

Tech Prep: Texas

A Summary of:

EXECUTIVE SUMMARY: Evaluation of Tech-Prep in Texas, January 1998

TECH-PREP IN TEXAS: Status Report/ Summary of Statewide Data on Programs and Student Characteristics, an Update of the Impact of the Tech-Prep Initiative in the Governor's 24 Planning Regions, August 1998

Overview

As noted in the previous summary, Tech-Prep was initiated in the early 1990's to encourage high school graduates to enter postsecondary education and achieve an associate's degree or two-year certificate in a technical field, such as engineering technology, applied science, trade, mechanical, industrial or practical art, agriculture, health or business. Students also have the opportunity to enter bachelor's degree programs when interested. Title III-E of the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 defined the model and provided grants for the planning and development of Tech-Prep programs to consortia formed by educational agencies and postsecondary institutions. Tech-Prep programs often provide the foundation for school-to-career programs. In 1998, Texas completed its sixth year of implementation of Tech-Prep programs. The state currently has 25 consortia and 505 state-approved associate's degree programs.

POPULATION

In Texas, secondary school enrollment in Tech-Prep programs has grown from 11,398 in School Year 1993-94 to 68,922 in 1997-98. In this same period, Tech-Prep enrollment grew from 8,529 to 64,994 postsecondary students. Tech-Prep programs are offered in 95.2 percent of the counties and 78.3 percent of school districts serving 95.5 percent of the K-12 students in the state. All the urban and most suburban school districts have Tech-Prep programs. However, the majority of the programs are located in rural (32 percent) and non-metro districts (26 percent). In 1996-97, 55 percent of the students enrolled in Tech-Prep programs were white, 31 percent Hispanic and 11 percent African American; 37 percent were classified as "at-risk," 28 percent were economically disadvantaged, and nearly eight percent were special education students.

Evidence of Effectiveness

The evaluators compared students identified by school districts as participating in Tech-Prep programs (Tech-Prep students) with two other groups of students: (1) students taking vocational education credits, who were not participating in a coherent sequence of courses approved as Tech-Prep (other vocational students); and (2) students who were not taking vocational credits (non-

vocational students). The results on the Texas Assessment of Academic Skills (TAAS) from 1995 to 1997 show that students identified as Tech-Prep in grade 10:

- ◆ increased their overall pass rates in all sections of TAAS by 16 percent while non-vocational students improved by 12.4 percent

- ◆ increased pass rates in the reading section of TAAS by 12 percent, in writing by four percent and in math by 15 percent, compared to 9.6, 1.8 and 11.8 for non-vocational students

Data collected by the statewide Public Education Information Management System (PEIMS) show that students identified as Tech-Prep students had a:

- ◆ 13 percent decrease in dropout rates (from 1.28 percent in 1994-95 to 1.11 percent in 1996-97), compared to a six percent decrease for non-vocational students (from 1.75 to 1.64 percent) and a 23 percent decrease for other vocational students (from 2.18 to 1.67 percent)
- ◆ 88 percent graduation rate since 1994-95, compared to a 82 percent rate for non-vocational and other vocational students

In a follow-up of three cohorts of high school graduates, an average 75 percent of Tech-Prep and 70 percent of non-Tech-Prep students were located.

The follow-up indicated that:

- ◆ 26 percent of Tech-Prep students are working (non-vocational 23 percent; other vocational 30 percent)
- ◆ 31 percent are working and pursuing postsecondary education (non-vocational 25 percent; other vocational 27 percent)
- ◆ 19 percent are pursuing postsecondary education and not working (non-vocational 21 percent; other vocational 16 percent)

Representatives of school districts offering Tech-Prep programs indicated that the programs have:

- ◆ been of direct benefit to students (84 percent of respondents)
- ◆ increased interest in career and technology education programs in their districts (78 percent)

Key Components

The key components of a Tech-Prep educational program in Texas are:

- ◆ formal articulation agreements between secondary and postsecondary schools
- ◆ two or four years of secondary school plus two years of higher education or an apprenticeship program of at least two years (with a common core of required proficiency in mathematics, science, communications and technologies) leading to an associate's degree or certificate in a specific career field
- ◆ development of Tech-Prep education program curricula appropriate to the needs of consortium participants
- ◆ in-service training for teachers to effectively implement the curriculum

- ◆ training for counselors to improve student recruitment, graduation from the program and job placement
- ◆ equal access to the full range of Tech-Prep programs to members of special populations
- ◆ preparatory services to assist all program participants
- ◆ integrated occupational and academic learning

Although programs vary widely to fit local needs, most Tech-Prep programs offer:

- ◆ "seamless" extension of courses from high school to postsecondary education or training, usually at a community college
- ◆ integrated hands-on training with academics

- ◆ emphasis on technology through venues such as technology laboratories
 - ◆ work-based experience, offered either through collaboration with local employers or through simulated worksite experiences at a school approved to offer Tech-Prep
 - ◆ focus on individualized career guidance and exploration
 - ◆ partnerships with school-to-work programs or adoption of school-to-work components
 - ◆ job placement and assistance with transfer to four-year universities
 - ◆ supports for minority students, those with limited English proficiency, from low-income families, re-entering school, or coming from special education programs
- Currently, 49 of the 50 community colleges and community college districts, all three campuses of the Texas State Technical College and all three public, lower division postsecondary institutions in Texas are involved in Tech-Prep initiatives and have approved Tech-Prep Associate of Applied Science degree programs.
- The most numerous programs are in business management and administrative services (23.2 percent of postsecondary and 39.3 percent of secondary program options), health professions and related science (16.6 and 8.9 percent respectively), engineering-related technologies (12.9 and 8.9 percent) and precision production trades (10.7 and 6.8 percent). Computer and information science is popular at the secondary level (13.3 percent), but less in the postsecondary institutions (5.9 percent).

Contributing Factors

Partnership Development

The implementation of Tech-Prep in Texas has contributed to increased involvement of business, industry, labor and the community at large in education. In 1997, 47 percent of Tech-Prep governing boards were composed of business, industry and labor representatives, 37 percent were education representatives, and 16 percent were community members. Partnerships between secondary and postsecondary education have improved course articulation, integration of program content and professional development.

Clear Educational Goals

Survey participants considered that Tech-Prep better prepares students for work and postsecondary education and provides greater focus and clearer goals for students. Participants also agreed that Tech-Prep programs have increased the awareness of career and technology education and improved its image throughout the state, even in districts that do not have Tech-Prep programs.

Postsecondary Connections

Tech-Prep programs go beyond high school years to include two years of postsecondary education. The curricula contain a common core of academic and technology education. Students are encouraged to complete the required credits for the more rigorous graduation plan (Recommended High School Program) or the advanced plan (Distinguished Advancement Plan). Upon completion of the associate's degree, they can also transfer to a four-year institution to earn a bachelor's degree.

Supporting Activities

Teachers, both in academic and technical courses, and counselors at the secondary and postsecondary levels are involved in training activities provided by each Tech-Prep consortium. These activities focus on professional development as well as student recruitment, achievement and job placement.

STUDY METHODOLOGY

A statewide survey was conducted with representatives of 600 of the 691 independent school districts in Texas approved to offer Tech-Prep programs (89.4 percent return rate), and 168 of the 282 school districts not approved to offer the programs (60 percent return rate). The survey covered all the essential elements of a Tech-Prep program. In addition, researchers used the Public Education Information Management System (PEIMS) database to evaluate student outcomes, using the School Year 1994-95 as baseline. The report also incorporates results of previous evaluation studies and input from Tech-Prep consortium personnel, representatives of agencies developing the programs and state agency staff.

EVALUATION FUNDING

Both evaluations by the Region V Education Service Center (Beaumont, TX), Carrie H. Brown, Project Director. The Texas Higher Education Coordinating Board with funds provided by the Carl D. Perkins Vocational and Applied Technology Education Act of 1990.

GEOGRAPHIC AREAS

Tech-Prep programs are offered in more than 6,000 school districts nationwide. This study reflects the implementation of Tech-Prep in Texas.

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