

Career and Technical Education Policy Proposal

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Framing The Issue

It is imperative that every high school student be prepared with the high-level skills needed for success in careers and post-secondary education. Career Technical Education (CTE) must be joined with traditional academic coursework to serve as the backbone of a strong, well-educated workforce, which would foster productivity in business and contribute to America's leadership in the global economy.

CTE and college preparation cannot be mutually exclusive and they cannot be in competition. Both must require courses at the level of rigor that will qualify graduates for four-year colleges, two-year college academic or technical programs, apprenticeship programs, or jobs with career ladders leading to high-wage jobs. High-level career and technical education programs can open doors for many students. We, as a state, must commit to giving all students the choice of college or technical training and not track them into paths that limit their options.

CTE should no longer be considered breezy education for students without clear goals, but rather rich, fertile ground for cultivating further education and careers. Today, a good employee must not only report for work on time, but must also know how to use highly technical diagnostic machinery, read complex technical manuals, or understand sophisticated operating systems.

It is crucial that CTE be wholly integrated into the curriculum of all comprehensive and alternative high schools in California, and not solely be considered one aspect of alternative education for students with limited success in school. Curriculum and courses must be redesigned to ensure rigor and alignment with state academic content standards and be consistent throughout the state to be successful. The high school experience for many students, however, often does not prepare them for future learning or future employment. Many students find school boring and not relevant to their own lives and interests. This must change.

To get there, several state policy initiatives would be helpful:

- I. Strengthen Standards and Academic Rigor: Develop curricula with sequenced courses and model programs that support the integration of CTE and college preparation.
- II. Engage and Support Students: Provide courses, programs, and structures that motivate and support students and prepare graduates to enter college, the workforce, and prompt students to think about their futures.
- III. Revamp Teacher Preparation and Professional Development
- IV. Augment the State Accountability System to Provide Longitudinal Post-Secondary Student Information
- V. Establish Strong Regional Partnerships with Business and Industry

- I. Strengthen Standards and Academic Rigor: Develop curricula with sequenced courses and model programs that support the integration of CTE and college preparation.**

- A. Ensure the alignment of CTE standards and the regular academic standards.
- B. Ensure that all new CTE courses that purport to also be academic courses meet the level of rigor required for college admission.
- C. Create a statewide mechanism to ensure rapid, consistent approvals of high school courses for A-G credit so that those agencies providing education to high-school age students in California (local school districts and county offices of education) can provide approved courses that are both interesting to students and meet A-G standards.
- D. Commission the development of model or anchor courses and course sequences to serve as exemplars to assist county and district teachers and curriculum staffs in designing CTE sequences and combined CTE/academic sequences.

All coursework at all levels must be rigorous. The high school diploma must have value and not be awarded to students who have simply served their time. In fact, the first recommendation made by the California P-16 Council (2004) promotes the need for high expectations in the classroom: “California’s educational system must be based upon high expectations for every student, with accountability for learning embedded into each grade level.”

Project Lead the Way, in its report *A Pre-engineering Curriculum That Works/A New Design for High School Career Technical Students*, proposes that career/technical programs should adopt high standards and integrate their courses with rigorous academic studies. Also, the Southern Regional Education Board recommends, in *Getting Students Ready for College and Careers* (2006), that schools develop a strong core curriculum that includes the following for all students: four years of English; four years of mathematics: Algebra I, Algebra II and Geometry, plus one course beyond Algebra II such as Statistics and Data Analysis, or one designed to prepare seniors for college mathematics; three years of science; and three years of social studies.

Schools are reporting that students are registering higher grade point averages while taking what are termed more “advanced” courses than their predecessors. However, the National Assessment of Educational Progress (NAEP) recently reported that only 35 percent of 2005 seniors scored high enough to be considered proficient in reading and just 23 percent tested at the proficient level in math.

“Just slapping new names on courses with weak curriculum and ill-prepared teachers won’t boost achievement,” said Kati Haycock of the Washington-based Education Trust (Atlanta Journal-Constitution, 2/28/07).

II. Engage and Support Students: Provide courses, programs, and structures that motivate and support students and prepare graduates to enter college, the workforce, and prompt students to think about their futures.

- A. Provide courses and programs that motivate students. A report of the National Academy of Sciences (2004) states the conditions that enhance a student’s motivation:

1. Students are more likely to be motivated in programs that allow for close adult-student relationships.
 2. Students' engagement increases in environments where they have some autonomy in selecting tasks and methods, and in which they can construct meaning, engage in sense making on their own, and play an active role in learning.
 3. Motivation and engagement are enhanced in well-structured educational environments with clear purposes.
 4. Motivation and engagement are enhanced when students have multiple paths to competence.
- B. Provide high school students experience in practical, meaningful applications of reading, writing and mathematics, as a result improving the quality of their education, motivating potential dropouts and giving all students leadership opportunities in their fields and their communities.
- C. Provide multiple pathways for students that create strong connections between the classroom curriculum and the world beyond as suggested by University of California, Berkeley researcher W. Norton Grubb, who in *What Educational Resources Do Students Need to Meet California's Educational Content Standards* wrote, "The real advantages of multiple pathways is that many themes used to structure pathways lead 'naturally' to out-of-school work placements or real world experiences—'natural' in the sense of having some logical or authentic connection to the school curriculum."
- D. Provide various organizational structures for CTE:
1. Comprehensive high school settings, which serve the needs of all students.
 2. Schools that provide a direct focus on careers, such as Arthur A. Benjamin Health Professions High School in the Sacramento City Unified School District, which offers a rigorous career and college preparatory education using healthcare as a theme.
 3. Academies that focus on specific careers, such as the arts, manufacturing, or biotechnology.
 4. Alternative schools, which serve students who have not experienced success in traditional schools.
 5. Regional Occupational Programs (ROP), which provide career education, career development and workforce preparation, which are often within all of the above.
- E. Increase access to student support systems, such as the Advancement Via Individual Determination (AVID) program. The AVID program provides students with sets of skills and patterns of behavior that are needed to succeed in both worlds: how to plan for and attain goals; how to maintain a focus on important goals and tasks; how to keep track of and complete assignments and tasks; how to engage in reflective inquiry that can deepen their thinking; and how to work as a team to support one another. Moreover, AVID teachers work to ensure that their students are successful.

III. Revamp Teacher Preparation and Professional Development

California has made strides in the preparation, support and professional development of its teachers. The majority of this work has been done at the elementary level. Now, in order to continue this good work:

- A. Funding must be made available to develop programs that reinforce and enhance secondary teacher preparation and professional development, and support the integration of CTE and college preparation courses.
- B. Secondary teaching credentials must immediately be redesigned to ensure that all individuals teaching academic subjects – whether through CTE or regular academic courses – have the requisite content knowledge and pedagogical training.
- C. Through a provision of targeted incentive grants, a variety of entities, including universities, county offices, school districts, charter schools, and other private providers, must immediately be commissioned to develop pilot preparation programs that will produce teachers competent to deliver coursework in CTE or academic settings. This new credentialing program cannot be just a few new added requirements but instead must be built from the ground up. Key to these programs will be the ability to deliver content in a manner that interests and engages students.
- D. In order to support new secondary teachers, the Beginning Teacher Support and Assistance (BTSA) program must be modified to continue to build on the new teacher preparation programs. The transition from pre-service preparation to the first two years of teaching must be well-articulated and not redundant.
- E. And lastly, it is vital to the success of this new blended program that California and district/county staffs develop and implement new curriculum and teaching methods. This professional development must be sustained and similar in the approach and structure to the very successful AB466/SB472 training in Reading/Language Arts and Mathematics. Professional development for teachers should also include some summer internships so that teachers have a better sense of the business world.

IV. Develop and Augment the State Accountability System to Provide Longitudinal Post-Secondary Student Information

To work with California's schools and business community and to implement this new integrated program, it is essential to have a better sense of the schools and the training in which our students enroll after high school. There is limited information in this area.

- A. This expanded accountability system should capture whether, upon leaving high school, students are:
 - 1. Working in apprenticeship programs or jobs with career ladders
 - 2. Enlisted in the military

3. Enrolled in two-year colleges
4. Enrolled in two-year colleges' (private or public) technical preparation programs or transfer programs to four-year institutions
5. Enrolled in four-year colleges with remediation
6. Enrolled in four-year colleges without need for remediation
7. Other

By gathering this information we can assist in the evaluation of the new student programs in our high schools.

V. Establish Strong Regional Partnerships with Business and Industry

Convene strong, high-level regional business and education partnerships that will guarantee that high school course and course sequences are at a sufficient level of rigor and that new and remodeled CTE facilities augment these programs.

It is vital that the business and education communities work in concert to develop an education system that can turn out a workforce that is properly trained and educated to meet the occupational demand. State and local policies must be flexible enough to encourage business partnerships and allow for these partnerships to grow.

An example of an excellent education/business partnership is Linking Education and Economic Development (LEED) in Sacramento. LEED's board is comprised of regional higher education chancellors and presidents, CEO's of major businesses, and superintendents of major K-12 districts and counties. The Board and its staff work to coordinate all business/education initiatives in the region.

The Opportunity Before Us

The renewed focus on CTE presents a great opportunity and a big risk. The risk is that it could come to resemble the old "vocational education," a lower track for students from whom nobody expects much. The opportunity is that it could lead to robust "multiple pathways" as suggested by the report entitled *Multiple Perspectives on Multiple Pathways: Preparing California's Youth for College, Career and Work Responsibility*. CTE courses must meet a similar test of rigor as academic courses and both academic courses and CTE courses should incorporate engaging project-based learning opportunities. This is difficult to do well, but powerful if it is.