

# Archived Information

## I. THE TECH-PREP FOUNDATION

National concern during the past decade about the adequacy of the American educational system's ability to prepare young people for successful careers has led to several important new federal initiatives. Among these are the Tech-Prep Education Act, included in the 1990 amendments to the Carl D. Perkins Vocational Education Act, and the more recent School-to-Work Opportunities Act of 1994 (STWOA). Both initiatives were designed to improve the knowledge, skills, and employment preparation of American youths by stimulating state and local reform efforts. The two laws promote some similar practices that involve many of the same local partners; in fact, the STWOA encourages communities to build school-to-work systems by extending or enhancing existing programs, including Tech-Prep.

However, STWOA funding is intended to support initiatives that are broader than traditional Tech-Prep programs, including additional components and groups of students. This objective, anticipated to some extent by Tech-Prep practitioners, has begun shifting Tech-Prep implementation efforts in some communities toward the school-to-work model, according to informal discussions with state and local Tech-Prep coordinators. Thus, information about current Tech-Prep efforts--documented in this report--can provide early insights into the effects of the STWOA at the local level.

This report assesses the implementation status of key school-to-work features in Tech-Prep communities using data from two annual surveys of Tech-Prep consortia, conducted in fall 1993 and 1994. The remaining chapters describe the extent to which Tech-Prep consortia are developing the school-based learning, work-based learning, and connecting activities components the STWOA specified. In this chapter, we describe the Tech-Prep and school-to-work models, their common elements, and the data currently available on local implementation.

### A. THE TECH-PREP AND SCHOOL-TO-WORK MODELS

The efforts promoted by the Tech-Prep Education Act and the STWOA represent major undertakings by the agencies and institutions involved. Although the models promoted by the two acts are clearly different in expected scope and scale, there is some overlap in key components. The extent to which local Tech-Prep implementation can inform policymakers and practitioners who are interested in early school-to-work development depends largely on the similarities in the designs and practices of the two initiatives.

#### *Tech-Prep*

Tech-Prep, formulated most clearly as a program concept by Dale Parnell in the early 1980s, has been viewed primarily as a strategy for improving the skills and employment preparation of American youths who are unlikely to pursue a four-year baccalaureate degree. The Tech-Prep model emphasizes applied learning--teaching academic concepts through practical hands-on experience--and development of clearly defined academic and technical competencies. Students are offered planned career "pathways" that link their high school classes to advanced technical education in community colleges, technical colleges, or apprenticeship programs and, in some cases, to baccalaureate programs. Ideally, these pathways help students develop qualifications for well-paying jobs in fields with strong and growing labor demand.

Strong interest in the Tech-Prep concept among educators and policymakers, as well as growing concern about strengthening the skill levels of American youths, led to an emphasis on technology-oriented education in the 1990 amendments to the Carl D. Perkins Vocational Education Act of 1984. The amendments, which retitled the legislation the Carl D. Perkins Vocational and Applied Technology Education Act (Perkins Act), provided Tech-Prep program development guidelines and funding in Title III-E, labeled the Tech-Prep Education Act. All programs funded under the Perkins Act, including Tech-Prep, are administered by the U.S. Department of Education (ED), Office of Vocational and Adult Education.

Title III-E of the Perkins Act identified seven essential elements of programs eligible for federal Tech-Prep funding:

1. **Articulation agreements** between secondary and postsecondary participants in Tech-Prep consortia, to establish a basic framework that links secondary and postsecondary courses
2. **A 2+2 or 4+2 design**, which defines a common core of math, science, communications, and technology for participating students as a basis for more advanced and specialized courses during four- or six-year program sequences leading to at least an associate degree or two-year certificate
3. **A Tech-Prep curriculum** appropriate to the needs of each secondary and postsecondary institution, so that the overall program design makes full use of each school's resources but also considers the needs of its student body
4. **Joint staff development for secondary and postsecondary instructors**, to promote cooperation and a common understanding of objectives, overcome turf jealousies, and maximize the "seamlessness" of the overall curriculum content in four- or six-year program sequences
5. **Secondary and postsecondary counselor training**, to promote effective student recruitment, retention, and postprogram employment placement
6. **Measures to ensure access** for special populations, such as minorities and students at risk of dropping out of high school
7. **Preparatory services**, such as recruiting, counseling, and assessment, to help students understand the Tech-Prep option, explore the educational and career options open to them through Tech-Prep, and make decisions on program and course selection and career direction

Title III-E authorizes federal funding for Tech-Prep programs that meet the design and implementation requirements specified in the legislation. Federal funds are distributed to states, which then award grants for planning and implementation to consortia of local educational agencies that operate secondary schools and postsecondary institutions to plan and operate Tech-Prep programs. The U.S. Congress first appropriated \$63.4 million to support development of Tech-Prep programs in fiscal year (FY) 1992. It has continued to fund Tech-Prep in each subsequent year. FY 1996 funding for Title III-E is \$107.6 million.

## ***School-to-Work***

The STWOA built on a variety of strategies for improving young people's school-to-work transition, including Tech-Prep, cooperative education, and youth academies. These previous education reform efforts emphasized different aspects of the transition challenge, including the need to motivate students to complete high school or adapt to the demands and habits of work, the importance of strengthening basic academic skills by teaching these skills with a hands-on, contextual learning approach, and the urgency of helping students identify a tentative career direction. The STWOA attempts to combine these goals into a comprehensive system of school-based and work-based experiences for students that will enhance their academic foundation and career preparation.

The STWOA's primary objective is to provide initial support--seed money or venture capital--for states and localities to build school-to-work systems. Unlike previous school-to-work strategies, which often targeted particular groups of students, school-to-work systems are intended to serve all students: college-bound and non-college-bound, those with disabilities, limited English proficiency, diverse educational and cultural backgrounds, and varied career interests, and even individuals who may already have left school. The STWOA outlines overall objectives for the reforms but provides considerable latitude to states and local partnerships to tailor school-to-work systems to their own needs and constraints. STWOA specifies three key components for school-to-work implementation:

1. ***School-based learning***: classroom instruction linked to workplace experiences that provide students with the information and skills needed to identify and prepare for promising careers
2. ***Work-based learning***: work experience, structured training, and other workplace activities appropriate to students' career interests and linked to their school curricula
3. ***Connecting activities***: efforts by partnership members to help employers and schools forge and maintain links between the school-based and work-based component

Specifically, school-to-work systems are required to include the following key elements in their designs:

- ***A planned program of student training*** and work experience coordinated with school-based learning
- ***A program of study*** designed to meet state academic standards, including those established under GOALS 2000, and to meet the requirements for transition to a postsecondary education and for achievement of a skills certificate
- ***Integration*** of academic and vocational education
- Broad instruction in the classroom and workplace that, to the extent possible, exposes students to ***all aspects of an industry***
- ***Linkages*** between secondary and postsecondary education and training
- ***Career awareness***, exploration, and counseling

- Selection of a *career major* no later than at the beginning of 11th grade
- Workplace *mentoring* and instruction in general workplace competencies
- Assistance for students in *finding jobs and making the transition* to postsecondary education and training

In addition, the STWOA specifies that partnerships funded under the act must include employers, secondary and postsecondary educational agencies or institutions, labor organizations, and students.

The STWOA provided for joint administration of the new federal initiative by ED and the U.S. Department of Labor (DOL). To coordinate administration more effectively, ED and DOL established the national School-to-Work Office, staffed by personnel from both agencies. Under the act, states are encouraged to apply to the national School-to-Work Office for development and implementation grants to assist them in planning and establishing statewide school-to-work systems. The STWOA also provides funding for implementation grants made directly to local partnerships that have made progress in developing school-to-work systems within their communities. In summer 1994, implementation grants were awarded to eight states and 36 local partnerships. An additional 19 states and 44 partnerships were awarded implementation grants in late 1995 and early 1996.

### ***Common Elements of Tech-Prep and School-to-Work***

The Tech-Prep and School-to-Work initiatives include some similar features, both as designed in the authorizing statutes and as implemented by local practitioners (Table I.1). Most clearly, both models emphasize integrating academic and vocational education and linking secondary and postsecondary educational experiences. The types of institutions, agencies, and organizations included in Tech-Prep consortia will, according to the STWOA, also be required members of school-to-work partnerships. Both initiatives emphasize the importance of career counseling to assist students in making educational and career decisions and of defining programs of study to help students meet career objectives. Both also stress the role of staff development and training to help personnel adapt to new roles and responsibilities.

There are some significant differences in the models promoted by the Tech-Prep Education Act and the STWOA, however. Unlike School-to-Work, Tech-Prep was not designed to include a work-based learning component. Employers are intended to play a more significant role and be more active in school-to-work partnerships than was expected for Tech-Prep consortia. Moreover, at least as originally conceived, Tech-Prep is a program serving particular groups of students--the "neglected majority," while the STWOA encourages a system of school-based and work-based activities that engages all students to some extent.

These design distinctions have become somewhat blurred as practitioners have responded to local needs and constraints, state and federal leadership, and funding. Even before passage of the STWOA in spring 1994, some consortia were already implementing or starting to implement Tech-Prep education reforms broadly rather than as distinct program options. Some Tech-Prep programs, developed in close

TABLE I.1 SCHOOL-TO-WORK ELEMENTS INCLUDED IN TECH-PREP MODEL

cooperation with area businesses, were including workplace activities. As congressional support for the STWOA became evident, many states and communities began to modify components of their Tech-Prep initiatives in anticipation of new requirements and expected funding under the STWOA. In some states, Tech-Prep consortia are currently the organizational structure for new school-to-work partnerships and, in many others, Tech-Prep program features and personnel are the building blocks for new school-to-work systems.<sup>1</sup>

## **B. AVAILABLE DATA ON LOCAL IMPLEMENTATION**

Policymakers have grown increasingly interested in the progress of Tech-Prep and school-to-work initiatives. Some research has been conducted into the implementation approaches of practitioners in select locations. With changes in federal funding of state and local education reforms imminent, however, information on the status of implementation is needed on a national scale. Obtaining early data on school-to-work development is currently a priority for ED, DOL, and the national School-to-Work Office.

### ***Evaluation of School-to-Work Implementation Grants***

In passing both laws, the U.S. Congress required the administering federal agencies to conduct national evaluations. These agencies awarded a contract in September 1995 for a national evaluation of School-to-Work Implementation. The evaluation, which is being conducted by Mathematica Policy Research, Inc., (MPR) is examining the implementation of state and local grants funded under the STWOA.<sup>2</sup> Specifically, the evaluation is examining (1) implementation of school-based, work-based, and connecting activity components; (2) access and participation by schools, students, and employers; and (3) student experiences in education and employment. This assessment will be based on a three-year survey of all local partnerships funded by the STWOA, case studies of selected states and partnerships, and a study of student high school and postsecondary experiences in 32 randomly selected partnerships in eight states. The earliest survey data on national school-to-work implementation will be available in fall 1997.

### ***Evaluation of the Tech-Prep Education Program***

National data on Tech-Prep development are already providing useful information to ED on the implementation status of this initiative. Mathematica Policy Research, Inc., (MPR) and its subcontractor, Northwest Regional Education Laboratory, have been conducting the national Evaluation of the Tech-Prep Education Program since October 1992. This evaluation has two primary objectives. First, it is describing Tech-Prep programs funded under the Perkins Act--documenting the number of programs, their characteristics, the institutions involved, the populations they serve, and their planning and implementation activities. Second, it is identifying effective practices to provide guidance to other program consortia.

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<sup>1</sup>This information was obtained through discussions with school-to-work directors in the 27 states that have received STWOA implementation grants.

<sup>2</sup>Subcontractors for the national school-to-work evaluation are MPR Associates, Inc., and Decision Information Resources, Inc.

One component of this evaluation is an annual survey of all local Tech-Prep consortia, beginning in fall 1993 and continuing through fall 1996. Data from the fall 1993 and fall 1994 surveys have already been analyzed and two reports have been produced documenting the implementation status of Tech-Prep consortia and the progress made between 1993 and 1994.<sup>3</sup>

### ***Use of Tech-Prep Data for Preliminary Examination of School-to-Work Development***

Data on Tech-Prep implementation can be used to document some aspects of early school-to-work progress under way in local communities. Tech-Prep and school-to-work include similar elements and objectives, as described earlier. Thus, the questionnaire administered for the annual survey of local Tech-Prep consortia includes items that overlap with many school-to-work components--even some not emphasized in the Tech-Prep Education Act. Questions on business involvement in consortium activities and the availability of workplace experiences were included from the start, because prior research identified these areas as important for some Tech-Prep consortia. In late spring 1994, after the STWOA was passed, ED asked MPR to add questions to the Tech-Prep survey that would provide a more comprehensive picture of school-to-work implementation and issues in Tech-Prep communities before a national evaluation of the new initiative.

The Tech-Prep data are particularly relevant for assessing early national school-to-work progress, because they illustrate reform activity in a substantial number of communities around the country. The close to 1,000 Tech-Prep consortia operating in 1994 included more than half of all U.S. school districts and three-quarters of all U.S. secondary students. Moreover, most two-year community and technical colleges, as well as a growing number of four-year institutions, are members of Tech-Prep consortia. High response rates to the Tech-Prep surveys and the significant "coverage" of consortia provide a credible, national picture of school-to-work implementation within the Tech-Prep framework.

There are some limitations to using the Tech-Prep data to document early school-to-work development, however. The groupings of districts, postsecondary institutions, businesses, and other organizations that make up current Tech-Prep consortia may not be identical to those funded under the STWOA. Moreover, Tech-Prep consortia did not start out with a federal or state mandate to implement the full range of school-to-work components. Most are in states that had not received STWOA implementation grants before the fall 1994 survey and thus may have lacked the motivation or support to push forward with some of the new elements. Finally, the definition and description of key STWOA components have been evolving. At the time of the Tech-Prep survey, some Tech-Prep staff may have been unfamiliar with STWOA concepts or terms, such as skill certificates.

## **C. ORGANIZATION OF THIS REPORT**

This report uses data from the Tech-Prep survey to describe how Tech-Prep consortia are already following practices or developing program features envisioned in the STWOA. Each of the remaining chapters discusses one of the three fundamental components specified in the STWOA: (1) school-based learning; (2) work-based learning; (3) and connecting activities.

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<sup>3</sup>The 1993 and 1994 surveys achieved response rates of 86 and 91 percent, respectively.