ONLINE ASSESSMENT:

From Readiness to Opportunity

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Acknowledgements

The Consortium for School Networking (CoSN), in partnership with The School Superintendents Association (AASA) and the National School Boards Association (NSBA), has engaged the authors and sponsors of the first online assessment report—*Raising the BAR: Becoming Assessment Ready*—to research and update their work to provide a current view of online assessments in the United States.

Dr. Tom Ryan, CEO of the eLearn Institute, is the principal analyst for the report working in collaboration with Education Networks of America (ENA) and Susan Van Gundy, CEO and founder of Eduvate. Dr. Ryan served in public education for 31 years, including time spent as a teacher and high school principal, as well as 11 years as Chief Information Officer at Albuquerque Public Schools in New Mexico. Dr. Ryan worked in collaboration with Kipp Bentley, a consultant with eLearn Institute and Senior Fellow with the Center for Digital Education. Mr. Bentley is a former teacher, librarian, and executive director of educational technologies and interdisciplinary learning for Denver Public Schools. ENA is a national leader in providing broadband, Wi-Fi/LAN, communication, and cloud solutions to school systems across the country. Prior to founding Eduvate, a consulting organization focused on improving education systems, Ms. Van Gundy served as the Director of Technology for the Partnership for the Assessment of Readiness for College and Careers (PARCC) consortium. With their combined knowledge, the authors have a deep understanding of the online assessment landscape.

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Introduction

Amid the flurry of planning and actions to get ready for online assessments, the heated discussions about the purpose and value of online assessments and the Common Core State Standards (CCSS), and the challenges to successfully deploy online assessments, something very transformational happened: standards across the county were evaluated and improved to be more rigorous and online assessments became the norm instead of the exception for school districts across the country. This ongoing transformation is creating new opportunities for college and career readiness for our students.

Our first report, *Raising the BAR: Becoming Assessment Ready*, focused on action items to help schools prepare for online assessments. An excerpt from that 2014 report suggested the following:

We have an opportunity to transform from Industrial Age school systems that are more group focused to Information Age school systems that are much more customized to the unique needs of individual children, while providing all students with greater access to content, resources, and support. The opportunity exists for transformation to take place not only at the classroom level but also in the way schools and central offices across the country function to meet the needs of students. In order to achieve this needed transformation, education will finally be moving technology from the sidelines of education to center stage, not as the focus of teaching and learning but as an essential tool in creating the environments of success we so earnestly need for all children.

We are well on our way to making this transformation a reality. While not all school districts across the country have fully embraced online assessments, we believe the momentum will continue until paper and pencil assessments are a thing of the past.

A report published by the Council of the Great City Schools in October 2015, "Student Testing in America's Great City Schools: An Inventory and Preliminary Analysis," brought to light the deficiencies, inefficiencies, and sometimes redundancies of traditional assessments and the need for "a more thoughtful approach to assessing the academic needs of our urban schoolchildren," as stated by Michael Casserly, the Council's executive director.[1]

With all of that in mind, this white paper looks at the current state of online assessments, explains how we got here, highlights best practices, and illustrates the benefits and value of online assessments to the broader K–12 education community, including students, teachers, parents, administrators, superintendents, and school board members.

Four out of 10 districts reported having to wait two to four months before receiving their state test results, meaning the results had limited utility to inform instructional practices.

The findings suggest that some tests are not well aligned to each other, are not specifically aligned with college- or career-ready standards, and often do not assess student mastery of any specific content.

Student Testing in America's Great City Schools: An Inventory and Preliminary Analysis, Council of the Great City Schools, October 2015

Value of Online Assessments

There are several direct benefits to online assessments for each education community stakeholder.

Administrators

- Creates collaboration among district departments
- Delivers improved security models for assessments and student data
- Ability to move beyond percentage of student proficiency to data that helps students learn

School Board Members

- Promotes effective and equitable execution of assessments
- Allows for ongoing improvement and innovation for assessments
- Builds confidence between communities and schools

Teachers

- Provides test results quickly to inform instruction and personalize learning
- Reduces the burden of test grading
- Improves assessments of English language learners and students with special needs

Superintendents

- Accurately reflects school and district performance against standards
- Provides tools to quickly and easily disaggregate and interpret test data
- Provides the data needed to support students, teachers, and principals

Students

- Increases student engagement
- Provides more opportunities to demonstrate proficiency
- Ability to use real world tools

Parents

- Provides insight into standard proficiency for their child
- Offers highly reliable and accurate scoring
- Accurately reflects school and district performance against standards

DIRECT BENEFITS

As this white paper will highlight, there are several direct benefits to online assessments for each education community stakeholder:

- Quick return of results providing educators with the information needed to modify instruction based on student learning needs
- Ability to better capture student subject matter performance, mastery, and depth of knowledge
- Saved time for students taking the test, test administration, and results analysis, ultimately resulting in increased instructional time
- Tools to quickly and easily disaggregate and interpret test data
- Ability to include multiple formats, such as video, audio, and other digital resources, to present information and collect responses previously unavailable through paper and pencil tests
- Tools to safeguard security of test items and student responses
- Improved assessments of English language learners and students with disabilities

Over the past couple of years, there have been significant discussions and controversy regarding assessments aligned with the Common Core State Standards (CCSS) or state College and Career Ready Standards (CCRS), such as too much testing, accountability, and federal versus local control of standards and assessments. Many of the controversies are heavily influenced by the way online assessments were planned and implemented.

It is important, however, not to lose focus on the real value of online assessments to provide teachers and parents with important information about individual student performance. The online format of assessments is becoming the standard and shifts the focus from summative or end-of-year assessments to formative assessments which have the potential to significantly improve education.

Online assessments have also placed a stake in the ground for schools and systems to build out the infrastructure necessary to support not only online assessments but also classroom learning environments that will finally provide the tools educators require to meet the unique needs of children.

The opportunity for all students to access and use Internet-based instructional resources has become a major equity issue in our schools. While challenges remain, the benefits for all education community stakeholders outweigh the challenges.

From a Superintendents Perspective

Fairness, equity, and access are top of mind when speaking to superintendents about online assessments, career and college ready standards, and accountability. It's important for all students and teachers to have access to devices, high-speed broadband, and high-quality digital tools in order to realize the benefits of online assessments. Many school districts are struggling to get up to speed when it comes to implementing online assessments, especially when it comes to resource allocation, accountability, and timeline expectations. Many districts, particularly those in rural areas, encourage collaborative partnerships for professional learning and resource sharing to address some of these challenges. Overall, however, most school districts are conducting systemic planning and strategic investments to tackle the fundamental issues of equity, access, and teacher preparation.

— AASA, The School Superintendents Association

NSBA – School Boards are the Bridge Between Communities and Schools

A Conversation With Ann Lee Flynn, Ed.D., Director of Education Technology for the National School Boards Association (NSBA):

There is no doubt that Common Core State Standards (CCSS) and online assessments have been contested topics for many school boards and districts across the United States over the past few years. While these topics have settled down in recent months, they are not likely to go away entirely, especially in light of the planning and preparation for the Every Student Succeeds Act (ESSA), which is the most recent reauthorization of the Elementary and Secondary Education Act. Representing school boards across the country, NSBA is keen on making sure there is a balance between federal overreach and state and local control. No one argues the value of rigorous college and career ready standards or aligned online assessments, but tying the adoption of standards to funding or the results of online assessments to teacher evaluations is not of value to most school boards. While ESSA is still new and implementation has not yet begun, there remains a focus on keeping key decisions local and guarding against federal overreach.

Dr. Flynn points out that school boards are the bridge between communities and schools, and when it comes to online assessments, school boards are generally concerned about three key things:

- They want effective and equitable execution of assessments
- They want to prevent over testing
- They want to make sure parents and community members understand the value and connection between online assessments and improving student outcomes

School boards already recognize the importance of making sure students have equitable access to digital experiences throughout the instructional day before taking online assessments. The first question they ask school districts is, "What is your current capacity to execute online assessments?" They know districts must first invest in the infrastructure, devices, and digital curriculum that students need in order to have the digital experience needed before moving to online assessments.

Over-testing has been a big concern from parents and the community. There is a sense that the pendulum has swung too far and too many tests are being administered with no real impact. School boards want districts to focus on the most critical assessment tools that will have the biggest impact on student learning.

In addition to preventing over-testing, school boards want to ensure the tests administered have the greatest impact on teaching and learning, and parents want to know why and how online assessments matter to their children. The data provided by online assessments is valuable only if it is used to inform instruction and promote personalized learning—not if it is just used to measure a student's proficiency level. Communicating to parents the value and positive impact that online assessments can have on student performance is an important step in connecting online assessments to student outcomes.

Looking toward the future, Dr. Flynn sees online assessments becoming more sophisticated, providing deeper and more meaningful insight into student proficiency. She believes technology advancements will enable developers to generate assessments that provide a clearer picture of a student's ability.

> **"Assessment tools have to be better refined and aligned to what we are asking teachers to teach and children to master."**
>
> **—Ann Lee Flynn, Ed.D., National School Boards Association**

Key Considerations for Online Assessments

What Is the Purpose and Value of Online Assessments?

Recognizing how the Common Core State Standards (CCSS), as well as various individual state College and Career Ready Standards (CCRS), have focused educators' attention to the rigor, communication, higher-order thinking, and problem-solving demands of their new curricula, a new assessment model was needed that could better determine each student's ability to meet the new criteria. Online assessments are currently proving they can provide such opportunities, and they are offering new methods for dramatically improving student learning outcomes through summative end-of-year assessments, as well as through interim and formative assessments that provide teachers with timely data on their students' progress that can be used to modify instruction.

School districts already making a strategic transition to online assessments are also beginning to see a focus shift among their staff. In the early stages of this transition process, these districts were mostly focused on readiness questions—was their bandwidth adequate, did they have the right type and sufficient number of devices, and did their assessment providers have the system capacity to support their schools? Additionally, they also hoped the new online assessments would provide greater insight into evaluating student proficiencies.

However, now that most of the readiness questions have been addressed, new assessments are primarily being used by these forward-thinking districts to impact teaching and learning with the end goal of impacting each student's academic success. Their conversations have shifted from a primary focus on summative assessments offered at the end of their instructional cycles to an emphasis on conducting formative assessments at earlier instructional stages. Ultimately, with more informative and timely student data, these districts are working to determine how to best personalize instruction.

Online assessments are currently proving they can provide such opportunities, and they are offering new methods for dramatically improving student learning outcomes through summative end-of-year assessments, as well as through interim and formative assessments that provide teachers with timely data on their students' progress that can be used to modify instruction.

THE RESULTS ARE IN

The first full implementation year of online assessments delivered using Partnership for Assessment of Readiness for College and Careers (PARCC), Smarter Balanced Assessment Consortium (Smarter Balanced), and other online assessment tools has proven successful. Online assessments are meeting the expectations for this format over traditional paper and pencil tests.

As anticipated, online assessments are offering schools the following:

- A greater ability to assess the higher order thinking and problem solving skills of students through a wider range of question and answer formats; this is especially important for interim assessments used by districts, as they can now better align to CCSS or state CCRS both in context (i.e., the *kinds of* questions being asked) and in format (i.e., *how* the questions are presented)
- A much faster scoring turnaround time on interim assessments, allowing teachers to use their students' test results to inform and personalize their instruction
- More adaptive assessment options for English language learners and students with special needs
- Increased opportunities for better engaging students in the assessment process
- Improved security models for the assessments and for student data

ESSENTIAL CONDITIONS FOR INFORMATION AGE SCHOOLS

The recent online assessment experiences of many school districts highlight several essential conditions that must be in place for districts to successfully implement these new assessments. A key takeaway for all districts to understand is, **if their teachers aren't teaching with digital tools and their students aren't learning with digital tools, districts shouldn't expect their students will be successful with online assessments**. Early results are showing that students who don't have regular access to technology—and specifically with the device(s) used for their online assessments—will struggle through the assessment and become frustrated with the process. Very often, these struggling students are from low socioeconomic households.[2]

Recognizing the college and career ready demands of the new Information Age, many U.S. school districts have made concerted efforts to meaningfully integrate technology into their teaching and learning processes. School network infrastructures have been upgraded to meet the State Educational Technology Directors Association (SETDA) and Federal Communications Commission (FCC) broadband recommendations, digital devices have been purchased for teachers and students, and e-books and interactive digital instructional content have been deployed. But overall as a nation, our school districts' transition from Industrial Age to Information Age instructional practices continues to move slowly.

The inherent benefits of aligned curricula and online assessments are helping motivate school districts toward improved Information Age instruction. Technology infused curricula, including blended learning, personalized/individualized learning, and online courses, are gaining recognition and becoming more prevalent in U.S. schools. Additionally, the opportunities that technology-based curricula offer for data-driven instruction are also being confirmed.

During the first year of online assessments, districts focused on their assessment readiness, but many teachers complained they did not have adequate CCSS- or state CCRS-aligned instructional materials and content, and this may have been negatively reflected in their students' scores. During the second year, student results increased as teachers became more familiar with the assessments and had more aligned resources to use. As a result, their students' scores generally increased. We categorize this process as phases toward transformation with the first year being an "awareness" phase and the second year being an "adoption" phase.

Districts should now be moving toward the "transformation" phase wherein each teacher's classroom instruction and interim assessments should focus on gathering and analyzing data to gain deeper knowledge about their students, which would then be used to personalize instruction based on each student's individual needs. Teachers should also be replicating the online testing environment and growing their students' technical skills through their daily classroom instruction.

For more information on smart design of education networks, visit www.cosn.org/SEND

Early results are showing that students who don't have regular access to technology—and specifically with the device(s) used for their online assessments—will struggle through the assessment and become frustrated with the process. Very often, these struggling students are from low socioeconomic households.

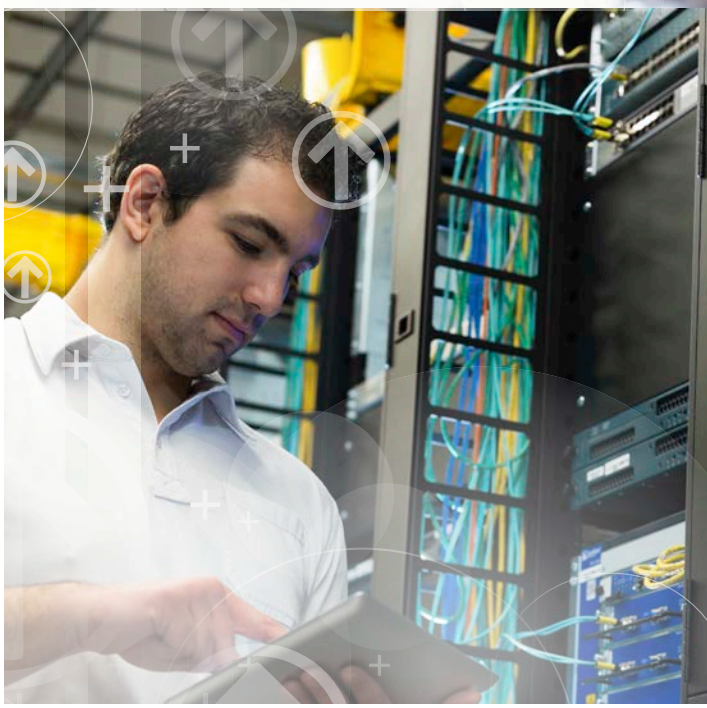
SUPPORTING TEACHERS

Many districts on the forefront of leveraging online assessments have identified other essential conditions needed to successfully support their teachers' use of both the district-created interim assessments and the teacher-created formative assessments:

- A full-featured student information system (SIS)
- A data warehouse for storing and reporting student assessment information
- An online assessment platform that supports summative, formative, interim, and teacher-created tests and includes a bank of quality test items that capture students' higher order thinking skills via CCSS or state CCRS assessment formats
- A learning management system that houses digital curricula, including commercially created content, teacher created content, and curated open educational resources (OER) that are tagged and aligned to the CCSS or state CCRS
- Professional development offerings to train teachers to effectively use and integrate the available resources

Districts moving toward data-driven and Information Age instruction recognize that the data and digital resources they employ are only valuable if teachers can easily access and use them. However, building this complex but user-friendly and accessible system, wherein each part is able to interconnect, is no small task. Based on the progress of most school districts in this development process, the work toward meeting these additional essential conditions will continue for some time to come.

The good news is the way forward has been charted by many school districts and progress is being made. An example of this progress is described in the Houston Independent School District vignette, "Making Their Stars Align—How Houston Independent School District Is Successfully Leveraging Online Assessments to Improve Learning," which is provided in this white paper.



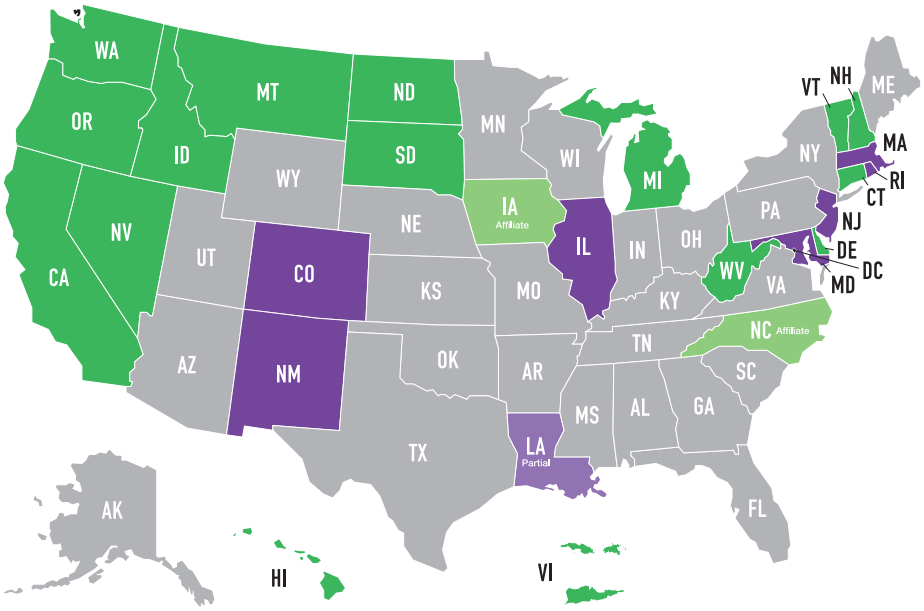
The National Assessment Consortia

Looking back at the history of online assessments as part of the American Recovery and Reinvestment Act of 2009 (ARRA), the Race to the Top (RttT) Assessment Program provided funding to state assessment consortia to develop a new generation of assessments aligned to the Common Core State Standards (CCSS) that are valid, support and inform instruction, provide accurate information about what students know and can do, and measure student achievement against standards designed to ensure that all students gain the knowledge and skills needed to succeed in college and the workplace.[3] Beyond building better test instruments, the overall objective was to reduce state-to-state variability in standards and achievement against those standards. The new online assessments were expected to significantly raise the bar by presenting more challenging, complex, and real-world tasks that measure knowledge *and* performance through a variety of test item types, including complex technology-enhanced performance tasks, selected-response items, and constructed-response questions.

Who Are the Primary Comprehensive State Consortia?

In 2010, two primary comprehensive state consortia—PARCC and Smarter Balanced—were awarded RttT funds to develop online assessments in English language arts and mathematics for both grades three through eight and high schools to use by the 2014–15 school year.[4]

While both organizations share the goal of implementing successful online assessments, each entity has a unique and valuable new approach to assessment. The most notable difference between the two is that Smarter Balanced uses adaptive technology embedded in the testing instrument that is intended to maximize the precision of



“The Common Core State Standards were originally intended to be a national educational initiative as opposed to a federal mandate. It began as a set of standards created by teachers for teachers. At some point, the Common Core and assessments got tied to federal funding, and it became a federal program, but that was not the original intent behind it.”

—Dr. Veronica C. Garcia, Superintendent, Santa Fe Public Schools

LEGEND

Members of PARCC

PARCC

Members of Smarter Balance

Smarter Balanced Assessment Consortium

As of 11-01-16

concept mastery and PARCC uses a fixed-form of delivery where students take one of several fixed, equated sets of items and tasks. Both allow computers, laptops, and tablets for test taking, and both use a combination of electronic and human scoring techniques.

Both Smarter Balanced and PARCC use computer-based assessment systems designed to utilize technology for innovation, student engagement, accessibility, cost efficiencies, and a rapid return of results. Both have universal design features making the assessments accessible to all students including those with special needs and English language learners, and each consortium is working with states that have selected them. Originally, PARCC had 26 states as part of their consortia and Smarter Balanced had 31 states, as several states elected to join both and some states did not join either. Over time, some states dropped out or suspended their participation in the consortia due to funding or cost issues—not only for the cost of the assessments but also for the cost of the technology and infrastructure upgrades required. Technology readiness concerns and CCSS adoption were also among the reasons some states chose to exit or suspend their participation. State participation remains fluid, and as of the publishing of this white paper, Smarter Balanced has 15 state governing members, two state affiliate members, the U.S. Virgin Islands, and the Bureau of Indian Education; PARCC has eight states fully participating in addition to the Bureau of Indian Education, Department of Defense, and Louisiana participating at varying levels as illustrated in the map below.

The remaining states have taken various assessment paths, including creating their own state standards and contracting with traditional assessment companies for online or paper assessments, creating their own standards and assessment tools, or a combination of the above. Information on each of the primary state consortia, their experiences, and their deployment results in is provided below.

SMARTER BALANCED ASSESSMENT CONSORTIUM (SMARTER BALANCED)

Smarter Balanced assessments are aligned to the CCSS and test in English language arts/literacy and mathematics for grades three through eight and 11. Their assessments use computer adaptive technology (CAT) that ask students tailored questions based on their previous answers. Questions get harder when students answer correctly and easier when they answer incorrectly. The Smarter Balanced system includes three major components:

- **Formative Assessment Process**—An instructional process that provides actionable feedback used to adjust teaching and learning strategies to improve student attainment of learning targets
- **Optional Interim Assessments**—These tests use the same content and report scores on the same scale as the summative assessments, and they are administered at locally determined intervals for instructional use to allow teachers to check student progress throughout the year and inform students, parents, and teachers about whether students are on track
- **Summative Assessments**—These tests are administered near the end of the school year for accountability purposes. They consist of two parts – a CAT and a performance task. These assessments are designed to accurately describe student achievement (how much they know) and student growth (improvement from previous year).

Smarter Balanced believes that CAT provides a significant improvement over traditional testing by providing more accurate scores for students across the full range of the achievement continuum. They also believe that CAT provides better information for teachers to be more efficient and secure. Additionally, Smarter Balanced offers a digital library of instructional and professional learning resources provided by educators for educators to support formative assessments to improve teaching and learning.

For more information, please visit http://www.smarterbalanced.org.

Our Goal is to Improve How Students Learn

A Conversation With Brandt Redd, Chief Information Officer/CTO With Smarter Balanced

Reflecting on the first two years of Smarter Balanced's online assessment deployment, Brandt Redd, Chief Information Officer/CTO with Smarter Balanced, notes, "There were surprisingly few surprises." He likens the becoming assessment ready initiative to the Y2K preparation: "Everyone knew online assessments were coming." School districts took internal inventory of their devices and made purchases-—E-rate funding for broadband was increased making it easier for schools to improve their bandwidth—and teachers and students used online instructional materials and practice online tests to familiarize themselves with the online tools. Mr. Redd is pleased to say, "The results indicated the amount of technology in the schools taking online assessments was sufficient, and there were no major problems."

Looking beyond technical readiness, there were no other red flags to report. Smarter Balanced and others conducted extensive interviews with students and teachers and noted that they appreciate the online testing experience. One of the major benefits is the enhanced accessibility features for all student populations that go far beyond what can be offered in a paper and pencil environment. Even though the clear majority of schools using the Smarter Balanced tests use the online version of the test, Smarter Balanced expects to continue to offer paper and pencil versions of their assessments indefinitely. This is primarily to support unique circumstances such as schools located within religious communities that do not allow technology in schools.

While there are many benefits to online assessments that contribute to improved student learning, the Smarter Balanced data shows there is no significant difference in student assessment performance when comparing online assessments to paper and pencil ones. In addition, they compared the test results of students using tablet devices to those using laptops or desktop PCs and found no detectable difference in student test results. They did note that physical keyboards are required with tablets in order to display the entire test item on-screen. A touchpad keyboard takes up too much screen space and obscures part of the test item which forces the student to scroll, taking more time and possibly creating challenges for students—especially for test items that require writing.

Smarter Balanced understands they are working in a climate where online assessments have received a lot of pushback and criticism from various stakeholders in the education community. Despite the opposition, Smarter Balanced has had limited state attrition. As Mr. Redd says, "Our goal is to improve how students learn by using the test data in the most effective way possible." Smarter Balanced believes their adaptive testing approach provides more accurate test results, giving teachers a clear view of their students' needs, and they are very encouraged by the 2015–16 results of their states, which saw competency rates rise significantly over the 2014–15 results. Improvement was expected from year one to year two, but everyone was very pleased with the gains. Smarter Balanced attributes this rise in competency to two key things:

- Students and teachers are more familiar with taking the online test; therefore, test taking and test administration skills improved
- Student learning improved as a result of using the previous year's assessment data to help inform instruction

Teachers using Smarter Balanced assessments say that the knowledge and skills required by the tests are aligned with what they are teaching students, which is exactly what Smarter Balanced set out to achieve. Teachers and Smarter Balanced alike are using the common core as the basis. "This means less teaching to the test and more teaching to the subject standard, and that is exactly what we like to see happen," adds Mr. Redd.

"Competency rates from the 2015–16 test results are up a couple of percentage points from the 2014–15 results, which is a really big deal and very exciting to see."

—Brandt Redd, Chief Information Officer/CTO, Smarter Balanced

Smarter Balanced believes the real value is in the specificity of the data and making reports more effective. If student learning improves and assessment results are more valuable to parents and educators, the pushback will become nonexistent. Smarter Balanced has taken a step to make results more effective for parents by creating an Online Reporting Guide website to specifically help them analyze and interpret their child's test results. Value-added services such as the Online Reporting Guide will help reduce or eliminate the online assessment opt-out campaigns. Several states have created outreach programs to shift the emphasis from end-of-year summative assessments to interim assessments. These voluntary interim assessments are focused on particular skills areas and can be as short as half an hour. Teachers can use these at the beginning or end of a unit to inform or measure proficiency, and some teachers use the interim assessments as part of a lesson learning experience instead of a testing experience. Smarter Balanced has seen a significant uptake on interim assessments, creating quite a fan base among their users in the process.

In addition to providing resources to parents, Smarter Balanced also provides valuable resources to teachers through their Digital Library, which encourages formative activities in the classroom. The Digital Library trains teachers with example videos and sample lesson plans on how to make use of formative assessments in the classroom. In conjunction with summative and interim tests, formative testing is the third leg of the assessment stool. The Digital Library is an excellent training resource for teachers, and Smarter Balanced is continually adding quality resources and improving the tools within the Digital Library.

> **"Knowing what it takes to close the achievement gap is really not a science we yet understand. However, the most promising results are around teaching to individual needs versus overall classroom needs."**
>
> **—Brandt Redd, Chief Information Officer/CTO, Smarter Balanced**

Transformation Is Just Getting Started

On the short-term horizon, Smarter Balanced is tying their reports to the Digital Library and making the reports more effective for everyone, including parents, teachers, principals, and policy makers. "Way too often we collect a lot of data, and then we do not use it effectively. We are doing a good job of collecting assessment data, but we need to make it effective in the lives of individual students, teachers, and parents," notes Mr. Redd.

Smart Balanced is also opening up their practice and training tests so that these resources can be made available to other entities. With this approach, if a state wants to build a training tool, they can link straight to available exemplar items, providing a good indication of which activity Smarter Balanced uses to measure a student's skill in a particular area. They are also working on a map of skills so stakeholders can understand what different proficiency skill levels actually mean.

In the long run, Smarter Balanced is a big believer in competency-based learning that addresses the needs of individual students, but they also know this can be a challenge for teachers working with 25 to 30 students in a class. The responsibility of assessments is to make sure teachers are well-informed to aid them in making good decisions for their students. That means testing will eventually shift from being an event to being part of the learning experience, and it also means stronger partnerships between the people doing assessment work and the people doing curriculum work.

Smarter Balanced recognizes transformation is just getting started. Digital textbooks are not much better than printed textbooks from a learning perspective, and technology for the sake of technology does not help. While it enables, it does not force a change. What does force a change is personalized learning. The challenge is capacity and achieving personalized learning at scale, and that is where the promise of technology plays an important role. More importantly, online assessments provide the ability to better measure student proficiency and then inform teachers, allowing for the personalization to happen. When online assessments inform effective decisions, that is where Smarter Balanced feels it can be transformative. However, Smarter Balanced suggests that other sectors need to follow—

curriculum needs to be easily customized to student needs, teachers need training to use new tools, and teachers need the ability to conduct more one-on-one teacher time. If technology can help keep a group of students productively engaged while a teacher can work with one student, or even a small group of students with the same issue, that is when we will make a big difference in student achievement. As Mr. Redd puts it, "It is really important we shine a light on student performance and keep an eye on the achievement gap."

From Smarter Balanced's perspective, the way to describe the next level of readiness is closing the feedback loop and taking what is learned from assessments to inform future decisions. This can be beneficial at every stakeholder level of the education system, including state, school board, district, principal, teacher, parent, and student.

PARTNERSHIP FOR ASSESSMENT OF READINESS FOR COLLEGE AND CAREERS (PARCC)

PARCC Partnership for Assessment of Readiness for College and Careers

PARCC believes its new assessments serve as an "educational GPS system" by assessing a student's performance and identifying what students need to learn to be college and career ready. PARCC tests a student's ability to read and comprehend complex literary and informational texts, complete authentic research tasks drawing evidence from multiple sources, and solve multistep real-world mathematics problems including those involving modeling and mathematical reasoning.

PARCC's approach consists of two basic tools:

- Annual year-end tests in English language arts and mathematics for grades three through eight and high school
- Instructional tools for teachers, including formative tasks at various grade levels that are incorporated into the curriculum, diagnostic tools with subtests, and speaking and listening tools with performance-based tasks

PARCC assessments have been shortened for the 2015–16 school year and are now administered in one testing window versus the previous two-part assessment.

PARCC understands that states need more flexibility for summative assessments and has created the following tiered system of product offerings with a menu of options:

- The current complete PARCC offering delivered on the Pearson technology platform, which includes the ability for states to customize the test and add state developed items
- The PARCC test blueprint and content with the added ability for states to separately or jointly select their own vendor to administer the test while maintaining rigorous comparability
- Test items available in blocks in order to give states the ability to design their own tests utilizing sets of PARCC questions while maintaining standardization from state to state (in this option, states may choose their own vendor but would need to adhere to the agreed-upon guidelines for test administration)
- A freestanding item bank, providing states (or vendors bidding for state contracts) the ability to license individual or sets of test items

For more information, please visit http://www.parcconline.org.

An Innovative and Exciting Future for Online Assessments

A Conversation With PARCC's Jeffrey Nellhaus, Chief of Assessment and Chloe Torres, Director of Assessment Technology

All things considered, PARCC was very pleased with their first two years of online assessments. Despite seeing nearly 90 percent of states in 2016 utilizing online assessments in lieu of paper and pencil tests, PARCC did not experience any systematic downtime and demonstrated the reliability of the online assessment platform. In fact, two states tested more than 90 percent of their students online, giving a strong indicator for the ability of states and school districts to fully transition to online assessments. PARCC attributes this level of success to the following key contributing factors:

- Schools conducted their due diligence to make sure they had an appropriate number of devices, as well as adequate bandwidth and network infrastructure, and they paid attention to basic logistics to prevent any major failures
- PARCC's approach to proctor caching that accelerates the delivery of test content to students and reduces the amount of bandwidth needed for online testing, which is especially helpful when a high number of students are testing simultaneously
- PARCC strongly recommended schools conduct "infrastructure trial testing" with practice test forms, which were intentionally made to be very media heavy, before each administration of the assessment in order to make sure the school's bandwidth and infrastructure could handle the load
- Trial testing also proved to be enormously helpful for students, teachers, and test proctors, as it allowed them to become familiar with the various types of test items and formats
- Communication by participating states and school districts helped manage the stigma of lower test scores, commonly called the "cliff effect". PARCC set an honest and true bar for the proficiency of more rigorous standards, which was effectively communicated to stakeholders and ultimately reduced the negative reaction to lower test scores
- PARCC partnered with Pearson Education (Pearson) to deliver the assessment, and PARCC gives a lot of credit to Pearson and the effort they put into their TestNav online delivery solution for the overall success of PARCC assessment administration

In response to feedback from PARCC states, PARCC has made significant changes to their assessment program to make things more efficient in terms of both time and test design. Previously, PARCC assessments were composed of two components: performance-based tests and end-of-year tests. Today, these are combined and consolidated into a single testing window. Additionally, the tests have been shortened, reducing the time needed by students to complete the assessment.

One of the ongoing challenges faced by PARCC, as well as other online assessors, is supporting old operating systems while at the same time introducing new innovations to online testing. With today's accelerated rate of change in technology, it is difficult to innovate when you must make sure your platform runs on the newest operating systems in addition to older, outdated versions. It is commonly understood

> **"It's one thing to get adults prepared, but the most important thing is to get the students prepared. You do not want unfamiliarity with a device or test item type to interfere with the student's performance."**
>
> **—Jeff Nellhaus, Chief of Assessment, PARCC**

that school districts do not have the funding or support personnel to refresh devices and move to new operating systems as quickly as they change. Even with infinite funding to purchase new devices, it still takes a lot of time to implement and make sure teachers and students are trained on new technologies. This means assessment organizations must strike a balance between innovation and the dated technologies used in some schools.

Despite the challenges, PARCC believes we are just beginning to see the benefits of online assessments. Of course, there is the obvious elimination of paper, which was a large burden on schools and the environment. However, one of the biggest benefits is the ability to administer item types that are simply not possible or practical with paper and pencil testing. Online assessments allow for innovative constructs that get away from multiple choice questions and give a more accurate view of student proficiency. The ease and accuracy of scoring is another major benefit. For example, essays can now be graded with sophisticated artificial intelligence that delivers highly reliable and accurate scoring via machine, which lowers the total cost and reduces turnaround time for the results. Receiving timely and accurate results is a clear benefit of online assessments and PARCC is always exploring ways to expedite the turnaround time without sacrificing quality. PARCC also notes that students seem more engaged with online testing. PARCC assessments also offer accessibility features that help all students during the test, as well as greater accommodations provided for English language learners and students with disabilities.

A Look to the Future

PARCC sees an innovative and exciting future for online assessments, and the PARCC team is heavily focused on interoperability working with the IMS Global® Learning Consortium (IMS). IMS has created the IMS Question & Test Interoperability (QTI®) specification. QTI enables the exchange of item and test content and metadata between various technology platforms such as authoring and test construction tools, learning platforms, item banks, assessment delivery systems, and scoring/analytics engines. PARCC is working closely with IMS to share PARCC content specifications through the PARCC Accessible Portable Item Protocol (APIP®) Profile. The work of IMS reaches beyond PARCC to the broader assessment community worldwide. This work not only helps PARCC, but it also helps to coordinate and connect a variety of disparate tests and assessment vehicles.

While online assessments provide an accurate measure of student performance, it is not the measure itself that is so important, but rather it is about how the results are used. PARCC is enthusiastic about the future of actionable data, which will help educators see more clearly the proficiency expectation around a standard. When an assessment task is aligned with a standard, you get a concrete view of what the standard is trying to measure. This is a big value to educators and students.

In the future, PARCC would like to integrate more authentic, real-world tasks and tools into assessments, ultimately creating real-word simulations so the assessment is better aligned with college and career scenarios instead of just the classroom. The key is to not compromise the types of questions asked so that the test is defensible.

Looking much further into the future, PARCC sees embedded assessments throughout the year, as opposed to only end-of-year testing, as the ideal future goal. PARCC believes technology should help facilitate the notion of embedded assessments by capturing how a student is doing and measuring what and how they are learning. Ideally, event tests will not be needed because the standards and assessment will be embedded throughout the instruction and instructional materials.

“The next phase of implementation is understanding how to share the work of the consortia.”

—Chloe Torres, Director of Assessment Technology, PARCC

“What does proficiency look like? That’s the question everyone needs to have in their mind’s eye. Proficiency isn’t a number; it’s about being able to demonstrate a grasp of the standards.”

—Jeff Nellhaus, Chief of Assessment, PARCC

“Embedded assessments is the promise of technology and assessment.”

—Chloe Torres, Director of Assessment Technology, PARCC

Additional Assessment Consortia Entities

In addition to Smarter Balanced and PARCC, the Department of Education issued grants to four specialized assessment consortia—two alternative assessment consortia focused on students with cognitive disabilities and two English language proficiency (ELP) consortia focused on English language learners:[5]

NATIONAL CENTER AND STATE COLLABORATIVE (NCSC)

NCSC is developing an alternate assessment based on alternate achievement standards (AA-AAS) that includes both formative and summative assessments for students with significant cognitive disabilities. Their goal is to ensure all students with significant cognitive disabilities achieve higher academic outcomes and are ready for postsecondary options. NCSC also provides professional development on appropriate uses of data for progress monitoring and management systems to assist in administration and documentation. The NCSC is a collaborative of five national centers and 24 state partners. A listing of their states can be found on their website at *http://ncscpartners.org/about-states*.

DYNAMIC LEARNING MAPS (DLM) ALTERNATE ASSESSMENT SYSTEM CONSORTIUM

The DLM Alternate Assessment System will let students with significant cognitive disabilities show what they know in ways that traditional multiple-choice tests cannot. It is designed to map a student's learning throughout the year by using items and tasks that are embedded in day-to-day instruction. In this way, testing happens as part of instruction, which both informs teaching and benefits students. DLM provides an end-of-year assessment for students in grades three through high school. DLM consists of state departments of education. A listing of DLM states can be found on their website at h*ttp://dynamiclearningmaps.org/about/consortium*.

ASSESSMENT SERVICES SUPPORTING ENGLISH LANGUAGE LEARNERS THROUGH TECHNOLOGY SYSTEMS (ASSETS)

The ASSETS project was awarded an Enhanced Assessment Grant in fall 2011 to build a comprehensive and balanced next-generation, technology-based assessment system for English language learners. ASSETS has 35 state members in its consortium representing over 1 million English language learners. The Wisconsin Department of Public Instruction is the lead state and fiscal agent for the ASSETS grant. A listing of their states can be found on their website at *http://assets.wceruw.org/aboutus/memberStates.aspx*.

ENGLISH LANGUAGE PROFICIENCY ASSESSMENT FOR THE 21ST CENTURY (ELPA21)

ELPA21 is a group of states designing and developing an enhanced assessment system that measures the ELP of English language learners. Using an evidence-centered design (ECD) framework, the ELPA21 assessment is aligned with ELP standards. ELPA21 is an online assessment that incorporates technology-enhanced items, allowing students to respond in ways that differ from traditional assessments. A listing of their states can be found on their website at *http://www.elpa21.org/standards-initiatives/ells-elpa21*.

Every Student Succeeds Act (ESSA) Impact

The Every Student Succeeds Act (ESSA), signed into law by President Obama on December 10, 2015, is the new reauthorization of the Elementary and Secondary Education Act, and it is the education policy established to replace the No Child Left Behind Act (NCLB). This policy gives states additional flexibility in designing their education systems with a focus on innovation as well as accountability. States are expected to use the 2016–17 school year as a transition time to work with all stakeholders to develop state plans, and the new state plans complying with ESSA are required to go into effect for the 2017–18 school year. This means that formula ESSA provisions affecting formula grants will not take effect until the 2017–18 school year.

ESSA and Assessment

The Council of Chief State School Officers (CCSSO) has extensive resources on their website to help states and education stakeholders prepare for ESSA at *http://www.ccsso.org/Resources/Programs/Every_Student_Succeeds_Act.html*.

Selected highlights from CCSSO's ESSA assessment information are outlined as follows:

- Maintains annual assessment in math and English language arts for grades three through eight and at least once in high school
- Maintains assessment in science at least once in grades three through five, at least once in grades six through nine, and at least once in grades ten through twelve
- Creates the opportunity for states to pilot innovative assessment systems
- Increases state flexibility to design accountability systems, interventions, and student reports
- Gives states flexibility to work with local stakeholders to develop education evaluation and support systems
- Requires assessments be aligned to the state's college and career ready academic standards
- Increases state and local flexibility in the use of federal funds

You will note the emphasis on flexibility. This emphasis extends to standards and assessment as noted on the following page.

"The key is to assure district leaders that it's all right to think positively, to dare to be great—to be transformative."

—Bob Wise, President, Alliance for Excellent Education, EdNET Conference 2016

STANDARDS

- ESSA reinforces state authority over standards, accountability, and other key education policies
- ESSA prohibits any U.S. Secretary of Education from requiring states to adopt specific standards, assessments, teacher evaluation methods, or other key policies
- ESSA does require that state standards be aligned with college and career skills but defers to states on how to define such alignment

ASSESSMENT

- Each state is required to have implemented a set of high-quality student academic assessments in math, reading or language arts, and science
- Assessment timelines from current law are maintained
- Assessments may, at the state's discretion, measure individual student growth
- States may use computer-adaptive assessments and may measure a student's academic proficiency above or below grade level and use such scores in the state accountability system
- States may allow an LEA to use a nationally recognized high school academic assessment in lieu of a state assessment so long as the assessment is aligned to state standards and meets requirements
- ESSA allows, but does not require, states to set a limit on the amount of time devoted to assessment administration for each grade
- Disaggregation of assessment results by student subgroups is still required
- ELP assessment for English language learners that is aligned to state ELP standards is required
- States must have a 95 percent assessment participation rate for all students and student subgroups to meet accountability measures
- States may administer a single summative assessment or multiple statewide interim assessments that result in a single summative score that provides valid reliable, and transparent information on a student achievement or growth
- Funding is available for state and district assessment system audits, including determining technology readiness; the audit programs includes a required 20 percent set aside for districts that may be used to increase access to assessment technology
- Title I-B assessment formula grants may be used to secure the technology required for administering assessments; in addition, funding provided by Title I-A that is used in the schoolwide context may also be used for technology acquisition for assessment and other purposes

ESSA provides the opportunity for states to explore and implement strategies to improve standardized assessments that provide enhanced insight into student personalized learning. However, assessments must align to college and career ready standards, report annually on each student's progress toward the standards, and be accessible to all students.

ESSA also addressed the most prominent concerns about federal control over standards and assessment. Specifically, ESSA allows states to determine their own college and career ready academic standards, provides flexibility in choosing assessment vehicles, allows states to use a single summative assessment or multiple interim assessments, and allows states to limit assessment time.

In summary, ESSA reinforces state authority over standards, accountability, and other key education policies.

INNOVATIVE ASSESSMENT AND ACCOUNTABILITY PILOTS

ESSA provides a unique opportunity for states to redesign state assessments and accountability models through the Innovative Assessment and Accountability Pilots (Innovative Pilots). As many as seven states will be selected to design, build, and implement next generation assessment systems, such as competency-based, cumulative, or year-end assessments. States, or a consortium of states, are required to submit a proposal to the Department of Education for consideration and approval. As part of the proposal, states will be required to submit a timeline which cannot exceed five years.

CCSSO reports that innovative approaches should provide the following:

- More valid, varied, and richer measures of student learning and progress
- Assessment and reporting of a broader set of skills that more clearly signal the nature of college and career readiness for students, educators, parents, and policymakers
- More timely and useful data that allows educators to make real-time adjustments to student instruction
- Assessment systems that are more student-centered and seamlessly aligned with innovative models of learning and instruction, such as personalized or competency-based education, that are designed to achieve high learning expectations for all students
- The ability to demonstrate that new assessments are comparable, valid, reliable, of high technical quality, and consistent with relevant, nationally-recognized professional and technical standards

States may pilot their new assessment and accountability systems with districts, but they must be able to scale statewide at the end of the demonstration period which, again, may not exceed five years. Once the pilot is complete, the U.S. Secretary of Education along with peer reviewers will evaluate and determine if the pilot can be transitioned permanently as the state's assessment and accountability system.

Since the implementation of ESSA will not be realized until the 2017–18 school year and beyond, it is impossible to predict the full affects this new law will have on assessments, but the flexibility of the law will hopefully strike a balance between federal and local control and mitigate the controversy around standards and online assessment.

ESSA and Technology

Reg Leichty, CoSN's policy advisor from Foresight Law and Policy, provided the following insight into ESSA funding for technology:

ESSA authorized an important but limited formula-based funding source for states and school districts interested in strengthening their assessment technology infrastructure, among other areas.

ESSA's Student Support and Academic Enrichment Grants (SSAEG, Title IV - Part A) program expressly permits grantees, independently or through voluntary consortia, to use at least a portion of the new program's funds for technology investments, including related professional development.

The SSAEG program authorizes up to $1.65 billion in annual formula funding for states and school districts, with actual fiscal year 2017 funding projected to be between $300 million and $1 billion. The program offers a relatively flexible funding source for state and local activities in three areas:

- Providing all students with access to a well-rounded education
- Improving school conditions for learning
- Improving the use of technology to improve the academic achievement, academic growth, and digital literacy of all students

State-by-state SSAEG funding allocations are determined based on ESSA's Title I-A formula. States and districts must provide statutorily specified assurances to receive their SSAEG funding, including—in most cases—conducting a needs assessment, promoting equitable access to the activities supported by the program, and more.

Following the U.S. Department of Education's allocation of program resources to states, ninety-five percent of program funding flows from states to school districts. States may reserve one percent of the state's aggregate formula allocation for administration and up to four percent for state activities.

With a limited exception for school districts that receive less than $30,000 through the program's formula, grantees must use at least twenty percent of their SSAEG funds for well-rounded educational opportunities and at least twenty percent of funding for school conditions for learning programs. The remaining sixty percent may be used for activities to support the effective use of technology, including assessment technology and related professional development investments. However, no more than 15 percent of funds may be used for purchasing technology infrastructure, such as devices, equipment, and software applications.

State SSAEG plans, which must be filed with the U.S. Department of Education before program funding is released at the federal level, must describe how the state education agency will use SSAEG funds for state-level activities and ensure district awards are used consistent with program requirements. States must also provide assurances that they will do the following:

- Review existing resources and programs and coordinate them with initiatives supported by the program
- Monitor program implementation and provide technical assistance to districts
- Provide equitable access to the activities supported by the program

States must use their SSAEG set-aside funds—which can be up to four percent of the total provided to the state—for school district monitoring, training, technical assistance, and capacity building. States must also use the funds for public reporting concerning how school districts use the program funds, including noting progress toward meeting program objectives and outcomes. Importantly, states may use their funding to support districts in delivering SSAEG related programs and activities

School districts, including charter schools considered districts under state law, will receive SSAEG funding through their states based on the Title I-A formula. No eligible district may receive less than $10,000, and they may form multi-district consortia to combine program funds and jointly conduct program activities. School districts must consult with stakeholders—parents, teachers, principals, school leaders, and community-based organizations—when developing their SSAEG applications which must be submitted to states prior to the release of program funds.

As part of the application process, districts that would receive more than $30,000 through the formula must conduct a needs assessment, including examining access to personalized learning experiences supported by technology and professional development for the effective use of data and technology. The needs assessment is required every three years.

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Assessment Best Practices – Recommendations, Checklists, and Online Assessment Planning Tool

For the 2014 iteration of this white paper, which is available on the **CoSN** and **ENA** websites, an assessment ready survey was distributed to a wide group of school districts. The information gathered from that survey has been combined with the current feedback from districts that are now fully engaged with online assessments.

Additional input from the Smarter Balanced and PARCC consortia has been included to create these updated recommendations and checklists. This current analysis resulted in adding a ninth important recommendation about using data effectively, as described below.

Nine Key Recommendations

1. Create a cross-functional strategic planning team
2. Secure funding sources for modern learning environments
3. Embed technology in instructional practice
4. Invest in robust and ongoing professional development for teachers, administrators, and technical staff
5. Build out a robust infrastructure
6. Select devices meeting instructional needs and assessment consortia requirements
7. Communicate—a lot
8. Pay attention to logistics
9. Prepare to use the assessment data effectively

In addition to the recommendations and checklists, we have added a new **Online Assessment Planning Tool** resource designed to assist schools and districts in effectively planning for and using online assessments to achieve broader transformations of teaching and learning.

Recommendation #1: Create a cross-functional strategic planning team

The 2014 version of this recommendation described how school districts often succumb to the silo effect, whereby district departments act independently of other departments or schools and their operations are not well integrated. To be successful, an online assessment initiative requires the collaborative efforts of several key departments that must work together from a common plan. A district's curriculum and instruction, professional development, assessment, and technology departments remain integral to the success of the initiative, and leadership from each of these departments should be included on a strategic planning team.

If districts create a cross-functional strategic planning team in preparation for their online assessments and they work together on the up-front work necessary for a successful rollout, ideally new partnerships and processes were forged from these collaborations that have positioned the district for ongoing success. As the strategic planning team works together, new activities and responsibilities often emerge, and forward-looking districts have transformed their teams to address a whole new set of essential questions. In some districts, individual schools are also taking advantage of the cross-functional strategic planning team model to better meet the needs of their teachers and students.

Initially, these cross-functional teams worked to ensure their digital environments were ready for online assessments, but as noted above,

Essential Questions

- What differentiated support is needed to help our district's schools move forward?
- What do we know about the schools that have been especially successful with online assessments? What do we know about schools that have been less successful?
- Does our district have a strong alignment between our curriculum and instruction, assessment, technology, and professional development departments?
- Are our teachers making the instructional shifts toward engendering higher-order thinking skills in their students?
- Does our district have a test bank of CCSS- or state CCRS-aligned questions that our teachers can use for classroom-based assessments? If not, what must we do to address our district's shortcomings in any of these areas?

Checklist

- ☐ Ensure all teachers are making the shift to daily CCSS- or state CCRS-aligned instruction and using the digital tools and resources necessary to promote their students' assessment readiness
- ☐ Reestablish the district cross-functional planning team, including curriculum and instruction, assessment, technology, professional development, and finance, to proactively meet prior to assessments to focus on the district's instructional strategies and online assessments, to respond quickly to issues, and to debrief afterward to improve for the next assessment cycle
- ☐ Build a three-year roadmap for continued transformation toward full CCSS- or state CCRS-based classroom instruction wherein schools own their assessment results and leverage student data to guide their instructional practices
- ☐ Reestablish the district's cross-functional support team to not only respond to issues during assessment windows but to also provide ongoing support to schools and teachers on the functional and instructional uses of the district's online assessment system
- ☐ Continue to collect and analyze data on assessment training, infrastructure, devices, and preparation, and then use that information to determine how to best improve instruction

Recommendation #2: Secure funding sources for modern learning environments

If schools had not already begun an earnest shift toward new standards and building digital learning environments for all their teachers and students, the CCSS or state CCRS and online assessments have provided new incentives. Regardless of their state's participation in a CCSS or state CCRS assessment program, online assessments should play an important role in all schools and classrooms. All students need and deserve 21st century learning environments, and districts must address the funding resources necessary to meet these needs.

It is important to note that funding for building digital learning environments must be consistent and ongoing. Purchasing the resources for these environments is not a one-time cost—**these items must be refreshed on an ongoing basis**. As such, a district must have a strategic plan for building and maintaining a robust network infrastructure and for ensuring every student has an Internet-connected device.

In the 2014 edition of this white paper, we outlined some of the ways districts can potentially reduce costs to free up funds for building digital learning environments. Possible redundancies in centrally purchased and supported systems, such as learning management systems, online courses, and digital content, are prime suspects. Additionally, districts should also consider decreasing their purchase of paper-based instructional content and instead leverage high-quality open educational resources (OER).

Essential Questions

- Does our district have adequate financial resources to continue replacing and refreshing our current digital resources?
- Do we have the financial means to deploy a one-to-one (1:1) device strategy for our elementary, middle, and high school students? If not, do we have alternative ways to ensure each of our students have the necessary access to digital devices throughout their instructional day?
- Have we evaluated all current instructional support systems and determined if we have redundancies?
- Do we have a plan to evaluate and procure commercial digital content resources and/or to curate OER?

Checklist

- ☐ Create or update a districtwide strategic plan that shifts funding from paper-based practices, resources, and staffing toward digital-based functions necessary to provide all students with fully-realized digital learning opportunities
- ☐ Prioritize operational, categorical, grant, and capital funds toward the districtwide strategic plan
- ☐ Review and consolidate digital resources and assets
- ☐ Adopt OER to help defray costs

Recommendation #3: Embed technology in instructional practice

If there is one consistent piece of advice from districts that have been the most successful in the transition to online assessments, it is the importance of fully embedding the use of technology in each student's daily instruction. When that happens, the teachers and students view technology and assessments as a natural component of teaching and learning and not as a special event that requires specific preparations. Regular access to Internet-connected devices is especially important for students who may not have these tools at home.

Some early research is showing that students who do not have regular access to Internet-connected devices, either at school, at home, or both, are struggling with the functional aspects of taking online assessments.[6]

Essential Questions

- Have our teachers made the transformative shift to embed students' use of technology devices and resources throughout the school day?
- Do our students have anywhere, anytime access to Internet-connected devices?
- Do our students have home Internet access? If not, have we considered what role our district can and should play in ensuring all students have home access?
- Are we adequately addressing the need for our elementary age students (beginning in third grade) to develop the keyboarding and computing skills necessary for online assessments?

Checklist

- ☐ Embed the use of technology throughout students' school day
- ☐ Strategically address the need for all students to have Internet access at home
- ☐ Ensure all students are comfortable multitasking on a computer and moving between applications, such as word processing tools and online calculators
- ☐ Ensure elementary age students develop keyboarding and technology skills necessary for a skilled performance on online assessments
- ☐ Make assessment a natural part of the teaching and learning environment—not a special event

Recommendation #4: Invest in robust and ongoing professional development for teachers, administrators, and technical staff

Most of the districts successfully conducting online assessments are now providing their staff with necessary training on how to build and support these new testing environments. Based on the results of their initial assessments, these districts have addressed any issues with the functional operations necessary to conduct a successful online assessment. As described earlier in this white paper, the role of the district's cross-functional strategic planning team is crucial to the district's success in ensuring these new testing processes are well supported and that teachers, administrators, and technical staff are well prepared. But providing and supporting a district's online testing environment is only the first step in the transition to digitally infused instruction. And it's the easiest part.

It's widely understood that a teacher's transition to digitally infused instruction does not happen simply because their students have access to Internet-connected devices—nor does it happen because students are prepared to take their summative and formative assessments online. Important new instructional opportunities have been created in districts and schools that have made investments in building out their infrastructure and in purchasing more digital devices to support their online assessment processes. These districts' classrooms are now better equipped to become digital learning environments than ever before, but districts' professional development initiatives must have a strong focus on supporting their teachers' move to digitally enhanced instruction. Districts must also provide the additional digital content and data resources necessary for this transition. Additionally, districts' professional development offerings should also focus on the CCSS or state CCRS in order to develop students' higher order thinking and problem solving skills.

Essential Questions

- Has our district adequately invested in teacher professional development, having both a sufficient number of well-qualified trainers and an adequate amount of time allocated to teacher professional development?
- Do our district's teacher professional development offerings—both centrally offered and site based—adequately prepare our teachers to administer the new online assessments?
- Do our professional development offerings also focus on supporting teachers' use of student data to inform their instruction?
- Do our offerings support teachers as they move toward developing increased higher order thinking skills in their students?

Checklist

- ☐ Ensure staff receive the ongoing training and support necessary to conduct successful online assessments
- ☐ Continue to help teachers and students become familiar with the new assessment question format and tools, as well as with the assessment's increased focus on higher order thinking skills and problem solving
- ☐ Support teachers and administrators in their proactive use of technology to personalize teaching and learning and in transforming their classrooms to digital learning environments
- ☐ Create or adopt a technology skills roadmap for each grade level, such as the *ISTE Standards for Students* or the CoSN *Framework of Essential Skills*, that addresses both technology and assessments
- ☐ Create or adopt a technology skills roadmap for teachers and administrators, such as the *ISTE Standards for Teachers* and the *ISTE Standards for Administrators*, and use these tools to guide and inform your district's professional development offerings.

Recommendation #5: Build out a robust infrastructure

Districts already involved in the online assessment initiative have made concerted efforts to ensure their network infrastructures can support the demands of these new assessments. The original SETDA and FCC recommendations for bandwidth provided a good reference point for districts as they undertook this work and has helped districts build future-ready networks. Recently, SETDA published updated recommendations for broadband infrastructure in their latest report, **The Broadband Imperative II: Equitable Access for Learning**. These latest recommendations include a context for small, medium, and large districts as highlighted below. ENA, co-author of this white paper and Infrastructure as a Service provider to over 550 school districts nationally, contributed to the new SETDA recommendations based on data from the school districts they serve with broadband solutions, as well as the data from several other states. We suggest you download the free report for more insight and details about the recommendations at *http://www.setda.org/priorities/equity-of-access/broadband-imperativeii-2016/*.

INTERNET SERVICE PROVIDER RECOMMENDATIONS

School Year	2017-18 Targets	2020-21 Targets
Small School District (fewer than 1,000 students)	At least 1.5 Mbps per user (Minimum 100 Mbps for district)	At least 4.3 Mbps per user (Minimum 300 Mbps for district)
Medium School District Size (3,000 students)	At least 1.0 Gbps per 1,000 users^	At least 3.0 Gbps per 1,000 users
Large School District (more than 10,000 students)	At least 0.7 Gbps per 1,000 users	At least 2.0 Gbps per 1,000 users

^Published by SETDA 2012; Adopted by the FCC in 2014 https://www.fcc.gov/general/summary-e-rate-modernization-order
*User: students, teachers, administrators, staff, and guests
Methodology Appendix A

WAN RECOMMENDATIONS

School Year	2017-18 Targets	2020-21 Targets
Connections to each school to link to the internet via a district aggregation point and for in-house administrative functions	At least 10 Gbps per 1,000 users	At least 10 Gbps per 1,000 users

*User: students, teachers, administrators, staff, and guests

The initial 2014 version of this white paper outlined several solutions and strategies for districts that could not meet the minimum networking requirements for online assessments. We encourage districts having ongoing network challenges constraining their move to online assessments to revisit **this resource**.

Those districts that have built out their networks to make them robust enough to support online assessments also created new instructional opportunities for their teachers and students. Leveraging streaming video, cloud-based computing, and other bandwidth-intensive applications is now more possible than before.

Essential Questions

- Has our district adequately addressed the bandwidth needs of all schools to ensure uninterrupted assessment windows?
- Do we have a growth plan that examines increasing wireless access in areas where device use is the greatest?
- Are we load-testing our network to ensure it will function properly during assessment windows?
- Are we exploring new ways to use our bandwidth to enhance classroom instruction?

CHECKLIST

- ☐ Keeping pace with SETDA's bandwidth recommendations as necessary to adequately support online assessments
- ☐ Continue to use tools to manage and prioritize existing bandwidth for high priority data traffic
- ☐ Continue to ensure network density is adequate across all schools to handle their growing wireless loads
- ☐ Continue to plan for increased and ongoing technical support to meet the growing demands on the network infrastructure and digital devices
- ☐ Continue to implement strategic scheduling as necessary to reduce the number of students testing at one time when adequate bandwidth is not available
- ☐ Continue to conduct regular field tests to determine real-time network capacity in preparation for actual test days
- ☐ Explore new ways to leverage the network and bandwidth for enhanced instructional opportunities

For more information on smart design of education networks, visit www.cosn.org/SEND

Recommendation #6: Select devices meeting instructional needs and assessment consortia requirements

Most of the districts conducting online assessments have invested heavily in new devices for student use, and from initial reports, these districts have had both successes and challenges in their device selections. Many factors must be considered when selecting devices. These considerations include cost, maintenance, warrantees, peripheral devices (e.g., keyboards), screen size, content availability, battery life, and power. Additionally, professional development is needed to ensure all teachers and testing proctors are prepared to confidently use and support their students' devices—especially during testing.

Districts that have had fewer issues with their devices are ones where device selection was informed by a range of stakeholders who ensured the devices met the ongoing academic needs of teachers and students. However, some other districts selected devices primarily based on the minimum device requirements of the CCSS or state CCRS assessment tools and have struggled to have them widely adopted by teachers for daily classroom use. The primary lesson learned is that device selection should be based on instructional drivers—not on the purely operational needs of online assessments.

Essential Questions

- Does our district have any issues linking student performance on online assessments to particular devices? If so, are these issues primarily caused by the devices being a poor choice for online assessments or by the students' lack of familiarity with the devices?
- Are the online assessment devices used in an age-appropriate manner?
- Are our students assessed in their classrooms or in less familiar lab-based settings?
- Do we have adequate ongoing maintenance and support for our devices?
- Do we have the necessary ongoing funding to ensure an adequate refresh cycle for our devices?

Checklist

- ☐ Intentionally select the appropriate device based on student academic success and understanding that desktops, laptops, tablets, Chromebooks, and netbooks have different strengths and weaknesses and interact differently with online resources and assessments
- ☐ Select devices that give students the best ongoing opportunities for success—not just devices that meet minimum standards
- ☐ Make sure to use keyboards with tablet devices as touch keypads take up too much screen space and require more scrolling, which takes up time and offers more potential distractions
- ☐ Consider the age-appropriateness of devices, as one device may not be suitable for all grade levels
- ☐ Move from lab-based assessments to fully integrated classrooms, recognizing the importance of students taking tests in the same environment and on the same devices used to learn
- ☐ Protect expensive digital investments with quality maintenance and support programs and ensure adequate technical staff members are readily available to support your districts' growing device inventory
- ☐ Invest in a robust refresh cycle for equipment

Recommendation #7: Communicate—a lot

The CCCS and state CCRS are significantly more rigorous than most previous state standards, and the online assessment procedures are new for most districts. Because of this, assessment results are showing that fewer students are meeting proficiency levels than before. It is important to note that the conversation is shifting from accountability and the percentage of students who pass or fail the assessments to how the gathered data is better informing teacher instruction. This will ultimately lead to improved student outcomes.

Some states, districts, and schools anticipated these changes and worked diligently to prepare their communities. Due to the political nature of statewide assessment results and the potential reflection they have on their districts and schools, the need for ongoing thoughtful communication is a must. Districts that have been successful in this regard have a mechanism in place for proactive communication that ensures assessment information flows to schools and then to all key stakeholders, including parents, students, board members, and the general community. Successful districts are also in regular communication with their state assessment coordinators, their testing provider, and with other districts to gather additional support and information on others' best practices and experiences.

Essential Questions

- Does our district have a thoughtful and timely assessment communication plan that meets the needs of schools, parents, students, board members, and the general community, and does it proactively provide helpful information concerning assessment procedures and results?
- Does our district have assessment experts available to meet with stakeholders to clearly explain the CCSS or state CCRS, the impacts of these new standards on teaching and learning, and what stakeholders' realistic expectations should be for student assessment performance over time?

Checklist

- ☐ Be intentional and proactive about your district's communication plan to schools and teachers—as well as to parents, students, board members, and the larger community—to keep them informed and prepared
- ☐ Communicate regularly with your state assessment coordinators
- ☐ Communicate regularly with your testing provider
- ☐ Communicate regularly with other school districts in your state, especially those that share a common demographic and student population
- ☐ Create opportunities for parents and community members to take practice tests to increase awareness of the test rigor
- ☐ Continue to offer open meetings and parent nights, and provide CCSS or state CCRS challenge questions to local media and news outlets to raise awareness

Recommendation #8: Pay attention to logistics

Districts that have been successful in their move to online assessments have paid close attention to details and have learned to expect the unexpected when it comes to preparing for testing windows. These districts continually address the many logistics involved in this undertaking and some have developed procedural manuals—both for district level staff and for schools—to help ensure their ongoing preparedness because, as always, the devil is in the details.

Essential Questions

- Does our district have critical areas needing attention to ensure online assessments are conducted consistently and successfully?
- Is our district prepared for the likelihood of staff changes in critical online assessment support positions and do we have redundant skillsets among our staff to ensure uninterrupted support?
- Have we developed procedural manuals that can be shared with new staff members?
- Are we conducting adequate field tests for new testing environments and devices?
- Do we have a fully staffed and trained rapid-response team to provide support during testing windows?

Checklist

- ☐ Develop and communicate well in advance the detailed scheduling for assessments
- ☐ Make sure you have ample devices and equipment that meet the required specifications, including back-up equipment
- ☐ Make sure you have age-appropriate devices meeting the consortia guidelines
- ☐ Test wireless density in all schools to ensure there are enough access points to handle the load
- ☐ Make sure devices are fully charged and will last for the duration of the assessment
- ☐ Train testing proctors on the devices being used
- ☐ Conduct field tests and take ample opportunity to practice with the new testing environments
- ☐ Have a districtwide rapid-response team at the ready to address any issues, technical or instructional, that arise during the testing windows

Recommendation #9: Prepare to use the assessment data effectively

Successfully administering online assessments and then receiving the data are only the first important steps in a district's move to standards-aligned instruction and assessment. Districts and schools should be moving past the "awareness" and "adoption" phases and moving toward "transformation." In the transformation phase, teachers use interim assessments to gather and analyze meaningful student data to gain deeper knowledge about their students, and then they use that information to personalize instruction based on each student's individual needs. These "transformed" teachers also integrate technology into their daily instruction to replicate the online testing environment and grow their students' technical skills. Making this transformational move can be the most difficult step in the process. It requires teachers to fundamentally modify their instructional roles and behaviors to focus on their students' needs in new ways. It is only through this instructional transformation that the promise of online assessments improving learning can be realized. Unless this transformation occurs, the time and effort focused on online assessments and data gathering will be for naught, and transformation has to occur across the entire school system—not just in the classroom.

When transformation occurs across the entire school system, a comprehensive formative assessment strategy moves to the front of the instructional design process, which significantly changes the work of curriculum and instruction, instructional technology, assessment, accountability, and professional development departments.

Essential Questions

- Has our district clearly communicated to all stakeholders the timeline and key message that online assessments and data gathering are only the beginning steps in the district's instructional transformation?
- Does our district have the data systems in place to provide teachers with clear, actionable, and timely student assessment data? If so, are all teachers adequately trained and supported in accessing and interpreting this data?
- Has our district defined how it should use this new student data to improve teachers' formative instruction?
- Has our district defined which student data reports are most meaningful? If so, are those reports easily accessible to teachers and other key stakeholders?
- Does our district have the professional development required to assist teachers in using student data to transform their instructional practices to better meet the individual needs of students?
- Does our district have the ongoing staff resources required to support individual teachers as they adapt over time to data driven and student-focused instruction?

Checklist

- ☐ Communicate to all district stakeholders the steps required to ensure all teachers and students are working in a standards-aligned instructional model
- ☐ Form follows function—redesign departments to build a new instructional assessment process, as opposed to modifying current processes, job descriptions, and departmental silos
- ☐ Make certain the districts' data systems are providing teachers with clear, actionable, and timely student assessment data
- ☐ Confirm the district has defined the most meaningful student data reports and that these reports are easily available to teachers and other key stakeholders
- ☐ Provide professional development offerings focused on helping teachers make the transformative moves necessary to offer data-driven personalized instruction to students across the district
- ☐ Allocate expert instructional staff to support teachers in their ongoing transition to data-driven and student-focused teaching and learning

Online Assessment Planning Tool

The Online Assessment Planning Tool is designed to assist districts in thinking through common considerations for assembling effective online assessment plans, and for supporting the cultural and administrative change management that accompanies the shift to technology enhanced teaching, learning, and assessment. The tool draws from best practices that are emerging within districts around the county who are successfully making the leap to a culture of digital instructional materials, classroom assessments, and data that can promote personalized learning.

Because districts, and individual schools within districts, are in different starting points, the tool references a range of planning strategies, both gradual and immediate, that districts can consider based on their needs and overall goals for moving the measurement of student progress beyond traditional paper-based methods.

The Online Assessment Planning Tool can be useful in a range of settings, including:

- As a conversation starter for district leaders and school boards
- As a guidance document for assessment cross-functional teams
- For individual schools to self-assess their levels of readiness for online testing modalities
- For districts to understand the needs of individual schools as they prioritize and coordinate supporting resources
- To benchmark progress over time

Access to the Online Assessment Planning Tool is available at www.leaddigitalleap.org

District Vignettes

Making Their Stars Align—How Houston Independent School District Is Successfully Leveraging Online Assessments to Improve Learning

Houston Independent School District (HISD) serves approximately 215,000 students, is the largest school district in Texas, and is the seventh largest school system in the nation. In the last eight years, HISD has made significant gains in its overall student achievement, increasing its graduation rate from 64.3 percent in 2007 to 79.3 percent in 2016. The district has distributed laptops to over 65,000 high school students as part of its aggressive one-to-one (1:1) initiative.

To provide the district's students with access to personalized learning opportunities, HISD began administering online assessments a few years ago. Dr. Leng Fritsche, HISD's Assistant Superintendent of Information, Assessment, and Analytics, has been instrumental in integrating online assessments into the district's classrooms. "Our E-assessment program began about two years ago," says Dr. Fritsche. "What we are trying to do is scale up online assessments knowing that there are going to be limitations at our schools." Dr. Fritsche and her team have been successful in their endeavors. During the program's first year, three percent of the district's assessments were web-based. The district increased that number to 12 percent during the program's second year, and the team is confident that number will reach 25 to 50 percent by the end of the 2016–17 school year.

THE PLANNING PROCESS

Although HISD is still relatively new to online assessments, the district has been preparing for the transition from paper to digital for several years. One of the first critical steps Dr. Fritsche and her team took was to create a districtwide tiger team. This tiger team is composed of key stakeholders who are involved in the assessment planning and administration process. HISD's tiger team includes representatives from the district's IT, assessment, curriculum, special education, school support, multilingual, special population, and leadership development departments.

The district also reviewed and revised their normal help desk protocol to streamline the testing process. "We know that we will always have technical situations that arise during the testing process," says Dr. Fritsche. "Because of that, we have to engage our IT staff members ahead of time because our teachers don't have time to cycle through our normal help desk ticket procedures." To mitigate the likelihood of system interruptions, the district also proactively notifies their vendor partners of any pending testing windows. "We request that our internal IT team, as well as our vendors refrain from making any system updates during testing periods to eliminate any interferences," says Dr. Fritsche.

BUILDING A STRONG FOUNDATION FOR SUCCESS

When HISD launched its program two years ago, readiness was the biggest concern among the district's teachers—whether the district had the bandwidth, devices, and logistics in place to support and execute high stakes online assessments successfully. To alleviate these concerns, Dr. Fritsche and Diana Bidulescu, HISD's Manager of Online Assessments, first introduced the new online testing format to a small group of early adopters. "We had our first volunteers testing in a less punitive environment to get them comfortable with it," says Bidulescu. "We began with district-designed assessments—those benchmarks and snapshots that are not high stakes." The team also created a platform-agnostic environment to ease any worries the teachers had about switching to a new platform, and they made some changes to the assessment administration process to make it more dynamic and efficient.

During the program's second year, Bidulescu and her team shifted their focus from readiness to establishing alignment between the district's assessments and the actual online delivery of testing materials. Bidulescu goes on to say, "We see the need to have exclusive online delivery of the assessment. We have experienced tremendous buy-in from our elementary and middle schools this year, and we want to meet their demands and expectations. This year, we have 55 campuses that are actively participating in our online assessment program, and 25 of those are elementary schools."

THE A-HA MOMENT

HISD understands that having a plan in place for integrating online assessments is only part of the equation. "The only major benefit we get from digital instruction is what we do with the data after we assess," says Dr. Fritsche. "Assessment is not the end of the process—in many ways, it is just the beginning. It provides you with valuable and timely insight into what a student can and cannot do. Traditionally, teachers have had a difficult time creating personalized lesson plans for 25 students. With assessments, you can use test results and data to cluster your students based on areas of mastery and non-mastery."

Instead of receiving an autopsy report at the end of the year, online assessments provide teachers with a live diagnosis that they can use to tailor their instruction to meet their students' specific needs. "Online assessments gives teachers power over what support they can provide their students," says Bidulescu. "One of the most important aspects of being a teacher is knowing how to support every student with exactly what they need. Having readily-available data that is broken down into specific areas of need enables educators to do just that."

HISD is proud of the progress they've made, and the district's leaders are excited about the future. "The stars aligned for us when we started this journey," says Dr. Fritsche. "This would have been a much more difficult transition if we weren't already undergoing a significant digital transformation, or if the state of Texas hadn't already issued some relevant mandates that impacted this program. Everything has fallen into place for us."

HISD is embracing its digital future while remaining cognizant of inevitable limitations. "You can never be 100 percent online because you have to accommodate for everyone and maintain equity," says Dr. Fritsche. "If you aren't teaching online, you can't test online. At the end of the day, it's not about the assessment, it's about the teaching and learning." It's that learning-centric philosophy that has enabled HISD to create a thriving online assessment program that empowers its teachers to deliver personalized and relevant learning opportunities to every student.

Assessment is not the end of the process—in many ways, it is just the beginning. It provides you with valuable and timely insight into what a student can and cannot do. Traditionally, teachers have had a difficult time creating personalized lesson plans for 25 students. With assessments, you can use test results and data to cluster your students based on areas of mastery and non-mastery."

— Dr. Leng Fritsche, HISD's Assistant Superintendent of Information, Assessment, and Analytics

Leaders at Santa Fe Public Schools Redefine the Role of Assessments to Better Meet Their Students' Learning Needs

Dr. Veronica C. Garcia has only been the superintendent of New Mexico's Santa Fe Public Schools (Santa Fe) since August 2016, but she is already redefining the learning pedagogy in the school district's classrooms. When Dr. Garcia first arrived, she discovered that Santa Fe's teachers were diligently integrating assessments and data capturing into their instruction. However, Dr. Garcia quickly identified that the assessment tools they were using weren't working. Instead, they were producing frustration and cultivating test fatigue among Santa Fe's teachers and students. Dr. Garcia immediately formed a task force to address the problem.

BACKGROUND

As New Mexico's former Cabinet Secretary of Education, Dr. Garcia has extensive knowledge of assessments as well as the Common Core State Standards. When she was the Cabinet Secretary of Education, she advocated for rigorous academic standards that were recognized nationally. "New Mexico had very rigorous standards for basic content areas in comparison to other states," says Dr. Garcia. "Many individuals thought we should create national standards to help ensure that all of our students were receiving the instruction they required to be college and career ready. We worked with various education professional associations and teaching unions to create these standards. The Common Core State Standards were originally intended to be a national educational initiative as opposed to a federal mandate. It began as a set of standards created by teachers for teachers. At some point, the Common Core and assessments got tied to federal funding, and it became a federal program, but that was not the original intent behind it."

Because of this shift, the Common Core State Standards were enforced and assessment consortiums were formed to align assessments to the Common Core State Standards. "I don't think there was enough time allowed for the transition," says Dr. Garcia. "Teachers were not properly trained for assessments, and our parents and community members at large lacked understanding about what was required." Some common assessment challenges that school districts still experience include test fatigue, the use of curricula guides that don't align to the Common Core, and technology adaptability. "To be successful, our teachers need better professional development, and we need to provide our parents with Common Core guides that help explain the standards," says Dr. Garcia. "Also, we still have children who are being taught using pencil and paper but are assessed using a computer," says Dr. Garcia. "Or, we have children using Chromebooks in their classrooms, but are tested on PCs. That doesn't work."

MOVING FORWARD

As school districts evaluate their assessment platforms, it is important they remember the ultimate driver behind the tests. "I hope that we, as a country, will move toward using these massive end-of-the year assessments in the way they were intended to be used: to provide educators with a sense of how well they are delivering the curricula," says Dr. Garcia. "Instead of focusing strictly on student performance, we need to evaluate our instruction and pedagogy. We should use timely formative assessments to gauge how well we are working with our students. Ultimately, our job is to ensure that we are providing students with the learning skills and instruction required to be college and career ready."

> **"I'm trying to ensure that we are using the right instruments with the right frequency,"**
>
> **—Dr. Veronica C. Garcia, Superintendent, Santa Fe Public Schools**

Conclusion

We titled this report Online Assessment: From Readiness to Opportunity for good reason. As noted throughout the report, improved and more rigorous standards aligned with online assessments are improving student outcomes and, subsequently, delivering on the promise of enhancing college and career ready opportunities for our students.

Education systems across the country are shifting from a focus on becoming online assessment ready to using assessment data to transform pedagogy and educational systems. The shift to digital, which the CCSS and state CCRS online assessment accelerated, provides students and teachers with a new set of tools and data to personalize instruction. Furthermore, the possibility of transformation now extends beyond classrooms, schools, and districts by expanding student access and the use of high-quality digital learning resources to the home.

The initial benefits of online assessments over paper and pencil assessments—such as testing efficiency, quick return on student performance data, reduced costs, and test security—are already being realized. More importantly though, the wide range of digital tools and assessments is providing educators an opportunity to rethink the role of assessment from summative to formative, which has a greater potential to significantly improve teaching and learning. Simply stated, informed teachers—along with other stakeholders in the education community—make better decisions.

The assessment consortia have met the first difficult challenge of providing stable and effective assessment systems to capture useable student data on higher order thinking standards, and they believe the role of online assessments will continue to grow and become even more important in improving student outcomes. This belief is supported and reinforced by the important role assessments will play in the new ESSA policy. In the future, the assessment consortia are not only planning for system enhancements to streamline the testing process, but they are also working on ways to embed assessment into instruction, shifting the emphasis away from event-based assessments.

NINE KEY RECOMMENDATIONS

This whitepaper has identified nine key recommendations, listed below, that form a comprehensive framework for transforming online assessment practice from readiness to opportunity. It also includes a set of essential questions that will assist schools and districts in customizing the recommendations to their individual needs.

1. Create a cross-functional strategic planning team
2. Secure funding sources for modern learning environments
3. Embed technology in instructional practice
4. Invest in robust and ongoing professional development for teachers, administrators, and technical staff
5. Build out a robust infrastructure
6. Select devices meeting instructional needs and assessment consortia requirements
7. Communicate—a lot
8. Pay attention to logistics
9. Prepare to use the assessment data effectively

Looking Ahead

It is an exciting time to be in education, and we are just now at the beginning of the transition from readiness to opportunity. By designing systems and tools that will inform, enhance, and support the important work of teachers, this opportunity will soon be realized.

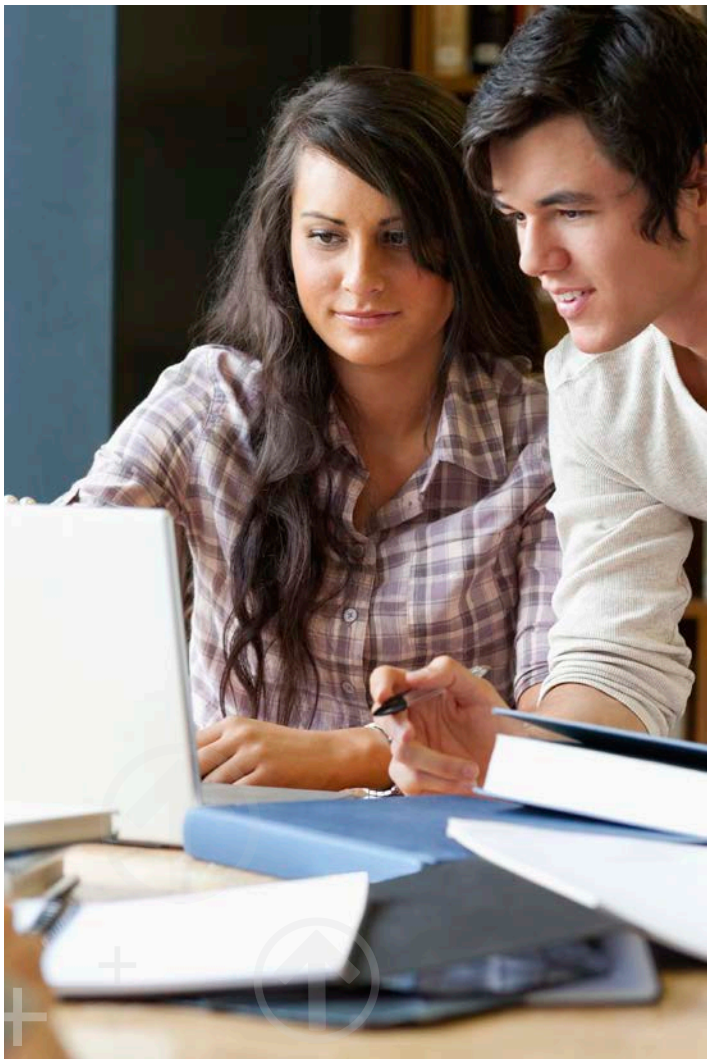
EXCITING FRONTIER

The last recommendation, "Prepare to use the assessment data effectively," discusses the next exciting frontier for online assessments: taking the assessment data received on individual students and effectively using it to personalize instruction in real time. This will be difficult work, but it will move schools and districts into the transformation phase.

For transformation to be successful, data systems will need to be interoperable and integrated in order to share student performance, align and embed assessments into digital content, and provide real-time resources to easily customize curricula to the needs of individual students.

Achieving personalized learning at scale requires school districts to leverage technology, especially in daily instruction, and provide professional development to build capacity and knowledge.

In addition to the recommendations and checklists, we encourage schools and districts to use the **Online Assessment Planning Tool** to assist in effectively planning for and using online assessments to achieve broader transformations of teaching and learning.



READINESS TO OPPORTUNITY

It is an exciting time to be in education, and we are just now at the beginning of the transition from readiness to opportunity. By designing systems and tools that will inform, enhance, and support the important work of teachers, this opportunity will soon be realized.

As stated by Dr. Leng Fritsche, assistant superintendent of information, assessment, and analytics with Houston Independent School District, "At the end of the day, it's not about the assessment—it's about the teaching and learning."

Endnotes

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3 "Race to the Top Assessment Program," last modified 05/28/13, *http://www2.ed.gov/programs/racetothetop-assessment/index.html*

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6 "PARCC Scores Lower for Students Who Tool Exams on Computers, Education Week, 06/16/16

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The eLearn Institute is a non-profit organization that is dedicated to transforming education through the effective use of digital learning tools. The central focus of the institute is to help schools and districts design, build, and "own" their eLearning programs. As a trusted partner and aggregator of digital resources, the eLearn Institute will help connect online educators and organizations to appropriate resources as they (a) develop appropriate eLearning models, (b) select quality content, (c) provide professional development for teachers, administrators, and staff, and (d) select appropriate hardware, software, and systems to build a high-quality eLearning program. The eLearn Institute understands that having the right digital tools is one half of the challenge that educators and schools face, and using these tools effectively to building transformative educational models that support great learning is the other half of the challenge. The institute assists schools to create a facilitated community of online educators to share best practices, effective learning models, and new ideas specific to online and blended learning.

For more information, please visit http://www.elearninstitute.org.

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