



Career & Technical Education

How can states evolve their programs to be high-quality and industry-aligned?

September 2018

Career and Technical Education



Fast Facts



CTE serves as the primary framework and source of funding for high school career pathways across the nation. Even recent innovative local initiatives and school models depend on this framework and its associated investments for long-term program stability and success.



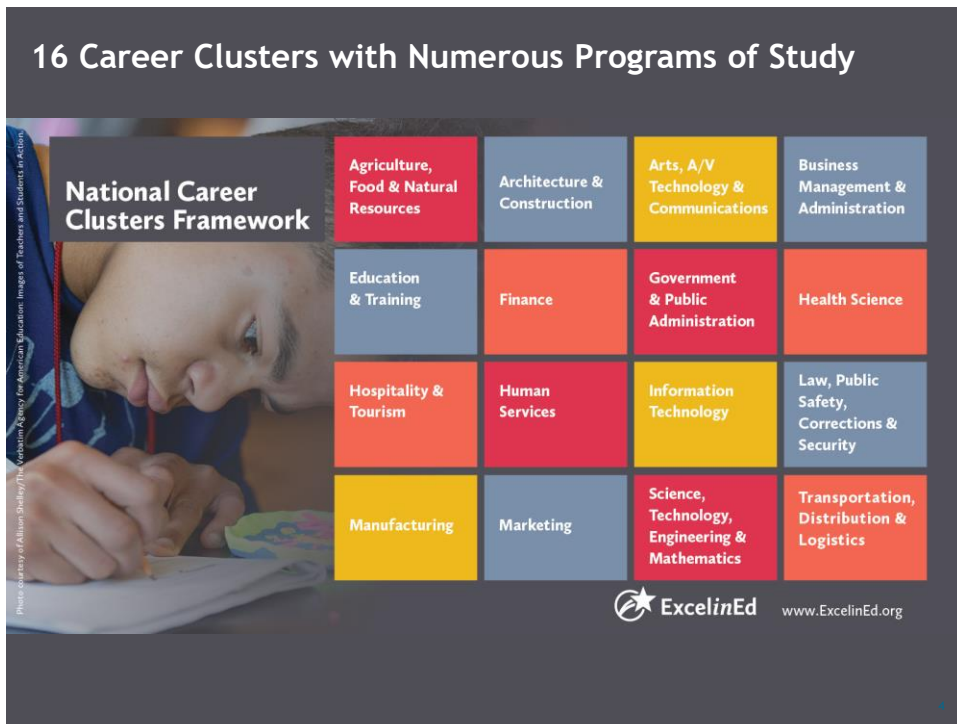
In addition to the annual federal investment (over \$1 billion for secondary students via Perkins) in CTE, 47 states provide dedicated funding to support CTE programs and instruction. AR provides just over \$20 million for CTE funding and over \$2 million in start-up grants; federal funding adds a little over \$12 million (FY 2018).



During the 2016-17 school year, 98 percent of public school districts offered CTE programs to students at the high school level. Over 8 million high school students were enrolled in CTE programs in states across the nation (over half of all students attending high school).



Nationally, graduation rates for CTE “concentrators” are about 93 percent - 10 percent higher than the national average. In 2017, the graduation rate for AR CTE students was 99 percent, compared to 87 percent statewide.



State CTE Programs Must Evolve



Addressing Issues of Alignment & Quality

1. Alignment to State and Regional Workforce Demand

CTE programs can no longer continue to offer a “buffet” of options or only what current district and school staff can support (or have always offered). This includes phasing out CTE pathways that lead to low-skill and low-paying employment opportunities - and filling gaps in pathways aligned with workforce demand and middle- and higher wage careers.

2. High Quality, Rigorous Academic and Technical Skills Preparation

Preparing students for a career means providing them with the skills, knowledge, and experiences that will ensure success in postsecondary and advanced career training programs. This requires a comprehensive evaluation of the outcomes of existing courses and vertical linkages to credentials and employment.

High-Quality CTE Programs:

Non-Negotiables for State Policymakers

- 1 All promoted programs of study align with state and/or regional industry and labor market data.
- 2 Programs of study incorporate experiential learning and capstone experiences valued by industry.
- 3 Secondary programs of study vertically align with postsecondary programs.
- 4 Courses are sequential and progressive in a given program of study.
- 5 Secondary programs of study incorporate courses and exams eligible for postsecondary credit or hours where appropriate.
- 6 Course standards are robust and accurately represent the academic, technical and employability skills learners must master.
- 7 Educators receive ongoing, progressive training and professional development to ensure their instruction is reflective of course standards and current industry work environments.
- 8 Federal, state and local funding are utilized to leverage and drive programmatic changes leading to the implementation of vertically aligned education-to-career learning pathways.

No Dead Ends



Photo courtesy of Alison Staley/The American Agency for American Education. Images of Teachers and Students in Action.

To ensure that there are no dead ends for students, states must look at the entirety of their career and technical education programs when advocating for high-quality, aligned programs.



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Rethinking State CTE Programs



Three Steps to Consider

- 1 **Conduct a CTE Program Audit**
Convene partners across K-12, postsecondary and workforce/industry to prioritize state needs. Analyze existing program offerings and outcomes to evaluate whether they reflect state economic goals.
- 2 **Make Necessary Changes in Program Offerings**
Eliminate “dead ends,” update existing pathways to reflect industry standards, and develop new programs of study that will foster economic mobility and prosperity.
- 3 **Incentivize Outcomes**
Provide financial incentives for success, such as student attainment of high-quality industry certifications.

Sample Program Quality Indicators & Questions

Program Quality Indicator (PQI)	Audit Questions	Validating Data	Data Source
“College and Career Ready” Programs of Study	1. Are the courses in each state-promoted CTE program of study sequenced correctly to progress student learning accordingly?	1. Student course enrollment and course pass rates	1. State K-12 student information system
	2. Are the course standards in the state-promoted CTE courses content- and skills-appropriate for their program of study’s field of occupation?	1. Participating employer 2. National industry standards	1. Administered survey 2. National associations 3. State industry councils
	3. How do state-promoted CTE programs of study provide student access to early postsecondary courses or exams? Is access to these opportunities equitable? How is this reflected in student credit attainment for those students concentrating in a program of study?	1. Student course enrollment and course pass rates	1. State K-12 student information system 2. State longitudinal data system
	4. How do state-promoted CTE programs of study provide student access to industry-valued certifications? How is this reflected in student certification attainment for those students concentrating in a program of study? Are these opportunities available to all students?	1. Number of exam-qualified students 2. Student exam participation rate 3. Student exam pass rate	1. State K-12 student information system 2. State longitudinal data system 3. Vendor data
	5. Are the courses in each state-promoted CTE program of study being offered/taught to students sequentially by local school districts? Are some schools and districts more or less likely to offer these courses?	1. Student course enrollment	1. State K-12 student information system

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State Spotlight



Tennessee

- In 2013, Tennessee launched a multi-phase initiative to improve the rigor of its CTE programs of study and align them with state workforce needs.
- TN evaluated the **academic and workforce** outcomes of its CTE offerings, retiring over 130 obsolete or low-value courses and adding 73 new courses based on industry need.
- TN created regional hubs industry, K-12, and postsecondary partners to ensure curriculum and program offerings lead to middle- and higher-wage job opportunities.
- Existing CTE programs of study are reviewed annually and must be justified based on student outcomes and business/industry needs.
- Only approved CTE programs of study are funded by the state, including a list of about 60 “state-promoted” industry-recognized credentials.

Industry-recognized Credentials

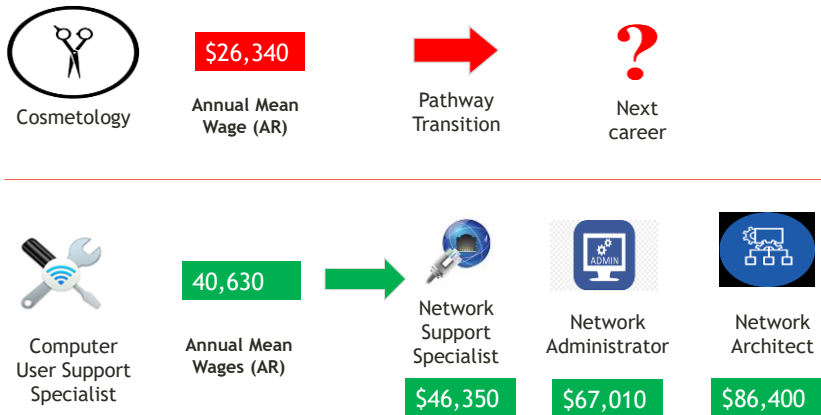
Key Attributes

- **Labor Market Demand**— Pathway credentials should be informed by labor market demand data.
- **Pathway to Upward Mobility**—Pathway credentials should be linked to positions and fields that provide higher, living wages.
- **Portable:** Nationally or internationally recognized by business and industry offer students the broadest opportunities.
- **3rd Party Verification:** Knowledge and skills must be demonstrated, whether through assessments, projects, or activities.
- **Postsecondary Connection:** Pathways should offer students an opportunity to “stack” their associate/secondary level credentials with postsecondary credentials. Articulation agreements should allow secondary students to earn college credit by earning qualifying credentials.

Not all industry-recognized credentials are created equally.

Arkansas Career & Technical Education Pathways

Not all pathways and credentials lead to middle- and higher-wage careers with opportunities for continued advancement



Source: Bureau of Labor Statistics, May 2017 State Occupational Employment and Wage Estimates, Arkansas https://www.bls.gov/oes/current/oes_ar.htm#35-0000

Incentivize Access to Real-World Job Skills



Industry Credential Attainment

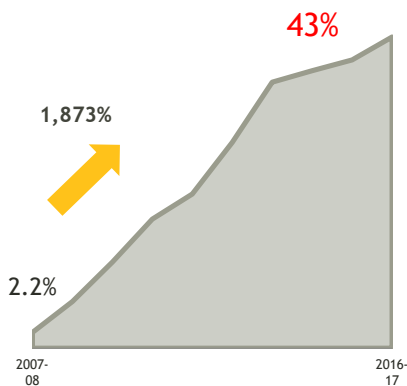
- **Alignment:** Creating greater nexus between education offerings and workforce demand.
- **Financial Incentive:** to schools for each student earning a national industry certification aligned to workforce demand.
- **Teacher Bonus:** to classroom teacher
- **Accountability:** School grades are tied to students earning industry credentials
- **Articulation:** Linkages established between credentials and college credit.
- **Partnerships:** Between schools and employers to offer work-based learning opportunities.

State Spotlight

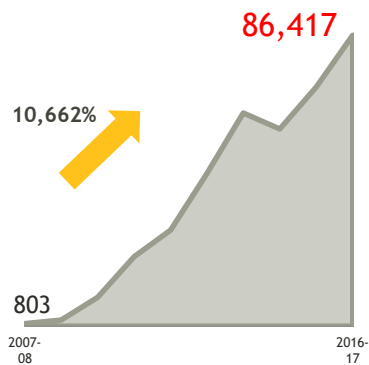


Florida Industry Certification Incentive

Percentage of Florida high school students enrolled in courses that lead to a qualifying industry certification



Number of students earning qualifying industry certifications in Florida



Florida Department of Education, Career and Professional Education Act Enrollment and Performance Report, 2016-17

Industry Certifications Can Help Make College More Affordable



Florida Department of Education

INDUSTRY CERTIFICATION = **EARNED COLLEGE CREDIT**

SAVING FLORIDA FAMILIES ROUGHLY **\$11,000,000** IN TUITION COSTS



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Thank You!

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