P-TECH
(Pathways in Early College High Schools)

COLORADO SUCCEEDS
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Overview

In 2015, Colorado was ranked nationally with the 3rd highest percentage of jobs requiring postsecondary education or training for employment. That same year, the Colorado legislature passed HB15-1270 "Pathways in Technology Early College High Schools" (P-TECH) which brought an innovative new school model that connects K–12, postsecondary, and industry partners through a formal education structure.

P-TECH programs create public-private partnerships among high schools, community colleges, and employers to prepare students for high-skill jobs of the future. P-TECH models are different than other early college frameworks because they extend the typical four-year high school model to a five or six-year timeframe where students earn both their diploma, an industry-recognized associate degree, and, depending on the P-TECH pathway, industry credentials.

P-TECH programs are largely funded by a school's per-pupil revenue (PPR) during grades 9–12, and subsequently funded by state-based PPR during the 5th and 6th years of their P-TECH program. Students enrolled in their 5th or 6th year of high school through a P-TECH program are eligible for full-time funding if they are scheduled for a minimum of one class. P-TECH students are also eligible for the College Opportunity Fund (COF) starting in the 9th grade.

THE STATE HAS APPROVED **20 P-TECH PROGRAMS** SINCE THE PROGRAM'S INCEPTION

Source

Since the P-TECH school is expected to partner with local high-growth employers, the programs are tasked with providing student support services, apprenticeships, mentoring, job shadowing, and other learning experiences that will equip students for future success.

Learnings & Best Practices

- Investing in strategic partnerships among K–12, community colleges, and industry partners to ensure students have the support required to graduate high school being both college and career ready.
- Providing a college education and associated costs, such as tuition, books, and other fees, at no cost to students and families.
- Building a career pathway system that aligns public partners and engages them in a continuous movement that ensures students move seamlessly through various career-connected learning experiences and training opportunities to build skills and credentials that meet industry demand.

Student Experience

Fremont RE-1 School District
Fremont RE-1 School District, home to Cañon City High School, adopted a career pathways model in 2016. This model emphasizes career exploration and encourages students to pursue coursework and career-connected learning opportunities aligned with their skills, interests, and future aspirations. Shortly after adopting the career pathways model, Cañon City became the first rural P-TECH school in the nation.

ACCORDING TO THE 2021 COLORADO TALENT PIPELINE REPORT, **56.4% OF THE STATE'S TOP JOBS** REQUIRE A CREDENTIAL PAST HIGH SCHOOL

Source

Students can now pursue four P-TECH pathways: automotive technology, fire science, medical, and computer information systems. Many P-TECH pathways also offer industry credentials relevant to their chosen field so students graduate prepared to enter the workforce.

Nora (name has been changed) is a high school junior enrolled in the computer information systems (CIS) P-TECH pathway. She plans to graduate in two years, earning her high school diploma and associate's degree in five years. Nora is the first person in her family to attend college and P-TECH has given her the opportunity to earn her degree at no cost to her or her family. Most P-TECH students at Cañon City are first-generation college students, and find much more meaning, relevance, and engagement in their P-TECH classes than their general education requirements.

Through the Fremont Multi-District Initiative, Cañon City has also expanded P-TECH beyond their district, opening P-TECH pathway opportunities to students in the neighboring districts of Fremont RE-2 and Cotopaxi RE-3. Fremont and Cotopaxi are recognized P-TECH programs independent of Cañon City, but due to the region's collaborative relationships, students can enroll in a P-TECH pathway at another school. This agreement allows Cotopaxi students to take fire science at Cañon City for example, or a student from Cañon City to pursue agriculture classes at Fremont.

Greeley-Evans School District 6
Students in Greeley-Evans School District 6 can choose between two P-TECH pathways: advanced manufacturing or construction. Each located at a different high school in the district, this school-specific model, rather than a district-wide approach, allowed Greeley to build on existing strengths and program offerings at each of three P-TECH sites.

APPROXIMATELY 58% OF 2021 P-TECH GRADUATES ARE EITHER EMPLOYED WITH A P-TECH INDUSTRY EMPLOYER/ PARTNER OR ARE PURSUING CONTINUED EDUCATION IN THEIR P-TECH FIELD OF STUDY

Source

The opportunity to continue education toward an associate's degree at no cost to students and families is a newer option in Greeley. Starting in the pandemic with support from Aims Community College (Greeley's higher education partner) 134 students have enrolled in P-TECH pathways giving students the opportunity to continue education toward an associate's degree at no cost to students and families. Among the many districts that offer P-TECH programs, Greeley-Evans is an exemplary Colorado model. Beyond providing students with programs that prepare them for in-demand jobs in the region, all Greeley-Evans students can access free public transportation by showing their school ID. This public transportation option alleviates one of the largest barriers to participation for students with limited transportation options. This, combined with Colorado's open-enrollment framework, allows students the freedom to choose a P-TECH program most suited to their interests.

National Context

P-TECH programs have been influential in blurring the lines between K-12, postsecondary education, and workforce readiness across the country. Anticipating more than 16 million middle-skill jobs by 2024 and only 43% of the nation's workers trained to do them, Connecticut has invested in strategic public-private partnerships between school districts, institutions of higher education, and industry employers through various P-TECH programs.

Rhode Island emphasizes the differentiation of P-TECH programs in segmented regions of the state. They've outlined the need for more computer science programs in Providence, cybersecurity programs in Newport, health science and administration in Westerly, and advanced manufacturing in Woonsocket, making their P-TECH programs one of the most thriving models nationwide.

Policy Recommendations

- **Develop stronger data collection to understand student participation.** Currently, the state has limited demographic data on students participating in P-TECH schools and districts. The state already collects the number of students who are first generation students and whether the students are employed in their field of study or pursuing continued P-TECH education. The state would benefit from additional information about participants in the P-TECH annual report, including demographics, whether the student is low-income, and whether the student completes a postsecondary credential.
- **Equity-centered approach to expanding P-TECH access for students.** Updating the P-TECH statute to explicitly name equity priorities could increase participation among underrepresented populations. Statewide priorities could be established, or state policy could require each local system with programs providing postsecondary credit in high school to create strategies that identify groups they intend to prioritize, and how they will work to engage their disproportionate participation.

IN THE 2020–21 SCHOOL YEAR, **922 STUDENTS** PARTICIPATED IN P-TECH PROGRAMS ACROSS THE STATE, **49% OF WHICH ARE FIRST-GENERATION COLLEGE STUDENTS**

Source

- **Increase funding for P-TECH to make it more accessible for school districts trying to establish programs.** Currently, almost all P-TECH funding goes to covering tuition with little funding left for general program management. School districts often must cover the cost of books and other fees for the students, as well as program management and staff costs associated with establishing and running a P-TECH program. This funding gap is a particular barrier for smaller, rural schools that do not often have the staff flexibility to manage P-TECH, whereas larger, urban districts do have more staff capacity to support P-TECH. The funding formula could be adjusted in years 3 and 4 to provide additional funding in a fixed, proportional way.

  Another option would be the legislature setting aside a pool of funds that P-TECH schools apply for, using the actual amount needed per additional course taken. Another option would be modifying state higher education aid funding rules to make students in P-TECH schools eligible for state financial aid while they are still in grades 9–12, using Free & Reduced Lunch qualification to determine eligibility.
- **Allow intermediaries to play the role of bringing in new business partners.** This could include workforce centers, local chambers of commerce, local economic development councils, or non-profits operating specific programs as the designed employer partner for P-TECHs. The statute does not prohibit the use of intermediaries but also doesn't invite them.