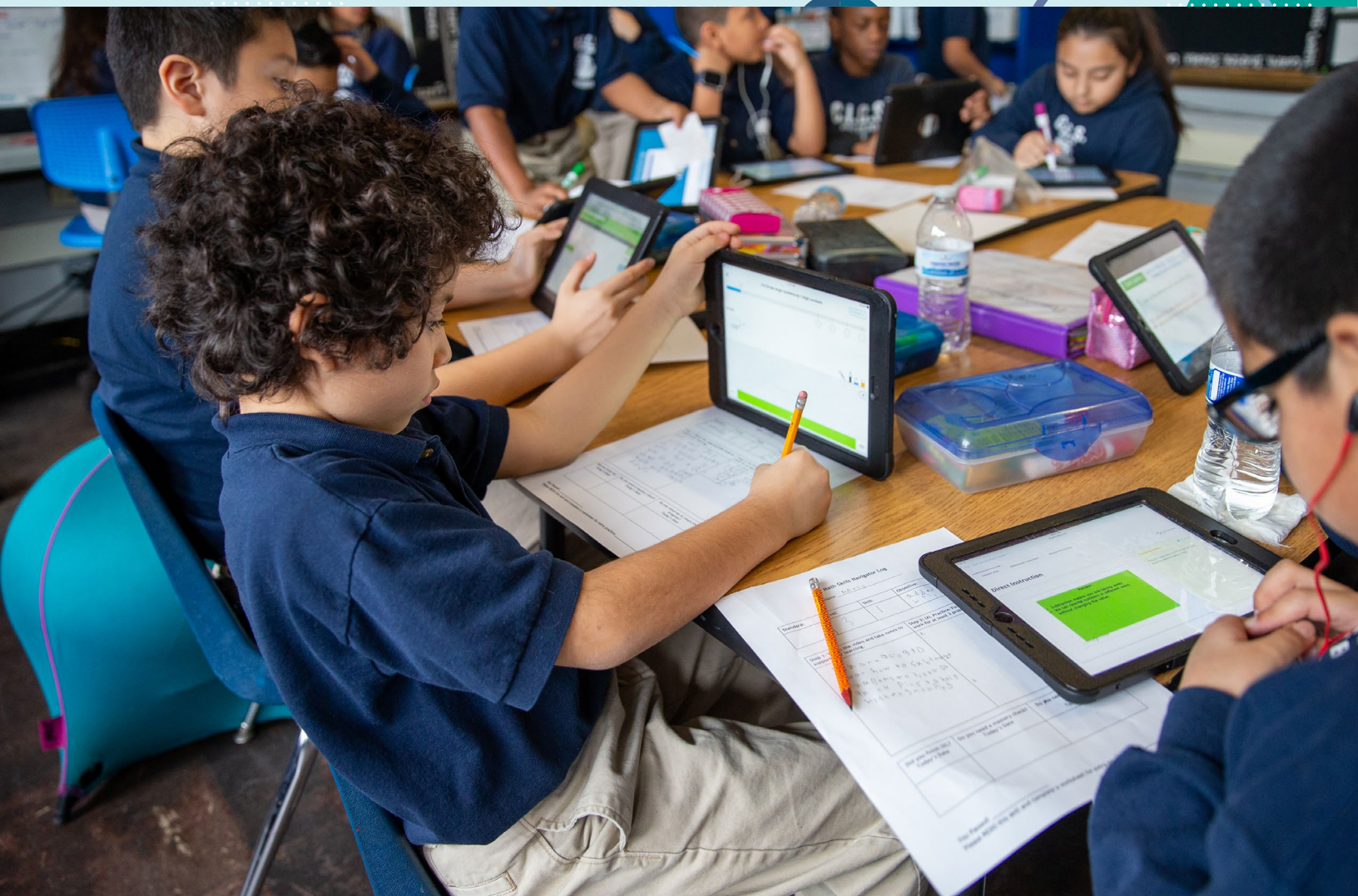
WHITE PAPER

A research-backed assessment can improve instruction and outcomes



Summary

Well-researched assessments, and the data they produce, can be a powerful way to identify learning gaps as well as areas of special promise, paving the way for an instructional model that meets students where they are. However, implementing new assessment tools is not an easy task. As school districts weigh the potential benefits of assessment solutions, they should consider key criteria such as adaptability, quality, and ease of use, as well as what kind of training and support are available to ensure success.

Introduction

Across the United States, educational outcomes for schoolchildren have stagnated in the 21st century. In a period of rapid change in an increasingly globalized world, American students have not seen appreciable improvement in the domains of reading, math, and science, according to the National Assessment of Educational Progress. What has progressed, however, is the public's awareness of and respect for the fact that students come to the classroom with a multitude of learning styles and abilities, which will either advantage or disadvantage them depending on their instructional environment. While efforts to boost educational attainment continue at the school, district, state, and national level, it is ultimately the classroom where real change takes effect, provided that teachers receive the professional development they need in order to offer better and more responsive instruction.

To fulfill the potential for change at the classroom level and prepare students well for college and the workforce, educators need insight into each student's knowledge and learning progress. These insights can sometimes be hard to come by via a typical or traditional approach to education, in which teachers work their way through a set sequence of lessons, moving forward based not on whether all students are ready to do so, but rather on whether most students seem ready. Consequently, many students with gaps in their ability to comprehend or apply the material they're learning fall behind their peers. Students who are ready for more challenging material are also overlooked, as they must wait until their class can move forward as a single unit. To ensure that all students are met where they are, relative to their peers, schools need to match students' needs with a curriculum that works for them as individuals.

To do this, schools need reliable, accurate assessments of students' learning progress. Many teachers, who see the results every day of the instructional models they use in their own classrooms, are eager to personalize their students' education and take a more flexible

and adaptable approach to curricula and lesson planning. For example, rather than lumping all students together in one static group, teachers know that creating dynamic groups of students based on learning progress and interest areas could be an effective way to identify and cater to students' abilities and needs. But this kind of differentiation can require a significant investment of time for educators and tough resource-allocation decisions on the part of administrators.

To overcome the challenges of such a strategic shift, schools need robust, research-validated assessment solutions that give teachers actionable, frequently refreshed information about what their students are learning and where they need attention.

Understanding the diversity of students' minds and needs

In decades past, few people questioned the assumption that a classroom full of students would be well served by a single, well-designed curriculum taught by a qualified instructor. Each year, as students completed their end-of-unit or end-of-year summative assessments, schools have used test results to assign all students into three broad groups—above average, normal, and below average—and group them accordingly into classes with their similarly situated peers. For a variety of reasons, the limitations and inequities associated with this kind of tracking practice have given rise to increasing concern and controversy. Over time, classes organized in this manner tend to become segregated by socioeconomic status, race, and ethnicity, and students in lower-level classes often experience stigmatization as "delayed" learners.

Moreover, there is growing recognition that students learn differently from one another, and that such variation does not correlate well with standard measures of intelligence or ability. The influential theory of multiple intelligences, for example, posits that human beings express their innate intelligence through a number of different modalities, such as musical, verbal, and others. Applying this theory to the typical classroom, we can see that some "intelligences" may be privileged over others. While labeling individual students under any category of intelligence runs the risk of pigeonholing them, most educators would agree that appealing to students' own interests, learning styles, and personal strengths can only be a good thing.

Indeed, how well students internalize what they are learning may depend to a large degree on whether they are able to approach the information in a way they find agreeable and motivating. A Gallup poll found that while 74% of surveyed fifth-graders reported feeling interested and engaged in their schooling, only 32% of eleventh-graders did. The causes of this "engagement cliff" are debatable and no doubt multifactorial, but it stands to reason that as students progress through the grades, a significant number will feel left behind or overlooked if their curriculum is not presented in a way they find relatable—which could have a downstream effect on their state-standards performance and college readiness.

Many students, including those with learning gaps or challenges, may be amenable to alternative instructional approaches. But in a typical instructional model, individual learning needs are often not brought to light, let alone met with solutions. A standardized instructional model aimed at a composite "average" student may be a poor fit at a time when our understanding of and respect for students as individuals continues to grow. And unlike in the past, when the public generally deferred to school districts and gave them wide latitude to develop academic plans for their students, more parents today expect accommodation for their children's learning differences and styles.

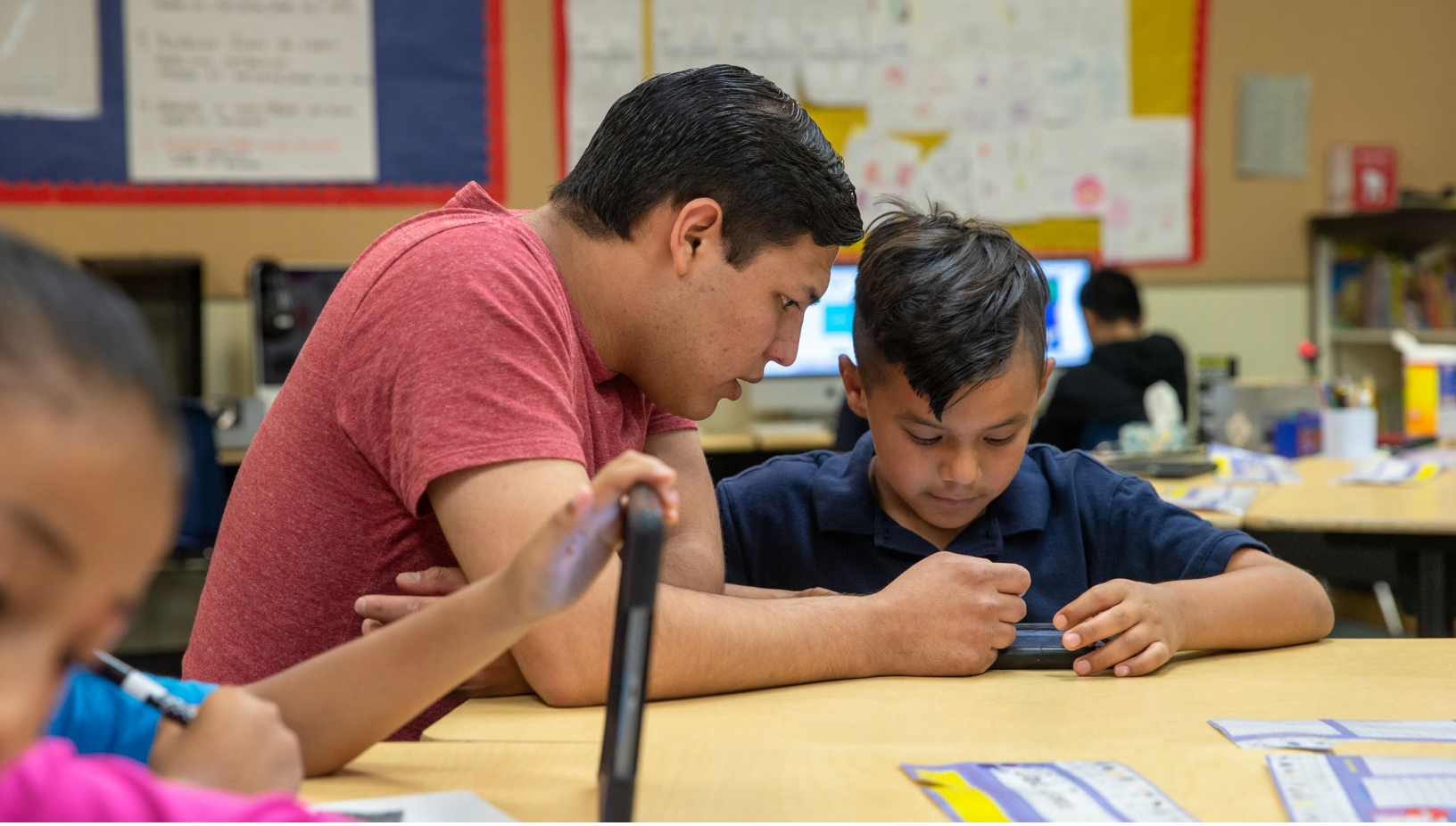
Exploring the potential of differentiated instruction

Recognizing that students are individuals with a variety of learning styles, strengths, and challenges, educators endeavor to create a classroom experience that keeps all students engaged with the curriculum. Teachers continually assess their students' learning progress through both testing and informal means, and, to the best of their ability, they use that knowledge to meet students' learning needs.

For teachers with the right kind of support in the classroom and from school leadership, differentiated—or personalized—instruction can be a viable and powerful way to reach students and foster engagement with the curriculum. One way that teachers do this is to create flexible groupings of students within the classroom, in which learners have access to a range of different ways to understand and apply new information. Instead of the familiar static groupings (or single group) that students belong to throughout the year and from one grade to the next, differentiation can turn a classroom into a dynamic, collaborative environment in which students move in and out of peer study groups, based on their interests and academic success. Students can change groups every week, or even every day, based on what they need in a particular area in order to be successful.

In schools where differentiated instruction is valued, teachers are able to take an expansive, flexible view of whether their students are "good" at a given subject. Rather than make categorical judgments about students' knowledge and skills—even when test performance shows they are behind or ahead of their peers—teachers think of their students as having specific challenges (or talents) with specific tasks or conceptual areas. A student may not be "bad at math," in other words; they may simply need extra support with numeracy or geometry. Rather than asking students to work harder at the things they already struggle with, teachers play to their strengths because they know students will progress faster and farther if they can show their capacity for success. Students learn not to label themselves as low, average, or above average. Instead, they see themselves on a more forgiving spectrum of knowledge and ability, with setbacks in some areas and triumphs in others.

Even with teachers' intuition and skill, however, this sort of student-centric learning environment can be difficult to create without investment and support at the school level. And without that support, teachers' attempts to personalize instruction for their students can sometimes create new problems in the process of trying to solve others. To return to the example of student grouping, teachers may form groups based on their own perceptions of how their students are doing, but in the absence of reliable information about each student's learning progress and gaps, students may end up grouped with peers who have a very different set of learning styles and preferences. It is also important to note that teachers sometimes group students based on behavioral, not academic, factors, which deprioritizes their learning needs.



The role of research-based assessment solutions

Given the challenges inherent in implementing new instructional models in the classroom, it is vital that any effort to do so is well informed and backed by professional training and support. Here, assessments have the potential to play an essential role. To be sure, assessments of student learning are already a fact of life at the classroom, school, district, and state level, so teachers and school leaders are looking for more than simply another test. They want a solution that generates useful reporting, is aligned to state standards and national benchmark data, and has strong potential to move the needle on improving instruction and learning outcomes.

The results of the right assessment solution can be transformative for schools. Teachers use the data to inform their professional development, creating highly targeted instructional practices that engage students in their own learning progress. School and district leaders, for their part, rely on the assessments to inform their resource allocations and program needs, and to foster collaboration among educators. And students themselves feel the benefits of assessments when they are conducted as part of a positive vision of classrooms as centers of individualized learning.

As an example, consider the potential impact of adaptive interim assessments on the arc of a student's schooling. When a student completes a well-designed, adaptive assessment a few times over the course of a school year, teachers receive timely data on the student's performance in mathematics, reading, language usage, and science—and are able to track the student's progress in these domains. The data directly informs the teacher's creation of flexible learning groups in the classroom, in which the student has many more opportunities to collaborate and communicate with peers than in a traditional, facing-forward instructional model. By working as part of a team, the student learns from their peers, discovers their potential for leadership, and becomes more comfortable with self-guided learning. These outcomes contribute significantly to the student's well-being and college readiness, and they lay the groundwork for career success.

Turning this scenario into reality is a complex task. Successfully implementing assessment solutions, let alone generating the results that justify the effort, is beyond the reach of any single teacher or school. This reality underscores the importance of an assessment solution's quality and breadth. An off-the-shelf assessment product will perform very differently from a customizable instrument that is designed by academics and comes with ongoing support and training.

As districts weigh the features of various assessment solutions, they should be asking: Who has developed the content on these tests, and what are their credentials and areas of expertise? How can we be sure that these tests have excellent psychometric strength and are designed to correct for bias? How extensively has this assessment been field-tested, and what kind of results have other districts seen? What kind of implementation support and ongoing relationship with the assessment provider can we expect? The answers to these questions will go a long way toward choosing the right solution and fostering confidence in the results it will deliver.

In particular, schools will want to choose assessment solutions that not only generate the best data possible, but also are informed and continually improved by large amounts of high-quality data themselves. By pooling anonymized, longitudinal data from schools across the country, assessment providers can refine their assessment instruments over time and offer schools new insights into a wide range of education topics. With this kind of information readily available, educators and school leaders can gain valuable perspectives on achievement gaps and learning trends beyond their own districts.

This focus on data reflects a growing awareness of and dependence on research in a wide variety of fields. Like many organizations and industries, school districts in the age of "Big Data" are warming to the use of data analytics to improve and analyze the effectiveness of the services they offer. Adoption of data analytics in all industries, according to a survey, rose from 17% in 2015 to 59% in 2018. Education lags other fields in adopting data analytics techniques, with about one-quarter of K–12 and higher-education schools reporting that they regularly use these techniques. However, the trend will continue to grow, and nearly all schools say they may or are likely to use big data in the future to evaluate students' learning progress and improve instruction.

Conclusion

The stagnation of educational outcomes among US students in the 21st century makes clear that a new approach is needed to help students excel in the domains of reading, mathematics, and science. In addition to the "engagement cliff" described in research that shows students feeling increasingly detached from their curriculum as they advance through their secondary education, teachers report high levels of stress; they, too, are often dissatisfied with the status quo.

At a time when families, schools, and educators increasingly recognize—and even celebrate—students' varied learning styles, teachers must be supported to continually improve and refine the instruction they provide. Such improvement includes, when possible, moving toward a model of differentiated or personalized instruction. Whether it takes the form of flexible learning groups or self-guided learning centered on individual interest areas, differentiated instruction can help close learning gaps, enhance engagement with subject matter, increase preparedness for state-mandated tests, and position students well for college and beyond.

Well-designed and researched assessments, and the data they produce, can be a powerful way to identify learning gaps as well as areas of special promise, paving the way for an instructional model that meets students where they are. That said, implementing new assessment tools is not an easy task in the best of circumstances. Schools and teachers are already under considerable pressure to have their students perform well on state tests, and teachers are understandably wary of "flavor of the month" initiatives that will demand a lot from them without producing appreciable results. Moreover, many teachers may feel they are administering plenty of assessments already, and that it's not always clear what they're supposed to do with the results of those assessments.

For all of these reasons, the adaptability, quality, and ease of use of assessments should be major considerations as school districts attempt to gauge the level of uptake they can expect among teachers, as well as return on investment as defined by students' academic attainment. It's also important to note that the data produced by any robust assessment is complex and likely out of reach for any one educator. Those tasked with interpreting and acting upon the data need a well-explained context for doing so. Therefore, assessment instruments that are paired with professional training and support will be more useful to school leaders and far more motivating to teachers—who, in the end, are the change agents who can put students on a path to success.

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