

**Career and Technical Education:
The solution for preparing today's youth for college and career**

Karla Saeger

University of Wisconsin-Whitewater

saegerk@uww.edu

Introduction

For some time, college and career pathways have operated as separate units; one pathway for students going to college and another for students entering the workforce, with both pathways focusing on the end-goal of high school graduation. However, in June 2010, the release of the Common Core Standards began a movement to prepare all students to be college- and career-ready. Nevertheless, according to an analysis of transcripts from the High School Longitudinal Study published by the Education Trust, only 8 percent of high school graduates completed a full college- and career-prep curriculum and nearly 50 percent of high school graduates did not complete either a college- or career-preparation curriculum (Bromberg & Theokas, 2016). After analyzing trends in the experiences and preparation of U.S. high school graduates, Bromberg and Theokas (2016) reported that, “instead of being prepared for college and career, many of our students turn out to have been prepared for neither” (p. 1).

Combining the separate college and career pathways, may be the solution for preparing today's youth to be college- and career-ready. Consistent with this perspective, in 2017, the Association for Career and Technical Education (ACTE) emphasized the need to prepare *all* high school students to achieve their long-term goals through equal development of core academic skills, employability skills and knowledge, and technical, job specific skills. This could be accomplished by further developing Career and Technical Education (CTE) curriculum to integrate career-ready pathways with college-ready curriculum.

Background

As far back as the late 1800's debates existed over the purpose of the American high school. Lee and Ready (2009) described, “the controversies centered on basic issues of what students should learn, whether all students should learn the same thing, and who should make decisions about such matters” (p. 137). In 1893, the Commission on Ten, a national commission formed by the National Education Association, studied the American high school and suggested the following recommendations: (1) students should be permitted little curricular choice, and (2) all high schools should offer a narrow academic curriculum that does not distinguish students heading for work from those heading to college (National Education Association, 1893). Twenty-five years later the Cardinal Principles of Secondary Education took the position that, “schools should offer a broad and diffuse curriculum, one that included a wide range of academic and vocational offerings that varied not only in content but also in rigor” (Lee & Ready, 2009, p. 137). It was during the twentieth century that two distinct tracks were developed for students attending college and for students bound for work. Change occurred again during the 1960's where the shift moved towards student choice within a more flexible curriculum (Cusick, 1983). Known as

the comprehensive curriculum (Lee & Ready, 2009), this academic structure remained in place until the 1980's when the National Commission on Excellence in Education published, *A Nation at Risk* with recommendations to move back to a common academic high school curriculum (Gardner, 1983). *A Nation at Risk* emphasized academic underachievement on a global level. Since this time education curricular reform has been influenced by national and state standards, education legislation, and increases in required graduation credits and courses (Lee & Ready, 2009); although students may have some flexibility in regard to course selection, there is still a disparity of cohesiveness between career-ready and college-ready curriculum (Bromberg & Theokas, 2016).

Career and Technical Education

The ACTE (2002) states that Career and Technical Education (CTE), “as we know it today has its roots in the founding of the United States” (para. 2). Apprenticeships are credited with being one of the earliest forms of vocational education along with “a strong knowledge base and skill set for citizens” (ACTE, 2002, para. 2). Over time, vocational education changed in name and intent adapting to the prevailing social needs.

Key educational legislation that has impacted CTE can be dated back to 1862 with the passing of the Morrill Act. The Morrill Act was the first legislation to support vocational education by providing land that states could sell to fund agricultural and mechanical colleges. Subsequent legislation such as the Second Morrill Act 1890, the Hatch Act, and the Adams Act of 1906 continued to support agricultural educational initiatives.

The 20th century brought significant change to vocational education. Growth in economic and industrial development, World War I, the Great Depression, and World War II all contributed to developing vocational education especially the training of women, youth, and veterans. The Smith-Hughes Act of 1917 provided the first federal investment in vocational education funding agriculture, home economics, and trade and industrial education. Other key legislation includes; The George-Deen Act of 1936 funding teacher education and marketing; The George-Barden Amendments of 1956 funding vocational centers, nursing, and fishery; The Vocational Education Amendments of 1969 funding for student specific population and postsecondary students; 1984 vocational education was renamed Carl D. Perkins Vocational Education Act of 1984; Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1990 included accountability, secondary and postsecondary alignment, and business partnerships; and the School-to-Work Opportunities Act 1994 linked work-based and school-based learning expiring in 2001.

In the 21st century, the Carl D. Perkins Career and Technical Education Act of 2006 introduced programs of study and retired “vocational education”. The Strengthening Career and Technical Education for the 21st Century Act (2016) provided states flexibility while promoting innovation and program alignment of administrative requirements. Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) has been instrumental in moving all students toward college- and career-readiness by promoting “a greater focus on academic rigor, career-focused programs of study, articulation between secondary and postsecondary education, and greater accountability” (Brand, Valent, & Browning, 2013, p. 2). Programs of Study (POS) are organized into 16 career clusters and provide students more than 79 career pathways. Schools

that receive Perkins IV funding to support CTE programs must offer at least one program of study that:

- Incorporates secondary education and postsecondary education elements;
- Includes coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary to postsecondary education;
- May include opportunity for secondary education students to gain postsecondary education credits through dual or concurrent enrollment programs or other means; and
- Leads to an industry-recognized credential or certificate at the postsecondary level or an associate or baccalaureate degree. (Carl D. Perkins CTE improvement act of 2006, 2006)

CTE programs are uniquely positioned to advance the necessary skills and knowledge of students to be successful by developing and implementing a comprehensive college- and career-ready curriculum within CTE programs. College-prep curriculum typically consists of four credits in English; three credits in math, science, and social studies; and two credits in the same foreign language (Bromberg & Theokas, 2016, p. 2). The college-prep curriculum is not a rigid track rather it is structured on student curricular choice. Lee and Ready (2009) explain, “many high schools permit students to select among three distinct levels of eleventh-grade U.S. history: regular, honors, and Advanced Placement” (p. 138). Honor courses are considered to be more academically challenging by entailing a, “more demanding college-preparatory coursework, and they were intended for the highest-achieving or most academically accelerated students in a school” (Abbott, 2016, para. 1). Another option for high-achieving high school students are Advanced Placement programs where unlike honors courses students can earn college credit or advanced placement of introductory college level courses.

The Advanced Placement program (AP), created by the College Board in 1952, is a popular high school academic program which exposes high-achieving high school students to advanced academic content (Warne, Larsen, Anderson, & Odasso, 2015). High school students can elect to take AP courses in which they learn college-level material in their high school course which culminates with a standardized exam at the end of the course. Students who score well on the AP exam can earn college credit from the university and/or advance standing in introductory level college courses. The College Board (2013) in the *AP Report to the Nation* highlights the steady growth in the AP program over a ten-year period, nearly “doubling the number of students who have been given access to the opportunity of AP” (p. 6). However, the College Board also noted there are, “nearly 300,000 students in the class of 2013 with potential to succeed in AP graduated having never participated in a matched AP course” (p. 7); such as evident in the sciences where, black/African American, Hispanic/Latino, and American Indian/Alaska Native students who have the same AP readiness as their Asian/Asian American/Pacific Islander peers are significantly less likely to experience AP-level course work (p. 28). Traditionally, AP programs serve a select high school population with a focus on college-readiness and is working on advancing the opportunities for low-income students and students of color. Unfortunately, both honor courses and AP courses are not inclusive of providing opportunities to all students in preparing them for college-readiness.

Statistical evidence supports the need for development of pathways that focus on core academic skills, employability skills and knowledge, and technical, job specific skills of students. According to the Southern Regional Education Board (2012), 80 percent of students taking college preparatory courses and CTE courses meet college and career readiness goals, whereas only 63 percent of students meet college and career readiness goals when taking the same college preparatory courses without involvement with CTE courses. Further development of CTE program of studies with college preparatory courses can benefit students of all abilities and socio-economic status. Bromberg and Theokas (2016) stated that, “Students from disadvantaged backgrounds were 14 percentage points less likely to complete a college-prep or college- and career-prep course sequence than advantaged students” (p. 4). While the benefits to students are great, there are significant challenges that must be overcome to maximize the benefits for all students. The Independent Advisory Panel (IAP) of the National Assessment of Career and Technical Education (2014) identified three recommendations to strengthen the full potential of college- and career- readiness. First, integrate CTE with broader education reform; second, develop greater coherence between secondary and postsecondary CTE; and third, gather robust, actionable information about the implementation and outcomes of CTE. The IAP (2014) concluded,

Continued federal investment in CTE is warranted, but today’s CTE must make itself part of the repositioning of the broader landscape of K–12 and postsecondary education for the 21st century. It must embrace the new Common Core State Standards to support student academic achievement as well as students’ long-term success. CTE must reposition itself not just as a vocational alternative to college prep but as a pathway into postsecondary programs that links degrees and credentials to occupations. (p. ES-2)

Conclusion

Historically, CTE has been adapting to meet the demands of the American work force, the needs of advancing technologies and has often been the answer to meet the challenges influencing our nation’s economy. With a strong backing of federal funding, CTE is in a position to be the solution to preparing all students for college- and career-readiness through further development of comprehensive curriculum aligned with core academics, employability skills, and technical, job specific skills. In order to maximize the full potential of CTE, it must position itself in a larger scope of K-12 education reform as a cohesive pathway preparing students for both entry into the workforce and postsecondary education. CTE can provide the leadership that will prepare students to be successful in today’s globally competitive high-skills, high-demand work force.

References

- Abbott, S. (2016). The glossary of education reform. Retrieved from <http://edglossary.org/honors-course/>
- Association for Career and Technical Education (2002). Retrieved from <https://www.acteonline.org/general.aspx?id=2389#.WYJT574TXwp>.
- Association for Career and Technical Education (2017). CTE Today! Retrieved from https://www.acteonline.org/uploadedFiles/What_is_CTE/Fact_Sheets/CTE_Today_Fact_Sheet_2017.pdf.
- Brand, B., Valent, A., & Browning, A. (2013). How Career and Technical Education Can Help Students Be College and Career Ready: A Primer. College and Career Readiness and

- Success Center at American Institutes for Research. Retrieved from www.ccrscenter.org/sites/default/files/CCRS%20Primer%20Brief.pdf.
- Bromberg, M., & Theokas, C. (2016). *Meandering toward graduation: Transcript outcome of high school graduates*. Washington, DC: Education Trust.
- Carl D. Perkins CTE improvement act of 2006. (2006). The Library of Congress. Public Law 109–270. Retrieved from <https://www.congress.gov/109/plaws/publ270/PLAW-109publ270.pdf>.
- College Board (2013). The 10th Annual AP Report to the Nation. Retrieved from media.collegeboard.com/.../ap/rtn/.../10th-annual-ap-report-to-the-nation-single-page.
- Cusick, P. A. (1983). *The Egalitarian Ideal and the American High School: Studies of Three Schools*. New York: Longman.
- Gardner, D. (1983). A nation at risk: The imperative for educational reform—Report of the National Commission on Excellence in Education. Washington, DC: U.S. Government Printing Office. Retrieved from https://www.edreform.com/wp-content/uploads/2013/.../A_Nation_At_Risk_1983.pdf.
- Independent Advisory Panel of the National Assessment of Career and Technical Education (2014). Putting “career” in “college and career ready”: The report of the Independent Advisory Panel of the National Assessment of Career and Technical Education, Washington, DC. Retrieved from <https://www2.ed.gov/.../sectech/.../career-technical-education/independent-advisory-p>.
- Lee, V. E., & Ready, D.D. (2009). U.S. High School Curriculum: Three Phases of Contemporary Research and Reform. Retrieved from <https://pdfs.semanticscholar.org/959c/4a373f15aae74ef7d85c5d29444d24e68138.pdf>.
- National Education Association. (1893). Report of the Committee on Secondary School Studies. Washington: U.S. Government Printing Office. Retrieved from <https://archive.org/details/cu31924030593580>.
- Southern Regional Education Board. (2012). 2012 SREB Annual Report. Retrieved from <https://www.sreb.org/publication/2012-sreb-annual-report>.
- Warne, R. T., Larsen, R., Anderson, B., & Odasso, A. J. (2015). The Impact of Participation in the Advanced Placement Program on Students' College Admissions Test Scores. *The Journal of Educational Research*, 108(5). Retrieved from <http://www.tandfonline.com/action/showCitFormats?doi=10.1080%2F00220671.2014.917253>.