How States Can Better Prepare Students for **Life After High School**

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Executive Summary

COVID-19 caused students across the country to postpone or change their plans for college while simultaneously dampening job prospects. Hardest hit have been families in poverty and students of color, both educationally and economically.

The pandemic is also hastening a steady march toward a fluid gig economy that displaces blue-collar workers with robots, contractors, and lower-wage service industry workers. During this transition, a college education will likely be more important than ever; during our last recession, more than 95 percent of newly emerging careers required a postsecondary degree or credential.

Over the past 10 years, states across the country have invested in career and technical education (CTE) to boost student access to a living-wage career. Most recently, this effort has focused on "new" CTE, which prepares students for living-wage technical careers such as nursing and engineering. High-quality CTE programs can improve outcomes in high school, lead to higher wages, and even result in higher postsecondary enrollment rates, especially for students from economically disadvantaged backgrounds.

Career pathways that include college and career preparation can benefit students during a COVID recovery, but for that to happen states must do more. In many states, the quality of career education is uneven and not aligned with economic realities.

We find that states share three common weaknesses that impede quality, access, and alignment:

Little support for districts that lack capacity: Developing career education programs requires analytical capacity to identify appropriate careers and certifications. Developing productive industry partners that can inform programs and offer real-world learning is time consuming and requires knowledge and connections many schools don't have. However, all too often states do not support districts to bridge these gaps.

Misaligned credit award and funding policies that prevent real-world learning: Real-world learning through job shadowing or internships can offer valuable exposure to students as they reinforce skills and knowledge from the classroom and explore post-high school options. But credit award and funding policies in many states create barriers to schools that want to make these learning experiences part of a student's high school education.

Weak career accountability and information systems: No state has a comprehensive accountability system that provides consistent, transparent information about student enrollment, graduation rates, and academic and career attainment for all career education providers. Without it, state education agencies and schools cannot compare performance, identify schools that need support, or flag models as exemplars. And without data about career prospects and program performance, families do not have the information they need to make informed choices about high school.

To solve these problems and create a more coherent education system that prepares students for life after graduation, states should take these four steps:

1. Support districts to conduct analysis, form industry partnerships, and scale innovation.

Too many states leave schools and districts on their own to identify the right programs, credentials, and industry partners. States can play a valuable role in helping schools develop quality career education programs by:

- Centralizing job market and employment data, similar to Texas's dashboard of employment data and list of approved pathways and course sequences. Indiana identifies high-wage, high-demand careers and disperses tiered funds to aligned courses.
- Working with industry partners to continually update lists of industry-approved and in-demand certificates and assessments, and phasing out those that are no longer relevant, like Kentucky and Florida.
- Creating intermediaries like the Delaware Office of Work-Based Learning, Career Wise CO or Career Connect WA in order to help districts engage with industry for work-based learning. But districts also need close relationships with industry for ongoing program input—something that intermediaries could do more to support.
- Supporting district experimentation during the pandemic by identifying and incentivizing innovations. The Colorado Community College System (CCCS) hosts bimonthly calls with secondary and postsecondary program directors, which helps them identify innovators like Westminster High School. To scale implementation, CCCS showcases examples, coordinates mentoring, and offers competitive grants.

2. Revise state policies that pose barriers to real-world and postsecondary learning.

Credit award, seat-time funding, teacher certification, and articulation policies can all pose barriers to program implementation. States can address some of these by:

- Allowing districts to award credit for out-of-school learning, like New Hampshire, or using a competency-based model to award course credit, like Virgina. States can consider prior learning assessments at the high school level to award credit for learning that occurs outside the classroom. Students can be credited for hands-on-learning and schools can tap local expertise without having to hire or train new teachers.
- Adopting new funding models, like South Carolina or Florida, that create alternatives to funding based on seat time so students have more flexibility in when, where, and at what pace they finish courses without penalizing schools or districts financially. The pandemic has created more incentive to explore alternatives to seat-time funding.
- Encouraging technical dual-enrollment programs that allow high schools to coordinate with local colleges and experts, like Georgia and Arizona.
- Breaking postsecondary and career credentials into stackable chunks, allowing students to work toward an ultimate degree while still carrying interim credentials that are recognized across institutions and by industry, as Ohio has done.
- Working with districts to identify local or state policy workarounds; sometimes the barriers schools face are the result of local policy, or a misunderstanding of what is allowable by the state.

3. Deliver consistent information about available programs and careers.

State agencies, providers, and families need information about available programs to assess the landscape:

- States should set clear definitions and standards for career and technical education, and then identify program providers using these terms.
- Public-facing, statewide information systems, like My Colorado Journey and Indiana's NextLevel Jobs provide youth and families with valuable information about regional careers, wages, demand projections, and available programs. States can also consider investing in or creating one-on-one career navigation services, like MyBestBets.

4. Hold all providers accountable to academic, professional, and postsecondary outcomes.

States can leverage existing K–12 accountability systems to ensure all students have equitable access to programs, and that programs deliver strong academic and employment outcomes. The pandemic caused disruptions to state testing, giving states an opportunity to reassess and improve their accountability systems by:

- Encouraging schools to offer effective career preparation programming by using measures for work-based learning like West Virginia and Georgia, or measures for dual credit like Illinois and North Dakota. States can incentivize college *and* career preparation by offering bonus points when students achieve both, like in Delaware.
- Conducting an audit of the full range of career program providers and including them in public-facing school reporting systems so they all are held accountable to the same standards, and families and the public can compare their effectiveness using common academic and work readiness measures. This would include technical high schools, shared-time centers, and career academies within comprehensive high schools. To date, no state does this.

Disruptions from the pandemic will likely force states to reimagine their systems for supporting postsecondary transitions, informing the public about what's working, and measuring schools' effectiveness. Before the pandemic, too many states left schools and districts on their own to determine goals and assess the effectiveness of their career-based learning programs, which resulted in incoherent and inequitable learning experiences for students. The systems they rebuild after the pandemic should be designed to set every student up for success in a complex and uncertain future.

Introduction

COVID-19 caused students across the country to postpone or change their plans for college. while simultaneously dampening job prospects. Hardest hit have been families in poverty and students of color, both educationally and economically.

The pandemic is also hastening a steady march toward a fluid gig economy that displaces blue-collar workers with robots, contractors, and lower-wage service industry workers. It has accelerated the demand for "soft skills," such as problem-solving and the ability to work independently: the pandemic favors companies that are nimble and creative.

During this transition in our economy, a college education will likely be more important than ever; during our last recession, more than 95 percent of newly emerging careers required a postsecondary degree or credential.

Over the past 10 years, states across the country have invested in career and technical education (CTE) to boost student access to a living-wage career. Most recently, this effort has focused on "new" CTE, which prepares students for living-wage technical careers like nursing and engineering. High-quality CTE programs can improve outcomes in high school, lead to higher wages, and even result in higher postsecondary enrollment rates, especially for students from economically disadvantaged backgrounds.

The pandemic amplifies weaknesses in our economic and education systems. Equitably preparing all students for a satisfying life will require more than incremental change. States must refocus K–12 priorities so all students are better prepared for life after graduation. To this end, states can revamp four policy areas related to secondary career preparation:

1. Support districts to conduct analysis, form industry partnerships, and scale innovations.
2. Revise policies that pose barriers to real-world and postsecondary learning.
3. Deliver consistent information about available programs and careers.
4. Hold all providers accountable to academic, professional, and postsecondary outcomes.

All states, no matter how robust their career preparation programming may be, have an urgent need and historic opportunity to improve how students are prepared for life after high school.

Terms Used in This Paper

Career academy: A method of delivering career education. Students pursue a concentrated course of study in a single career and connect with industry through work-based learning. Career academies use project- or place-based instruction and teach students in small cohorts, or academies. Linked Learning typifies this model, but it is found in some form in schools across the country.

Career and technical education (CTE): The most common term used in the United States to describe career-focused preparation at the secondary and postsecondary level. The federal government first used this term in 2006 to signal a movement away from vocational/technical education and the blue-collar careers associated with it. CTE is often referred to as vocational education in other countries.

Career education: A general term used in this paper for courses, programs, pathways, or work-based learning that prepares students for the world of work. This may include developing general workplace competencies, or "soft skills," technical skills in a specific career, or experience and training in the workplace.

Career pathways: A program that prepares students for a specific career or career cluster. Our use of the term includes a concentrated sequence of career preparatory coursework. Career pathways can prepare students for a range of careers, some of which will require a postsecondary credential.

Comprehensive schools: The comprehensive high school is the most common method of delivering CTE in the United States. Students complete graduation requirements while pursuing CTE through classes, pathways, career academies, or dual-enrollment opportunities with a local technical college.

Shared-time centers: Shared-time centers enroll students part-time, typically during the last two years of high school, to receive focused training in a career pathway. Students remain enrolled in their "home school," from which they earn a high school diploma. These are often regional centers that serve students across multiple districts, as in the case of Washington State's Skill Centers or the CTE programs operated by New York's BOCES system.

Technical high schools: A technical high school enrolls students in a full-time program that specializes in CTE. Schools typically enroll students starting in the 9th grade, as in the vocational and technical schools in Massachusetts. They can be operated by a district or by a statewide board, as in the case of Connecticut.

Work-based learning: A type of learning that connects students to the working world. It includes mentorships, job shadowing, industry-designed projects, school-based enterprises, internships, and apprenticeships.

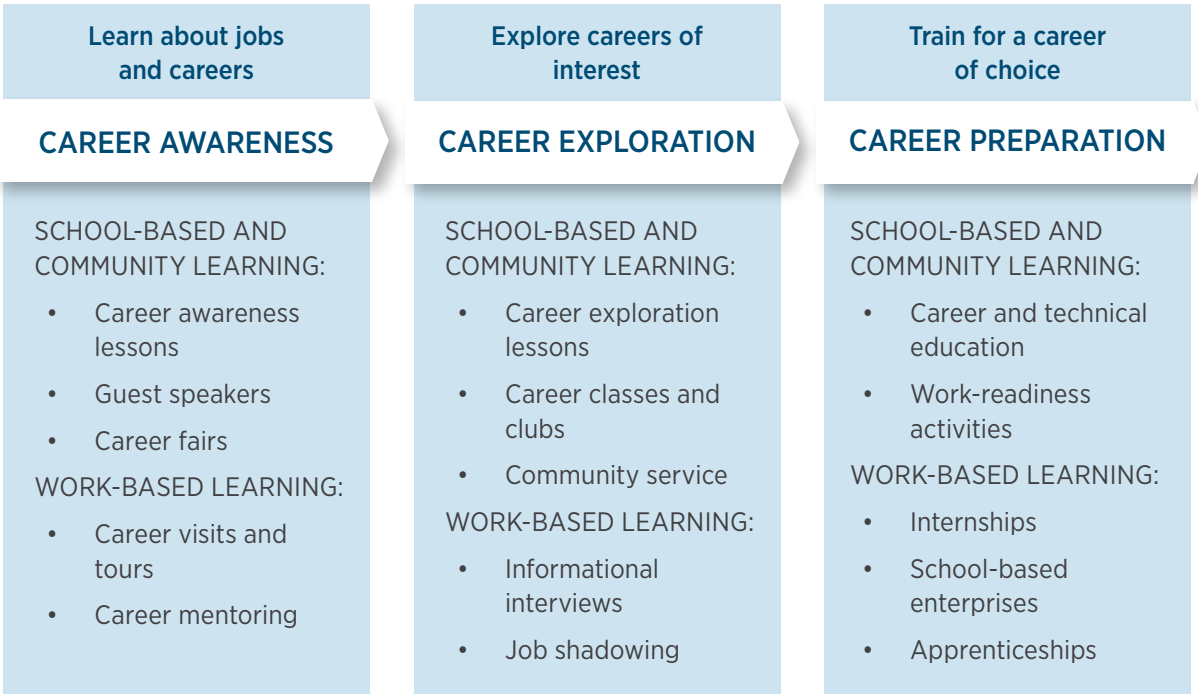
The Current System: A Hodgepodge of Programs with Uneven Access

Schools offer a range of career experiences without clear definitions or standards

The United States has no common standards or definitions for career preparation across or within states. This results from a CTE system that is governed primarily by state and district action. Federal guidelines are limited to broad recommendations tied to federal Perkins dollars.

The result is that "career education" can encompass a range of school-based experiences, from career awareness to career preparation (figure 1), which often do not conform to agreed-upon terms and definitions. In other words, one school may say that a "legal studies career pathway" consists of three disconnected courses, while another may offer a set of six sequential courses that includes dual-enrollment college classes, a year-long internship, and a postsecondary certification.

Figure 1. Schools Offer a Range of Career Preparation Experiences that Fall Along a Career Development Continuum



Source: Modified from New Ways to Work's career development continuum.

Work-based learning is a core feature of CTE in other countries, where there are often clear standards for apprenticeships and internships. In the United States, work-based learning varies from one school to the next. An internship may be six worksite visits over the course of a semester or an intensive learning experience aligned with coursework and workplace goals.

Students have uneven access to comprehensive career education

While any of the approaches outlined in figure 1 will raise awareness about career options, research suggests that better school, postsecondary, and career outcomes are more likely when students complete programs aligned with "career preparation." Specifically:

- Students who complete a sequence of coherent and increasingly advancing courses can lead to increased high school graduation rates and higher wages, compared to students who do not. Concentrated coursework appears to offer greater wage benefits to boys and to students from low-income households.
- Coherent program design appears to offer a higher-quality learning experience. Career academies typically feature college preparatory coursework, a project-based instructional approach, a progressive sequence of career courses, a small cohort of students, and connection to real-world work. This combination generally results in reduced dropout rates, a more rigorous course load in high school, and higher college enrollment rates, especially for under resourced students. Career and technical high schools can produce similar results.
- Work-based learning prepares students for success in the workplace. Mentorships, internships, and school-based enterprises offer opportunities for students to develop "soft skills," like communication and cooperation, which employers place in high demand. Research suggests work-based learning is most effective when combined with job site mentoring, pay, alignment with a career pathway, and data-driven outcomes. The most intensive form of work-based learning—apprenticeships—leads to clear wage benefits for participants.

Despite these benefits, not all students have access to comprehensive coursework, career academies, and work-based learning.

Students are much less likely to have access to a comprehensive career academy model (24 percent) than simply career education coursework (83 percent). Evidence suggests that the career academy model is most elusive for students from low-income households and students of color. Career academy programs in California struggled to achieve equitable enrollment along race and income. Across the country, students from wealthier households are more likely to attend a CTE school than are students from less wealthy households. These CTE schools are in turn most likely to offer career academies, which are associated with strong secondary and postsecondary outcomes.

When looking at enrollment in comprehensive career coursework by race, we find that white and Asian students are slightly more likely than their Black and Hispanic peers to concentrate their career courses in a single pathway. However, students with Individualized Education Programs (IEP) and students who are English language learners are somewhat more likely than their peers to concentrate their course-taking in a single pathway.

Table 1. White and Asian Students Are More Likely to Concentrate in a Single Pathway Than Their Black and Hispanic Peers

	Three or more credits in a single pathway	Three or more credits in a different pathway	Percent gap
White students	22%	19.9%	2.1 percentage points **more** students focused on a pathway
Black students	18.2%	23.2%	5 percentage points **fewer** students focused on a pathway
Hispanic students	16.4%	17.9%	1.5 percentage points **fewer** students focused on a pathway
Asian/Pacific Islander students	12.1%	11.5%	0.6 percentage points **more** students focused on a pathway

Source: "Table H201. Percentage of public high school graduates with each career and technical education (CTE) coursetaking pattern, by student race/ethnicity and sex: 2013," National Center for Education Statistics website.

Work-based learning is also unevenly distributed across schools and programs

Fewer than a fifth of students reported participating in these experiences. CRPE's scan of schools and districts suggests that work-based learning is usually offered for particular programs or based on student interest, when it is available at all. Disadvantaged youth especially have limited access to programs that offer work-based learning. In a survey of districts nationally, work-based learning was the second most commonly cited barrier to student participation in career education.

Within-school tracking may be on the decline, but schools still pose barriers to access

Earlier research in vocational and technical education identified evidence of tracking students of color and those from low-income households into career training programs, many of which were accompanied by academic coursework of lower rigor than standard courses. A 2011 study in California still found that students from low-income households and students of color were more often tracked into less rigorous academic and career education classes.

But in recent years, schools have put in place safeguards to try to prevent student tracking. These include offering an exploratory class in 8th or 9th grade so students can try different pathways before selecting one. Instead of locking students into a course sequence in 9th grade, most counselors help students move to a program or school that is a better fit. Research conducted since this change has found limited evidence of tracking by income and race.

Schools may not be tracking students into low-quality programs as frequently as in the past, but they still pose barriers to enrollment. Career and technical schools are more likely than any other specialty school to require admission tests and to request a student's academic record. Three-fifths have selective-admissions requirements such as grades, an application, or a reference letter. Specialized admission requirements signal student intent to be part of a school that offers a different learning experience, but requirements can also act as deterrents.

Shortcomings in State Policy

Although trends emerge, research on the efficacy of career education is mixed. The career type that one pursues likely accounts for some of the variation; students in a nursing pathway will likely take more advanced coursework and receive a higher wage upon certification than a student who has completed a culinary pathway, for example. But state context plays a part as well. Recent studies from Massachusetts and Arkansas find positive outcomes for students enrolled in career education programs. Both of these states have invested in local and state policy that support quality career programming alongside robust academic coursework.

Many states fall prey to one or more common problem areas, which impact program efficacy and student outcomes:

- States do not support districts that lack capacity.
- Restrictive credit award, teacher licensing, and funding policies prevent schools from offering career education.
- States have weak career accountability and information systems.

States Do Not Support Districts That Lack Capacity

In other countries, the national government identifies and drives change in secondary and postsecondary career education programs. In the United States, this task often falls on districts. Changes in the local economy, industry standards, and workplace norms should be reflected in the careers, credentials, and skills that programs offer. However, this demands the ability to identify economic changes; partner with industry to interpret data; and have the willingness, personnel, and resources to test and implement new programs. Together, this represents an enormous capacity challenge for local districts and schools.

Program providers must respond to changes in the workforce

Workforce data is often available through federal or state sources, but these data are lagged to account for collection and cleaning. For example, federal Standard Occupational Classification codes were most recently updated in 2018—after an eight-year lag. Any new job titles created in the past three years are not reflected in available data. In the absence of good information, programs may prepare students for careers that do not exist or do not offer a decent starting salary. A recent analysis suggests that CTE enrollment in 10 cities did not align with high-paying, local careers.

Program providers must identify appropriate credentials and assessments

K–12 programs that offer industry-recognized credentials are placing their students in a good position to succeed in high school and beyond. A recent analysis found that students who earned industry credentials were more likely to graduate on time. Increasingly, students will need more than a high school diploma, but this doesn't mean students need a bachelor's degree. Two-year degrees and postsecondary certificates are highly regarded in some industries such as electronics, IT, and nursing, and can be correlated with greater wage earnings than four-year degrees.

But high schools are not conferring these valued credentials. At the K–12 level only a fifth of the credentials earned by students are valued or in demand by employers. No state is aligning which certificates are awarded at the secondary level with industry demand. Without a way to determine and measure the quality of a credential, it is difficult for local education agencies to determine which credentials actually provide labor market value.

Program providers must coordinate with industry

Districts need partnerships with regional industry to inform curriculum, programming, and emerging technology. However, only about one-third of districts surveyed nationally report that they coordinate with industry about which occupations are in demand. School systems also need input on certifications, assessments, and emerging technology to keep up with industry changes. Schools also need industry partnerships to offer work-based learning; more intensive forms of work-based learning—such as regular internships—require deeper and closer relationships.

When schools fail to form partnerships with industries that center on student learning and well-being, students can end up in programs that benefit business rather than the long-term outcomes of students.

State Policy Prevents Schools from Taking Advantage of Learning Opportunities and Experts in Their Communities

Credit award and funding policies can restrict work-based learning

Work-based learning has several benefits for students, whether it is offered as a way to explore careers, gain general workplace competencies, or apply theoretical knowledge learned in the classroom. Efforts are being made to boost work-based learning at the secondary level. Perkins V places a greater emphasis on work-based learning in secondary schools than its predecessor, Perkins IV. National organizations such as the American Institute for Innovative Apprenticeship support work-based learning for students at any age.

In the United States, workplace, insurance, and school policies converge to make work-based learning difficult to implement. At the school level, impediments include school funding tied to seat-time requirements and credit award policies that favor learning inside school walls. Colorado incentivizes schools to participate in work-based learning (see table 2). But even so, seat-based funding models can make districts reluctant to expand learning outside of the classroom. In Colorado, districts only receive funding when a student is at school at least five hours per day.

Table 2. A Handful of States Award Credit for Work-Based or Real-World Learning

	Credit for Real-World Learning
Colorado	Colorado passed a bill in 2016 giving schools financial incentives to encourage student participation in work-based learning. Schools can award credit for work-based learning as long as the experience is overseen by a teacher of record. In 2020, HB20-1002 was enacted to study whether postsecondary institutions can award credit for work-related experience, including work-based learning in high school.
Connecticut	Starting with the class of 2023, a local or regional board of education may grant a student one credit upon completion of educational experiences and opportunities that provide flexible and multiple pathways to learning, including CTE.
Indiana	2.5 required "flex credits" can be awarded for workplace learning.
Kentucky	LEAs can award an elective credit for work-based or service learning.
Maryland	Policy specifies that credit can be awarded for work-based learning. Different formats include a capstone project, integrated curriculum, and diversified curriculum (two credits in school and two credits "on the job").
Nebraska	Work-based learning is one of six credit options, for which two credits are required.
New Hampshire	Learn Everywhere, passed in 2018, allows non-LEA programs to offer credit. Programs must apply to the New Hampshire State Board of Education.
New Mexico	Policy states that elective credit can be awarded for apprenticeships.

Source: Researcher analysis.

Teacher supply can also be a barrier to adding new CTE programs. Credentialing, training, and pay all act as barriers to expanding CTE.

Course transfer policies can prevent students from transferring credit across providers

Across the country, one-third of high school students complete college credit through dual enrollment, Early College, and Running Start programs. CTE dual enrollment in particular has positive impacts on graduation, college enrollment, and college persistence. As of 2016, 44 states specify in statute or regulation that high school students can earn credit for CTE postsecondary coursework. But policy barriers impede students from translating CTE postsecondary course attainment to valuable credentials.

States Have Weak Accountability and Information Systems for Career Providers

States do not publicly report all academic and program outcomes

A host of programs exist outside of public reporting systems. For example, while comprehensive high schools are the most common method of career education, no state requires that high schools report separately on career academies or pathways within schools. Shared-time centers are not found in any state reporting system, even though 43 percent of districts report using them to offer career training. While some students will attend a shared-time center for a single class in one semester, others will enroll half the day for two years. Yet there is no publicly available information about who is enrolling, how many students go on to graduate, or how well they are doing. These data are only reported by the student's home high school, even when part-time centers confer core graduation requirements, such English Language Arts and math.

Some nonprofits offer career education on a part-time basis as a supplement to a student's high school education (not unlike a part-time CTE center). This often consists of coursework and work-based learning after school or during the summer. These providers are not monitored by any state agency.

States do not hold programs to consistent measures

How states report career measures often does not offer the ability to compare performance across providers. To date, 44 states include career-related measures. However, states are more likely to offer a menu of measures (30 states) than require specific ones (14 states) that apply to all schools. A menu approach gives schools flexibility, but it also makes it impossible to compare one school's performance to another. Some states, like California, combine all career and college measures into a single score—families and community members cannot see what proportion of students are completing CTE pathways, AP classes, or dual-enrollment coursework.

Without the ability to monitor how students are performing or who is enrolling, states won't know how quality and program access differs within and across providers. Industry partners, teachers, and school leaders lack knowledge of each other's activities and may offer overlapping programs. And programs with similar career pathways miss opportunities to learn from one another.

Families may not know which programs offer career preparation or how well they do

When making choices across schools, families and students want an education experience that offers the right balance between fit and quality. Families and students also need information about the career that a program or school offers to know whether that is the right fit for their child's ambitions.

Making information directly available to families may influence a student's choice about a career pathway program, school, or course. While schools offer counseling, job fairs, and career days to help students learn about potential careers, it is the family and student's own counsel, not schools, that are most influential for students when thinking about their career trajectory.

Student interest may ultimately determine why a student enrolls in marketing rather than IT, but when information is available, students and families at least have the option to weigh the pros and cons between electives, pathways, and schools.

What States Can Do

Examples from leading states suggest how state policy can better support career education. In particular, they demonstrate how others can improve coherence and quality by:

1. Supporting districts to conduct analysis, form industry partnerships, and scale innovations.
2. Revising policies that pose barriers to real-world and postsecondary learning.
3. Delivering consistent information about available programs and careers.
4. Holding all providers accountable to academic, professional, and postsecondary outcomes.

These suggestions require investments, but will result in economies of scale that support school districts as they face limited budgets and competing demands. States can seek partnerships to offer capacity building supports or develop information systems.

1. Support districts to conduct analysis, form industry partnerships, and scale innovations.

Too many states leave schools and districts on their own to identify the right programs, credentials, and industry partners. States can play a valuable role in helping schools develop quality career education programs by:

Supporting timely analysis

- Centralizing job market and employment data, similar to Texas's dashboard of employment data and list of approved pathways and course sequences. The state uses vendors and partners to ensure the data they report is relevant. California offers grants to districts to do the work themselves: developing pathways aligned with regional demand. In Indiana, the state identifies high-wage, high-demand careers and disperses tiered funds to aligned courses.
- Working with industry partners to continually update lists of industry-approved and in-demand certificates and assessments, and phasing out those that are no longer relevant, like Kentucky and Florida. Virginia created a process to identify allowable credentials for FastForward programs aimed at young adults who want to complete short-term training in high-demand industries. States could pursue a similar process for secondary institutions.
- To combat the problem of lagged market data used in publicly available federal and state agencies, many community colleges use the services of private companies, such as Burning Glass, which report on hiring trends from the internet. A state agency can purchase the service and make the analysis available for free or a small charge.

Supporting partnerships and scaling innovation

- Creating intermediaries like the Delaware Office of Work-Based Learning, Career Wise CO, Career Connect WA, or Massachusetts Connecting Activities in order to help districts engage with industry for work-based learning. But districts also need close relationships with industry for ongoing program input—something that intermediaries could do more to support.

- Supporting district experimentation during the pandemic by identifying and incentivizing innovations. The Colorado Community College System (CCCS) hosts bimonthly calls with secondary and postsecondary program directors, which helps them identify innovators like Westminster High School. To scale implementation, CCCS showcases examples, coordinates mentoring, and offers competitive grants.
- Delaware exemplifies how a state can use new flexibilities in Perkins V funding to support work-based learning. Leadership from the governor helped the state launch and quickly iterate to develop pathways that spanned across K–12, industry, and the state's community college system.

2. Reform policies that pose barriers to learning in real-world and postsecondary contexts.

Credit award, seat-time funding, teacher certification, and articulation policies can all pose barriers. States can address some of these by:

- Allowing districts to award credit for out-of-school learning, like New Hampshire, or using a competency-based model to award course credit, like Virginia. States can consider prior-learning assessments at the high school level to award credit for learning that occurs outside the classroom. Students can be credited for hands-on learning and schools can tap local expertise without having to hire or train new teachers.
- Adopting new funding models, like South Carolina or Florida, that create alternatives to funding based on seat time and give students more flexibility in when, where, and at what pace they finish courses without penalizing schools or districts financially. The pandemic has created more incentive to explore alternatives to seat-time funding.
- Encouraging technical dual-enrollment programs that allow high schools to coordinate with local colleges and experts, like Georgia and Arizona.
- Breaking postsecondary and career credentials into stackable chunks, so students work toward an ultimate degree while still carrying interim credentials that are recognized across institutions and by industry, as Ohio has done.
- Working with districts to identify local or state policy workarounds; sometimes the barriers schools face are the result of local policy, or a misunderstanding of what is allowable by the state.

3. Deliver consistent information about available programs and careers.

State agencies, providers, and families need information about available programs to assess the landscape.

- States should set clear definitions and standards for CTE, and then identify program providers using these terms.
- Public-facing, statewide information systems like My Colorado Journey and Indiana's NextLevel Jobs, provide youth and families with valuable information about regional careers, wages, demand projections, and available programs. States can also consider investing in or creating one-on-one career navigation services, like MyBestBets.

4. Hold all providers accountable to academic, professional, and postsecondary outcomes.

States can leverage existing K–12 accountability systems to ensure all students have equitable access to programs, and that programs deliver strong academic and employment outcomes. The pandemic caused disruptions to state testing, giving states an opportunity to reassess and improve their accountability systems by:

- Encouraging schools to offer effective career preparation programming by using measures for work-based learning, like West Virginia and Georgia, or measures for dual credit, like Illinois and North Dakota. States can incentivize college *and* career preparation by offering bonus points when students achieve both, like in Delaware.
- States may want to use an existing Statewide Longitudinal Data System (SLDS) to report workforce outcomes or develop a P-20 data system if they do not have one. States with an SLDS can consider adding workforce data if they are one of the 14 states that has not already.
- Conducting an audit of the full range of career program providers and including them in public-facing school reporting systems so they all are held accountable to the same standards, and families and the public can compare their effectiveness using common academic and work readiness measures. This would include technical high schools, shared-time centers, and career academies within comprehensive high schools. To date, no state does this.

Conclusion

The disruptions of the pandemic will likely force states to reimagine their systems for supporting postsecondary transitions, measuring schools' effectiveness, and informing the public about what's working. Before the pandemic, too many states left schools and districts on their own to determine the goals and assess the effectiveness of their career-based learning programs, which resulted in incoherent and inequitable learning experiences for students. The systems they rebuild after the pandemic should be designed to set every student up for success in a complex and uncertain future.

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