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Assessment 2.0: "Next-Generation" Comprehensive Assessment Systems

An Analysis of Proposals by the

Partnership for the Assessment of Readiness for College and Careers

and

SMARTER Balanced Assessment Consortium

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Introduction

On September 2, 2010, the U.S. Department of Education announced the winners of the $350 million Race to the Top Comprehensive Assessment Systems Competition: the Partnership for the Assessment of Readiness for College and Careers (PARCC) and the SMARTER Balanced Assessment Consortium (SMARTER). In his announcement, Secretary of Education Arne Duncan asserted that these "next-generation" assessments are "an absolute game-changer in public education." Designed to replace individual state tests in English language arts and mathematics currently mandated by the No Child Left Behind Act (NCLB), the PARCC and SMARTER assessment systems will usher in a new and different approach to assessment system design to complement the adoption and implementation of the Common Core State Standards (CCSS). These new standards and assessments have significant implications for how states and districts organize and support the challenging work of principals and teachers to improve student outcomes.

States and districts need to build a "next-generation" policy infrastructure to ensure that school-based professionals have the resources they need to take full advantage of the assessment systems.

By the 2014-2015 school year, for the first time in the history of American education, the daily work of teachers in PARCC and SMARTER consortia states will be driven by common standards and assessments designed to prepare all students for success in college and the workplace. States and districts need to build a "next-generation" policy infrastructure to ensure that school-based professionals have the resources they need to take full advantage of the PARCC and SMARTER assessment systems. This side-by-side comparative brief describes the system proposed by each consortium in order to assist state and district-level leaders in planning for implementation.

As per the requirements articulated by the U.S. Department of Education, both the PARCC and SMARTER approaches to comprehensive assessment system design are grounded in four basic principles:

1. **Assessments are common across states and aligned to the CCSS.** Students in grades 3-11 in PARCC states and students in grades 3-8 and 11 in SMARTER states will take common assessments aligned to the CCSS in English Language Arts (ELA) and mathematics, including English learners and students with special needs. Further, common achievement standards and cut scores will allow for cross-state comparability of student performance between consortium states.

2. **Students take "performance-based" assessments for accountability.** Both the PARCC and SMARTER systems will require students to demonstrate their skills in reading, writing, and mathematical reasoning on higher-order tasks, including research and essay-writing, in order to measure students' readiness for college and careers.

3. **The assessment systems are "computer-based" for more sophisticated design and quick, reliable scoring.** With a few exceptions, the assessments, including many of the performance tasks, will be delivered and scored using computer and online resources, which will increase overall system functionality and dramatically reduce the amount of time that schools and teachers must wait for student achievement and growth data.

4. **Transparent reporting systems drive effective decision-making.** The PARCC and SMART-ER systems will provide clear and comprehensible student performance data to all stakeholders, from state and district leaders to teachers and parents. Student achievement and growth reports will also indicate whether students are "on track" to meet college and career-readiness expectations, thus facilitating responsive intervention where necessary.

By grounding their system designs in these four principles, aggregating the design and field-testing to a large scale, and taking advantage of federal resources, PARCC and SMARTER promise to reverse the widespread decline in test quality and rigor that has been documented over the last several years.[1] These new assessment systems will replace the NCLB-mandated assessments currently used in participating states.

Though similar in many respects, there are at least four important differences between the PARCC and SMARTER approaches to system design that warrant close inspection:

1. **Summative Assessments:** PARCC envisions a "though-course" model of summative assessment for accountability, which will require participating states to administer quarterly assessments in both ELA and mathematics. Each of these quarterly assessments will be included in summative scores for accountability determinations. SMARTER sticks to a more traditional "end-of-year" approach, with summative assessments administered during the last 12 weeks of the school year.

2. **High School Assessments:** PARCC requires tests in grades 9-11, while SMARTER requires testing only once in high school (in the 11th grade). The SMARTER consortium will develop assessments for grades 9 and 10, but these assessments are optional for states.

3. **Computer-adaptive versus Computer-based:** SMARTER assessments will be computer-adaptive—a method of test administration that adjusts in real time an assessment's level of difficulty based on individual students' responses. PARCC assessments will be computer-based but adhere to a single form for all students.

4. **Setting Cut Scores:** SMARTER will set initial cut scores in the summer of 2014, following the field testing of its assessments but before the first full-scale administration of the assessment system in all consortium states. Alternatively, PARCC will finalize assessment standards and set cut scores only after full-scale administration in 2014-2015.

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1 "No Child Left Behind Act: Enhancements in the Department of Education's Review Process Could Improve State Academic Assessments," U.S. Government Accountability Office, GAO-09-911, September 24, 2009.

This comparative brief describes the major elements of each assessment system and is designed to assist system leaders in gearing-up for implementation. This analysis highlights the following elements of the PARCC and SMARTER proposals:

- Consortia Governance and Membership
- Assessments for Accountability
- Additional Assessments Not for Accountability
- Assessment Descriptions
- Technology and Capacity Requirements
- Implementation Timelines

Individual states and districts need to understand these system-level decisions as they begin the process of determining how their existing systems (e.g. curriculum and instruction, information technology, budgeting and procurement) will be aligned to support effective implementation.

Consortia Governance and Membership

The PARCC and SMARTER consortia are voluntary membership organizations composed of governing and participating/advisory states (non-governing states are referred to as "participating" in PARCC and "advisory" in SMARTER). States are free to choose the consortium with which they are affiliated and whether they would like to act as governing or participating/advisory states. However, to remain or to become a member state of either consortium, a state must have adopted the CCSS by December 31, 2011, and each state must decide no later than the 2014-2015 school year which comprehensive assessment system it will implement, thus restricting states to membership in only one consortium.

Governing states are those which have fully committed to implementing their respective consortium's assessment system by the 2014-2015 school year. Each governing state controls one vote on either the Governing Board (PARCC) or the Steering Committee (SMARTER), which are the main policy-making bodies for each consortium. Participating or advisory states, which at this point in time can belong to one or both of the consortia, will engage at some level in consortium activities but have not yet committed to implementing one particular assessment system. The table below identifies current consortia membership, with participating/advisory members of both consortia marked in bold, as well as the lead project management organization for each consortium.

Presently, 44 states and the District of Columbia are affiliated with at least one consortium. The six states that are not members of either consortium are Alaska, Minnesota, Nebraska, Texas, and Virginia.

Table 1: Consortia Membership (as of Dec. 2010)

STATUS	PARCC	SMARTER
Governing States	Arizona Arkansas District of Columbia Florida (fiscal agent) Georgia Illinois Indiana Louisiana Maryland Massachusetts New York Rhode Island Tennessee	Connecticut Hawaii Idaho Kansas Maine Michigan Missouri Montana Nevada New Mexico North Carolina Oregon Utah Vermont Washington (fiscal agent) West Virginia Wisconsin
Participating or Advisory States	**Alabama** California **Colorado** **Delaware** **Kentucky** Mississippi **New Jersey** **North Dakota** **Ohio** **Oklahoma** **Pennsylvania** **South Carolina**	**Alabama** **Colorado** **Delaware** Iowa **Kentucky** **New Hampshire** **New Jersey** **North Dakota** **Ohio** **Oklahoma** **Pennsylvania** **South Carolina** South Dakota Wyoming
Project Management	Achieve, Inc.	WestEd

Assessments for Accountability

Perhaps the most significant difference between the PARCC and SMARTER proposals is their approach to assessment for accountability.

PARCC takes what it calls a "distributed" approach to assessment for accountability. Assessments will be distributed throughout the school year and will together produce a summative score in ELA and mathematics for each student in grades 3-11. The individual weights of each assessment have not yet been determined. Students' combined summative scores will indicate absolute levels of achievement against the CCSS at every grade level as well as progress (i.e. growth) toward college and career readiness.

SMARTER's "balanced" approach to assessment combines end-of-year, computer-adaptive, summative assessments for accountability with optional, computer-delivered interim/benchmark and formative assessments that will not be used for accountability. The end-of-year summative assessments also include standardized "performance events." Unlike PARCC, which requires assessments in grades 3-11, SMARTER requires testing in grades 3-8 and only once in high school, at grade 11. SMARTER assessments for grades 9 and 10 that assess progress toward grade 11 college and career-readiness goals are available but optional for states.

Table 2: Assessments for Accountability

ASSESSMENTS FOR ACCOUNTABILITY	PARCC'S "DISTRIBUTED" SYSTEM	SMARTER'S "BALANCED" APPROACH
END-OF-YEAR	**Two (2) assessments each year:** • *End-of-year Literacy Assessment (ELA-4)* • *End-of-Year Mathematics Assessment (Math-4)* **Notable features include:** ○ Computer-based assessments ○ Administered after roughly 90% of instruction ○ Includes "next-generation", computer-enhanced items ○ 100% computer-scored; one (1) week turnaround time for results	**Three (3) assessments each year:** • *Summative Assessment in Reading* • *Summative Assessment in Writing, Listening and Speaking, and Language* • *Summative Assessment in Mathematics* **Notable features include:** ○ Computer-adaptive assessments ○ Two (2) ELA and two (2) math "performance events" in grades 3-8 ○ Up to six (6) ELA and six (6) math performance events by grade 11 ○ Summative assessments in grades 9-10 are optional for states ○ Administered within a 12-week window at the end of the school year ○ Combination of computer and human scoring; two (2) week turnaround time for results
THROUGH-COURSE	**Six (6) assessments each year:** • *Focused Literacy Assessments—Writing From Sources (ELA-1 &2)* • *Extended Research/Writing Assessment (ELA-3)* And • *Focused Assessments of Essential Topics (Math-1 & 2)* • *Extended Mathematics Assessment (Math-3)* **Notable features include:** ○ Administered after roughly 25%, 50%, and 75% of instruction, respectively ○ Includes a mix of constructed response and performance tasks ○ Combination of computer and human scoring; one (1) to two (2) week turnaround time for results	**NOT APPLICABLE**

Additional Assessments Not for Accountability

The following table identifies the elements of the PARCC and SMARTER assessment systems that will not be used for accountability purposes.

PARCC requires states to administer the Speaking and Listening Assessment (ELA-5) each year to all students in grades 3-11. However, a student's score on this assessment will not be figured into his or her cumulative ELA score for the year.

SMARTER plans to provide member states the option of accessing a full complement of Interim/ Benchmark Assessments in ELA and Math in grades 3-11. These interim/benchmark assessments are optional, will be administered as per state/district policy, and will not impact students' yearly cumulative scores.

Table 3: Additional Assessments Not for Accountability

ADDITIONAL ASSESSMENTS	PARCC'S "DISTRIBUTED" SYSTEM	SMARTER'S "BALANCED" APPROACH
THROUGH-COURSE	**One (1) assessment per year:** • *Speaking and Listening Assessment (ELA-5)* **Notable features include:** ○ Administered following the *ELA-3* assessment, after approximately 75% of instruction ○ Teacher-scored using consortia-developed rubric; immediate turnaround time for results	**Multiple assessments per year:** • *Interim/Benchmark Assessments in ELA and Math* **Notable features include:** ○ Computer-adaptive assessments ○ To be implemented throughout the year as per state/district policy ○ Includes teacher-administered performance events ○ Combination of computer and human scoring; two (2) week turnaround time for results ○ Scoring will occur on the same scale as summative assessments for accountability ○ Items and tasks will be non-secure for teacher and principal analysis
FORMATIVE	Both PARCC and SMARTER will provide states the option of accessing a broad range of formative assessments and tools that teachers can use to diagnose student learning needs throughout the year. Many of these formative assessments will be computer-based and web-delivered and will also be useful in preparing students for interim and end-of-year assessments.	

Assessment Descriptions

The following are brief descriptions of the various assessments proposed by each consortium.

PARCC

English Language Arts:
- *End-of-year Literacy Assessment (ELA-4)*: This end-of-year computer-based assessment will include 40-65 "computer-enhanced" items to assess higher-order skills in reading, writing, and language/vocabulary. This assessment is a single-session exam that will be administered after roughly 90% of instruction for the academic year.
- *Focused Literacy Assessments—Writing From Sources (ELA-1 & 2)*: These "through-course" computer-based assessments will require students to complete constructed-response tasks through written analysis of selected texts. These are single-session exams that will be administered after approximately 25% and 50% of instruction, respectively, for the year.
- *Extended Research/Writing Assessment (ELA-3)*: This "through-course" computer-based assessment requires students to read, evaluate, and select information from digital sources in order to compose an essay or research project. This multi-session exam will be administered after approximately 75% of instruction for the academic year.
- *Speaking and Listening Assessment (ELA-5)*: This "through-course" exam will require students to present their findings from their ELA-3 exam to classmates. Teachers will administer this exam and score students' performance using a common rubric. This is a single-session exam, and while its administration by states is required, it will not be used for accountability.

Mathematics:
- *End-of-Year Mathematics Assessment (Math-4):* This end-of-year computer-based assessment will incorporate 40-65 "computer-enhanced" items to assess higher-order skills in mathematical computation, reasoning, and modeling. This assessment is a single-session exam that will be administered after roughly 90% of instruction for the academic year.
- *Focused Assessments of Essential Topics (Math-1 & 2)*: These "through-course" computer-based exams will test students' understanding of specific CCSS math standards or clusters of standards that are the foundation for more advanced math education. These are single-session exams that will be administered after approximately 25% and 50% of instruction, respectively, for the academic year.
- *Extended Mathematics Assessment (Math-3)*: This "through-course" computer-based exam will require students to demonstrate conceptual understanding, procedural fluency, and reasoning ability through the application of mathematical tools using complex and novel computer-based simulations. This multi-session exam will be administered after approximately 75% of instruction for the academic year.

SMARTER

- *Summative Assessment in Reading*
- *Summative Assessment in Writing, Listening and Speaking, and Language*
- *Summative Assessment in Mathematics*

- These end-of-year computer-adaptive tests will include writing prompts, constructed responses, technology-enhanced items, and standardized performance events to assess students across the whole range of the CCSS in ELA and math in grades 3-8 and 11. These single-session, computer-adaptive exams, along with the performance events, must be administered within a 12-week window at the end of the instructional year.

Technology and Capacity Requirements

The PARCC and SMARTER consortia expect that most assessments and tools will be computer-based and Web-delivered, requiring large-scale planning and coordination within and across every level of the education system. System leaders need to consider what these changes mean for their states and districts well in advance of the 2014-2015 implementation deadline.

The PARCC and SMARTER consortia plan to work with states to ensure that schools have the technology they will need to implement the assessment systems. This assistance will focus on systems needed to implement the assessments for accountability. Additional, optional elements not for accountability will be implemented only in states and districts with the resources to do so. Therefore, what "full implementation" actually looks like by 2014-2015 will depend on state and district budgets. The table below details technology and capacity demands in four areas: data management; assessment administration; curriculum and instruction; and professional development.

Table 4: Technology and Capacity Requirements

SYSTEM ELEMENTS	PARCC will require states/districts to:	SMARTER will require states/districts to:

Data Management	• Align existing data management systems with the *Interactive Data Tool*, a cross-consortia "open-source" system that houses student performance-related data
	• Generate three (3) different periodic reports:
	  o *Periodic Feedback Reports*
	  o *Annual Stakeholder Reports*
	  o *Item Analysis Reports*
	• Provide appropriate logon access to student performance data to school-based professionals, parents, and students
		• Align existing data management systems with the *SBAC System Portal*, a cross-consortium "open-source" system that houses student performance-related data
		• Generate two (2) different periodic reports:
		  o *Performance Summaries* for individual students
		  o *Class, School, District, and State Summaries*
		• Provide appropriate logon access to student performance data to school-based professionals, parents, and students

Assessment Administration	• Administer and score assessments for accountability using computer-based and online resources. *(Note: Assessments for grades 3-5 will not be administered online.)* • Administer assessment system training for school-based professionals and students using computer-based and online resources	• Administer and score assessments for accountability using computer-adaptive and online resources • Administer assessment system training for school-based professionals using computer-based and online resources, especially in the area of administering and scoring performance events
Curriculum and Instruction	• Provide school-based professionals access to the *Partnership Resource Center*, an online portal that will house model curriculum frameworks, released assessment items and tasks, and formative tools • Provide school-based professionals access to the *Test Complexity Diagnostic Tool* that will assess students' reading levels and suggest appropriately-leveled texts	• Provide school-based professionals access to the *SBAC Educator Portal*, an online system that will house student performance data, model instructional units, instructional and intervention recommendations, scoring rubrics, and an online, cross-consortium network for teacher-to-teacher communication and sharing of resources
Professional Development	• Train school-based professionals in system functionality including assessment administration, scoring, use of data, and appropriate use of online tools and resources	• Leverage existing professional development networks and programs to train school-based professionals in system functionality including assessment administration, scoring, and appropriate use of online tools and resources

Implementation Timelines

As per U.S. Department of Education requirements, PARCC and SMARTER consortia states must implement assessment systems no later than the 2014-2015 school year. The following table details assessment system implementation timelines and tasks, which will be managed at the consortium level by PARCC and SMARTER's project management organizations, Achieve, Inc. and WestEd. PARCC and SMARTER envision very similar implementation processes; however, there are some important operational differences, especially around the issues of standards-setting and establishing cut scores for the first full operational administration in 2014-2015.

Table 5: Implementation Timelines

YEAR	PARCC	SMARTER
2010-2011	• CCSS content analysis • Assessment blueprint development • Assessment item development • Performance task development • Draft accommodations manual for English language learners and students with special needs	• CCSS content analysis • Learning progression development • Assessment protocol and training materials development • Assessment item development • Performance event development
2011-2012	• Implementation framework development • Pilot testing of select components of the assessment system • Pilot testing to include English language learners and students with disabilities	• Pilot testing of select components of the assessment system • Pilot testing to include English language learners and students with disabilities
2012-2013	• Field testing begins in each consortium state • Data and CCSS-alignment review of test items	• Field testing begins in each consortium state • Data and CCSS-alignment analysis of test items
2013-2014	• Field testing continues • Finalize accommodations manual; each state must adopt by end of year	• Field testing continues • Initial standards and cut scores determined in Summer 2014 following field testing
2014-2015	• Implementation of PARCC system at scale in all consortium states	• Implementation of SMARTER system at scale in all consortium states
2015	• Standard-setting following first full operational administration • Initial cut scores determined	• Final standard-setting following first full operational administration • Cut scores validated using 2014-2015 data

Conclusion

The adoption of the Common Core State Standards and the new comprehensive assessment systems create important responsibilities and opportunities for system leaders. In order to be prepared for the successful implementation of the comprehensive assessments by the 2014-2015 school year, system leaders need to plan for transitions that involve many aspects of their organizations and new interactions across states and districts. Questions to be considered include:

Technology

What technology infrastructure is needed to administer the new computer-based assessment systems? Are computer-based assessments prevalent now or will the new assessments mark a big shift in your state/district? What coordination needs to occur between assessment and IT (information technology) departments to ensure that the technology in place meets assessment system demands and the needs of administrators and teachers?

Data Management

What systems do districts have that connect assessment results with professional development provided to administrators and teachers? What internal systems need to be developed to ensure that assessment data informs individualized professional development for teachers and individualized support for students?

Alignment

What are the best strategies for managing the transition to new standards and assessments while current NLCB-required assessments and accountability systems are still in place? How will states and districts align measures of teacher effectiveness to the new assessments?

Effective Collaboration

What kind of coordination and communication currently exists between states and districts and districts and schools around issues of standards and assessments? Who is responsible for that coordination and communication? How will states, districts, and schools develop mechanisms for coordination and communication that facilitate flexible approaches to problem-solving and addressing the inevitable challenges of implementing the new standards and assessments? Who needs to participate in planning for this work?

Leaders who consider these issues now and forge new mechanisms for cross-system collaboration will be best-positioned to take advantage of the new CCSS and common assessments to improve student achievement.

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