

# Issues and Solutions for Career and Technical Education in Virginia

## **Virginia Association for Career and Technical Education**

Virginia Association of Agricultural Educators  
Virginia Association of Career and Technical Education Administrators  
Virginia Association of Marketing Educators  
Virginia Association of Teachers of Family and Consumer Sciences  
Virginia Association of Trade and Industrial Education  
Virginia Association of Career and Technical Education Special Needs  
Personnel  
Virginia Business Education Association  
Virginia Health Occupations Education Association  
Virginia Technology Education Association

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## Introduction

This policy document has been developed through a collaborative process involving ten organizations and numerous educators and administrators from across Virginia. We welcome comments on these issues from citizens, parents, and members of the various policy-making boards that govern Virginia's public education. We welcome dialogue concerning these proposals and seek support from anyone interested in providing diversity of opportunity for all of Virginia's children.

Virginia Association for  
Career and Technical Education

## Policy Issues in Brief

1. VACTE supports increased efforts by Virginia's colleges and universities to implement and, where they already exist, strengthen teacher preparation programs in Career and Technical Education.
2. VACTE supports meaningful industry-recognized standards, assessments, and credentials for Career and Technical Education programs, staff, and students.
3. VACTE supports continued integration of secondary and postsecondary Career and Technical Education curriculum with the Standards of Learning and postsecondary academic requirements, while placing particular emphasis on science, technology, engineering, and mathematics (STEM).
4. VACTE supports increased funding for Career and Technical Education equipment and program improvement in order to prepare students for a competitive workforce and further education.
5. VACTE supports requirements for Virginia's Technical Diploma and Advanced Technical Diploma that include a Career and Technical Education concentration, a rigorous course of study, attainment of workplace readiness skills, and total required credits exceeding the Standard Diploma.

that allows access to all students, regardless of achievement level, in preparation for entry into a competitive workforce and further education.

## Policy Issue 5

VACTE supports requirements for Virginia's Technical Diploma and Advanced Technical Diploma that include a Career and Technical Education concentration, a rigorous course of study, attainment of workplace readiness skills, and total required credits exceeding the Standard Diploma.

## Rationale

In its 2007 session, the General Assembly passed HB 2039 that creates the Technical Diploma option for high school students. Governor Kaine proposed and the General Assembly passed an amendment to HB 2039 to include an Advanced Technical Diploma. Both diplomas would require students to have a Career and Technical Education concentration.

The report of Virginia's P-16 Education Council includes recommendations to request that the Board of Education and the Department of Education continue to work with local school boards and school divisions to improve the preparation of middle school students for rigorous high school work and to increase the number of students completing rigorous courses in high school.

One of the pertinent goals of Virginia's *Workforce Development Strategic Plan* is to provide a workforce system that is responsive to employer and worker needs and that creates a well-trained, well-educated, and globally competitive, skilled workforce. The plan also requires "every public school student by 2010 to have an individualized high school plan to ensure course selection decisions are aligned with students' transition and career goals after high school."

- 5.1. VACTE supports the development of a Technical Diploma that exceeds the requirements of a Standard Diploma and includes a concentration in Career and Technical Education. A CTE concentration is defined in the *CTE Administrative Planning Guide* as a "coherent sequence of courses completed by a student in a specific career area."
- 5.3. VACTE supports the following exact wording for these diploma options: "Technical Diploma" and "Advanced Technical Diploma."
- 5.4. VACTE recommends that the Technical Diploma options include the requirements for a CTE seal and opportunities for dual enrollment credit with community colleges.
- 5.5. VACTE recommends that, whenever possible and appropriate, workforce readiness skills and industry credentials or assessments be a recognized component of the Technical Diploma and Advanced Technical Diploma.

While these five issues address the most pressing needs in Career and Technical Education, VACTE will continue to monitor and support other concerns throughout the year. These include, but are not limited to

- support of educational programs that balance academic studies and Career and Technical Education studies
- support of comprehensive programs of career exploration and education for all students
- support of continued funding for CTE initiatives, including regional and local technical centers, equipment, and CTE-business partnerships

- 3.1 The General Assembly should continue to provide adequate funding to sustain the work of the CTE (Career and Technical Education) Resource Center. This Center produces curriculum and resources for and offers professional development and training to all Virginia's career and technical educators at no cost to individual teachers and school divisions.

The Center has continuously supported Career and Technical Education in Virginia for more than 25 years by working with state and local educators and with business representatives to ensure up-to-date, high-quality curriculum that is reflective of industry standards and specifically validated for Virginia. The Center has worked closely with academic teachers to identify the Standards of Learning that are supported and reinforced through CTE courses and programs. The Center's Web-based curriculum system, Verso, provides ready access to these resources for all educators throughout the Commonwealth.

In addition, the Center conducts in-service training on new CTE initiatives and resources to enhance classroom instruction, with particular emphasis on the integration of academic skills and knowledge into CTE programs.

The General Assembly designated \$400,000 per year in the 2008-09 biennial budgets for Center operations. These funds ensure that the Center will have the financial support needed for its many essential services and products.

- 3.2. The Board of Education should establish annual benchmarks for increasing the number of students receiving dual enrollment credit in CTE courses and to collaborate with the Virginia Community College System to continue to develop statewide agreements. As a component of a student's career plan, dual enrollment and postsecondary education opportunities are crucial entities to be addressed.

## Policy Issue 4

*VACTE supports increased funding for Career and Technical Education programs in order to prepare students for a competitive workforce and further education.*

### Rationale

VACTE appreciates the attention of the 2000, 2005, 2006, and 2007 General Assembly sessions, but recognizes that the funds are shared among 134 school divisions with approximately 290 high schools and 280 middle schools, as well as 39 separate and 10 jointly-owned career and technical centers. In addition, 18 separate technical centers providing special services to disadvantaged and disabled students must also share in this funding. Current funding, therefore, is inadequate for the technology needs of the career and technical programs in Virginia's public schools.

Equipment reimbursement is now based on the number of students enrolled in career and technical courses, with a base funding level of \$2,000 per school division and an average allocation of \$2,326.53 per school based on 2008-2009 funding from the General Assembly. The average cost of equipment in a typical career and technical laboratory ranges from \$20,000 to more than \$250,000. Most high schools in the state have multiple labs that must be updated with new technology on a regular basis. Under the *Virginia Standards of Accreditation*, high schools are expected to offer a minimum of three career and technical programs to meet students' needs. Under the present funding level, local and federal funds support the largest percentages of CTE equipment resources. It is time for the state to recognize the overwhelming need for up-to-date equipment in these required programs.

- 4.1 VACTE supports increased funding for Career and Technical Education equipment and program improvement to promote statewide consistency in course offerings and quality

## Policy Issue 1

*VACTE supports increased efforts by Virginia's colleges and universities to implement and, where they already exist, strengthen teacher preparation programs in Career and Technical Education.*

### Rationale

As noted in Virginia's P-16 Education Council *Report to the Governor and General Assembly* (October 2006), the state is experiencing a critical shortage of qualified teachers in its most challenged schools. Addressing this issue effectively requires an understanding of the types of programs offered at the state's colleges and universities to prepare Virginia's teachers. During the 2008 General Assembly, House Bill 506 and Senate Bill 169 identified Career and Technical Education as one of the top three critical teacher shortage areas.

In 2006-2007, specific CTE teacher shortages occurred in Business and Information Technology, Family and Consumer Sciences, Trade and Industrial Education, and Technology Education. The only critical shortages ranking higher than CTE were in special education and mathematics.

Local school divisions face increasing difficulty in finding qualified teachers for CTE programs, and this shortage is predicted to become more serious within the next five years. CTE administrators collectively project 613 openings within five years—more than eight times as many as in 2006-2007.

As student enrollment in CTE programs continues to grow and workforce readiness skills become an increasingly clear priority for Virginia's businesses, highly qualified CTE teachers must be available to keep pace with the demand.

VACTE proposes the following recommendations to strengthen and expand Virginia's system of Career and Technical Education:

- 1.1. VACTE recommends that the General Assembly appoint a Task Force consisting of representatives from the State Council of Higher Education for Virginia, the Virginia Community College System Workforce Development Office, and the Department of Education Office of Career and Technical Education to develop career pathways to expand the teacher preparation programs for Career and Technical Education in areas identified to have critical shortages.
- 1.2. VACTE recommends reinforcing the linkage between the Virginia Community College System and Virginia's four-year colleges and universities to provide students a seamless transfer and transition into CTE teacher preparation programs.
- 1.3. VACTE recommends that the Board of Education move aggressively to support teacher education programs in Career and Technical Education in Virginia and encourage the expansion of "career switcher" programs with realistic endorsement requirements for individuals with relevant industry certifications and professional experience. At the same time, the Board should provide enhanced pedagogy instruction and mentor opportunities to strengthen "career switcher" candidates' transition to the classroom.
- 1.4. VACTE recommends that the General Assembly 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.
- 1.5. VACTE supports colleges and universities offering summer courses that help CTE teachers meet provisional licensure requirements and guidelines for highly qualified status.

- 1.6. VACTE recommends development of new and continuation of existing CTE teacher preparation programs in Virginia.
- 1.7. VACTE supports action by the Board of Education and the General Assembly to encourage schools, colleges and universities, and businesses and industries in the recruitment of students planning to enter CTE teaching fields.
- 1.8. VACTE encourages the Board of Education to continue its support of the Teachers for Tomorrow program to encourage high school students to enter the teaching profession, especially in Career and Technical Education.

## Policy Issue 2

*VACTE supports meaningful industry-recognized standards, assessments, and credentials for Career and Technical Education programs, staff, and students.*

### Rationale

Virginia faces the great challenge of creating a skilled workforce equal to the demands of a global economy. According to the U.S. Department of Labor, *OPA News Release*, August 16, 2006, “America is transitioning to a knowledge-based economy, creating millions of new jobs in industries that did not exist a generation ago and which demand highly educated and skilled workers.” The report also notes that “two-thirds of the estimated 18 million new jobs that will be created in the next ten years will be occupations that require some kind of higher education—a four-year degree, community college, or a specialized apprenticeship training program.”

Additionally, in February of 2006, the publication, *Business 2 Business*, noted that “by 2020 we’re going to have a shortfall of some 14 million skilled workers who will need some type of postsecondary education or training to qualify for the high skilled jobs our economy demands. In fact, 80% of the U.S.’s fastest-growing jobs over the next decade will require at least two years of college.” Currently, initiatives are underway to correlate Science, Technology, Engineering, and Math (STEM) with CTE instructional programs. Virginia received a grant from the National Governor’s Association to develop six CTE Academies that emphasize STEM activities and instruction.

In addition, Virginia is using industry credentialing in conjunction with the Virginia CTE student competency records to meet the Carl D. Perkins Career and Technical Education Act of 2006 performance standard for measuring technical skills attainment of CTE graduates. By 2010-2011, schools will be required to test all CTE completers who will be graduating from a CTE program with a state-approved industry certification, state licensure, or NOCTI test. The industry credentials are also used as part of the Virginia Index of Performance program to recognize schools and school divisions for student achievement.

The workforce of the 21st century will need both academic competency and technical skill training to compete in the high performance workplace. State educational standards must be broadened to include standards for CTE programs that are regulated by the Board of Education. The current Standards of Quality state that “...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*). In 2005, the Board of Education established a pathway for a student to obtain a maximum of two verified credits through the successful completion of a Board-approved nationwide industry assessment.

According to *Are They Really Ready to Work? Employers’ Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century U. S. Workforce* (2006), “Young people need a range of skills, both basic and academic skills, as well as the ability to apply these skills and knowledge in the workplace.” This Conference Board study goes on to say, “The

education and business communities must agree that applied skills integrated with core academic subjects are the ‘design specs’ for creating an educational system that will prepare our high school and college graduates to succeed in the modern workplace and community life.”

*Virginia’s Workforce Development Strategic Plan* cites the need to “increase priority and visibility of skills development, Career and Technical Education, and postsecondary education opportunities...” Along with this, a recommendation by Virginia’s P-16 Education Council identifies the need to “increase the number of industry certifications, state licenses, and successful National Occupational Competency Testing Institute (NOCTI) assessments earned by high school students...”

VACTE was instrumental in securing a funding increase for fiscal year 2008 to assist students with credentialing testing. However, as more students enroll in Career and Technical Education courses and take credentialing tests, funding resources should be increased.

Teachers also must acquire industry certification and state licensure in order to provide the necessary instruction for students. Avenues must continue to be created and funded for teachers to achieve such credentials.

VACTE proposes the following recommendations to strengthen Virginia’s system of Career and Technical Education:

- 2.1 The Board of Education and the General Assembly should increase state funding to help students obtain Board-approved industry certifications, state licensure, or other valid, high quality assessments, as approved by the Board, as a part of their secondary career and technical studies.
- 2.2 Funding should continue to be available for Career and Technical Education teachers to attain Board-approved industry-recognized certifications.
- 2.3 The Board of Education should establish annual benchmarks for improvement in the number of students receiving industry credentials.

## Policy Issue 3

*VACTE supports continued integration of secondary and postsecondary Career and Technical Education curriculum with the Standards of Learning and postsecondary academic requirements, while placing particular emphasis on science, technology, engineering, and mathematics (STEM).*

### Rationale

Occupational competencies for Virginia’s Career and Technical Education programs have core academics embedded within them; thus, students enrolled in CTE courses have the opportunity to reinforce their achievement of Virginia’s Standards of Learning. Linking academic and occupational standards provides a powerful tool for instructors to develop contextual instruction and assessment materials. As reported in numerous research studies, contextual instruction with real-world examples results in significant improvement in learning and retention by learners in all age groups. Simply stated, students need to learn how specific academic skills are used or applied in the real-world setting of the workplace.

Section 22.1-253.13:1B of the *Code of Virginia* states: “With such funds as are available for this purpose, the Board shall regularly review and revise the competencies for career and technical education programs to require the full integration of English, mathematics, science, and history and social science Standards of Learning.”

VACTE proposes the following recommendations to continue and expand the integration of Virginia’s Career and Technical Education curriculum with the Standards of Learning: