



Academic Pathways to
Access and Student Success

TECH PREP AND RELATED CAREER PATHWAYS¹

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The federal Carl D. Perkins vocational education legislation of 1990 and 1998 provided the legislative framework for the Tech Prep Education Act. Federal career and technical education has supported tech prep planning and implementation throughout the nation. According to federal law, tech prep funds flow to states that then award funding to local consortia to administer cooperative agreements involving multiple secondary schools and postsecondary institutions. Though their structure and function vary widely, virtually all community colleges in the U.S. demonstrate some level of involvement in tech prep, with about 65% of consortia utilizing community colleges as the lead institution to manage the grant funds and perform administrative duties related to implementation (Hershey, Silverberg, Owens, & Hulsey, 1998; Orr, 1998; Silverberg, Warner, Fong, & Goodwin, 2004).

The federal Perkins law also stipulates that certain essential elements should be implemented by consortia, including formal articulation agreements between secondary and postsecondary institutions; core curriculum extending from the 9th or 11th grade through the 14th grade or more advanced grades requiring progressively rigorous and sequential course work in math, science, communications (including English, reading and writing), and technical studies; curricular pathways leading to an associate degree or two-year certificate or apprenticeship in a technical field; in-service training for teachers and counselors; equal access for all students to the full range of tech prep programs offered by a consortium; and preparatory services (academic and career-oriented) that facilitate participation by any student who desires to do so.

In addition to tech prep, career academies, career pathway programs, and college and careers transition initiatives that coordinate secondary and postsecondary education programs provide students with the opportunity to begin a course of study at the high school level that continues to the two-year college level while also preparing for career. According to the League for Innovation in Community Colleges that administers the College and Careers Transition Initiative (CCTI) for the U.S. Office of Vocational Education, career pathways are:

[A] coherent, articulated sequence of academic and career courses available to all students, commencing in the ninth grade and leading to an associate degree, and/or an industry-recognized certificate or licensure, and/or a baccalaureate degree and beyond... A career pathway program is developed, implemented, and maintained through a partnership among secondary and postsecondary education, business, and employer organizations. Retrieved March 1, 2005 from www.league.org/league/projects/ccti/index.html.

Career pathway programs enroll students in academic and CTE courses, many of which offer college credit prior to high school graduation by awarding dual credit or deferring credit and awarding it by exam or demonstration of mastery. Numerous implementation strategies are associated with the career pathway programs associated with the CCTI initiative include:

- college-level learning and accelerated credit-earning transition programs offering dual credit;
- secondary and postsecondary institutions working collaboratively on curriculum alignment and articulation;
- placement exams administered in grade 10 or 11 to measure students' college readiness;
- opportunities for students to learn industry recognized skills and knowledge;
- opportunities for employment and business skills and training centered on career clusters at various levels of students' transitions; and
- data enhancing program decision-making, modification, and improvement

¹ Obtain additional information about tech prep and career pathways by using the APASS website, including searching by state. References appearing in this report are available upon request.

Oldest of the emerging career pathway options, tech prep is recognized in all 50 states, according to the APASS inventory and numerous other studies that have documented tech prep implementation nationally. Results of the APASS study show 37 states utilize tech prep as a vehicle to encourage enrollment of underserved students, often relating their tech prep programs to the language of the federal Perkins legislation that encourages enrollment by “special population” students. Forty-six of the states described special efforts at the state level to support local implementation of tech prep, more often referring to the state’s administration of federal dollars than state dollars earmarked specifically for tech prep. The number of high school students identified as enrolled in tech prep rose from about 173,000 in 1993 to almost 740,000 in 1995 according to Hershey, Silverberg, Owens, & Hulsey (1998). More recent estimates from the National Assessment of Vocational Education (NAVE) study placed student enrollments in 48 states and revealed about 1,260,000 students or approximately 10% of high school students were enrolled in tech prep in FY 2001 (Silverberg et al., 2004). By the early 2000s, over a decade after passage of the initial federal tech prep legislation, Silverberg et al. (2004) estimated 47% of high schools in the U.S. were implementing some aspect of a tech prep program.

After the initial five years of implementation by local consortia, the national evaluation of tech prep, sponsored by the Office of Vocational and Adult Education (OVAE), U.S. Department of Education (USDE) and conducted by Hershey et al. (1998), observed that tech prep consortia had focused a great deal of attention on the implementation of educational processes, including strengthening teacher collaboration, career guidance, and applied instruction, and that these processes had created an enhanced learning environment for students. Another benefit was that new partnerships and cooperative relationships were facilitated among secondary schools, two-year colleges, and business and industry, enhancing communications among teachers, counselors, and administrators concerning curriculum and pedagogical approaches. In this same report, Hershey et al. (1998) criticized tech prep because nationwide, and even within states, the programs lacked consistency in purpose and function at the local level. Though their evaluation design lacked a strong outcomes component, Hershey et al. found gaps in curriculum extending from the secondary to the postsecondary level, and they suggested these disparities did not bode well for successful student transition to college. The national evaluation favored highly structured, comprehensive programs of study, discouraging the notion of tech prep conceived as a broader, whole-school reform. They envisioned tech prep as a programmatic “option for *some* students in *most* schools” (p. xxii, emphasis ours) rather than an approach more widely accessible to all students as is typical of comprehensive school reforms (see Castellano, Stringfield, & Stone, 2001 for a discussion of career and technical education aligned with whole school reform). The federal tech prep evaluation recommendation by Hershey et al. for distinctive tech prep program options for some but not all students failed to address the thorny issue of tracking which has plagued secondary career and technical education (Rojewski, 2002).

The most recent NAVE study (Silverberg et al., 2004) examined tech prep and largely confirmed earlier findings of the national evaluation of tech prep by Hershey et al. (1998). Methodologically, the NAVE study was similar to the earlier national evaluation in that it mainly addressed implementation. Silverberg et al. reported continuing challenges with defining what is meant by a tech prep program and tech prep students, referencing ambiguity in the federal legislation that contributes to inconsistencies and confusion at the state and local levels. According to Silverberg et al., implementation of a comprehensive program of study called for by the earlier national evaluation had rarely occurred by the early 2000s when most data were collected for the NAVE study. Rather, local consortia emphasized selected program components such as articulation agreements, integrated curriculum, and professional development. Based on results of other studies, Silverberg et al. (2004) concluded tech prep students transition to college in about the same proportion as their non-tech prep counterparts, but a scarcity of evidence was reported on the performance of tech prep participants on college placement examinations, their participation once enrolled in college, or their employment after graduation from high school or college.



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