Talent Pipeline Management® (TPM)

TPM RESOURCE GUIDE:
A Compendium for High-Quality CTE

U.S. CHAMBER OF COMMERCE FOUNDATION

Resource 2:
Table of Contents

Resource 2: Employer Orientation to the CTE Community

This resource provides an orientation of the career and technical education (CTE) community for employers. It is part of a set of resources that, when combined with the Introduction, make up the *TPM Resource Guide: A Compendium for High-Quality CTE*. Building successful partnerships requires employers and the CTE community to develop a mutual understanding of each other's worlds and the roles that different professionals and organizations play in making partnerships work. This resource is intended for the employer community as an orientation to better understand the CTE community, the professional roles therein, and the policy landscape that undergirds CTE in the United States.

Orienting Employers to CTE Systems and Professionals

Employers seeking to establish CTE partnerships should start by understanding CTE programs and how they are funded and administered at the state and local levels, as well as where and how to engage effectively with CTE professionals at each level.

CTE prepares secondary and postsecondary learners for careers.

CTE refers to programs of study offered mainly by secondary schools, regional technical centers, and community and technical colleges. These programs of study provide students with the academic, employability, and technical skills and credentials needed to prepare for further education and careers. They include course sequences as well as related **work-based learning** and career exploration opportunities. Credentials include education certificates and degrees, industry and professional certifications, and other types of **industry-recognized credentials**.

Historically, CTE programs have focused on in-demand jobs that require more education and training than a high school diploma, but less than a four-year degree. However, these programs are increasingly designed to provide learners with pathways to four-year college programs, more advanced industry-recognized credentials, and beyond.

States and their school and postsecondary partners offer students program options organized under broader career clusters or pathways, such as those found in the National Career Clusters® Framework (e.g., manufacturing, finance, information technology).[1] These program options are usually listed on school and college websites along with other program and course offerings.

CTE programs are mostly classified and categorized by government-defined coding systems including the **Classification of Instructional Programs (CIP)** which supports the accurate tracking and reporting of program enrollments and completions at the national, state, and local levels. These CIP codes are frequently crosswalked with government occupational coding systems such as the **Standard Occupational Classification (SOC)** system to show the types of jobs that students qualify for after completing programs of study. Both of these types of government classification systems may not fully reflect differences in jobs and programs and should always be used as a starting point when exploring potential employer and CTE partnerships.

CTE program offerings are based on local needs assessments. These needs assessments consider both employers' needs, learners' career interests, and capacity of schools and colleges to deliver different program options. As a result, schools and colleges across a state will offer different program options. For example, a regional technical center may offer an Information Technology program involving an introductory course as well as two advanced courses that prepare learners for related certificates and certifications that make learners ready for employment as well as provide pathways to further education, training, and credentialing.

Many times, these programs provide learners the option to engage in applied or work-based learning opportunities, such as internships, apprenticeships, and cooperative education. They also provide opportunities to participate in student organizations such as the National FFA Organization, HOSA-Future Health Professionals, and SkillsUSA through which they may engage in skills-based competitions at the local, and state, and national levels.

---

[1] Advance CTE. (n.d.). *National Career Clusters® Framework*. https://careertech.org/career-clusters

CTE also provides opportunities for middle school, secondary, and postsecondary learners to explore career options before enrolling in programs of study. These career exploration opportunities include career advising, career awareness events at schools and colleges, and company tours and job shadowing opportunities. In all, CTE provides a wide variety of career exploration, skills development, and credentialing opportunities that reach a large share of secondary and postsecondary learners. For example, some form of CTE offering is estimated to reach more than 90% of high school graduates.[2]

In the past, CTE was considered an alternative option for students who were considered non-college bound and needed preparation to directly enter the workforce. As a result, CTE enrolled a disproportionate share of learners from low-income and minority households and those historically marginalized populations facing multiple barriers to employment. Now, CTE is a preferred option for both the college and non-college bound and is seeking ways to reduce opportunity and achievement gaps for all students in pursuing further education and careers. As a result, CTE provides employers with opportunities to develop programs that can serve all students and provide career advancement opportunities for a wide variety of populations targeted in their workforce diversity initiatives.

Key Takeaways

Employers should explore how to partner with schools and colleges to develop and deliver CTE programs of study that meet their needs. These CTE programs of study provide an important **career pathway** option in developing talent pipelines. However, employers must recognize that these programs can only be offered if learners have sufficient career interest to enroll in them and schools and colleges have the capacity and resources to deliver them.

[2] National Center for Education Statistics. (2011). *Postsecondary and Labor Force Transitions Among Public High School Career and Technical Education Participants*. http://nces.ed.gov/pubs2011/2011234.pdf.

CTE programs have service areas.

It is important to recognize that CTE programs offered by schools and colleges have defined geographic areas they serve, usually defined by school district and college district boundaries. They are likely involved in one or more regional partnerships that include area or regional technical centers and more than one college. Sometimes schools and colleges have partnerships that enable their programs to be offered outside their districts and regions. In parallel, employers may be involved with other workforce partners, such as local workforce investment boards, that often have different service areas.

Employers frequently recruit potential employees beyond the boundaries of one school or college district and may want to explore more regional partnerships involving cooperation between multiple schools and/or colleges. They may also want to include other education and workforce partnerships that have different service areas.

Key Takeaways

Employers should explore how to establish partnerships with schools and colleges that have service areas within the regions from where they source talent, not just geographic areas defined by others.

CTE programs are administered by and delivered mainly through school districts, regional centers, and community and technical colleges, involving a variety of professionals.

Secondary CTE Programs. At the secondary level, CTE programs are usually administered by school districts at one or more high schools or through regional or area technical centers, which provide shared CTE courses for two or more school districts (and sometimes adult learners as well). School district professionals that are important in planning, funding, and managing CTE programs include both upper-level administrators that have responsibilities across the entire school system, and middle- and lower-level administrators focused more specifically on CTE program offerings. There are also instructors or faculty who develop and deliver the programs in classrooms and coordinate related activities, such as work-based learning, student organizations, student services, and advising. Finally, there are the academic and career counseling and student services professionals who guide and support learners.

Increasingly these secondary school professionals work with their counterparts in middle schools to provide career exploration and applied learning opportunities that can prepare middle school students to enroll in secondary CTE programs of study.

While these professional go by many occupational titles, the key professional roles include:

- **Superintendents and Associate/Assistant Superintendents.** Upper-level administrators that set the district-level strategic direction and resource allocations for academic and CTE programs and related student services, such as career counseling and advising. They also address how CTE programs are coordinated with academic and other career-related programs and strategic initiatives, such as STEM education.

- **High School Principals and Associate/Assistant Principals.** Administrators who oversee curriculum and instruction at the school level and who set the strategic direction and resource allocations for academic and CTE and related student services, such as academic and career counseling.

- **Regional Coordinators and Technical Center Administrators.** Administrators that plan and manage regional programs that serve learners from multiple school districts. These regional centers often have

programs that involve specialized faculty and equipment that cannot be easily acquired and managed by just one school district or high school.

- **CTE Administrators and Department Chairs.** Administrators that manage CTE funding and work with faculty in planning, developing, and offering CTE programs. Many are also instructors themselves in one or more programs and play coordinating roles with key partners, such as employers.

- **CTE Program Faculty and Instructors.** Full-time and part-time instructors who teach one or more courses and coordinate work-based learning and student organization activities. These instructors usually have widely varying backgrounds with many part-time instructors having recent industry experience related to the courses they teach. Schools frequently have a difficult time in recruiting and retaining qualified faculty for programs in high-demand fields where industry can pay more than schools or where teacher licensure rules pose barriers to entry for existing professionals.

- **Counseling and Advising Professionals.** These professionals assist learners and their parents or guardians in planning their programs of study and enrolling in required and elective academic and CTE courses to meet graduation and credentialing requirements. They also provide assistance in exploring career opportunities and planning transitions to further education and employment. They play important roles in planning and coordinating career events and experiences, such as student field trips, job shadowing and mentoring programs, and career fairs.

- **Student Services Professionals.** These professionals provide and coordinate access to student services (e.g., counseling and social services) that are important for enrollment, program completion, and successful transitions. These services can be particularly important for opportunity populations that face one or several barriers to education and employment.

Another potential player in supporting CTE programs is an education service agency, which is a publicly funded, regional structure charged with developing, managing or providing services or supports to local school districts. These agencies, which go by a range of names depending on the state, may support CTE curriculum development, professional development, or technical assistance.

Postsecondary CTE Programs. At the postsecondary level, there are a set of parallel administrative, faculty, and student service roles. However, there is one important difference. Community and technical colleges offer CTE-related programs on a credit and non-credit basis, which involve different administrative and funding structures, as well as faculty. These programs provide different types of advantages and disadvantages in establishing employer and CTE partnerships. Many colleges use their non-credit options to respond more quickly to employer needs through customized training programs and targeted initiatives that then can be used to make improvements in regular for-credit CTE programs. It is important to note that when a non-credit option is used, they may not be aligned with for-credit programs that allow students to pursue career pathway opportunities through related programs of study at the college or university levels that result in a degree.

In addition, many colleges work directly with industry partners and employers to deliver joint programs, such as apprenticeships, where colleges deliver some or all of the classroom components.

While these professionals go by many occupational titles, the key professional roles in postsecondary CTE include:

- **Presidents and Provosts.** Upper-level administrators who set the strategic direction and resource allocations for academic and CTE programs as well as related student services. They also address how CTE programs are coordinated with academic and other career-related programs on both the credit and non-credit sides of the college.

- **College Deans and Department Chairs.** Deans directly manage budgets and faculty for large program areas, such as arts and sciences; science, technology, and engineering; and nursing and health sciences. Unlike high schools, colleges also have deans or other types of high-level administrators that manage non-credit programs as part of continuing education offerings. Department chairs manage budgets and faculty for more specific programs, such as nursing. Similar to the secondary level, deans and department chairs are also frequently instructors in one or more programs and play coordinating roles with key partners, such as employers.

- **CTE Program Faculty and Instructors.** Full-time and part-time instructors who teach one or more courses and coordinate work-based learning and other instructional related services. These instructors have varying backgrounds with many part-time instructors having recent industry experience related to the courses they teach. Like high schools, colleges often have a difficult time recruiting and retaining qualified faculty for programs in high-demand fields where industry can pay more than colleges.

- **Counseling and Advising Professionals.** These professionals assist students and their parents and guardians in planning their college programs of study and enrolling in required and elective academic and CTE courses to meet college completion and credential requirements. They also provide assistance in exploring career opportunities and planning transitions to further education and employment. They play important roles in planning and coordinating career events and experiences.

- **Student Services Professionals.** Similar to high schools, these professionals provide and coordinate access to student services (e.g., counseling and social services) that are important for many learners in enrolling and completing programs and making successful transitions. These services can be particularly essential for opportunity populations that face one or several barriers to education and employment.

Cooperative Secondary and Postsecondary CTE Programs. School districts and colleges generally partner together in developing more coordinated programs of study for learners based on articulation agreements that begin early in high school and continue into college. They are composed of jointly developed and delivered courses at high schools and colleges (e.g., dual enrollment or dual credit), and often result in learners attaining one or more credentials in an in-demand field. These cooperative programs of study routinely involve multiple school districts, regional centers, colleges, and universities.

Key Takeaways

Similar to the employer community, the types of CTE offerings and the professionals involved in their delivery are as diverse as they are complex. Employers will need to engage school and college partners at all levels, including administrators, faculty/instructors, and support services, at the middle school, secondary school, and postsecondary levels. This is essential to ensure there is sufficient commitment and capacity to develop and maintain strong, comprehensive, and responsive career pathway partnerships.

CTE professionals are members of professional associations.

National and state CTE professional associations provide professional development opportunities and resources that are important in building partnerships between employers and CTE programs and practitioners. These associations include those for administrators, teachers and instructors, as well as advising and counseling professionals. Here are some of the major CTE associations and association types:

- **Advance CTE.** A national organization representing state CTE Directors and state leaders responsible for secondary, postsecondary, and adult career and technical education. Advance CTE provides its members a variety of advocacy, state policy support, and professional development services.

- **Association for Career & Technical Education (ACTE).** A national organization representing CTE professionals at the state and local levels. ACTE has affiliated state associations and divisions representing major key career areas (e.g., agricultural, business, engineering, and technology education), counseling and career development as well as services, such as work-based learning/youth apprenticeship programs and those supporting special populations.

- **Career Area Professional Organizations.** These organizations provide program resources and professional development services for faculty and instructors, such as the National Association of Agricultural Educators and the National Association of Industrial and Technical Teacher Educators.

- **Other Professional Organizations.** These organizations provide professional development opportunities for key school and college professional roles, such as the American School Counselor Association (ASCA).

- **National Initiatives and Networks.** These initiatives and networks provide program, curriculum, and professional development resources, such as High Schools That Work (HSTW) and Project Lead the Way (PLTW).

- **Student Organizations.** Student organizations that facilitate peer learning and networking, connect CTE professionals to CTE students through mentorships, and engage students in planning and managing competitions, such as those that are facilitated by the National FFA Organization, HOSA-Future Health Professionals, and SkillsUSA.

Key Takeaways

In building CTE partnerships, employers should work with CTE professionals in schools and colleges to explore opportunities to leverage and support CTE professional organizations that can provide important resources and best practices in building strong CTE programs of study as part of talent pipelines.

Employers have many options in engaging with CTE at the local level.

There is a long history of employer engagement in CTE partnerships and well-documented best practices. Today, employers have many options when engaging with CTE, including traditional options, such as:

1. **Career Advising and Exploration.** Provide support to career counseling and exploration opportunities, including career advising materials, career day events, company tours and field trips, and career mentoring.

2. **Advisory Groups.** Participate in program advisory groups for developing and improving programs, curriculum, and credentials.

3. **Curriculum Development.** Provide resources and experts for developing curriculum, including learning and assessment materials, and aligning credentials.

4. **Classroom Instruction.** Provide guest speakers and team teachers for delivering classroom and lab instruction.

5. **Work-based Learning.** Provide work-based learning opportunities in the form of apprenticeships, internships, cooperative education, and/or student and student team projects.

6. **Student Organizations and Competitions.** Provide support for student organizations and coach and judge national, state, and local student competitions.

7. **Professional Development.** Conduct teacher outreach and provide externships and other professional development opportunities to school and college faculty and other professionals.

8. **Student Recruitment and Hiring.** Conduct job fairs and other recruitment and hiring activities in cooperation with schools and colleges.

9. **Funding, Equipment, and In-Kind Contributions.** Provide direct funding to schools and colleges for curriculum, up-to-date equipment currently used by employers (e.g., machinery and tools), and other purposes as well as provide in-kind contributions, such as access to company facilities and equipment.

Employers should also work with their school and college partners to explore additional non-traditional options. Also, employers should collaborate with their peers as well as schools and colleges to take a more comprehensive and coordinated approach that creates the most **shared value** for employers, education partners, and learners.

Key Takeaways

To be successful, employers cannot choose to participate periodically in just one or a few CTE engagement opportunities in response to requests from schools or colleges. Rather, employers should work together to take a more proactive and comprehensive partnership approach that addresses the full spectrum of engagement opportunities, from career exploration to classroom instruction, student organizations and competitions, and work-based learning to employment and career advancement.

CTE programs operate under complex federal and state funding and administrative structures as well as accreditation requirements that provide both incentives and constraints.

CTE receives federal funding from the U.S. Department of Education through the Carl D. Perkins Career and Technical Education Act, otherwise referred to as "Perkins." The most recent Perkins legislation is the Strengthening Career and Technical Education for the 21st Century Act, otherwise known as Perkins V. This Perkins funding flows from designated state secondary and/or postsecondary education agencies such as state departments of education and community college boards to local schools and community colleges. In a few states, this funding is coordinated through regional delivery systems involving different school districts and colleges within a geographic area. States and their school and college partners may choose to deliver CTE programs through regional technical centers as well as school and community college partnerships.

This federal funding represents only about 10% (approximately $1.5 billion) of total CTE funding with the remaining funding from state and local sources. However, Perkins funding comes with significant federal requirements that are very influential in setting state and local priorities and funding levels. As a result, Perkins requirements provide a starting point for states in exploring more robust employer engagement in:

- State and local planning and needs assessments, including employer needs and priorities;

- Setting competency and skills standards and identifying industry-recognized credentials for students in different programs of study;

- State and local advisory groups, including advisory committees for specific CTE programs at schools and colleges;

- Work-based learning and professional development opportunities for CTE teachers, and other types of monetary or in-kind contributions needed for high-quality programs; and

- Performance goal setting on key metrics important to employers and other partners.

While Perkins is a useful starting place, it is important to keep in mind that state agencies provide the most guidance to schools and colleges offering CTE programs. State agencies establish policies for planning and approving programs and how these programs are funded. They also sponsor and promote national and state initiatives in addition to providing technical assistance and networking opportunities. State education agencies also further define teacher certification requirements at the secondary school level and how CTE programs address academic standards.

It is important to note that not all CTE programs are tied to Perkins. Many states operate career pathway initiatives and STEM programs that are driven by state investments and not directly tied to Perkins, though the processes they use to plan, implement, and improve them are more often than not similar to requirements established under Perkins.

In addition, states and local levels are often implementing Perkins and CTE in a complex environment where multiple legislative initiatives and administrative requirements converge. For example, the **Every Student Succeeds Act**—otherwise known as ESSA (its predecessor was No Child Left Behind)—defines the federal role in K–12 public education. It requires each state to implement a statewide plan that includes a wide variety of administrative procedures, goal setting, performance targets, and interventions, particularly for failing schools.

There is more than just Perkins and ESSA. State education and workforce agencies and schools and colleges are involved in coordinating a multitude of education and workforce-related funding streams that impose incentives and constraints on the ability of local programs to partner with and be responsive to employer needs. Some organizations, like the Bipartisan Policy Center, have counted as many as 47 different federal workforce programs that filter down into states and communities.[3]

---

[3] Douglas, J. (2013, September 9). *Workforce Laws Aren't Meeting the Needs of Workers*. Bipartisan Policy Center. https://bipartisanpolicy.org/blog/workforce-laws-arent-meeting-needs-workers/.

For example, the **Workforce Innovation and Opportunity Act (WIOA)** is overseen by the U.S. Department of Labor and has federal funding flow through states and to local workforce boards. Under WIOA states are required to have yet another plan and they are encouraged to work in coordination with those agencies and local partners that are involved in implementing related legislation, such as Perkins. WIOA is an entirely separate infrastructure from Perkins but can be inclusive of the CTE community with some CTE leaders serving on state and local workforce boards and some programs drawing resources from multiple funding streams overseen by different state and federal agencies.

In addition to federal and state funding streams and programs, schools and colleges must maintain accreditation by a wide variety of national accreditation organizations. Accreditation is partially determined by how schools and colleges maintain the quality of the programs they offer. There are also specialized accreditors for specific types of programs. These specialized accreditors may be associated with industry and professional certification organizations. These accreditation requirements provide important benefits in ensuring program quality, but they also may provide constraints for schools and colleges in working with employers and how quickly they can respond to changing employer needs. For example, faculty qualification requirements can restrict the ability of local schools to staff a classroom with qualified instructors that also have recent industry experience.

Given this complex environment, it is important for employers to recognize that schools and colleges will vary widely in the resources they have to engage in partnerships and respond quickly to employer needs. However, employers can play a major role in working with partners to align incentives and remove unnecessary constraints.

Key Takeaways

Federal funding for CTE is relatively small but sets priorities and requirements that are important for employers to understand. CTE is mainly funded and administered at the state and local levels, which is why employers should start there when building CTE partnerships. Employers should always recognize that federal and state funding and accreditation requirements frequently provide constraints on how quickly schools and colleges can establish and make changes in their programs. One of the most common constraints is faculty/teacher qualification requirements, especially licensure and certification requirements at the secondary level. In addition, schools and colleges vary in the level of funding and other resources that affect their capacity to address employer needs.

Employers can play a major role in the planning and implementation of CTE systems and programs. They can help ensure the right incentives to partner are in place while at the same time navigating or removing constraints that may prevent schools and colleges from working with employers in the ways they want and need.

Recommended Actions for Employers

Employers should consider the following actions in working with CTE:

1. **Compare Critical Job Needs to Existing CTE Programs of Study.** Identify your most critical jobs that can be addressed in CTE partnerships and conduct a review of existing CTE programs of study offered that have the potential and capacity to address your needs within the geographic area from where you hire workers.

   Questions to Consider:

   a. Has your company—or collaborative that you are part of—identified the most critical jobs or business functions to focus on, and, if so, what are they?

   b. What CTE programs of study are currently available and is their focus consistent with the priority needs of your company or **employer collaborative**?

   c. If the focus is not consistent, is there willingness and capacity for those programs to change their focus or to stand up a new program?

   d. If the priorities are consistent, do they have sufficient scale to address your needs or will your company or collaborative require multiple CTE partnerships?

2. **Identify and Prioritize Opportunities for Partnerships.** Work with CTE professionals involved with the planning, management, and delivery of CTE programs of study to evaluate the degree of fit between employer needs and the willingness and capacity of these programs to address these needs. Identify and set priorities in where to start in establishing or improving partnerships.

   Questions to Consider:

   a. Have you secured senior level buy-in and support from your CTE partners and how do you know?

   b. Have you been assigned a point of contact and, if so, what is their professional role?

   c. Is your point of contact supported by a team of professionals, and if so, what are their respective roles?

   d. Do you have and know the right points of contact for planning, managing, and delivering a talent pipeline solution and are there any gaps?

   e. Is there agreement on the priorities to be addressed in the partnership and is the data being used coming from the employers directly?

3. **Collaborate with Other Employers on How Best to Engage CTE in Your Talent Pipeline Solution.** Where possible, engage with employers that have similar needs when working with CTE providers. Collaborating with other companies has many advantages, including increasing the level of need which, in turn, increases the responsiveness and ability of a CTE partner to address that need. Employer associations that already organize employers and are expected to deliver value are a natural fit to coordinate multiple employers around a shared workforce solution.

Questions to Consider:

a. If you are not already, is there value in engaging with other employers around a shared workforce solution? Is there evidence to support there being a shared need and **pain point** where you are better off addressing it together rather than pursuing solutions separately?

b. Is there an employer-facing association that has the capacity and willingness to bring employers together in pursuit of a shared workforce solution, and would TPM provide a useful framework for organizing as an employer collaborative?

c. What are some advantages you see in engaging CTE as an employer collaborative rather than going it alone, and are there any disadvantages?

d. When combining your needs with other employers, is the level of demand sufficient enough to partner effectively with CTE partners, and if so, what evidence supports your conclusion?