

Issues and Solutions for Career and Technical Education in Virginia 2019–2020

Educators and business representatives from across Virginia, along with 10 organizations representing career and technical education (CTE) professionals, developed this document, which outlines Virginia ACTE’s position on a number of priority issues within CTE. Virginia ACTE welcomes comments from citizens, parents, and members of the boards that govern Virginia’s public education. We seek public policy support from anyone interested in providing diversity of opportunity for all of Virginia’s children on the following issues.

Virginia Association for Career and Technical Education
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IN BRIEF

1. Virginia ACTE supports funding to sustain the CTE Resource Center, to replace its obsolete data structure and website, to support its mission of providing free resources for the development of CTE curricula, and to continue its support of the commonwealth’s CTE educators.
2. Virginia ACTE supports funding that would enable school divisions to hire work-based learning (WBL) coordinators to increase WBL opportunities for students and align these opportunities with the Profile of a Virginia Graduate.
3. Virginia ACTE supports funding for meaningful, industry-recognized standards, assessments, and credentials for CTE programs, staff, and students.
4. Virginia ACTE supports continued priority funding for CTE classroom lab equipment and program improvements to prepare students for a competitive workforce and postsecondary education.
5. Virginia ACTE supports increased efforts by Virginia’s colleges and universities to develop and, where they already exist, strengthen undergraduate and graduate teacher-preparation programs in CTE.
6. Virginia ACTE supports funding for the Governor’s STEM Academies and

Governor's Health Sciences Academies, which prepare students for in-demand, high-wage, and high-skill careers in Virginia.

POLICY ISSUE 1

Virginia ACTE supports funding to sustain the CTE Resource Center and replace its obsolete data program and website, to support its mission of providing free resources for the development of CTE curricula, and to continue its support of the commonwealth's CTE educators.

Rationale

- Virginia's Educational Resource System Online (Verso), managed by Virginia's CTE Resource Center, has been the repository for the state's CTE curricula for nearly two decades. It houses information such as correlations to standards of learning, student competency records, and industry-based instructional resources.
- The Verso website (cteresource.org/verso) receives ~2 million page views each year and has been a model for the delivery of quality CTE curriculum nationwide.
- Verso faces significant problems and a potential long-term shutdown. The data program, developed in 2001, is obsolete, with no support available.
- Verso is susceptible to a catastrophic crash which would result in a loss of access to information critical to the continuity of CTE instruction throughout the state.
- Verso technology urgently needs to be replaced with a 21st-century database and content management system to continue to be relevant. Virginia's increasingly rigorous graduation requirements make the transition to a reliable, modern system imperative.
- Verso is the primary distribution point for all CTE curriculum for the commonwealth's public school CTE administrators and educators. The CTE Resource Center and its services and resources are free to CTE educators in the state. It is the only source for comprehensive information about credentials offered to Virginia students, aligned with the Profile of a Virginia Graduate.
- The CTE Resource Center is unique and valuable to Virginia's educators as well as to CTE programs across the United States; no other state offers such resources to its CTE teachers.

The Center's online portal is more meaningful than ever because of Virginia's high-stakes graduation requirements:

- It is the repository for the commonwealth's CTE state-approved curricula: the course frameworks, competencies, definitions, SOL correlations, correlations to national standards and state regulations, and student competency records (which allow teachers to track performance on the competencies).
- It provides credentialing information, which includes the provider and cost, for teachers, administrators, and students in Virginia's school divisions.

Virginia ACTE proposes the following recommendations to replace the CTE Resource Center's Verso

data program, continue with CTE curriculum development, continue to provide free resources for the commonwealth's CTE educators, and sustain funding for the CTE Resource Center:

- 1.1 *Provide \$1.2 million (one-time expenditure) for the replacement of the CTE Resource Center's online repository of CTE essential competencies, industry certifications, and administrative planning information for Virginia's educators and students.*
- 1.2 *Restore full funding to sustain the work of the CTE Resource Center.*
- 1.3 *Increase line-item funding to the CTE Resource Center.*

POLICY ISSUE 2

Virginia ACTE supports funding for school divisions to hire WBL coordinator(s) who will ensure high-quality WBL opportunities for students and align these opportunities with the Profile of a Virginia Graduate.

Rationale

- Work-based learning refers to a sequence of on-the-job experiences undertaken in partnership with local companies or organizations. It is coordinated by local schools and school divisions, in line with the Profile of a Virginia Graduate (8VAC20-131-70).
- Students who participate in WBL experiences often continue to work for these companies after graduation.
- Employers increasingly seek new hires who have WBL experiences.
- Virginia recognizes 11 WBL methods of instruction: job shadowing, mentorship, service learning, externship, school-based enterprise, internship, entrepreneurship, clinical experience, cooperative education, youth registered apprenticeship, and registered apprenticeship.
- The growing emphasis on WBL requires schools to increase opportunities for WBL for their students. WBL coordinators in each school division would build and coordinate relationships with the local and regional business community, screen and match qualified students to WBL experiences in line with their career goals and interests, and oversee the implementation of the local school division's WBL program.
- The coordinator will serve as the link between the classroom and the business community, ensuring seamless integration for students while serving as the school division's single point of contact for the business community.
- Providing WBL opportunities allows school divisions to report data for the Virginia Department of Education School Quality Profile for college and career readiness.
- Work-based learning experiences enable students to apply classroom instruction in a real-world business or service-oriented work environment.
- Students' knowledge, skills, and attitudes are enhanced by participation in supervised, authentic WBL experiences.

- Work-based learning is valuable because it helps students identify career interests, develop workplace skills, and experience life within a given career.
- Students who participate in WBL experiences are often able to continue to work for their placement companies after high school graduation or even after college graduation.

Virginia ACTE proposes the following recommendation to assist school divisions and the business community in providing opportunities for students to participate in WBL experiences and prepare all students to be career ready:

- 2.1 Provide \$8 million in state funding to support school divisions in the implementation of WBL opportunities which will strengthen Virginia’s future workforce.

POLICY ISSUE 3

Virginia ACTE supports funding for meaningful, industry-recognized standards, assessments, and credentials for CTE programs, staff, and students.

Rationale

- Employment projections state that 500,000 new jobs will be created in Virginia by 2024. As employers seek to fill these jobs, they rely on industry-recognized credentials as evidence of workers’ knowledge, skills, and abilities.
- During the 2018-2019 school year, 158,452 credentials were earned by Virginia’s high school students. The Profile of a Virginia Graduate initiative increases the opportunity for all students to earn a credential beginning with the ninth-grade class of 2018-2019.
- Credentialing assessments have been level-funded for the past three years. Funding is divided among 132 school divisions.
- In the 2017-2018 school year, the total cost of these assessments was more than \$5.4 million, while state funding was only \$3.9 million, so school divisions had to use more than \$1.5 million in local funding to meet the shortfall.
- The requested increase in allocations for credentialing assessments would bridge the funding gap and allow more Virginia students to be career-ready by graduating with an industry-recognized credential, making them attractive to employers and allowing them to show proof of their skills as they enter the workforce.
- Virginia’s CTE programs currently provide multiple avenues for students to earn credentials and continue their education beyond high school.
- The current Standard Diploma requirements for students entering the ninth grade prior to 2018-2019 include an earned industry credential, a state licensure examination, a national occupational competency assessment, the Virginia Workplace Readiness Skills assessment, or satisfactory competency-based instruction in a particular subject area where a credential is not readily available.
- The current Standards of Quality state, “Career and technical education programs shall be aligned with industry and professional standard certifications, where they exist.” (Code of Virginia §22.1-253.13:1B)

- The College and Career Readiness section of the School Quality Profile documents earned industry credentials.
- The 2019 General Assembly continued to appropriate the following at level funding distributed to 132 school divisions:
 - more than \$1.8 million for industry certification examinations, licensure tests, and occupational-competency examinations
 - \$308,655 for the Workplace Readiness Skills assessment and other board-approved industry certifications
 - \$500,000 for industry credentialing for students and professional development for instructors in STEM-Health and CTE programs
 - \$1.3 million for information-technology industry credentials.
- Section 22.1-298.1 of the Code of Virginia was amended in 2015 to state that “teachers seeking an initial licensure with an endorsement in career and technical education shall have an industry certification credential in the area in which the teacher seeks endorsement. If the teacher has not attained an industry certification credential, the Board may, upon request of the employing school division or educational agency, issue the teacher a provisional license to allow time for the teacher to attain such credential.”
- Virginia’s future workforce must be ready to take advantage of new growth opportunities in high-tech, high-growth industries.

Virginia ACTE proposes the following recommendations to strengthen Virginia’s CTE system:

- 3.1 Increase funding by \$1.5 million for credentialing assessments.
- 3.2 Increase funding for credentialing assessments to help students complete industry certifications, occupational competency exams, Workplace Readiness Skills assessments, state licensures, and other valid, high-quality assessments, as approved by the Virginia Board of Education, as a part of their secondary CTE studies, Standard Diploma requirements, and the Profile of a Virginia Graduate requirement.
- 3.3 Continue funding that allows CTE teachers to attain Virginia Board of Education-approved, industry-recognized certifications.
- 3.4 Provide support and expand credentialing initiatives at the secondary-education level and recognize the importance of secondary-education credentialing initiatives for success at the postsecondary level and for career readiness.

POLICY ISSUE 4

Virginia ACTE supports continued priority funding for CTE classroom lab equipment and program improvement to prepare students for a competitive workforce and postsecondary education.

Rationale

School divisions in the state exceed the minimum number (three) of required CTE programs and have multiple labs that must be updated regularly to meet industry and local workplace needs. Under the present funding level, local and federal funds provide the largest percentages of CTE equipment resources to meet state requirements and the future needs of the Virginia economy.

- General Assembly funding allocated to CTE during the previous 12 sessions has provided essential support for helping to keep Virginia’s CTE classrooms equipped with the technology and materials students will use in the workplace.
- The 2018 General Assembly again level-funded CTE equipment at \$1.8 million with a base allocation of \$2,000 and the remainder distributed on the basis of student enrollment in secondary CTE courses.
- Funding in the amount of \$1.4 million was allocated for equipment in high-skill, in-demand, and fast-growth industry sectors identified by the Virginia Board of Workforce Development and based on data from the U.S. Bureau of Labor Statistics and the Virginia Employment Commission.
- Funds provided by the General Assembly are distributed among 132 school divisions, including middle and high schools, many local technical centers, and 10 regional career and technical centers. These funds are used to provide project-based and industry-relevant educational experiences not otherwise available to public school students.
- There were more than 666,200 enrollments (duplicate count) in CTE courses during the 2018-2019 school year, indicating daily use of CTE equipment and labs.
- The average cost of equipment and software updates in a standard CTE lab ranges from \$60,000 to more than \$250,000.
- Virginia’s “new collar” workforce is experiencing shortages of qualified workers, indicating a major skills gap.
- Virginia’s public schools can help close the skills gap through adequately funded CTE programs.

Virginia ACTE recommends the following to strengthen Virginia’s CTE programs:

- 4.1 Increase funding by \$1 million for CTE equipment updates and replacements.
- 4.2 Continue priority funding for CTE program expansion to meet the demands of high-skill, in-demand, and fast-growth industry sectors.
- 4.3 Increase funding for equipment and software updates for credentialing assessments required by industry standards.
- 4.4 Change the base allocation level from \$2,000 to \$5,000 to provide an equitable distribution of funds to each school division, especially in smaller and rural school divisions. Currently, only 18.22 percent of the state equipment funding is used for the base allocation and 81.78 percent of the funding is allocated based on student enrollment.

POLICY ISSUE 5

Virginia ACTE supports increased efforts by Virginia’s colleges and universities to implement and, where they already exist, strengthen undergraduate and graduate teacher-preparation programs in CTE.

Rationale

Virginia continues to experience a critical shortage of qualified teachers, especially in its most challenged schools.

- For SY 2018-2019, CTE ranked fourth in Virginia’s top-10 list of critical teacher shortage areas.
- Since 2003–2004, CTE has been ranked among the top 10 areas of critical teacher shortages.
- School divisions face increasing difficulty finding qualified teachers for CTE programs, and this shortage is predicted to become more serious within the next five years.
- Demand for CTE teachers and programs is increasing:
 - Student enrollment in CTE programs during 2018-2019 totaled more than 666,200 (duplicate count; some students took more than one course).
 - The updated Workplace Readiness Skills for the Commonwealth (taught in all CTE courses) are a clear priority for Virginia’s employers, often valued more highly than academic grades or test scores.
 - Teachers in four CTE program areas (Agricultural Education, Business and Information Technology, Family and Consumer Sciences, and Marketing) provide the largest number of instructors endorsed to teach Economics and Personal Finance, a graduation requirement for all Virginia students.

Highly qualified CTE teachers must be available to meet increasing demand. Teacher preparation programs at the state’s colleges and universities (sometimes in cooperation with Virginia’s community colleges), along with selected special initiatives, offer some solutions to these shortages, but more needs to be done.

- The 2016 General Assembly included CTE as a critical-shortage teaching discipline, which allows students enrolled in full-time or part-time approved undergraduate or graduate teacher programs to apply for the Virginia Teaching Scholarship Loan Program in critical shortage areas.

Virginia ACTE proposes the following recommendations to strengthen and expand Virginia’s supply of highly qualified CTE teachers:

- 5.1 The Board of Education and the State Council of Higher Education in Virginia (SCHEV) should prioritize support for teacher-education programs in CTE in Virginia’s colleges and universities to provide for a supply of motivated and dedicated teachers.
- 5.2 The career switcher program should require rigorous pedagogy instruction, realistic endorsement requirements with relevant certifications, and professional experience.
- 5.3 Increase the amount of funding available for the Virginia Teaching Scholarship Loan Program and set aside a portion of the funds specifically for CTE teacher-shortage areas. In this program, recipients who teach two years in Virginia are not required to repay the loan.
- 5.4 Encourage collaboration between the State Council of Higher Education for Virginia (SCHEV) and the Virginia Community College System (VCCS) to endorse the Virginia Teachers for Tomorrow program as a dual-enrollment community college course that is eligible for transfer to teacher-education programs at four-year colleges and universities.

POLICY ISSUE 6

Virginia ACTE supports funding for the Governor's STEM Academies and Governor's Health Sciences Academies, which prepare students for in-demand, high-wage, and high-skill careers in Virginia.

Rationale

- Research shows that students demonstrate higher levels of learning and performance when they learn essential academic skills in a relevant context and when those skills are applied to real-world settings, as they are in CTE courses and programs.
- Secondary CTE programs build upon elementary STEM experiences and integrate STEM initiatives in all Career Clusters by using performance-based and team-based instructional methods and encouraging critical thinking and problem solving.
- Twenty-two Governor's STEM Academies have been implemented across the commonwealth and are designed to expand options for students to acquire STEM literacy and technical knowledge and skills, while earning an industry credential.
- Nine Governor's Health Sciences Academies are now in place and represent a partnership between public school divisions, healthcare institutions, the private sector, and institutions of higher education to deliver rigorous programs that prepare students for careers in the health sciences.
- Governor's STEM Academies, Governor's Health Sciences Academies, and other STEM initiatives relevant to all CTE programs are growing.
- The 2018 General Assembly provided \$600,000 in competitive innovation program grants for in-demand, fast-growth industry sectors, with priority given to state-identified challenged schools and the Governor's STEM Academies and Governor's Health Sciences Academies.
- There is a need to provide reliable, sustainable, and identifiable funding streams for the Governor's STEM Academies to ensure that labs are updated to meet the needs of rapidly changing curricula and to provide a rigorous and relevant program of study based on industry needs.

Virginia ACTE proposes the following recommendations to expand the integration of Virginia's CTE curriculum with the Standards of Learning and STEM initiatives:

- 6.1 Increase funding by \$1 million for Governor's STEM Academies and Governor's Health Sciences Academies for sustainable and reliable funding streams.
- 6.2 Improve support for a performance-based educational system that incorporates the standards for career and technological literacy, authentic assessment, and the infrastructure for college and career readiness in all public schools.
- 6.3 Recognize CTE as an integral component of K–12 STEM initiatives and acknowledge CTE's unique ability to provide STEM instruction in secondary schools throughout the commonwealth.
- 6.4 Increase funding for competitive innovation program grants to support current and future Governor's STEM Academies and Governor's Health Sciences Academies.

Affiliated Organizations

Virginia Association for Teachers of Family and Consumer Sciences
Virginia Association of Agricultural Educators
Virginia Association of Career and Technical Education Administrators
Virginia Association of Marketing Educators
Virginia Association of Trade and Industrial Educators
Virginia Association of Career and Technical Education—Special Needs Division
Virginia Business Education Association
Virginia Health and Medical Sciences Educators Association
Virginia Technology and Engineering Education Association

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