ALLIANCE FOR EXCELLENT EDUCATION

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A Framework for Advancing Career and Technical Education:

Recommendations for the Reauthorization of the Carl D. Perkins Act

The nation's economy is only as strong as the educational foundation that supports it. Economic success in the twenty-first century requires a labor force capable of demonstrating an advanced level of both knowledge and skill. To be a true engine of growth, the nation's education system must be aligned with these demands. This is why the reauthorization of the Carl D. Perkins Career and Technical Educational Improvement Act of 2006 (Perkins), the nation's largest federal investment in secondary and postsecondary career and technical education (CTE), is both critical and timely. As a result of the previous reauthorization, a greater emphasis was placed on improving the academic achievement of CTE students, program accountability, and the link between secondary and postsecondary education. The next reauthorization of Perkins must continue to build on these changes, ensuring that the opportunities provided at the secondary school level are relevant, engaging, of high quality, and aligned with the career demands that lie ahead, and that such opportunities place a targeted focus on those youth who have traditionally been least likely to have access to the educational opportunities that prepare them to be both college and career ready.

Education and the Economy

> *If the students who dropped out of the [high school] Class of 2011 had graduated, the nation's economy would likely benefit from nearly $154 billion in additional income over the course of their lifetimes.*[1]

Everyone benefits from increased high school graduation rates. The graduates themselves, on average, will earn higher wages and enjoy more comfortable and secure lifestyles. At the same time, the nation benefits from their increased purchasing power, collects higher tax receipts, and sees higher levels of worker productivity. Unless high schools are able to graduate their students at higher rates, nearly 12 million students will likely drop out over the next decade, resulting in a loss to the nation of $1.5 trillion.

In addition to calculating how many students are graduating from high school, it is equally critical to assess how well prepared students are when they graduate. Although some schools are graduating students who are ready for the rigor of college and the workplace, many of the nation's students struggle after graduation. Nearly three out of ten students fail to graduate from high school within four years, and the number of over-age, undercredited students continues to plague American secondary education.[2] Even among those who do graduate from high school, only about one in four students is deemed college ready in all four tested subjects on the ACT, and one in three students will need to take at least one remedial course at the postsecondary level.[3]

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Together these challenges have significant implications for the nation's economy. According to estimates by the Georgetown Center on Education and the Workforce (the Center), the share of jobs in the U.S. economy needing a postsecondary degree will increase to 63 percent in the next decade. This will require 22 million new employees with postsecondary degrees; at the current pace, the nation will fall at least 3 million postsecondary degrees short.[4] The Center's projections highlight an unfortunate long-term economic trend—one that places a particular focus on the nation's high school students. The economy requires a knowledge- and innovation-centered workforce. As the composition and demands of the American workforce continue to evolve, so too must the American high school. Furthermore, employers increasingly value an employee's ability to communicate effectively, collaborate productively, problem-solve, and innovate.[5] Researchers have documented strong and steady growth in the demand for these skills in the U.S. workforce since 1969, a dramatic departure from the repetitive, routine jobs that once were the staple of middle-class employment.[6]

With new and advanced skills being demanded of workers, and comparable academic requirements coming into focus for college- and career-bound students, it is clear that all high school graduates are expected to be able to do similar things. As the demands change, so must the ways in which schools prepare students to meet these demands. This requires rethinking, reimagining, and restructuring how high schools provide educational opportunities for students. Career and technical education plays a critical and integral role in this process by helping to make education relevant while also providing students with the variety of skills necessary for success in both college *and* a career.

High Schools That Prepare All Students to Be College *and* Career Ready

The traditional American high school has long represented a critical decision point at which students must choose to pursue college or a career. Yet there is growing recognition that to best serve students and society, today's high schools must offer more than education for just one option or the other. To prepare students for success in life, the twenty-first-century American high school needs to shift its focus from preparing for college *or* a career to achieving college *and* career readiness for every student.

Engaging CTE classes and opportunities to experience the workplace provide the relevance to real life that most students do not get in traditional high school settings. Moreover, integrating these classes with a college-prep core ensures that each pathway is characterized by academic rigor. The versatility of the knowledge and skills learned means that students are increasingly likely to have more varied opportunities after high school instead of a narrow subset of options that are often based on the educational track on which they were placed.

The traditional delivery method in education is still largely dominated by teachers conveying knowledge to students through textbooks and assessing student learning with classroom-administered tests. Because this style of learning is no longer aligned to the workforce demands of the twenty-first-century economy, American students often leave high school unprepared for the immediate challenges they face in college and the workplace.[7] Furthermore, students feel more engaged and connected to what they are learning when they have the opportunity to apply knowledge and skill and see the relevance of their work beyond high school.[8] The 2006 report *The Silent Epidemic: Perspectives of High School Dropouts* shows that nearly half of high school dropouts said they left high school because classes were not engaging them.[9] By involving high school students in more interesting,

inquiry-led work that has relevance to their daily life, the nation could see significant improvements in graduation rates, achievement, and other important academic outcomes.[10]

While the widespread adoption of the common core state standards in English language arts and mathematics represents an important step in ensuring that all students leave high school ready for success in college and a career, simply increasing rigor will not yield more prepared graduates.[11] All students should have the opportunity to participate in high-quality CTE programs that prepare them to be college and career ready and that integrate

- rigorous academic core classes aligned to college expectations;
- career and technical education themes in in-demand industry sectors or occupations;
- work-based learning; and
- wraparound support services.

These components must be supported across all relevant federal programs to ensure greater alignment, integration, and sustainability. Furthermore, supporting greater investments and improvement in CTE program quality is a critical step toward transforming the nation's secondary schools to meet both the nation's economic challenges and the needs of students.

The Role of Career and Technical Education in Secondary School Reform

Strengthening and integrating CTE is an opportunity to

- **Improve student achievement through opportunities for applied learning.** Research shows that many people learn better when they are taught concepts in context.[12] CTE programs utilize applied project- and portfolio-based education. Such approaches have also been shown to improve achievement for English language learners by scaffolding instruction for students who have not yet mastered English.[13]

- **Integrate academic and technical education.** When teachers collaborate to integrate content across academic and technical disciplines, it can result in strong positive student outcomes. In a rigorous, fully experimental random-assignment study, CTE teachers who worked with math colleagues to highlight the math inherent to their curricula showed student learning gains in math that exceeded those in a control group.[14]

- **Increase student engagement.** The relevance of coursework is important to student motivation and engagement. One study found that abstract academic education unconnected to a career was only satisfying to students who were certain that they would get a four-year degree to meet their career aspirations.[15] One might infer the same from numerous studies that suggest that students who take CTE courses are less likely to drop out than those students who do not.[16] For example, in California, students enrolled in CTE programs improved their GPAs more than those in a comparison group, and had similar post–high school outcomes despite being lower achieving and from lower socioeconomic backgrounds.[17] Working for a moderate number of hours during high school can also positively impact students' future educational and occupational attainment.[18]

Federal policy must address barriers to secondary school reform in the area of college and career readiness. Steps were taken in 2006 when the Perkins Act was reauthorized to include more expansive language around academic-technical integration. However, the next reauthorization of Perkins must build on these efforts and include greater alignment with the Workforce Investment Act and the Elementary and Secondary Education Act to ensure that all relevant federal policies and programs are aligned to support transitioning all of the nation's schools into places where every student truly has the opportunity to graduate from high school ready for college and a career.

The Alliance for Excellent Education's Four Principles for Perkins Reauthorization

As education leaders seek to establish ambitious visions and new approaches to school reform, federal policy needs to enable and support the work and innovation that makes this possible. The following recommendations for Perkins reauthorization will be critical as the country moves in that direction.

Principle 1: Increasing Equity in Access and Opportunity

All students should have equal opportunity to participate in high-quality CTE programs that prepare them to be college and career ready. Opportunities to participate in CTE programs should not only be available for students attending well-resourced schools, but also should not be used to track students into less-rigorous pathways that diminish their future opportunities. Federal CTE funds can help improve outcomes for students through increased rigor, access, and support. Federal CTE funds should be directed toward programs that serve students with the greatest needs, including at-risk and disconnected youth. To ensure program quality and success, outcomes for youth should be disaggregated and used to provide targeted supports such as career guidance, academic counseling, and other integrated supports that help remove the barriers standing between these youth and success in college and a career.

Principle 2: Increasing the Integration of Academics and Career and Technical Education

High-quality CTE requires that programs, program planning, curriculum, professional development, and assessment reflect both academic and career technical skill development. This includes the incorporation of skills that are necessary for college and career success. In addition to the mastery of core academic and technical content, these skills include the ability to problem-solve, think critically, work collaboratively, communicate effectively, and be self-directed. Additionally, success in the twenty-first-century economy demands that workers be able to employ technology in their practice. The provision of these skills is supported by project- and work-based learning that combines both academics and CTE, reinforcing core academic skills while making learning more relevant to students and providing increased opportunities to develop such skills. Rigorous academic content, career and technical education, *and* work-based learning can no longer operate in independent silos. Whether learning takes place in a CTE school or a more traditional secondary school CTE program, all youth must be provided with a comprehensive program of education that is aligned with the job demands of the twenty-first century.

Principle 3: Supporting Successful Transitions Between Secondary and Postsecondary Education

Just as CTE programs must bridge the connection between academics, technical education, and career preparation, so must it bridge the connection between secondary and postsecondary school education. Facilitating this transition helps support students most at risk of either dropping out or not enrolling in a postsecondary program. It requires targeted efforts such as providing ongoing access to school-based guidance counselors, career counseling, information on financial aid, secondary to postsecondary articulation agreements, and support for dual enrollment programs, including transferability of dual enrollment credits to state higher education institutions. It is not enough that students graduate from high school; they must also successfully make the transition into postsecondary education.

Principle 4: Strengthening Strategic Partnerships

In order to fully integrate academics and career and technical education while meeting the needs of postsecondary education, business and industry, and labor, collaboration between stakeholders is critical. Full integration requires extensive collaboration in order to better align program goals and accountability and ensure consistent implementation across programs. Eligible applicants should consist of at least one local education agency and at least one postsecondary institution. In addition to collaboration between secondary and postsecondary institutions, high-quality CTE programs should be encouraged to solicit the engagement and participation of other key stakeholders such as employers, community-based organizations, and qualified intermediaries with the expertise to build, connect, sustain, and measure partnerships. These partnerships can support the development of relevant program content, the leveraging of community-based resources, and program sustainability.

Conclusion

Preparing youth for the demands of the twenty-first-century economy requires an educational system that moves beyond outdated conceptions of what schools should look like. This includes the misconceptions that

- some youth are better suited for college, and others for a career;
- educational experiences can only happen at certain times, in certain places, and through the facilitation of certain individuals;
- the development of knowledge and skills are mutually exclusive; and
- secondary, postsecondary, and workforce preparation, as well as the polices, legislation, and funding that support them, should operate within silos.

The reauthorization of Perkins can address these misconceptions by ensuring that CTE programs are no longer viewed as something separate and distinct from a high-quality twenty-first-century education. Rather, by providing all students with the preparation and opportunity to succeed in college, career, and life, high-quality career and technical programs should be viewed as catalysts in driving the needed reforms in education.

This brief was prepared by members of the Alliance for Excellent Education's policy and advocacy staff.

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Endnotes

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