

SOL Innovation Committee Fall 2017 Report



Background

Established in Virginia Code in 2014, the SOL Innovation Committee has fulfilled its legislative mandate over the past three years to make “recommendations to the Board of Education and the General Assembly on (a) the Standards of Learning assessments, (b) authentic individual student growth measures, (c) alignment between the Standards of Learning and assessments and the School Performance Report Card, and (d) ideas on innovative teaching in the classroom.” This has been achieved by convening a variety of issue-specific subcommittees and regularly publishing recommendations and reports, including reports in 2014, 2015, and early in 2017.

The work of the Committee has largely centered on the need for Virginia to modernize its assessment and accreditation systems by reducing “reliance on traditional standardized tests and instead be guided by an innovative and broad set of learning outcomes that prepare all students for success in college, in careers, and as engaged and enlightened citizens” ([Committee Beliefs, 2015 Report, P.5](#)). The Committee has sought to build on the Commonwealth’s history of rigorous accountability by fostering innovation and modernization while simultaneously holding students and schools accountable for a broad set of student outcomes relevant to the needs of our modern economy. In its first year, the Committee formed an assessment subcommittee and an accreditation subcommittee to independently make recommendations to policy makers for immediate changes. The following year, the subcommittees combined to design a balanced assessment system that linked to a multi-metric accreditation plan and a set of coordinated supports for school improvement.

Building on that history, the SOL Committee created two new subcommittees in the spring of 2017. The first was charged with looking at the progress made to date on high school redesign, and bringing forward additional recommendations to ensure all Virginia students have an experience in grades nine through twelve that prepares them to succeed in a rapidly changing economy. The second, a continuation of previous subcommittees focused on Virginia’s assessment system, was charged with making recommendations to better achieve the balanced assessment system the Committee has promoted.

This 2017 Report is the result of the work of these two subcommittees, which met numerous times throughout the year to bring forward recommendations for policymakers to consider as they seek to drive and sustain a public education system that prepares all our students for success in post-secondary education, the workforce, and participation as productive citizens. At the core of the work of both subcommittees is a desire to see the “5Cs” – Communication, Collaboration, Citizenship, Critical Thinking and Creativity – embedded in all academic curriculum, instruction and assessment. Such reform can lead to a truly redesigned educational experience for students and teachers, one that fosters their love of learning, and prepares them for any post-secondary path; such reform similarly meets, and maintains the need for rigorous state accountability.

The full SOL Committee met on October 10, 2017 to collectively consider the subcommittees’ recommendations. Per the Committee’s authorizing language, only those recommendations endorsed by majorities of both citizen and legislative members present were advanced to the Board of Education. Of the 19 recommendations put forward, 12 were unanimously approved and adopted. Despite unanimous support from the committee’s citizen members and two legislators, the remaining seven recommendations failed to advance as the result of opposition from four legislators.

This report includes a comprehensive list of all 19 recommendations advanced by the two subcommittees, and indicates which recommendations were formally advanced to the Board of Education.

High School Redesign Subcommittee

For the first time in 2017, the SOL Innovation Committee created a subcommittee to look specifically at high school redesign and the policy and program changes needed to fully achieve the bold vision set forward previously by the SOL Innovation Committee and the Virginia Board of Education. The recommendations of this subcommittee seek to better align the high school experience of our students with the realities of the economy and Virginia's workforce needs.

The goal of these recommendations is to ensure that all students are prepared for any post-secondary path, whether it be immediate employment, technical, trade or credentialing programs, or any number of higher education opportunities. Ultimately, the task requires state and local partners to collaborate to prepare professionals, engage community stakeholders and employers, and foster students' love of learning.

The subsequent sections of this report outline a path to achieve this ambitious, yet essential goal, including a guiding vision, foundational principles, and a set of concrete recommendations.

High School Redesign Subcommittee's Vision

The subcommittee's vision is that all Virginia's high schools meet the evolving workforce and citizenship needs of the Commonwealth by fostering the communication, collaboration, citizenship, critical thinking and creativity skills of students, in addition to the necessary core academic knowledge base. Such understandings will help them become successful residents, citizens and contributors to society.

Recognizing that this system will serve as the foundation for a student's future educational, career and societal success; it must include robust opportunities for lifelong learning, including numerous pathways to post-secondary education and directly into career development and workforce training.

High School Redesign Subcommittee's Guiding Principles

- **Focus on keeping students first.** Virginia should strive to enhance the learning experience of our students and make it more relevant to the workforce and citizenship needs of the future.
- **Improve student preparedness for career success.** Identify the necessary competencies for changing career patterns and how they relate to one another. Emphasize life and employment attributes through more interdisciplinary and experiential teaching and learning. Emphasize critical and creative thinking, communication, collaboration, and citizenship.
- **Value demonstrated learning that is tied to progress, growth and application without the limitations of organizational structure and age related cohorts.** Add hands-on learning opportunities that relate to career exploration and preparation. More instruction should focus on tangible problems to solve, concepts to learn and or competencies to develop. Through the use of case studies and/or group problem solving, teaching should begin with the "why" of the instruction and the application of the learned ability with emphasis on how it can benefit the student in practical ways.
- **Reduce organizational and curricular silos by expanding collaboration and communication, both vertically and horizontally and in and outside of schools.** Develop curricula that are based upon "stackable" and interchangeable learning concepts and not a quarter or semester of time.

Provide regular ongoing feedback and progress reports to students and integrate additional forms of demonstration/ performance assessment into the learning process.

- **Identify and build upon institutional strengths and work with better resourced partners to address weaknesses.** Expand working relationships with other parts of the educational continuum most notably community colleges in order to enhance external partnerships, especially with employers.
- **Address the professional learning needs of teachers and administrators to effectively meet the student needs of the 21st Century.** Expand the pool of potential instructors beyond certified teachers with full time roles to include non-traditional sources. Identify opportunities to expand the use of technology in student teaching and learning.
- **Utilize the period of time just prior to graduation from high school to prepare students for career or life interests. Develop student centric areas of learning that are tied to future educational, employment and societal success.** Prepare students for post-secondary education. Convert the language of K-12 education to better align with career and educational planning and build around specific areas of learning (i.e. Information Technology (IT), Accounting and Finance, Social Service, Government, Health Care, Communications, Engineering, Data and Statistical Analysis, Leadership and Management, Entrepreneurship, etc.). Blend career and technical K-12 education with community colleges for workforce preparation and economic development.

High School Redesign Subcommittee Recommendations

Expanding upon the work done to date by the General Assembly and Board of Education to implement the Profile of a Virginia Graduate and modify graduation requirements, the subcommittee has identified the following changes required in order for Virginia to achieve its shared vision for a robust high school experience for all students.

1. While maintaining rigorous standards, Virginia must redesign curriculum and instruction to integrate the “5Cs” in core and co-curricular courses, enrichment offerings, and other learning activities. *(Advanced)*
 - a) Virginia should initiate a plan to require all high school students to obtain an authentic experience through any of the following: apprenticeship, internship, externship, other work-based learning experience, service project, or capstone project.
 - b) To enhance the required academic career plan, all high school students should develop a portfolio or resume demonstrating their career competencies, with clear alignment among their career goals, work-based learning experiences, and academic coursework.
 - c) Virginia should conduct a comprehensive evaluation of mathematics and science course offerings; develop blended curriculum courses; ensure that a wide variety of applied mathematics courses are available to all students that align with mathematics competencies needed for their career pathways, and ultimately the Commonwealth’s workforce needs.
2. The Virginia Department of Education must build upon the success of the High School Innovation Grants to help equip all schools to deliver a redesigned high school experience. To accomplish this, VDOE should:

- a) continue providing high school innovation grants over the next biennium, so schools can incorporate and implement the concepts identified in recommendations 1A, 1B, and 1C; and
 - b) identify, compile and distribute best practices and exemplar models amongst all divisions in the spring of 2018; and
 - c) identify outstanding policy barriers in code and regulations to facilitate implementation at scale. The VDOE should report back to the SOL Innovation Committee in the summer of 2018 with specific policy recommendations. *(All advanced)*
3. Virginia should replace the current workplace readiness certificate with one that is aligned with the “5Cs” and is a more relevant, rigorous and meaningful way for students to demonstrate career readiness. *(Advanced)*
 4. A workgroup should be formed to develop specific policy recommendations to align teacher licensure and teacher preparation programs to the state’s vision for redesigned high school experiences. This workgroup should include a variety of stakeholders, including but not limited to VDOE, SCHEV, and teacher preparation program representatives. *(Advanced)*
 5. The Virginia Department of Education and school divisions should provide relevant professional learning opportunities to all educators, including best practices learned through the high school innovation pilots. Professional learning content must include:
 - a) the development and delivery of content that integrates the “5Cs” in curriculum and instruction, and the use of a balanced assessment system; and
 - b) the enhancement of educators’ understandings of relevant and contemporary career opportunities for students, and their ability to establish partnerships that facilitate work-based learning opportunities; and
 - c) training and development to address the academic, emotional, social, and physical needs so essential to student success. *(All Advanced)*
 6. A strong, holistic accountability of schools and divisions is important to the successful implementation of these changes. As such, the Board of Education should consider how the College, Career and Civic Readiness indicator, included in the proposed accreditation matrix, might be updated to reflect meaningful and statewide implementation of these changes. *(Advanced)*

Assessment Subcommittee

Since 2014, the Assessment Subcommittee’s discussion has focused on the vision of a balanced assessment system. The SOL Innovation Committee’s November 2014 Report includes this statement of principle (page 8): The state accountability system should allow for a balance between alternative assessments and the existing assessments that comprise the state assessment system, allowing for flexibility within school districts. The SOL Innovation Committee’s November 2015 Report included a Proposed Framework for Assessing Student Learning, which was updated and retitled Proposed Virginia Assessment System Framework in 2017. It is included at the end of this document. The Framework provides an example of a K-12 assessment system that balances formative classroom assessment with consistent and standardized state-wide measures, while providing reasonable alternatives for students with significant disabilities. The 2015 report acknowledges the intersection between assessment and

accountability and notes that a more balanced assessment system necessitates changes to the accountability system. Now, some of these changes are reflected in the Board of Education's Proposed Standards of Accreditation.

Since the Assessment Subcommittee's last report in February 2017, the group has focused attention on four aspects of the Framework:

- Measuring academic growth at scale.
- Performance-based assessment.
- Ongoing formative assessment and quality feedback in classrooms.
- Professional development.

Measuring Academic Growth at Scale

Statements of Principle:

The assessment system should balance achievement, growth, and performance assessments combined across students' school careers, giving them multiple ways to document their learning and creating a more complete picture of what students know and are able to do.

While including growth measures that are currently feasible, the assessment system should be designed to adapt as higher-quality, more direct measures of growth become available in the coming years.

Context/Rationale:

The Innovation Committee's Proposed Virginia Assessment System Framework shows growth measures in the areas of reading and mathematics in the elementary and middle school years, when students are forming the foundational reading and mathematics skills upon which their later success depends. These content areas are characterized by sequential skills that build upon and rely on each other, making growth measurable.

If the goal is to maximize student learning, then direct measures of growth which yield results teachers and students can use for goal-setting are needed. However, we recognize that the state assessment system must also serve an accountability purpose.

Prior discussions about growth measures rested on the assumption that existing Standards of Learning tests could not be used to measure growth and that new types of assessments in these areas would be required. Since then, the implementation of computer-adaptive testing and the Virginia Department of Education's linking studies suggest that it is possible to use SOL test items to create CAT tests in elementary and middle school reading and mathematics which could serve as legitimate growth measures, assuming adequate vertical scales are used.

Even at best, these measures will not yield all the information that teachers need to guide instruction. Most school divisions are likely to continue their implementation of locally-chosen tools to assess growth. In the accountability system, however, a set of linked, multi-year tests using SOL items and delivered in a computer-adapted format is likely the best option that will be available in the near term for measuring student growth.

Recommendations on Measuring Growth at Scale:

7. For the short term, recommend the use of linked SOL item banks to measure growth in grades 3-8 reading and mathematics with the following assumptions:
 - Students are not required to sit for multiple test sessions in order to access questions above or below their grade level.
 - The average length of test sessions does not increase significantly in order to yield a growth measure.
 - The item bank is broad and robust enough to yield a growth score for students.

**The subcommittee recognizes that there are limitations to the number of students for whom a growth measure is feasible in this system, if other recommendations are not to be violated (i.e. more tests or longer tests).*
 - Growth scores are reported. *(All Advanced)*

**It is understood that the accountability calculation for a school will consider growth scores only for those students whose performance levels do not indicate on-grade-level proficiency. Growth should, however, be reported (including to parents) for all students for whom a growth score can be calculated. A communications plan should be developed to help all stakeholders understand and interpret growth scores.*
8. Recommend ongoing research leading to implementation of more direct measures of student growth. Recognizing the limitations of linked SOL tests as proxies for growth, Virginia should have a long-term goal of replacing point-in-time achievement measures (SOL tests) with direct measures of growth in grades 3-8. *(Not advanced)*

State Required Performance Assessment**Statement of Principle:**

Performance-based assessments should be incorporated as one of multiple types of measures within a balanced state assessment system.

Context/Rationale:

In completing performance assessments, students apply academic content and discipline-specific skills in contexts where they can be required to use the “5Cs” (communication, collaboration, critical thinking, creativity, and citizenship) to solve problems. They create products to document their learning rather than supplying answers to discrete, controlled-response questions. Application of academic content in a performance assessment requires deeper, more thorough understanding of that content than most multiple-choice tests can assess.

Performance assessment is an important component of a balanced classroom assessment system as well (see section C below). Many teachers use performance assessment along with other types of measures, such as quizzes and multiple-choice tests. In the same way, the state’s assessment system should be balanced so that during their K-12 experience, students are required to demonstrate what they know and can do at varying levels of complexity and in multiple formats. Some state required performance assessments (elementary and middle school science) are included in school accreditation calculations; and some (Virginia studies, and civics and economics) are not included in school accreditation calculations but are still required by the state.

The Innovation Committee's Proposed Virginia Assessment System Framework shows three interdisciplinary performance assessments in science (upper elementary and middle school) and one in civics and economics (middle school). Each of these assessments includes a writing component. The importance of strong communication skills for our students cannot be overstated, and the connection between writing and critical thinking is well-documented.

In order to prepare for success in post-secondary education and the workforce, our students must learn and practice ways to clearly communicate their ideas. At the elementary and middle school levels, these assessments could have a performance task and/or a short multiple choice component combined with a writing component. Either way, students would be required to demonstrate their mastery of content and to organize and communicate their thinking through writing.

Recommendations on State Required Performance Assessments:

9. In order to align standards and assessments, we recommend that age-appropriate performance standards for the "5Cs" be integrated in the Standards of Learning as they are updated over time. *(Advanced)*
10. Recommend that the Virginia Board of Education develop a secured set of state-level performance assessments in elementary and middle school science (ESSA requires achievement testing in science at elementary and middle school levels). These assessments should require students to demonstrate their knowledge of content and skills from the Standards of Learning, and to demonstrate skill in two or more of the "5Cs". Each assessment should require a written component aligned with the grade-level Standards of Learning in written communication. *(Not advanced)*
11. To align with current practice in elementary school with the Virginia Studies performance assessment, we recommend that the middle school civics and economics performance assessment be locally administered and scored. School divisions should be required to attest to implementation. *(Not advanced)*
12. Recommend that the Virginia Board of Education develop and test state rubrics and scoring protocols for the science state level assessments. The rubrics and protocols should be pilot-tested and revised as necessary before statewide use to ensure (1) the assessment's validity for measuring the intended learning goals, and (2) consistency and reliability in scoring student work. *(Not advanced)*
13. Recommend that when the science state-level performance assessment is implemented in school divisions, the Board of Education use research-based mechanisms such as sampling, auditing, and objective third-party scoring to ensure reliability of results and integrity of the process. *(Not advanced)*
14. Recommend that the balanced assessment system continue to include point-in-time achievement measures. As Virginia's Standards of Learning and the accompanying SOL tests are revised over time, recommend including and emphasizing the "5Cs" where they align with grade-level content. [* The federal Every Student Succeeds Act (ESSA) requires achievement tests in grades 3-8 reading and mathematics.] *(Not advanced)*
15. Recommend continuous examination and application of the most current and rigorous research available as changes are made to individual tests as well as to the system as a whole. *(Not advanced)*

Classroom and School Level Assessment

Statement of Principle:

When the purpose of assessment is to improve student learning, the most powerful methods are ongoing formative assessments and feedback designed by teachers to meet the changing learning needs of their students.

Context/Rationale:

During the course of classroom instruction, teachers should ensure that their own classroom assessments are balanced. Some classroom assessments are informal and embedded in lesson activities. They may not even be noticeable to students, but they give teachers immediate and specific information to guide instructional decisions. For some learning goals, multiple-choice or short-answer questions are efficient and effective means of gathering data on student learning. Measuring learning of more complex skills and deeper understanding requires alternative types of measures, the most common of which is performance assessment. Over the course of a year students work towards a variety of learning goals, and so the most appropriate assessment type will vary as well.

Recommendations on Classroom and School Level Assessment:

16. In conjunction with recommendation 9; school divisions should integrate the “5Cs” into their local curriculum and provide teachers in all grade levels and content areas access to resources that support their use of a variety of assessment techniques (questioning and feedback strategies, aligned test items, performance tasks and rubrics, for example). *(Advanced)*
17. Recommend that VDOE create a collection of exemplar classroom and school-level performance assessments and a process for assessing the quality of performance tasks. *(Advanced)*

Professional Development

Statement of Principle:

Research-based professional learning opportunities which support quality implementation of classroom, school, and state-level assessments should be available to teachers and leaders in all areas of the Commonwealth.

Context/Rationale:

The current accountability and assessment systems have supported greater consistency in teaching the core curriculum and have improved student performance over time (Innovation Committee Report 2014, page 5). A system based on standardized achievement testing was a priority need in the time in which it was designed. Now the evolving needs of students and schools require adjustments in that system.

It is imperative that schools prepare students to participate productively in the workforce and as engaged citizens. This means that what we teach and assess, while focusing on content, must now include competency in the “5Cs”. This in turn requires revisions in how we assess student learning, since higher-level and interactive skills cannot be effectively measured using current testing formats. As these changes in what and how we assess occur, so must educators’ skill sets. Professional learning is essential for both teachers and school leaders.

The field of adult learning is replete with evidence documenting characteristics of effective professional development. Professional development is effective to the extent that the professional learning transfers into classroom practice, making students the beneficiaries.

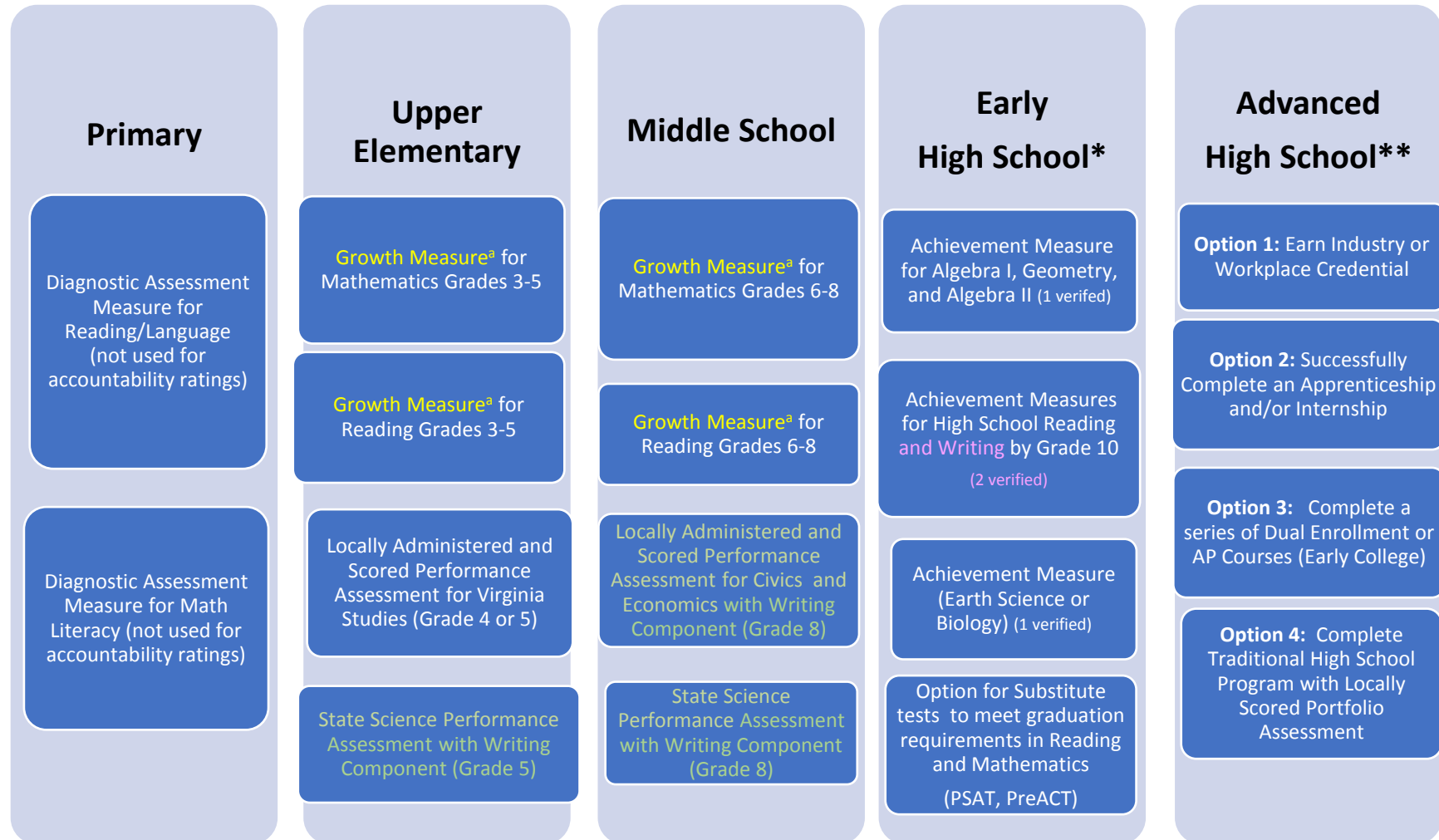
Recommendations on Professional Development:

18. There must be sustained, high-quality professional learning in order for this vision to be achieved. Therefore, wherever funds are available for professional learning, it should be directed to differentiated and customized professional learning activities which include opportunities to observe others, plan and design with colleagues, and receive quality feedback on the job. *(Advanced)*
19. Recommend that specific skills and competencies for teachers and leaders be identified to encourage school divisions, professional associations, Universities and other stakeholders to align programs and state licensure requirements with those competencies. To that end, we recommend micro-credentialing be an approved option for teacher recertification as one way in which teachers and leaders can document their learning and transfer it into practice. *(Advanced)*

[A micro-credential in performance assessment, for example, would require teachers to first participate in an approved professional learning seminar, workshop, or other type of program. Then the teacher would design and/or implement a performance assessment using Virginia's Quality Criteria as guidelines, and submit the assessment along with samples of student work to the school division for evaluation and approval. If earned, the micro-credential (like several current types of documentation of professional learning) would be used by the school division to award recertification points.]*

Formative Classroom Assessment Pre-K through 12

Revised July 2017



*Proposed Standards of Accreditation include a required verified credit in social studies that can be met with SOL test or performance assessment.

*English Language Learners- English language proficiency assessment (WIDA ACCESS for ELLS K-12)
Students with Significant Disabilities- Alternative Measure (Va. Alt. Assessment Program)*

APPENDIX B: Glossary of Terms

“5Cs” - Critical thinking, Creative thinking, Collaboration, Communication, and Citizenship

Accountability systems – The mechanisms used (generally by states) to evaluate the performance of their education systems. In recent years, accountability systems have increasingly used the school as the unit for monitoring and intervention, based largely on the scores of each school’s students on a set of standardized tests.

Alternative (or alternate) assessment – Alternative assessments are used primarily to determine what students can and cannot *do*, in contrast to what they do or do not *know*. In other words, an alternative assessment measures applied proficiency more than it measures knowledge. There are multiple types of alternative assessments, of which performance assessment is one.

Assessment – Any systematic basis for making inferences about characteristics of people, usually based on various sources of evidence; the global process of synthesizing information about individuals in order to understand and describe them better (J. McTighe and J. Arter).

Authentic assessment – An alternative assessment in which students perform a real-world task.

The student will typically have to employ critical thinking and problem-solving skills to successfully address the challenge presented. The more authentic an assessment task is, the more closely it approximates the way a similar task would be done in a setting outside the classroom (a workplace or community, for example). Student performance on a task is typically scored on the basis of a list of desired outcomes (known as a rubric)

Balanced assessment system – An assessment system that employs multiple types of assessments so that:

- a) achievement and growth are taken into account;
- b) assessments are matched to learning goals (both core content mastery and skills for success in the modern world); and
- c) The need for accountability measures is met, but not at the expense of meaningful information that informs classroom instruction.

Co-Curricular – courses, programs and activities that support and promote the core mission of schools.

Competencies - The term competency-based education refers to a systems model in which (1) teaching and learning are designed to ensure students are becoming proficient by advancing on demonstrated mastery and (2) schools are organized to provide timely and differentiated support to ensure equity. A competency-based structure enables personalized learning to provide flexibility and supports to ensure mastery of the highest standards possible. With clear and calibrated understanding of proficiency, learning can be tailored to each student’s strengths, needs, and interests and enable student voice and choice in what, how, when, and where they learn.

Computer-Adaptive Testing (CAT) – A test in which a computer program customizes the test for each student based on how the student responds to the test questions.

Common Diagnostic Items – A collection of assessment items that can be utilized to pre-assess students on specific content and skills.

Criterion-Referenced Assessment – A test or assessment that is designed to measure students against a fixed set of predetermined criteria or learning standards. In K-12 education, these are typically aligned to the curriculum taught in a particular course, academic program, or specific content area.

Developmentally Appropriate Assessment – An assessment that respects the age and individual needs of the student. This may include areas such as the intellectual, social, emotional, and physical needs of the particular age group being assessed.

Formative Assessment – The overall goal for formative assessment is to collect detailed information in an informal manner that can be used to improve instruction and student learning during the learning process. It is used to “inform” the learning process so that the teacher can make in-process adjustments and learning modifications based on the data collected from students. Formative assessments are generally referred to as assessments “for” learning.

Higher-Order Thinking – A category of thinking skills that increases the cognitive load, requiring students to go beyond understanding content and replicating skills. Students employing higher-order thinking may make connections, solve problems different from those given in classroom examples, and use content to reach and justify conclusions. Examples of activities that require higher-order thinking are (1) analyzing the usefulness of information, (2) providing evidence to support conclusions, (3) creative thinking and design, and (4) determining implications and consequences.

Integrated or Interdisciplinary Assessment – An assessment that measures student performance on content and/or skills across content areas.

Inter-rater Reliability – The degree of agreement among raters who are tasked with scoring a performance task or product.

Norm-Referenced Assessment – A standardized test that is designed to compare and rank students (test takers) in relation to other students who participated in the assessment. Norm-referenced tests report how a particular test taker performed in comparison to the hypothetical average student, which is determined by comparing scores against the performance results of a statistically selected group of test takers, typically from the same age group and grade level, who have already taken the assessment.

“On Demand” Testing – This type of testing allows flexibility to assess students when they are ready to be tested on required content rather than testing students according to an established testing window that does not account for student readiness.

Performance assessment – A type of alternative assessment in which students demonstrate the use of their acquired knowledge and skill. A performance assessment may include a written

component, but generally focuses primarily on the student's demonstration of a specified task. Performance assessments are typically scored using rubrics (see Rubrics), which explicitly describe levels of performance and designate which levels meet standards.

Personalized learning – An approach in which students' individualized learning needs are the primary consideration in making instructional decisions.

Portfolio Assessments – A type of assessment that is a systematic collection of student work and artifacts that demonstrate mastery of course and/or subject knowledge and skills.

Project-Based Learning/Assessments – Project-based learning (PBL) is a teaching approach that engages students in sustained, collaborative real-world investigations. Projects are organized around a driving question, and students participate in a variety of hands-on tasks that seek to meaningfully address this question (Buck Institute).

Reliability – The consistency or stability of test performance. Tests must be constructed and administered so that measurement error (for example, from ambiguous scoring, unclear questions/directions, or environmental factors) is minimized.

Rubric – A description of the criteria for success and levels of achievement for a task. Rubrics are used during instruction to help students maximize and improve the quality of their work, and as scoring tools for multiple types of alternative assessments (see Performance Assessment).

Student Achievement – Student demonstrated mastery of certain knowledge and/or skills as measured by a particular assessment.

Student Growth – The change in student achievement for an individual student between two or more points in time.

Student Portfolios – A type of assessment that is a collection of student work and artifacts that demonstrate mastery of course and/or subject knowledge and skills. The collection should include evidence of student reflection and self-evaluation, guidelines for selecting the portfolio contents, and criteria for judging the quality of the work included in the portfolio (Venn, 2000, pp. 530-531).

Summative Assessment – Assessments that are used to evaluate student learning, skill acquisition, and academic achievement at the conclusion of a defined instructional period. Summative assessments typically are administered at the end of a unit, project, course, semester, program, or school year. These are frequently described as assessments "of" learning.

Test Equating – The statistical process used to determine comparable scores for different forms of a particular test or assessment. It is intended to ensure that scores from different forms of the test are interchangeable. The equating process adjusts for different levels of difficulty across test forms.

Validity – The degree to which an assessment actually measures the learning it is intended to measure. Assessment designers use tools – both design and statistical tools- to maximize and collect evidence of assessment validity.

APPENDIX C: SOL Innovation Committee Members

Dr. Robert Benson of King George, Superintendent, King George County Schools

Dr. Kim Blosser of Fairfax, Vice President of Academic Affairs, Lord Fairfax Community College

Dr. Valerie Bowman of Richmond, Pediatrician, Bon Secours Developmental & Special Needs Pediatrics

Jamie Clancey of Culpeper, Licensed Clinical Social Worker, Clancey Counseling, LLC

Karen Cross of Bristol, Teacher, Bristol Public Schools

Michael Davidson of Marion, Principal, Smyth County Public Schools

Dr. Francisco Durán of Fairfax, Chief Academic Officer, Fairfax County Public Schools

Danielle Fitz-Hugh of Petersburg, President and CEO, Petersburg Chamber of Commerce

Deborah Frazier of Spotsylvania, Principal, Spotsylvania County Public Schools

Jim Gallagher of Lynchburg, Supervisor of Student Services, Amherst County Public Schools

Sarah Gross of Richmond, Parent, Richmond Public Schools

Linda Grubba of Lynchburg, School Counselor, Campbell County Public Schools

Dr. Rachel Holloway of Blacksburg, Vice Provost for Undergraduate Academic Affairs, Virginia Tech

Linda Hyslop of Hopewell, Member, Hopewell City School Board

Jim Livingston of Manassas, Teacher, Prince William County Public Schools

Dr. Brian Matney of Virginia Beach, Office of Research and Evaluation, Virginia Beach Public Schools

Dr. Oliver McBride of Hillsville, retired superintendent, Carroll County Public Schools

Laurie McCullough of Charlottesville, Director, Virginia Association for Supervision and Curriculum Development

Dr. Pat Murphy of Arlington, Superintendent, Arlington Public Schools

APPENDIX C: SOL Innovation Committee Members

Ting-Yi Oei, of Fairfax, retired teacher and administrator, Fairfax and Loudoun County Public Schools

Dr. Jennifer Parish of Poquoson, Superintendent, Poquoson City Public Schools

Annette Patterson of Forest, Special Education Teacher, Bedford County Public Schools

Todd Putney of Roanoke, Vice President of Human Resources, Medical Facilities of America

Dr. Stewart Roberson of Richmond, Chairman, Moseley Architects

Vivian Sanchez-Jones of Roanoke, School & Community Liaison, Commonwealth Catholic Charities

Bobby Shockley of Glen Allen, Assistant Principal, Richmond Public Schools

Karen Thomsen of Bridgewater, Principal, Rockingham County Public Schools

Delegate Jeion Ward of Hampton, retired teacher, Hampton City Public Schools

Members of House of Delegates:

Delegate David Bulova

Delegate Tag Greason

Delegate Jim LeMunyon

Delegate Roxann Robinson

Members of Senate:

Senator Ryan McDougale

Senator Jeremy McPike

Senator Stephen Newman

Ex Officio Members:

Dr. Steven Staples, Virginia Superintendent of Public Instruction

Dr. Billy Cannaday, President of the Board of Education

Dietra Trent, Secretary of Education

APPENDIX D: Vote Record from 10.10.2017 Meeting

High School Redesign Subcommittee Recommendations	Vote Record and Outcome
<p>1. While maintaining rigorous standards, Virginia must redesign curriculum and instruction to integrate the “5Cs” in core and co-curricular courses, enrichment offerings, and other learning activities.</p> <p>a) Virginia should initiate a plan to require all high school students to obtain an authentic experience through any of the following: apprenticeship, internship, externship, other work-based learning experience, service project, or capstone project.</p> <p>b) To enhance the required academic career plan, all high school students should develop a portfolio or resume demonstrating their career competencies, with clear alignment among their career goals, work based learning experiences, and academic coursework.</p> <p>c) Virginia should conduct a comprehensive evaluation of mathematics and science course offerings; develop blended curriculum courses; ensure that a wide variety of applied mathematics courses are available to all students that align with mathematics competencies needed for their career pathways, and ultimately the Commonwealth’s workforce needs.</p>	<p>Unanimously approved by citizen and legislative members present</p> <p>ADVANCED</p>
<p>2. The Virginia Department of Education must build upon the success of the High School Innovation Grants to help equip all schools to deliver a redesigned high school experience. To accomplish this, VDOE should:</p> <p>a) continue providing high school innovation grants over the next biennium, so schools can incorporate and implement the concepts identified in recommendations 1A, 1B, and 1C; and</p> <p>b) identify, compile and distribute best practices and exemplar models amongst all divisions in the spring of 2018; and</p> <p>c) identify outstanding policy barriers in code and regulations to facilitate implementation at scale. The VDOE should report back to the SOL Innovation Committee in the summer of 2018 with specific policy recommendations.</p>	<p>Unanimously approved by citizen and legislative members present</p> <p>ADVANCED</p>
<p>3. Virginia should replace the current workplace readiness certificate with one that is aligned with the “5Cs” and is a more relevant, rigorous and meaningful way for students to demonstrate career readiness.</p>	<p>Unanimously approved by citizen and legislative members present</p> <p>ADVANCED</p>
<p>4. A workgroup should be formed to develop specific policy recommendations to align teacher licensure and teacher preparation programs to the state’s vision for redesigned high school experiences. This workgroup should include a variety of stakeholders, including but not limited to VDOE, SCHEV, and teacher preparation program representatives.</p>	<p>Unanimously approved by citizen and legislative members present</p> <p>ADVANCED</p>
<p>5. The Virginia Department of Education and school divisions should provide relevant professional learning opportunities to all educators, including best practices learned through the high school innovation pilots. Professional learning content must include:</p> <p>a) the development and delivery of content that integrates the “5Cs” in</p>	<p>Unanimously approved by citizen and legislative members present</p> <p>17</p>

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<p>curriculum and instruction, and the use of a balanced assessment system; and b) the enhancement of educators’ understandings of relevant and contemporary career opportunities for students, and their ability to establish partnerships that facilitate work-based learning opportunities; and c) training and development to address the academic, emotional, social, and physical needs so essential to student success.</p>	<p align="center">ADVANCED</p>
<p>6. A strong, holistic accountability of schools and divisions is important to the successful implementation of these changes. As such, the Board of Education should consider how the College, Career and Civic Readiness indicator, included in the proposed accreditation matrix, might be updated to reflect meaningful and statewide implementation of these changes.</p>	<p>Unanimously approved by citizen and legislative members present</p> <p align="center">ADVANCED</p>
<p align="center">Assessment Subcommittee Recommendations</p>	<p align="center">Vote Record and Outcome</p>
<p>7. For the short term, recommend the use of linked SOL item banks to measure growth in grades 3-8 reading and mathematics with the following assumptions:</p> <ul style="list-style-type: none"> • Students are not required to sit for multiple test sessions in order to access questions above or below their grade level. • The average length of test sessions does not increase significantly in order to yield a growth measure. • The item bank is broad and robust enough to yield a growth score for students. <p>*The subcommittee recognizes that there are limitations to the number of students for whom a growth measure is feasible in this system, if other recommendations are not to be violated (i.e. more tests or longer tests).</p> <ul style="list-style-type: none"> • Growth scores are reported. <p>*It is understood that the accountability calculation for a school will consider growth scores only for those students whose performance levels do not indicate on-grade-level proficiency. Growth should, however, be reported (including to parents) for all students for whom a growth score can be calculated. A communications plan should be developed to help all stakeholders understand and interpret growth scores.</p>	<p>Unanimously approved by citizen and legislative members present</p> <p align="center">ADVANCED</p>
<p>8. Recommend ongoing research leading to implementation of more direct measures of student growth. Recognizing the limitations of linked SOL tests as proxies for growth, Virginia should have a long-term goal of replacing point-in-time achievement measures (SOL tests) with direct measures of growth in grades 3-8.</p>	<p>Unanimously approved by citizen members; and legislative members voted down 4-2</p> <p align="center">NOT ADVANCED</p>
<p>9. In order to align standards and assessments, we recommend that age-appropriate performance standards for the “5Cs” be integrated in the Standards of Learning as they are updated over time.</p>	<p>Unanimously approved by citizen and legislative members present</p> <p align="center">ADVANCED</p>
<p>10. Recommend that the Virginia Board of Education develop a secured set of state-level performance assessments in elementary and middle school science (ESSA requires achievement testing in science at elementary and</p>	<p>Unanimously approved by citizen members; and</p>

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<p>middle school levels). These assessments should require students to demonstrate their knowledge of content and skills from the Standards of Learning, and to demonstrate skill in two or more of the “5Cs”. Each assessment should require a written component aligned with the grade-level Standards of Learning in written communication.</p>	<p>legislative members voted down 4-2 NOT ADVANCED</p>
<p>11. To align with current practice in elementary school with the Virginia Studies performance assessment, we recommend that the middle school civics performance assessment be locally administered and scored. School divisions should be required to attest to implementation.</p>	<p>Unanimously approved by citizen members; and legislative members voted down 4-2 NOT ADVANCED</p>
<p>12. Recommend that the Virginia Board of Education develop and test state rubrics and scoring protocols for the science state level assessments. The rubrics and protocols should be pilot-tested and revised as necessary before state-wide use to ensure (1) the assessment’s validity for measuring the intended learning goals, and (2) consistency and reliability in scoring student work.</p>	<p>Unanimously approved by citizen members; and legislative members voted down 4-2 NOT ADVANCED</p>
<p>13. Recommend that when the science state-level performance assessment is implemented in school divisions, the Board of Education use research-based mechanisms such as sampling, auditing, and objective third-party scoring to ensure reliability of results and integrity of the process.</p>	<p>Unanimously approved by citizen members; and legislative members voted down 4-2 NOT ADVANCED</p>
<p>14. Recommend that the balanced assessment system continue to include point-in-time achievement measures. As Virginia’s Standards of Learning and the accompanying SOL tests are revised over time, recommend including and emphasizing the “5Cs” where they align with grade-level content. [* The federal Every Student Succeeds Act (ESSA) requires achievement tests in grades 3-8 reading and mathematics.]</p>	<p>Unanimously approved by citizen members; and legislative members voted down 4-2 NOT ADVANCED</p>
<p>15. Recommend continuous examination and application of the most current and rigorous research available as changes are made to individual tests as well as to the system as a whole.</p>	<p>Unanimously approved by citizen members; and legislative members voted down 4-2 NOT ADVANCED</p>
<p>16. In conjunction with recommendation 9; school divisions should integrate the “5Cs” into their local curriculum and provide teachers in all grade levels and content areas access to resources that support their use of a variety of assessment techniques (questioning and feedback strategies, aligned test items, performance tasks and rubrics, for example).</p>	<p>Unanimously approved by citizen and legislative members present ADVANCED</p>
<p>17. Recommend that VDOE create a collection of exemplar classroom and school-level performance assessments and a process for assessing the quality of performance tasks.</p>	<p>Unanimously approved by citizen and legislative</p>

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	<p>members present</p> <p>ADVANCED</p>
<p>18. There must be sustained, high-quality professional learning in order for this vision to be achieved. Therefore, wherever funds are available for professional learning, it should be directed to differentiated and customized professional learning activities which include opportunities to observe others, plan and design with colleagues, and receive quality feedback on the job.</p>	<p>Unanimously approved by citizen and legislative members present</p> <p>ADVANCED</p>
<p>19. Recommend that specific skills and competencies for teachers and leaders be identified to encourage school divisions, professional associations, Universities and other stakeholders to align programs and state licensure requirements with those competencies. To that end, we recommend micro-credentialing be an approved option for teacher recertification as one way in which teachers and leaders can document their learning and transfer it into practice.</p> <p><i>[* A micro-credential in performance assessment, for example, would require teachers to first participate in an approved professional learning seminar, workshop, or other type of program. Then the teacher would design and/or implement a performance assessment using Virginia’s Quality Criteria as guidelines, and submit the assessment along with samples of student work to the school division for evaluation and approval. If earned, the micro-credential (like several current types of documentation of professional learning) would be used by the school division to award recertification points.]</i></p>	<p>Unanimously approved by citizen and legislative members present</p> <p>ADVANCED</p>