U.S. Department of Education

A Planning Guide for Aligning Career and Technical Education (CTE) and Apprenticeship Programs

Mini-Guide for State Teams
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Prepared for the U.S. Department of Education
Office of Career, Technical, and Adult Education

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ALIGNING SECONDARY CTE AND APPRENTICESHIP PROGRAMS

High school career and technical education (CTE) and apprenticeship programs both seek to equip students with the academic, technical, and employability skills necessary to succeed in high-demand careers. The goal of the Potential Role of Secondary CTE Programs in Preparing Students for Apprenticeship Programs initiative, launched by the U.S. Department of Education’s Office of Career, Technical, and Adult Education, was to explore how CTE providers across the United States are working to connect secondary school students with apprenticeship programs. This effort included site visits to eight programs that have aligned CTE instruction and provided students with articulation options to apprenticeship programs. Site visit profiles and a synthesis of results can be found in the study report.

Target Audience

This mini-guide was designed to provide targeted guidance and simple action items to support local and regional efforts for improving student access to apprenticeships. It includes a description of the benefits of aligning CTE and apprenticeship programs, an overview of alignment dimensions, action steps, and local program examples. Content for this mini-guide was drawn from the comprehensive Planning Guide for Aligning Career and Technical Education (CTE) and Apprenticeship Programs.

Benefits of Alignment

When an apprenticeship program is aligned to fit within or be a natural extension of a CTE program, more students may choose to enter an apprenticeship and persist once enrolled, building out the pipeline of workers entering the profession. To students and parents, the value is the opportunity for students to engage in real-world, hands-on experiences in the career paths of their interest. An additional value is the opportunity to gain postsecondary credit or even degrees, which is a cost-savings for the students or parents. Aligned programs can

- increase the quality of CTE programs through expanded industry input.
  
  » To align CTE and apprenticeship programs, the Green Academy at Salinas High School revised its CTE curriculum to better align to industry expectations.

- expand post-program options for CTE program completers.

  » Participants in Apprenticeship Catawba can enter an apprenticeship while completing high school. At Upper Valley Career Center, students who complete the pre-apprenticeship program can receive preferred consideration into a registered apprenticeship.

- improve the quality of apprenticeship programs through stronger education connections.

  » In addition to providing a pathway for CTE students to enter an apprenticeship, alignment expands the potential for educational attainment for apprentices. For the Charleston Youth Apprenticeship Program, and nearly all the sites profiled, the apprenticeship training contributes credits toward a high school diploma, a postsecondary certificate, and/or an associate degree.
• increase the number of qualified apprentices for high-demand, high-wage, and high-skill careers.  
  » Since 2001, the Edward J. Malloy Initiative for Construction Skills has placed more than 1,800 graduating high school seniors into apprenticeship programs. Participating unions and employers see these programs as an important stream of diverse talent for New York’s building trades.

SITE PROFILES

Read about the work of eight sites that are making great strides toward aligning their CTE and apprenticeship programs. The profiles describe the history, structure, impact, and partnerships of each program.

Program Name

• Apprenticeship Catawba – Hickory, NC
• Bayless Floor Layers Middle Apprenticeship Program – St. Louis, MO
• Charleston Youth Apprenticeship Program – Charleston, SC
• Edward J. Malloy Initiative for Construction Skills – New York City, New York
• Green Academy at Salinas High School – Salinas, CA
• Puget Sound Skills Center Construction Technology Program – Seattle, WA
• Tech Ready Apprentices for Careers in Kentucky (TRACK) – Dr. Schneider Automotive Systems – Russell Springs, KY
• Upper Valley Career Center School-to-Apprenticeship Program – Piqua, OH

VIDEOS TO GET YOU STARTED

To deepen your understanding of the benefits of alignment, watch video 1 below, Expanding Opportunities: Aligning Career and Technical Education (CTE) and Apprenticeship. Explore the Elements of Career and Technical Education (CTE) and Apprenticeship Alignment in video 2 below, to see the variety of approaches used to meet the needs of students, employers, and education institutions across the country.
**DIMENSIONS OF ALIGNMENT**

**Instructional Alignment**
The degree to which secondary school CTE students’ instruction aligns with apprenticeship training.

**Full**—There is no distinction between the content taught in a secondary school CTE program and the training offered to an apprentice. A fully aligned program provides students with focused skill instruction tailored to address the entry requirements of an apprenticeship. Coursework fulfills both the education requirements necessary for students’ high school graduation and the performance expectations of entering an apprenticeship, as well as other educational and career opportunities.

**Embedded**—Apprenticeship skills training is integrated into a student’s CTE program and may be applied towards fulfilling course credit and high school graduation requirements. Students also receive technical instruction that may go beyond the scope of the apprenticeship program and that is intended to prepare them for other educational and career opportunities.

**Substituted**—All related technical instruction for an apprenticeship is delivered outside of the secondary school setting, typically by a postsecondary education partner or established program intermediary. To increase access to apprenticeship opportunities, secondary school students may not be required to have taken relevant CTE courses prior to entry. Those who are enrolled in a CTE program may be eligible to receive some high school and/or early postsecondary credit within their CTE field of study for the apprenticeship’s related technical instruction, with the degree of recognition varying by site.

**External**—Secondary school students who may be recruited from secondary school CTE programs and other sources, participate in an apprenticeship program with all instruction delivered outside the secondary school setting (during or after the school day). Students participating in such programs receive no education credit, though they may apply some or all of their hours worked toward fulfilling the entry requirements of an employer- or union-sponsored apprenticeship, or be positioned for preferred entry upon completion.

**Program Articulation**
The extent to which instruction articulates with apprenticeships to ease student entry into programs.

**Full**—There is no distinction between a CTE program and an apprenticeship program. Students are fully enrolled as apprentices or pre-apprentices while in high school and, upon their graduation, continue on as apprentices, with all credits and hours counting towards full program completion.

**Preferred Entry**—Students participate in CTE programs that may prepare them for entry into an apprenticeship, though students are not enrolled as apprentices. Apprenticeship and pre-apprenticeship sponsors formally agree to offer preferred entry into their programs to students who complete specific requirements through a CTE program, with the possibility of applying education credits or hours worked toward an apprenticeship.

**Optional Entry**—Students participate in programs that prepare them for entry into an apprenticeship but they are not formally enrolled as apprentices. Optional entry programs typically do not guarantee students a direct pathway to an apprenticeship program, but rather they are designed to prepare students for multiple post-graduate options, including employment and/or postsecondary education and training. Students opting to continue in an apprenticeship may receive advanced credit for their experiences on a case-by-case basis.

**Exploratory**—Students participate in programs that allow them to explore career options, which may prepare them for entry into a pre-apprenticeship or an apprenticeship program, but they receive no credit towards their program nor preferential consideration for entry.
Dimensions of Alignment
This chart places the eight programs along the alignment dimensions and describes their different approaches. Click on any site to begin.

Instructional Alignment
Sites seeking to connect CTE with high-quality apprenticeship programs took intentional steps to sequence and align instructional content, often with input from employer or labor sponsors. Four common approaches are: Full, Embedded, Substituted, and External.

Program Articulation
The ease and seamlessness of the transition from secondary school CTE to apprenticeships varied across the sites, driven by the programs’ goals and designs. Four common degrees of articulation are: Full, Preferred Entry, Optional Entry and Exploratory.
# STATE TEAM ACTION ITEMS TO CONSIDER

The following lessons learned provide state teams with simple action items to improve CTE student access to apprenticeships.

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<th>Create a Supportive Environment</th>
<th>Engage Employers</th>
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<tr>
<td>Leverage state policies, such as dual enrollment, to benefit the apprentices, educational institutions, and employers.</td>
<td>Allow employers to drive the program’s design, which helps earn their trust and commitment to the partnership.</td>
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<td>Revise policies and rules to provide opportunities for students to learn beyond the traditional school day and setting.</td>
<td>Develop a critical mass of employer and union partners offering apprenticeships.</td>
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<td>Provide state support through technical assistance and funding streams to help local programs improve their alignments, particularly with innovative pilot projects.</td>
<td>Include union and non-union employers in state partnerships to connect students with diverse apprenticeship options.</td>
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<td>Embed the programs into existing state CTE, accountability, and registered apprenticeship infrastructures. This helps create efficiencies, reduce duplication of effort, and target resources to accelerate program replication.</td>
<td>Expand Partnerships</td>
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<th>Expand Partnerships</th>
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<td>Leverage sector partnerships, or groups of employers within an industry, as a strategic way of recruiting smaller companies to participate in apprenticeship programs.</td>
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<th>Set the Example</th>
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<td>Collaborate across state agencies to leverage resources, build capacity, and most importantly, create opportunities for innovation.</td>
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<tr>
<td>Collaborate across education and employment systems to identify a common set of competencies that enables student learning and future success.</td>
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<td>Create a common, statewide program alignment structure that allows employers to have flexibility in the apprenticeship program model.</td>
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STATE EXAMPLES IN ACTION

Due to the complexity involved in connecting CTE and apprenticeship programs, designing the aligned programs can be challenging. These programs do not always fit within traditional methods of delivering CTE and apprenticeship training and, therefore, may require new strategies for providing education and training. Below are a few examples of how states have fostered a connection between secondary CTE students and apprenticeship programs.

EMPLOYER INCENTIVES IN ACTION

Upper Valley Career Center School-to-Apprenticeship Program, Piqua, OH

The state of Ohio has employed tax credits as a means to persuade companies to take on interns and pre-apprentices. While tax credits may not sway larger companies, state leaders who were interviewed said such benefits have been effective in encouraging smaller businesses to participate. In 2014, lawmakers passed the Career Exploration Internship program, which directed $1 million of state money to pay for half of the wages for a student’s work-based learning experience, such as an internship or pre-apprenticeship. The law covers up to three high school students per employer in a calendar year. Learn More at Ohio Career Exploration Internship Program Website

CREATE A FAVORABLE ENVIRONMENT

Puget Sound Skills Center Construction Technology Program, Seattle, WA

State agencies in Washington have created a set of policies and an infrastructure that can help expand aligned CTE and apprenticeship programs. Over the past decade, the state has worked through legislation and existing structures and systems to expand awareness and opportunity for secondary school students to seamlessly move from high school CTE programs into apprenticeships. In 2006, state legislation directed the Washington State Apprenticeship and Training Council (WSATC) to develop and administer an approval system for “direct-entry” programs for high school graduates into building and construction-related apprenticeships. In 2012, WSATC approved the policy and procedures necessary for an education-based preparatory program to seek and obtain formal recognition as a “pre-apprenticeship” program. As of August 2016, 14 programs, including the Puget Sound Skills Center (PSSC) construction program, have received pre-apprenticeship recognition.

In addition to documenting quality criteria—such as safety training and policies, training plans for instructional content, and a communication plan—each applicant must provide evidence of a formal agreement detailing how student completers “will be prepared to meet/exceed minimum qualifications and compete for or receive direct entry into the registered apprenticeship program.”1


SUPPORT SOLUTIONS

Tech Ready Apprentices for Careers in Kentucky (TRACK) – Dr. Schneider Automotive Systems, Russell Springs, KY

TRACK began as an interagency venture of the Kentucky Department of Education’s Office of Career and Technical Education and the Kentucky Labor Cabinet. TRACK was intentionally designed to be embedded into the state’s existing CTE and apprenticeship infrastructures, which means that the state faces no additional costs to administer the program. In addition to providing co-branded information sheets dispelling myths about youth labor laws, Kentucky has leveraged its existing relationship with Adecco, a national staffing agency, to address employer concerns about insurance and liability issues for employees under 18. Under the state’s Youth Employment Solutions (YES) program, Adecco manages the administrative and legal elements of work-based learning, including TRACK. Learn More at Tech Ready Apprentices for Careers in Kentucky (TRACK) Website

RESOURCES

Below are links to resources and tools that state teams can access for additional information.

DOCUMENTS

Opportunities for Connecting Secondary Career and Technical Education (CTE) Students and Apprenticeship Programs

A Planning Guide for Aligning Career and Technical Education (CTE) and Apprenticeship Programs

VIDEOS

Expanding Opportunities: Aligning Career and Technical Education and Apprenticeship

Elements of Career and Technical Education (CTE) and Apprenticeship Alignment

SITE PROFILES

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