



SMARTER

Balanced Assessment Consortium

Computer
Adaptive
Testing

EDUCATION AND LOCAL GOV'T
November 18, 2011
EXHIBIT 10

SMARTER Balanced is a state-led, national consortium working collaboratively to develop next-generation assessments aligned to the Common Core State Standards that measure student progress toward college and career readiness. The work of the Consortium is guided by the belief that a high-quality assessment system can provide resources and tools for teachers and schools to improve instruction and help students succeed.

An Innovative Approach

The SMARTER Balanced assessment system capitalizes on the precision and efficiency of computer adaptive testing (CAT) for both the mandatory summative assessment and the optional interim assessments. This approach represents a significant improvement over traditional paper-and-pencil assessments used in many states today.

- ▶ **More accurate:** CAT offers teachers and schools a more accurate way to evaluate student achievement, readiness for college and careers, and to measure growth over time. Based on student responses, the computer program adjusts the difficulty of questions throughout the assessment. For example, a student who answers a question correctly will receive a more challenging item, while an incorrect answer generates an easier question. By adapting to each student's abilities, these assessments quickly identify which skills students have mastered.
- ▶ **Better information for teachers:** Optional computer adaptive interim assessments will provide a more detailed picture of where students excel or need additional support, helping teachers to differentiate instruction. The interim assessments will be reported on the same scale as the summative assessment, and schools will have flexibility to assess small elements of content or the full breadth of the Common Core State Standards at locally-determined times throughout the year.
- ▶ **More efficient and more secure:** Computer adaptive tests are typically shorter than paper-and-pencil assessments because fewer questions are required to accurately determine each student's achievement level. The assessments draw from a large bank of questions, and since students receive different questions based on their responses, test items are more secure and can be used for a longer period of time.

Support for States

SMARTER Balanced is committed to helping states transition successfully to CAT. We are collaborating with PARCC to develop a technology assessment tool to identify infrastructure gaps that might serve as barriers for computer-based assessments. States will have the option to administer a paper-and-pencil version of the summative assessment during a three-year transition period. Finally, the 12-week administration window for the summative assessment will reduce pressure on school information technology resources.

Additional Resources

SMARTER Balanced is working with experts in the field of computer adaptive testing, drawing on the experience of member states like Oregon, which implemented computer adaptive testing in 2001. For more information on CAT, see:

- ▶ **A Framework for the Development of Computerized Adaptive Tests**, Nathan A. Thompson, Assessment Systems Corporation, and David J. Weiss, University of Minnesota
- ▶ **The Road Ahead for State Assessments**, Rennie Center for Education Research & Policy, Policy Analysis for California Education (PACE)
- ▶ www.smarterbalanced.org



SMARTER

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A Summary of Core Components

The SMARTER Balanced Assessment Consortium (SBAC) is one of two multistate consortia awarded funding from the U.S. Department of Education to develop an **assessment system based on the new Common Core State Standards (CCSS)**. To achieve the goal that all students leave high school ready for college and career, SBAC is committed to ensuring that assessment and instruction embody the CCSS and that all students, regardless of disability, language, or subgroup status, have the opportunity to learn this valued content and show what they know and can do.

With strong support from participating states, institutions of higher education, and industry, SBAC will develop a balanced set of measures and tools, each designed to serve specific purposes. Together, these components will provide student data throughout the academic year that will inform instruction, guide interventions, help target professional development, and ensure an accurate measure of each student's progress toward career and college readiness.

The core components of SBAC are:

Summative assessments:

- Mandatory comprehensive accountability measures that include computer adaptive assessments and performance tasks, administered in the last 12 weeks of the school year in grades 3–8 and high school for English Language Arts (ELA) and mathematics;
- Designed to provide valid, reliable, and fair measures of students' progress toward and attainment of the knowledge and skills required to be college and career ready;
- Capitalize on the strengths of computer adaptive testing, i.e., efficient and precise measurement across the full range of achievement and quick turnaround of results;
- Produce composite content area scores, based on the computer-adaptive items and performance tasks.

Interim assessments:

- Optional comprehensive and content-cluster measures that include computer adaptive assessments and performance tasks, administered at locally determined intervals;
- Designed as item sets that can provide actionable information about student progress;
- Serve as the source for interpretive guides that use publicly released items and tasks;
- Grounded in cognitive development theory about how learning progresses across grades and how college- and career-readiness emerge over time;
- Involve a large teacher role in developing and scoring constructed response items and performance tasks;
- Afford teachers and administrators the flexibility to:
 - select item sets that provide deep, focused measurement of specific content clusters embedded in the CCSS;
 - administer these assessments at strategic points in the instructional year;
 - use results to better understand students' strengths and limitations in relation to the standards;
 - support state-level accountability systems using end-of-course assessments.

System Features

- Ensures coverage of the full range of ELA and mathematics standards and breadth of achievement levels by combining a variety of item types (i.e., selected-response, constructed response, and technology-enhanced) and performance tasks, which require application of knowledge and skills.
- Provides comprehensive, research-based support, technical assistance, and professional development so that teachers can use assessment data to improve teaching and learning in line with the standards.
- Provides online, tailored reports that link to instructional and professional development resources.

Formative tools and processes:

- Provides resources for teachers on how to collect and use information about student success in acquisition of the CCSS;
- Will be used by teachers and students to diagnose a student's learning needs, check for misconceptions, and/or to provide evidence of progress toward learning goals.