

## Expanding Registered Apprenticeship through Alignment with Secondary Career and Technical Education

As states work to bring Registered Apprenticeship (RA) to scale, many are expanding access to Registered Apprenticeship Programs (RAPs) for youth. Building opportunities for secondary school students, particularly those enrolled in career and technical education (CTE), to prepare for or enroll in RAPs is an effective youth apprenticeship expansion strategy.

Federally funded CTE programs at both the secondary and post-secondary level share a number of features and goals with RA, including access to high-quality, occupation-focused training through a combination of classroom instruction and work experience. Although secondary and post-secondary CTE programs have common goals and requirements, the educational institution where the program is administered impacts the process and model of alignment to RA. This resource provides information about CTE in general and identifies steps that can be taken to build stronger alignment between RAP and CTE programs at the secondary level.

### STATE CAREER AND TECHNICAL EDUCATION PROGRAMS

CTE programs in every state prepare youth and adults for careers in a wide range of skilled, high-demand jobs. CTE programs are organized around career clusters, which vary by state, but typically include more traditional apprenticeship industries such as construction, and those industries states are seeking to expand RA into such as information technology, hospitality, healthcare, and others. The U.S. Department of Education invests roughly \$1.3 billion annually for CTE programs through the Career and Technical Education for the 21st Century Act (Perkins V). This funding supports CTE programming at both the secondary and post-secondary level through formula grants that are administered by the department's Office of Career, Technical, and Adult Education) and given to states for distribution to local CTE programs. States have flexibility to determine the allocation of funds between institutional levels. States are required to demonstrate collaboration among partners; connections to high-wage, in-demand career fields; service to special populations; and implementation of performance measures.

CTE programs and RAPs have similar elements, including:

- Classroom instruction integrated with rigorous academic, technical, and employability skills within a career context.
- Program curricula vetted by employers to ensure that coursework prepares participants for success in the field and aligns with current industry standards and employer needs.
- Classroom instruction reinforced by hands-on learning to give participants a deeper understanding of the field.
- An integrated career pathway model with options for earning college credits and/or industry-recognized credentials.
- Common accountability metrics demonstrating program and participant success and participation of underrepresented populations.

CTE programs are typically organized into 16 Career Clusters<sup>®</sup> that comprise groups of related industries and occupations. Within clusters, students may specialize in a career pathway that provides them with technical skills to prepare them to transition into post-secondary education and/or immediate employment. Programs usually consist of sequenced technical coursework that starts with introductory, basic technical skills instruction that progresses over time to more advanced skill training.

Oversight of state CTE programming is generally provided by different agencies at the secondary and post-secondary education levels. To comply with federal Perkins V grant requirements, states designate a single board, termed an eligible state agency, to serve as the fiscal agent for their federal grant. In most states, the secondary K–12 education agency serves in this role, but some states have their post-secondary system office, or another state agency play this role. All states have a state director of CTE who is responsible for overall grant management.

# APPROACHES TO SECONDARY CTE AND APPRENTICESHIP ALIGNMENT

Both CTE and RAPs combine classroom instruction with workforce training by integrating rigorous technical and employability skills within a career context. Because secondary CTE students complete coursework within a specific career pathway as part of their studies, they have validated interest in the field through hands-on exposure. CTE programs can create a pipeline of potential high-quality apprentices who have classroom knowledge and hands-on experience in the occupation of the apprenticeship.

RAPs and CTE programs are increasingly pursuing alignment strategies. Although the degree of alignment can vary from program to program, the common result is a population of individuals who are exposed to and enter RAPs. In the simplest alignment, students may simply learn about apprenticeship opportunities that are available after completing their high school CTE program and receive support in applying for RAPs. Stronger alignment may find the CTE program operating as a pre-apprenticeship that gives students preferred entry into a RAP upon graduation. Even stronger alignment involves students starting a RAP while in a high school CTE program, typically in their junior or senior year, and upon graduation continuing on as apprentices to complete the program, with all credits and hours counting toward program completion.

These levels of alignment require integration between RAP and CTE curricula. Examples include delivery of apprenticeship's related technical instruction (RTI) within the CTE classroom, providing exposure to and preparation for the apprenticeship requirements, or student participation in apprenticeship RTI outside the secondary school setting, allowing CTE students to be active apprentices. Whatever the approach, it is important to address any potential barriers to entry and success and consider if students can meet both high school graduation requirements and entry requirements of an apprenticeship or fulfill hours towards the training requirements of an apprenticeship.

Alignment between RAPs and CTE boasts several benefits for stakeholders:

*For employers:*

- ➔ **Increased number of qualified candidates for apprenticeship opportunities.** Connecting pre-apprenticeships and apprenticeships to secondary CTE students helps employers attract new talent that has education and experience specific to the field. CTE programs attract a diverse student base that can bring nontraditional, underrepresented populations to apprenticeship that in the past might have been overlooked.

*For students:*

- ➔ **Stronger education connections for apprentices and pre-apprentices.** In addition to providing a pathway for CTE students to enter apprenticeship, strong alignment expands the potential for educational attainment for apprentices such as credits toward a high school diploma, a post-secondary certificate, and/or an associate's degree. This adds value for parents and students, as well as for employers who are struggling to recruit apprentices.

- ➔ **More career-focused options for secondary CTE students.** Students can enter an apprenticeship while completing high school or have preferred consideration for an RA after completion. This is valuable to students who are looking for opportunities to obtain real-world, hands-on experience that is part of a career pathway in their area of interest.

*For local economies:*

- ➔ **Connections to a broader economic development strategy.** For communities, the alignment of CTE and apprenticeship programs can influence regional employment and economic development priorities and expand opportunities to align local employer demand to a strong talent network. CTE programs are required to have a CTE advisory board made up of local businesses, educators, students, and other stakeholders. These boards strengthen collaboration between those responsible for CTE programs and the communities they serve and create a platform to connect CTE and RA directly to community needs.

*For state and local agencies:*

- ➔ **Integrated education and workforce development.** Alignment of CTE and RAPs creates seamless career pathways that fit well within the context of federal, state, and local efforts to integrate education and workforce development programs. This alignment also leverages CTE resources to support apprenticeship expansion.

## GETTING STARTED

CTE and RA alignment requires a common understanding of the impact and value such alignment brings to all stakeholders including students, parents, educators, and employers. State leaders of CTE and apprenticeship can come together to identify the value for their stakeholders, define how alignment fits within state workforce and education priorities and strategies, and plan how to achieve closer CTE-apprenticeship connections. Below are simple strategies that can help state apprenticeship grantees get started:

- 1. Read about state strategies to build Registered Apprenticeship-CTE alignment in [Connecting Secondary Career and Technical Education and Registered Apprenticeship: A Profile of Six State Systems](#).** This report profiles six states—North Carolina, Connecticut, Florida, Kentucky, Washington, and Rhode Island—that are working to align secondary CTE and RAPs. The report identifies three approaches that these states have taken to align and expand apprenticeship opportunities. It also describes how these states address challenges, including lack of resources, misperceptions about pre-apprenticeship programs and RAPs, and difficulty engaging employers.

**2. Explore examples of alignment between specific CTE programs and RAPs** in [Opportunities for Connecting Secondary Career and Technical Education \(CTE\) Students and Apprenticeship Programs](#). This report profiles eight secondary school apprenticeship programs to identify strategies to connect CTE with apprenticeship programs. The report classifies each program as an apprenticeship, youth apprenticeship, or pre-apprenticeship and maps each by the degree of instructional alignment and program articulation. The report outlines key takeaways and recommendations for program design, program effectiveness, student-parent engagement and communications, financing, and equity and access. Watch a related webinar [here](#).

State-level agencies in [Ohio](#) are working together to increase the connections between apprenticeships and CTE. The RTI for Registered Apprenticeships is designed by or in conjunction with the University System of Ohio, allowing apprentices to gain college credit. In addition, pre-apprenticeship curricula are developed in collaboration with the Ohio Department of Education and/or the University System of Ohio to build a seamless pathway from pre-apprenticeship to apprenticeship and ensure post-secondary credit.

**3. Learn how secondary CTE is supported and structured in your state and identify key CTE leaders** by exploring [this resource](#) from the Education Commission of the States. This resource identifies each state’s CTE agency and provides a national comparison of state policies and activities related to secondary CTE.

**4. Connect with your CTE state director.** Ensure that the state CTE director has an awareness and understanding of the Registered Apprenticeship model and your expansion approach. Talk about the benefits of aligning CTE and RA that were mentioned above including expanding post-secondary options for students. Discuss opportunities for alignment and the process for collaboration at the state level that fosters connections at the local level.

The [Oregon Department of Education \(ODE\)](#) organized a core working group that included representatives from the [Oregon Bureau of Labor & Industry \(BOLI\) Apprenticeship and Training Division](#), ODE’s CTE Programs Division, and the Higher Education Coordinating Commission’s Office of Community Colleges and Workforce Development. This group created a [pre-apprenticeship application](#) that integrated BOLI’s pre-apprenticeship checklist with ODE’s CTE program of study approval processes and developed information and training to help CTE programs understand and build connections to apprenticeship, including this guide: [Understanding and Accessing Oregon Apprenticeships](#).

**5. Assess your state’s readiness for alignment-building activities** using the [Planning Guide for Aligning Career and Technical Education \(CTE\) and Apprenticeship Programs](#). The guide is designed as an interactive tool for initiating or expanding the alignment between existing CTE and apprenticeship programs. It provides a blueprint for state, regional, and local administrators leading efforts to transform CTE and apprenticeship linkages across a state or community. Tools and templates are built to be customizable, allowing users to adjust each resource to fit their unique need. Editable versions of tools and templates are available on the [Perkins Collaborative Resource Network’s](#) website.

## DEEPENING ALIGNMENT

While collaboration between state apprenticeship and CTE staff is a critical first step, partnering with other agencies and organizations increases capacity to strengthen alignment and increases scalability and sustainability. Workforce agency and other state-level staff can identify economic development priorities, navigate any regulatory challenges, identify tax breaks and other incentives for businesses participating in apprenticeship and other work-based learning, and identify opportunities to allocate or leverage funding for CTE and RA alignment.

In addition, state leaders can take an active role in fostering alignment by providing opportunities for workforce development and CTE experts to learn from each other and build models of alignment that can be easily adapted and implemented in local programs across the state. State-level staff can identify models of alignment by comparing the state standards and competencies for CTE pathways to the competencies for RA and determine what type of alignment might be best suited to the programs (e.g., full alignment where students transition directly from CTE pathways to RA vs. embedded alignment where students complete RAs as part of their CTE pathway) and assist local program staff in implementing the model.

State leaders can also engage in strategies that will eliminate barriers and influence success at the local level.

The [Charleston Youth Apprenticeship Program](#) is open to juniors, seniors, and recent high school graduates from 26 high schools located throughout the Charleston metropolitan area. All RTI for the youth apprenticeship is delivered at Trident Technical College (TTC) and can serve as a substitute for secondary CTE programs. Students who complete the two-year program earn their high school diploma, a technical certificate from TTC that articulates with a TTC associate of applied science degree, and a national journey-level certificate from the U.S. Department of Labor.

### ➔ Addressing labor laws and liability for students under 18 years

One of the considerations of secondary students participating in RAPs is student age. Many employers require their employees, including apprentices, to be 18 years or older for liability or insurance reasons. Look for creative workarounds such as identifying third-party companies that serve as the student's employer rather than the company operating the RAP. The third-party company can, in some cases, be an intermediary organization that is already engaged in making connections and sharing information between industry, labor, and education staff. States can also offer businesses tax or fiscal incentives for creating RAPs aligned with CTE programs that can help offset the cost of expanded insurance or liability coverage. Beyond technical workarounds or changes, it can also be helpful to have companies currently operating RAPs aligned with CTE to act as ambassadors or share their stories with their industry peers. In addition, states can develop and disseminate clear and concise information on legal requirements, restrictions, and workarounds for youth apprenticeship to ensure stakeholders have an accurate understanding.

## ➔ Identifying and addressing barriers for participation and success

Assist local CTE and RA stakeholders in addressing any logistical challenges for CTE students to be engaged in apprenticeship programs, such as rules preventing students from leaving campus during the day or a lack of infrastructure (e.g., buses or public transit) for students without their own means of transportation. Employers or intermediaries sponsoring RAPs can help break down barriers by providing transportation free of charge or allowing students to participate virtually (when possible) or outside of traditional school hours.

Because secondary and post-secondary institutions typically have fixed and inflexible schedules, employers or intermediary sponsors are often the best positioned to offer flexibility to make it easier for students to participate. State-level staff can also support efforts to mitigate transportation and attendance challenges at the local level by providing supplementary funding, clarifying which state and federal funding can be used to support transportation or virtual learning technology, and connecting stakeholders to promising solutions.

Students in Kentucky who take part in the [Tech Ready Apprentices for Careers in Kentucky \(TRACK\)](#) program begin the program in their junior year at an area secondary CTE center. After high school graduation, students have options to transition to the employer's apprenticeship and continue technical instruction at a community college to earn an associate of applied science degree.

## LEARN MORE

CTE programs that are aligned to RAPs give participants access to high-quality career training that combines classroom instruction with applied and intensive work-based learning opportunities and employers access to a diverse pool of qualified candidates. For more information, visit the [Alignment with Career Pathways and Postsecondary Education](#) resource page on the Apprenticeship Community of Practice.

## About AIR

The American Institutes for Research (AIR) is a nonpartisan, not-for-profit organization that conducts behavioral and social science research and delivers technical assistance to solve some of the most urgent challenges in the U.S. and around the world.

For 15 years, AIR has partnered with organizations at the national, state, and regional levels to advance Registered Apprenticeship as a talent development strategy in the U.S. We work with businesses and industry associations to design, register, and operate apprenticeship programs. We coach and support states and territories on how to grow Registered Apprenticeship and better align the apprenticeship, workforce development, and education systems. We also focus on conducting research and identifying promising practices to increase the knowledge base about the apprenticeship model and expansion strategies; working with federal and state agencies to train stakeholders, develop policy, and design technical assistance initiatives; and advancing diversity, equity, and inclusion to ensure that women, people of color, individuals with disabilities, and other groups are accessing and succeeding in apprenticeship programs. AIR conducts this work through the organization's Workforce Program Area within the Human Services Division.



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