

A young woman with dark hair tied back, wearing a bright yellow safety vest over a red long-sleeved shirt, is leaning on a metal railing in an industrial setting. She is looking off to the side with a thoughtful expression. The background is a blurred factory floor with orange safety railings.

NO DEAD ENDS

How Career and Technical Education Can Provide Today's Youth with Pathways to College and Career Success

Practitioner-Informed Considerations for Reforming K-12 and Postsecondary Policy

AT A GLANCE

High-quality career and technical education (CTE) programs represent an effective way to provide young adults with an educational experience that prepares them for both college and career success. But not all CTE programs provide permeable pathways to a bounty of educational options with no dead ends. In an effort to address the false dichotomy—college versus job preparation—in our nation's public education system, JFF offers practitioner-informed policy considerations, rooted in a commitment to equity, that federal and state officials can use as a guide to strengthen CTE college and career pathways for today's youth.

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About JFF

JFF is a national nonprofit that drives transformation in the American workforce and education systems. For nearly 40 years, JFF has led the way in designing innovative and scalable solutions that create access to economic advancement for all. www.jff.org

About The Policy Leadership Trust

The Policy Leadership Trust is a select group of community college practitioners convened by JFF. Together they draw on their expertise and experience to provide practical insights on what good policy looks like in education and workforce development. Learn more at www.JFF.org/trust.

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Table of Contents

Call to Action	4
Key Commitments for Policy Design and Implementation	6
Economic Mobility	6
Equity	6
System Alignment	7
Federal and State Policy Considerations	7
1. Clearly define, elevate, and adequately resource high-quality CTE to ensure all learners have access.....	8
2. Support every learner in developing their career identity through career exposure, counseling, and other critical supports	11
3. Provide access to intentional dual enrollment experiences that combine CTE and rigorous core academics	13
4. Provide every student with high-quality work-based learning experiences integrated into their academic coursework	15
5. Build stronger cross-sector data and accountability structures to ensure CTE student success and advancement	17
State Spotlights	19
Delaware.....	19
Texas.....	20
Washington	20
Colorado	21

Call to Action

The pandemic is ratcheting up the need to resolve a longstanding false dichotomy in our nation's public education system and among policymakers: preparing students for college versus preparing them for jobs.

We know that college—whether a credential, an associate's degree, or a bachelor's degree—is a prerequisite for most good jobs. Yet our education system too often separates college and career, focusing on preparing students for one at the expense of the other. And, all too often, career preparation programs are overlooked, underresourced, and disincentivized by federal and state policy. When career preparation is available in schools, it is often stigmatized as coursework for youth deemed “not college material” and is not always designed intentionally as a gateway to advanced education and high-wage career fields. Higher education suffers from the same issues; while the liberal arts are awarded prestige and credits, career-oriented programs are often terminal or offer non-credit credentials, making them ineligible for financial aid and other public resources.

The consequences of the false dichotomy between college and career are detrimental for [today's youth](#) and the economy. Many young people are questioning the relevance of their educational experiences. An alarming number of teenagers are [disengaging from school and work altogether](#); while others are forgoing or postponing their college plans, a challenge apparent in the [sharp declines in college enrollment](#) among recent high school graduates. Facing the heightened pressures and hardships of the pandemic, many of today's youth are uncertain about the career and financial benefits of traditional education.

Instead, young adults are demanding an education experience that prepares them for both college and career success. In a labor market that [values postsecondary credentials](#) and rewards critical thinking and technical skills, [they want career relevance to be infused into their educational experiences](#) and they need [personalized college and career guidance](#) to explore their career options and plan out their next steps to avoid costly missteps.

This vision of career development in both K-12 and postsecondary education is becoming a reality in several parts of the country, thanks to the [transformation underway](#) within career and technical education (CTE). Exemplary CTE programs have shed the stigma of career-oriented programs and are helping youth advance in education, careers, and in the economy. And rather than track teenagers into a singular profession, the best CTE programs provide permeable paths to a bounty of careers and educational options—with no dead ends.

Policymakers ought to strive to bring exemplary approaches to CTE to scale so that all young adults benefit from early exposure and preparation for work as well as durable and seamless pathways to and through college and careers. This undoubtedly will require shifts in federal and state policy governing K-12 and higher education to establish and enforce the necessary standards, spur innovation, and invest in and incentivize deeper collaboration across systems.

What “No Dead Ends” Means

The core principle of No Dead Ends is the creation of a student-centered approach that values and counts each of their experiences on their pathway toward a postsecondary degree or credential and into a high-wage career. Policy should be used to create a system that allows for learners to seamlessly transition between educational experiences and, at every point along the way, provides a clear next step for young learners. Each step should count their prior experiences and build upon them to create pathways for each learner toward a degree or credential and into a high-wage career. Such a system also needs to be sufficiently flexible to allow students to have the ability to change course (multiple times) over the course of their educational experiences, and to the extent possible to continue to value the experiences students have accumulated to date.

Taking a Practice-Informed Approach to Federal and State Policy Change

To determine key priorities and considerations for policy reforms, JFF sought the counsel of college and K-12 practitioners to learn firsthand how policy is enabling or impeding their efforts to provide college and career pathways for today’s youth. We convened a 10-member work group associated with JFF’s Policy Leadership Trust to examine critical nexus points in a student’s career journey—the transitions from secondary to postsecondary and into the labor market. Drawing from their deep expertise, the work group drilled into key policy considerations for bringing to scale best practices for career counseling, work-based learning, and dual enrollment. They also offered recommendations for reforming accountability and funding structures toward these aims. Work group recommendations have been reviewed and endorsed by JFF’s Policy Leadership Trust.

This policy brief builds on the policy ideas of other CTE practitioner organizations, including Advance CTE, which produced [critical principles for a shared CTE vision](#).

In this policy brief, JFF and our practitioner partners present the following:

- Three overarching commitments that should guide all federal and state policy decisions and, specifically, reforms to CTE affecting college and career pathways for young adults.
- Recommended changes to federal and state policy across five key areas for ensuring quality and scalability of college and career pathways through CTE.
- Four state and local spotlights that demonstrate the best of CTE policy and practice, drawn from the insights and experiences of work group members.

Key Commitments for Policy Design and Implementation

As state and federal policymakers consider policy changes CTE to strengthen college and career pathways for today's youth, it is critical that these policy actions are grounded in a commitment to closing equity gaps, expanding economic opportunities, and aligning systems. The Policy Leadership Trust recommends three aims for guiding policy design and implementation:

Economic Mobility

All policies must be designed and implemented to ensure all young adults have an opportunity to acquire the academic and technical preparation necessary for entry and success in “high-demand, high-wage” career fields. Career exposure and preparation experiences should begin as early as possible, in middle school or even elementary school, to give youth significant time and space to begin developing their occupational identities and homing in on preferred pathways to postsecondary and career success. These experiences should be developmentally appropriate and tailored to meet the learner wherever they may be.

Equity

All policies must be designed and implemented with the intention of closing equity gaps in college and career access and outcomes. Policies must eliminate occupational segregation and the tracking of students into educational opportunities that are not in demand and result in lower-wage employment options, while also ending the stigmatization of CTE and students participating in CTE programs. There should be special and targeted attention paid to Black, Latinx, and Indigenous students and those who are experiencing poverty or have a disability.

System Alignment

All policies must be designed and implemented to create greater synergies and integration across K-12, college, and the employer sector to provide today's youth with a seamless and durable pathway to economic advancement. The education system should reflect and take intentional steps to remove roadblocks and dead ends to opportunity in young adults' educational journeys. This requires policy to foster a shared and integrated approach and accountability to guide career preparation and progression for all students. To develop seamless pathways, both K-12 and higher education will need to move beyond their traditional roles and the siloed thinking that pervades too much of the education system.

Federal and State Policy Considerations

Building from their practical experiences, the Policy Leadership Trust and its CTE pathway work group propose action on five key policy issues in order to fully integrate high-quality CTE experiences into every young adult's pathway to college and career success:

1. [Clearly define, elevate, and adequately resource high-quality CTE to ensure all learners have access](#)
2. [Support every learner in developing their career identity through career exposure, counseling, and other critical supports](#)
3. [Provide access to intentional dual enrollment experiences that combine CTE and rigorous core academics](#)
4. [Provide every student with high-quality, work-based learning experiences integrated into their academic coursework](#)
5. [Build stronger cross-sector data and accountability structures to ensure CTE student success and advancement](#)

The sections below clearly spell out the need for policy change and offer a range of options for federal and state policymakers, from essential steps to transformational reforms to the CTE ecosystem.

Defining High-Quality Career and Technical Education

[Career and technical education \(CTE\)](#) programs of study are sequences of courses that integrate core academic knowledge with technical and occupational knowledge to provide students with a pathway to and through postsecondary education and into careers. CTE programs deliver an enriched educational experience that promotes student interest and academic success, while also developing technical and employability skills necessary to succeed in future careers and meet 21st-century workplace demand.

High-quality CTE pathways should include the following elements: opportunities that align with in-demand careers; work-based learning experiences; rigorous academics, including dual enrollment; coursework to allow for seamless transitions to postsecondary; and robust career guidance and counseling to ensure learners can make informed choices about their next steps.

POLICY CONSIDERATION 1

Clearly define, elevate, and adequately resource high-quality CTE to ensure all learners have access

The current state of federal funding for CTE, and funding available in many states, is inadequate to sustain and scale high-quality and impactful programs nationwide. To date, Perkins provides the only dedicated federal funding for CTE, and the [majority of these resources](#) is directed to secondary programs, limiting the capacity of colleges to offer CTE. This presents an ongoing challenge to strengthening college and career pathways for young adults. States and CTE providers need more federal and state money—and increased flexibility to braid and blend resources—in order to expand the adoption of effective CTE programs in high school and college, as well as more seamless transitions between. With the influx of new investments, policymakers should incentivize quality, equitable outcomes, and innovation.

Federal and State Policy Recommendations

Essential Steps:

- **Leverage federal statute to clearly define quality CTE at the state level and target funding to programs that meet the definition.**

Defining a quality CTE program is a foundational step for policymakers developing systems to better serve learners. States can choose to pursue this through the development of definitions clearly articulating required components for “fundable” CTE

programs, followed by enhanced CTE program approval or review. Policymakers should also consider tying widespread funding eligibility to these processes and concepts to ensure resources are used effectively. For example, [Delaware](#) not only created a statewide definition of CTE but requires each program and program of study to adhere to three key principles (included in the “State Spotlights” section). However, states don’t need to reinvent the wheel. Perkins V has a good definition for CTE—states can use that as a jumping-off point to ensure high-quality programming.

- **Increased federal investment in CTE.**

While our nation invests in CTE through Perkins legislation and through some secondary and workforce policy, it is only a fraction of the money being used by states and localities to develop and sustain CTE programs and programs of study. To ensure CTE options are more accessible across geographies and by more learners, federal policymakers should commit to providing substantially more resources via this funding stream.

- **Provide dedicated state-level funding for CTE.**

Some states still do not provide dedicated funding specifically for CTE. Policymakers should ensure that adequate resources are available, potentially including requiring a state match to draw down federal Perkins funding in order to ensure more learners have access to high-quality CTE.

Transformational Change:

- **Create funding incentives to foster partnerships.**

Federal policymakers could designate a pot of funding that state and local entities may draw down only if they demonstrate strong partnerships between secondary and postsecondary to support the alignment of CTE programs of study. This was the aim of the formerly funded Tech Prep program. Funding that strengthens partnerships could be used to support intermediary organizations charged with building and sustaining collaboration across systems.

- **Develop new performance-based funding models that reward institutions for achieving strong outcomes through CTE.**

Federal and state funding should make better use of formula funding that addresses access to CTE, including incentives tied to outcomes and performance to ensure that systems are offering programming that leaves learners better off. This means there are dollars that help get people in the door and additional dollars tied to institutional performance in supporting learner success. For example, **California’s** [Student Centered Funding Formula](#) provides additional funding if colleges help students complete nine or more CTE units in the same program. This policy incentivizes colleges to focus on providing critical support for students so they persist, complete, and advance.

Leveraging Existing Federal Policy as a Framework for Greater Impact

- [Perkins V](#): Perkins is the federal CTE statute for secondary and postsecondary systems and is intended to support expanded access to high-quality CTE experiences for students. The bill was reauthorized in 2018 to enhance CTE in states and on the ground. Several of the provisions in Perkins V provide a road map for injecting career preparation across the entire ecosystem of secondary and postsecondary education. However, this statute has limitations, including the limited reach of Perkins funding in our education system. K-12 and higher education policymakers and practitioners should not limit their scope to what is fundable and countable.
- [Workforce Innovation and Opportunity Act](#) (WIOA): WIOA is the federal statute that focuses on our nation's workforce system, providing career services and education and training opportunities for those displaced from employment and in need of support to reenter the workforce. Similar to Perkins V, there are limitations with this statute, specifically around funding. With their overlapping foci, WIOA and Perkins V are policies that can be leveraged to better support today's students and jobseekers.
- [Every Student Succeeds Act](#) (ESSA): ESSA is a federal statute that focuses on K-12 education. The last reauthorization of the bill, in 2015, lent unprecedented support for CTE, which demonstrated federal policymakers' increased understanding that career exposures and skills in K-12 are critical for student success.
- [Higher Education Act](#) (HEA): HEA is a federal statute that focuses on postsecondary education. HEA expands access to CTE at postsecondary institutions, including community and technical colleges, and provides the opportunity to align postsecondary with workforce development. Limitations persist around funding, and reauthorization of the bill is needed to ensure higher education is more responsive to today's economy and better serves today's students.

POLICY CONSIDERATION 2

Support every learner in developing their career identity through career exposure, counseling, and other critical supports

Career identity—the link between a person’s motivations, interests, and competencies and their potential career roles—is critical for learners to better understand the career path that is best for them and the skills needed to get there. However, a learner’s career identity is not established overnight, and there is a need for much more robust education, counseling, and support structures designed to provide learners with the information they need to make informed choices about their futures.

This work must begin much earlier to ensure learners better understand the breadth of options that are available to them throughout their educational and career journey. Exploration programming should start prior to high school and be supported into and through postsecondary. These experiences should include intentional efforts to support learners in developing their career identities.

Federal and State Policy Recommendations

Essential Steps:

- **Create a federal definition of and guidance for career identity development.** Current definitions coming out of the U.S. Department of Education’s Office of Career Technical and Adult Education (OCTAE) note that a high-quality program of study includes career and academic guidance. However, while advising is critical, policy must more deeply encourage the development of career identity. When Perkins is updated in a few years, it should include a definition of this term, and OCTAE should release clearer guidance. These efforts will help promote more robust college and career coaching for students.
- **Require schools to help every student create a career plan and make demonstrable progress toward their goals.** States should set clear expectations that every young adult develop a career plan while in high school, with a focus on building career identity and making informed decisions around selection of pathways, early college experiences, and work-based learning. This plan should be embedded in the student’s high school transcript that is shared with their college upon enrollment. College personnel should draw on the plan to help students progress toward their college and career goals. In addition, state policy must ensure every learner makes progress on these plans before leaving high school so they are prepared for the next phase of their college and career pathways upon graduation from high school. These requirements for individual student graduation plans should

meaningfully incorporate student supports, including tutoring, mentoring, and other activities that build their social capital. For example, in **Oklahoma**, each student [is required](#) to complete an Individual Career Academic Plan (ICAP) in order to graduate from a public high school with a standard diploma.

- **Increase funding and support to enhance career counseling.**

Increased resources should be allocated to hire qualified career counselors in high schools and colleges. It is equally important to allocate public resources to provide professional development opportunities for guidance counselors, academic advisors, and faculty so that all staff have adequate knowledge, resources, and tools to help students along their college and career pathways. This policy should dedicate more federal and state resources to schools in high-poverty areas to ensure access and the deployment of career counselors and navigation tools in order to increase access for learners in low-income communities.

Transformational Changes:

- **Incentivize shared advising approaches.**

Federal and state policy should incentivize shared advising approaches, such as embedding college counselors in high schools, so that all young adults can more readily ascertain what their credits mean and how to translate their competencies as they progress along their college and career pathways.

- **Create or expand a robust career navigation system.**

Career navigation is critical for learners to get the data they need to make informed choices about their careers and pathways. States can create or expand these services by offering a technological platform—paired with in-person advising—that would be accessible to all learners to guide them on skill development, professional networks and social capital, and greater understanding of workplace dynamics. The system will use national labor market information, as well as regional data around in-demand jobs and the value of CTE programs, to increase transparency around opportunities and outcomes. This will enable students and families to make better-informed choices about what is best for them.

POLICY CONSIDERATION 3

Provide access to intentional dual enrollment experiences that combine CTE and rigorous core academics

Dual enrollment provides early exposure to and experience for college, helping accelerate entry into postsecondary programs of study and attainment of credentials of value. All high school students, including those who are enrolled in CTE programs, [should have access to dual enrollment courses](#) that bolster college *and* career pathways. This can be accomplished by bundling CTE and rigorous core academic courses that count toward the requirements for specific postsecondary programs of study in a desired career field. To avoid dead ends, programs should be embedded thoughtfully in all career pathways, and should be available to all students, not just some.

As part of this policy, there will be large equity gaps to close; a specific example is the need for dual enrollment courses to align to portable, stackable degrees and credentials. This is generally not the case with applied associate’s degrees; many CTE courses offered as dual enrollment courses are embedded in applied associate’s degree programs, creating an equity issue by reinforcing the idea of a “vocational track” and creating a dead end when applied associate’s degrees limit the ability of students to transfer to four-year degrees.

Federal and State Policy Recommendations

Essential Steps:

- Develop statewide policy for dual enrollment that includes CTE.**

To encourage equitable growth of high-quality dual enrollment programs, every state should set clear and consistent rules—particularly around funding—for all school districts and institutions of higher education to follow. State policy should also ensure a robust role for both rigorous core academics and CTE classes for all students taking dual enrollment. Finally, statewide policy must also make clear the governance structures that administer dual enrollment in the state, and specifically where governance for dual enrollment in CTE courses is vested.
- Embed dual enrollment in all state-supported CTE programs of study.**

High-quality programs of study should include options for students to participate in dual enrollment to encourage a stronger and more seamless transition between secondary and postsecondary education. For example, in Illinois, the Illinois Community College Board (ICCB) sponsored the development of [Model Programs of Study Guides](#) for priority industry areas identified in the state’s Perkins V plan. The Model Programs of Study Guides include identifying priority dual enrollment courses that students should participate in as part of the program of study.

- **Expand cost-free experiences for learners.**

Federal and state policy should ensure greater access to dual enrollment in CTE programs by removing cost barriers, specifically non-tuition costs such as books, fees, protective equipment, and instructional materials. This should include addressing the added costs associated with allowing students to take courses on the college campus, where feasible. Federal policy must also create and implement a consistent interpretation of how students' dual enrollment credits are to be treated for the purposes of Satisfactory Academic Performance (SAP) and other financial aid requirements.

More on Dual Enrollment Policy

While the Policy Leadership Trust's recommendations in this brief specifically address dual enrollment through the lens of CTE, federal and state policy changes that improve equity of access and success to dual enrollment as a whole will also benefit dual enrollment CTE courses specifically. For more dual enrollment policy recommendations, please see the Policy Leadership Trust's [Achieving Equity in College in High School Programs: Practitioner-Informed Policy Design Commitments and Principles](#) and the College in High School Alliance's [Unlocking Potential: A State Policy Roadmap for Equity and Quality in College in High School Programs](#).

Transformational Changes:

- **Implement policy solutions to address dual enrollment instructor shortages in CTE programs.**

This may include states creating accreditor-approved certification programs for new faculty who are joining from the workforce, establishing and ensuring cross-system recognition of faculty credentials for dual enrollment and CTE instructors, and allowing for school districts and colleges to pool their resources to identify one candidate who can meet identified needs on both the K-12 and higher education levels.

- **Incentivize intentional dual enrollment aligned to labor market needs.**

Students should have access to dual enrollment opportunities that align to their programs of study and pathways. Dual enrollment funding mechanisms should be aligned to incentivize intentional dual enrollment and to limit or eliminate random or inconsistent opportunities. In addition, state accountability systems should be aligned toward the same goal, through measuring both dual enrollment access and success, and

prioritizing core general education and highly transferable technical courses. As part of this, states need to be more engaged with business and industry and to develop structures to ensure dual enrollment partnerships are engaged locally to understand existing labor market and workforce needs. States and local entities should then use that understanding to incentivize or require dual enrollment partnerships to provide courses that are aligned to local or state workforce needs. For example, **Indiana's [dual-credit initiative](#)** aims to integrate transfer policy and technology to foster intentional course taking and to scale opportunities for high school students to earn recognized postsecondary credentials.

POLICY CONSIDERATION 4

Provide every student with high-quality work-based learning experiences integrated into their academic coursework

Incorporating work-based learning into education programs provides an opportunity for students to practice and improve their job-readiness skills, expand their professional networks, and strengthen their ability to navigate the world of work. Importantly, programs like apprenticeships and internships are a critical component of equitable CTE strategies because they enable participants to earn income while they build skills and gain experience in their desired career fields. Work-based learning also provides students with opportunities to get career guidance from professionals in a field of interest and to build professional networks and social capital with value in the labor market. To ensure these opportunities are available, high quality, and a core element of CTE programs, federal and state policy must better support these models.

As part of these efforts, it is important that both high school and colleges help to connect young adults to work-based learning opportunities and contribute to seamless transitions from one work experience to another. This means cross-system coordination, as well as deep partnership with local employers, to help inform and provide these activities. Schools and institutions also must work to ensure that work-based learning experiences are learner-level appropriate while also being of high quality, regardless of geographic region. Lastly, policymakers must also acknowledge that work-based learning should be a spectrum of activities, rather than a one-size-fits-all approach. Opportunities and connection points should account for different student needs and the different industry needs as well.

Federal and State Policy Recommendations

Essential Steps

- **Develop a state framework for high-quality work-based learning.**
States should develop a framework for work-based learning that is applicable across

secondary and postsecondary education and that defines key terms, outlines the roles of cross-sector stakeholders, and creates a set of quality indicators for work-based learning, including progression of skills from experiences. As part of this framework, states should set equity goals and targets for secondary and postsecondary learners to ensure that efforts are being directed equitably. Many states are already doing this through accountability models used in Perkins and ESSA. However, these efforts can be expanded upon to ensure greater accountability across systems and sectors.

- **Embed paid work-based learning opportunities in CTE programs of study.**
The federal government should allocate dedicated resources in Perkins, ESSA, and WIOA to schools and colleges to grow work-based learning opportunities and to connect CTE students with available options. As part of this investment, federal policymakers should be clear that funding should be used for an array of work-based learning options, including internships and apprenticeship expansion—specifically youth apprenticeship and pre-apprenticeship, so younger students can prepare for future opportunities. Meanwhile, states can require work-based learning for high-school graduation. Federal policy can incentivize states to act by requiring work-based learning as part of states’ Perkins V planning or as part of their accountability systems. Lastly, youth should be paid for their work. Offering compensation honors their contributions and can help to close equity gaps among youth who simply do not have the economic resources required to participate in unpaid experiences. For example, in **Oklahoma**, beginning with the class of 2023, students [will be required](#) to participate in service learning or work-based learning at least once in grades 9 through 12.
- **Create transparency around the implications of the federal Fair Labor Standards Act for students under age 18 who participate in work-based learning.**
Too often employers cite federal labor standards as a barrier to their participation in work-based learning. However, the law states that there are exemptions for student learners and allows students to start work at 16 if certain conditions are met, including on-site mentorship and limited access to hazardous work. Given this, it seems that much of the hesitation on the part of employers may be due to a perception of legal barriers, rather than a need for changes to the law, indicating the need for increased transparency about legal requirements. States should create one-pagers that are easily accessible online and offer employers information about federal and state labor laws in relation to work-based learning, so that employers can better understand any legal constraints on their role in partnering to provide high-quality work-based learning.

Transformational Change:

- **Support and fund regional intermediaries.**

Regional intermediaries have an essential role in ensuring the scale and sustainability of high-quality work-based learning. Intermediaries foster strong relationships across K-12, postsecondary, and workforce partners to identify and facilitate work-based learning experiences for students. [Many intermediaries across the nation](#) lack the capacity or resources necessary for transformational change. With increased resources from federal and state leaders, these entities can work to start up and sustain critical partnerships. For example, in **Dayton, Ohio**, Montgomery County Educational Service Center (MCESC) facilitates the state-mandated [Business Advisory Council](#) (BAC) for both Montgomery and Warren counties' public schools. The MCESC is responsible for the continued success of the council and meeting the mission of ensuring the local workforce can compete by enhancing partnerships between schools, higher education, and employers.

- **Expand virtual work-based learning options.**

Federal and state policymakers alike should consider [expanding high-quality virtual work-based learning options](#), providing funding and flexibility to existing models to ensure great accessibility for learners. Virtual options could address several common barriers for participation, including transportation. However, with virtual options, there need to be necessary guardrails in place to ensure programming and opportunities meet the definition of high-quality work-based learning and are not simply online career exploration activities.

POLICY CONSIDERATION 5

Build stronger cross-sector data and accountability structures to ensure CTE student success and advancement

Accountability structures can, when designed properly, help break down the silos between K-12, postsecondary, and workforce development to incentivize high-quality programs that advance youth on college and career pathways. If structures are established, they also help reward programs that are operating in the best interests of students, and course correct those that are not. Policies should be designed to ensure systems actively work together. This includes not only secondary and postsecondary systems, but also strong partnerships with employers and the workforce system. Given how localized workforce needs can be, these leaders have an important role to play in the development and design of CTE.

Data is a critical piece to the accountability puzzle. To ensure programs and providers are being held accountable for better serving learners, K-12 and postsecondary systems need accurate and

real-time data to inform CTE program relevancy and value. Data can help show which CTE programs of study are most relevant to the needs of learners while also aligning with the accountability system's goals. Additionally, this information should be widely available to students, families, and communities so individuals can make informed choices about their college and career pathways.

Federal and State Policy Recommendations

Essential Steps:

- **Establish a state unified definition and standards for career readiness and ensure it is a core component of accountability for K-12 education.**

This should include a statewide attainment goal, with clear targets for closing equity gaps in college access, persistence, and attainment and entry into high-wage, in-demand career fields. Alongside a statewide attainment goal, which is inclusive of all system partners, states should also develop a clear understanding of their vision and goals for their workforce development system for youth, inclusive of Perkins V and other youth workforce and career development funding and programs. For example, **Tennessee's** Ready Graduate Indicator data factor into the state's early postsecondary opportunities (EPSO) framework as an "indicator of school quality and student success." In addition, Tennessee challenges districts to develop "a robust portfolio of early postsecondary opportunities [to help] ensure that college credit and/or a technical credential is accessible to all high school students."
- **Develop combined state plans.**

Federal policy allows states to create combined state plans for programs that are related, such as Perkins and WIOA. This combined planning allows for all state system partners to be at the table, informing program development, discussing how to blend and braid federal resources, and establishing accountability structures to measure success across systems and programs. Combined plans can also reduce duplication of effort across sectors and funding streams.
- **Pass federal and state legislation on data transparency.**

Federal and state policy should encourage data transparency and sharing across systems and states. It should modernize the reporting system for secondary, postsecondary, and workforce data by reporting on student outcomes such as program completion and post-program employment, earnings, and continuation on pathways.
- **Invest in state and local data systems.**

Federal and state policymakers must offer targeted and additional dollars for state and local data systems. These resources can create better collection of student information and outcomes and provide capacity funds to ensure state and local leaders are able to

accomplish their goals. This can also help build alignment across systems so data is shared and represents a student's full pathway (e.g., by connecting high school graduation data to postsecondary attainment data to individual wage record data).

Transformational Change

- Create universal and aligned standards across CTE programs and systems.** Federal and state policy should evolve to create aligned and strong outcome measures across K-12 and higher education to ensure equitable outcomes across all CTE programs. These outcome measures should move beyond job placement and wages to consider other critical measures, such as career advancement, job benefits, and improvements to an individual's quality of life, as measured by life expectancy, prosperity measures, health measures, and measures of true economic mobility.

State Spotlights

Delaware

When it comes to career and technical education, college and career pathways, and preparing young people for life after high school, Delaware is a national leader. Delaware already has enacted a majority of the policies recommended in this brief, especially in ensuring accountability across systems for the success of CTE learners.

Delaware has a combined Perkins and WIOA state plan that represents a partnership between the state's education and workforce systems to ensure both strategic policy and regulatory guidance are in place to ensure local education agencies, postsecondary institutions, and workforce providers are successful in their CTE efforts and better serving learners. Delaware's CTE definition guides program design and addresses issues of access to ensure CTE programs across the state are more equitably serving students. The definition creates clear standards for the CTE system, defining expectations for local education agencies in their implementation of high-quality CTE programs, and outlines how the system will engage employers to help place youth in work experiences aligned to their pathways.

The [Delaware Pathways](#) initiative supports cross-sector collaboration and brings the state's CTE system together with other state systems and key education and workforce development initiatives. Delaware Pathways has created and scaled a statewide college and career pathway system through which participating public high school students earn high school and college credits, as well as industry-recognized credentials, and participate in work-based learning

experiences. This promotes pathway approaches across all CTE programs in the state, results in learners being prepared for both college and career when they leave high school, and encourages seamless transitions to students' postsecondary options of choice.

Texas

In recent years, Texas has significantly expanded its education system's focus on career pathway opportunities using multiple strategies outlined in this report. The state's funding and accountability system has been reorganized to advance the state's [college and career readiness standards](#). When students demonstrate readiness for college, career, or the military (including through earning industry-based certifications) through the state's standards, local education agencies can earn [outcomes-based funding](#). This incentivizes education leaders to focus on ensuring learners graduate high school ready for college, career, or the military. In addition to emphasizing learner access to career pathways through the state's funding and accountability system, Texas has also been working to expand career exploration and career-focused counseling for students, including through the [Effective Advising Framework](#) that supports local education agencies and their cross-sector partners in implementing high-quality advising.

Texas has also focused on expanding dual enrollment (known as dual credit in the state), including through its [College and Career Readiness School Models](#) such as the Pathways in Technology Early College High School (P-TECH) career-focused dual credit school model. Texas policy has encouraged the growth of these popular six-year programs, which are partnerships between a school district, college, and employer, to provide students with the opportunity to earn a high school diploma, associate's degree in an in-demand field, and favored hiring status at the employer partner. In addition to funding for both the school district and college partner through the state's existing funding systems for K-12 and higher education, [P-TECH programs receive](#) additional funding per student, and have access to grant funds to implement new schools and expand existing ones. In the wake of COVID-19, the Texas legislature has also [provided extra state and federal funding](#) toward the Texas COVID Learning Acceleration Supports Program (TCLAS) to support the implementation of new P-TECH programs, expand existing programs, and increase the number of high school educators with the credentials to teach dual credit courses.

Washington

In April 2019, Washington State passed the Workforce Education Investment Act, including [Career Connect Washington](#) (CCW), an initiative that works statewide to combine classroom learning with practical career experiences for youth and young adults to ensure they are prepared for postsecondary education and the workforce. Career Connect Washington established a statewide, three-step, career-connected learning continuum: Career Explore,

Career Prep, and Career Launch. The continuum begins in elementary school and continues through postsecondary education.

Since its passage, CCW has continued to receive additional funds, demonstrating the initiative's value. The initiative has also received CARES Act funding to expand Career Launch, which includes a paid internship and aligned postsecondary pathways to a credential, degree, or a year's worth of college-level credit. The governor also allocated WIOA resources to expand CCW through a competitive grant program. The seven philanthropic funders that have supported CCW since 2018 have also remained engaged and have pledged resources through 2022. CCW is an example of how executive leadership in states can allocate resources to support the expansion and sustainability of a high-quality statewide career identity development and work-based learning initiative.

Additionally, Washington's State Board for Community and Technical Colleges (SBCTC) offers a [CTE dual credit program](#) that provides high school students the opportunity to earn college credit for successful completion of CTE courses taught by certified high school instructors. Through this program, community and technical colleges allow certified CTE teachers to deliver college-equivalent CTE courses to students in grades 9 through 12 for dual high school and college credit. Courses are offered at the high school or a [state skill center](#) through an articulation agreement between the high school or school district and the college. Credits earned through the program are transferable to any community or technical college in the state of Washington.

Colorado

Colorado's current [strategic plan](#) for CTE outlines many of the priority topic areas discussed in this paper, including career advisement and development, the importance of partnerships, elevating quality programs, and ensuring work-based learning opportunities underpinned by a fundamental principle of ensuring equity and access. One highlight of Colorado's CTE system has been the emphasis placed by the state on expanding access to dual enrollment—known as concurrent enrollment in the state—including for students in CTE courses. In the school year 2019-20, [45 percent of Colorado concurrent enrollment students](#) were taking a concurrent enrollment CTE course, a 20 percent increase from the school year prior. Colorado has a [comprehensive state policy](#) that governs the growth of concurrent enrollment statewide, of which CTE is a beneficiary. The state also operates the [Accelerating Students through Concurrent ENrollmentT](#) (ASCENT) program, which focuses on allowing students from low-income backgrounds to remain in the K-12 system for a 13th year and pursue a full year of college courses at no cost.

Additionally, the state provides tools for school districts and colleges to help students plan their CTE course experiences, including the [Individual Career and Academic Plan](#) (ICAP) and [My Colorado Journey](#). My Colorado Journey, in particular, is a cross-agency collaboration to develop a one-stop student support portal to explore education and career opportunities, locate training and community services, and quality for financial aid.

Lastly, Colorado has been very active in providing or facilitating opportunities for students to engage in work-based learning opportunities. The Colorado Department of Education has a [Work-Based Learning Continuum and Readiness Assessment](#) to guide the growth of these opportunities for students, and also partners with nonprofit organizations like [CareerWise Colorado](#), which provides business-led, student-centered apprenticeships beginning in students' junior year of high school.

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