Connecting Every Learner:

A FRAMEWORK FOR STATES TO INCREASE ACCESS TO AND SUCCESS IN WORK-BASED LEARNING

Introduction

Across the country, leaders in education, workforce and public policy have embraced work-based learning as a strategy to connect learners' classroom experiences to their future careers and support the development of local, regional and state economies. State leaders have a responsibility to ensure every learner has opportunities for career success and is supported in identifying and realizing their goals. Strong work-based learning policies and practices that are rooted in equity are vital to fulfilling this responsibility. Specifically, the policies and practices must be rooted in identifying and dismantling barriers to work-based learning participation for historically marginalized groups including learners with disabilities, economically disadvantaged learners, Black, Latinx, Native American, rural learners, and learners pursuing nontraditional career paths.

Work-based learning is an educational strategy that offers learners an opportunity to reinforce and deepen their classroom learning, explore future career fields and demonstrate their skills in an authentic, real-world setting. Work-based learning provides learners the opportunity to learn and apply employability and technical skills that support success in careers and postsecondary education and can culminate in recognized postsecondary credentials.[1] Work-based learning also provides learners the opportunity to build social and professional networks that they can rely on later in their career.

Work-based learning includes a continuum of experiences ranging from less intensive opportunities such as career awareness and career exploration to more intensive opportunities such as career preparation and career training *(see Figure 1)*.

FIGURE 1

Work-Based Learning Continuum

Career Awareness

Learning ABOUT Work: Learners build awareness about career and postsecondary options through experiences such as field trips and career days.

Career Exploration

Learning ABOUT Work: Learners explore career and postsecondary options in order to make informed decisions about their future. Learners can explore through job shadowing, mentorships and counseling.

Career Preparation

Learning THROUGH Work: Learners apply learning through practical experiences such as training programs and simulated work experiences that develop knowledge and core competencies necessary for success in careers and postsecondary education.

Career Training

Learning FOR Work: Learners train for employment and/or postsecondary education by engaging in work experiences such as internships and apprenticeships.

Adapted from ConnectED[2]

There are many examples of work-based learning experiences that exist along this continuum. Table 1 defines some of the more common work-based learning experiences but is far from an exhaustive list.

TABLE 1

Work-Based Learning Experiences

Career Awareness	**Career Day**	A career awareness activity where employers from a variety of industries come together at a school to share information about their company, their job, and the education and skills that are required for success in their career.[3]
	Workplace Tour	A highly-structured career awareness experience in which learners visit a workplace, learn about the business, meet employees, ask questions and observe work in progress.[4]
Career Exploration	**Career Competition**	A career exploration experience requiring learners to demonstrate mastery of career-related skills through presentations or competitions that are judged by industry professionals.[5]
	Career Mentorship	A career exploration activity where learners are matched one-on-one or in small groups with an industry professional to explore potential careers and related educational issues.[6]
	Job Shadowing	A structured career exploration activity in which learners are paired with an employer and observe the workday, interact with clients or customers, and attend meetings and other appointments with the person they are shadowing.[7]
Career Preparation	**Cooperative Education (Co-Op)**	An intensive career preparation experience where academic programs are connected to structured work experiences through which participants acquire professional and technical skills.[8]
	Simulated Workplace Experience	A career preparation experience where learners engage in activities that simulate work environments. Examples include automotive or construction programs in which sustained industry involvement allows students to develop and apply their skills in the context of industry standards and expectations.[9]
	Student Led Enterprise	A career preparation experience where students operate school-based enterprises that produce goods or services for sale or to be used by people other than the participating learner(s).[10]
Career Training	**Apprenticeship**	An intensive career training experience that generally lasts from one to six years and provides a combination of on-the-job training and formal classroom instruction.[11] Examples include the U.S. Department of Labor's Registered Apprenticeship program.
	Internship	A highly structured, time-limited, career training experience in which learners are placed at a worksite to observe and participate in work firsthand.[12]

FIGURE 2

States Choosing Work-Based Learning as Perkins V Secondary CTE Program Quality Indicator
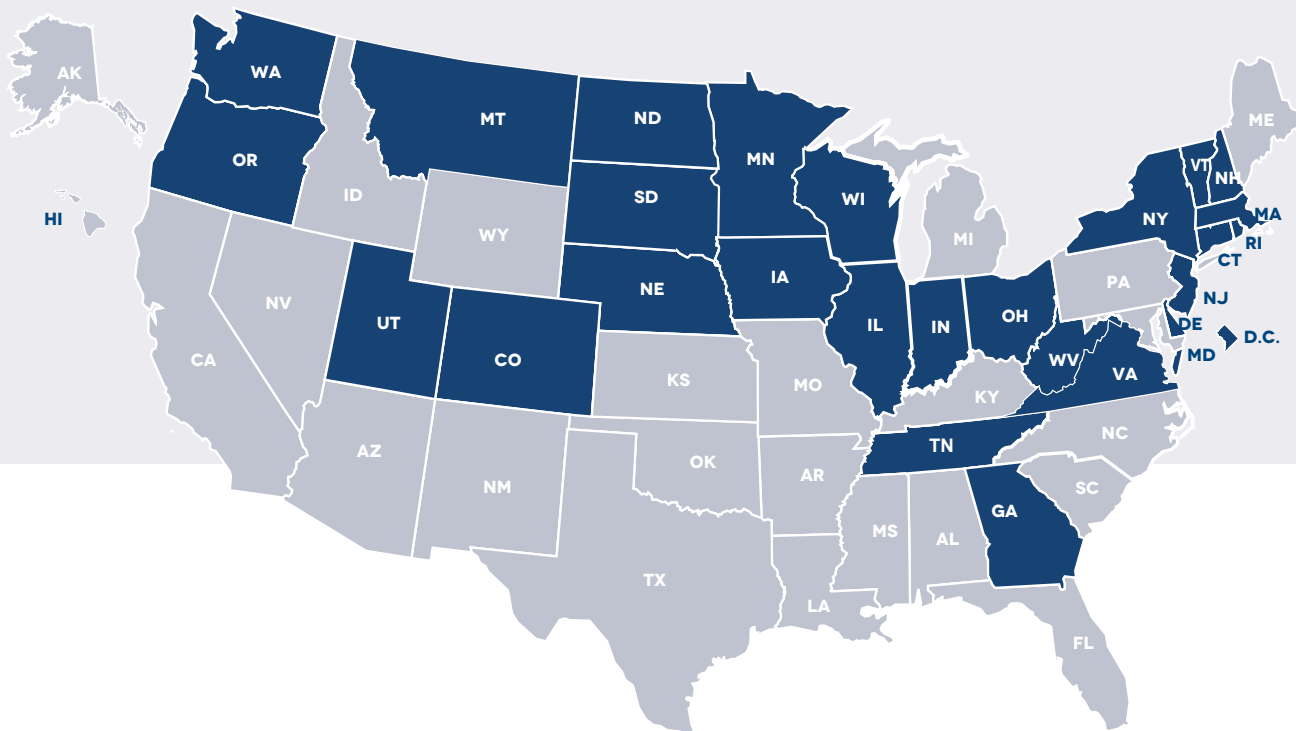
Work-based learning is an essential component of any high-quality Career Technical Education (CTE) program.[13] The Strengthening Career and Technical Education for the 21st Century Act (Perkins V) allows states to select work-based learning as one of their indicators of secondary CTE program quality, measured by the percentage of CTE concentrators graduating from high school having participated in work-based learning. As indicated in Figure 2, 27 states including the District of Columbia chose work-based learning as an indicator,[14] suggesting the importance they place on the practice.

Work-based learning generates positive long-term outcomes for participants. Economically disadvantaged learners who participate in more intensive work-based learning experiences such as internships or apprenticeships in high school are more likely to obtain better quality jobs as measured by wages, benefits,
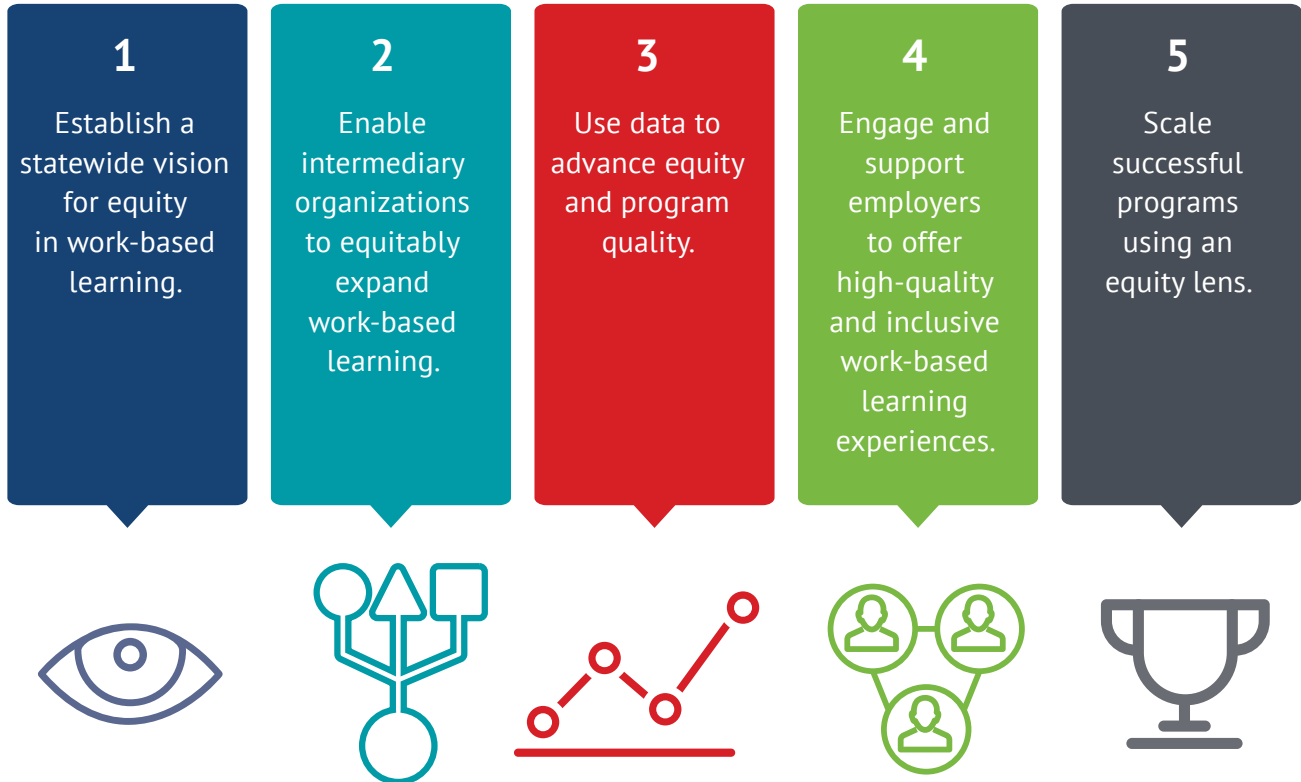
hours and job satisfaction than learners who do not complete such experiences.[15] Postsecondary learners who complete a work-based learning experience are also more likely to find full-time employment after graduation.[16]

Work-based learning also provides young adults the opportunity to build social capital critical to accessing employment and career opportunities later in life. Social capital is a network of relationships that can be mobilized to improve an individual's power, status and authority.[17] One example of this is job searching, where individuals often rely on family or personal connections made through school, work or other professional and social experiences to access job opportunities. Working-class and economically disadvantaged learners are less likely to be embedded in social networks with high-value connections that can be mobilized to provide support in

the job market.[18] Work-based learning experiences, therefore, become crucial to these learners' abilities to achieve both their immediate and long-term career goals.

Unfortunately, equity gaps persist in access to high-quality work-based learning opportunities. Although reporting disaggregated data on work-based learning participation is a challenge for many states, informal and anecdotal evidence suggests Black, Latinx, rural, female and economically disadvantaged learners have fewer opportunities to pursue high-quality work-based learning opportunities in high-wage, in-demand occupations. One report from the Center for American Progress notes that women made up only seven percent of registered apprentices in the country in 2017 while only 10.7 percent were Black and a little more than 16 percent were Latinx.[19]

While much of the hard work to identify, establish and sustain work-based learning programs is a local endeavor between schools, employers and sometimes local intermediaries, states have a role in creating the right environment that enables opportunities to grow, flourish and multiply equitably. States must set a clear vision for equitable access to and success in high-quality work-based learning; provide guidance as to how it should be defined, delivered and integrated into existing efforts; build local capacity; and hold local districts and institutions accountable for equity. This work-based learning report provides a framework for states to build, implement and scale effective work-based learning experiences with a specific focus on equity. States can take action in five key areas:

1	2	3	4	5
Establish a statewide vision for equity in work-based learning.	Enable intermediary organizations to equitably expand work-based learning.	Use data to advance equity and program quality.	Engage and support employers to offer high-quality and inclusive work-based learning experiences.	Scale successful programs using an equity lens.

THE IMPACT OF COVID-19 ON WORK-BASED LEARNING

Work-based learning programs across the country were significantly impacted in 2020 by the COVID–19 (coronavirus) pandemic. As industries closed their doors in an effort to contain the virus, most internship and apprenticeship programs were cancelled or postponed.

MIAMI-DADE COUNTY, FLORIDA

Pivoting to Virtual Internships

In **Miami-Dade County, Florida**, leaders of the Summer Youth Internship Program (SYIP) transitioned the traditionally in-person internship experience to a meaningful, high-quality, virtual experience. Originally conceived in 2015 as the Miami-Dade County Summer Jobs Program that targeted just 10 communities,[20] the program quickly evolved into a county-wide program in 2016 with the help of Florida's state workforce policy and investment board — CareerSource — and other partners including the Children's Trust, Miami-Dade County Public Schools District,

the South Florida Educational Federal Credit Union, and the Foundation for New Education Initiatives.[21] This public-private partnership came together with a single intent in mind: to provide a meaningful paid summer internship opportunity for youth across Miami-Dade County. The resulting expansion provided additional educational, work and training opportunities to participating learners.

The SYIP is a five week, work-based learning experience offered to rising 10th–12th grade students enrolled in Miami-Dade County Public Schools.[22] Throughout the internship, learners work with a teacher on skills and competencies and earn one high school credit for successful completion of the program. A learner can also receive dual enrollment credit from either Miami-Dade College or Florida International University if they meet requirements established by each institution. In addition to receiving academic credit, learners are paid a stipend totaling $1,400 for their work.[23] The payments are directly deposited into the learner's credit union accounts as part of the partnership with the South Florida Educational Federal Credit Union.

To ensure a successful remote internship experience during the coronavirus pandemic, the SYIP was intentional about its strategies for pivoting from a traditional, in-person internship to a remote one. Below are some of the most impactful strategies used by Miami-Dade County:[24]
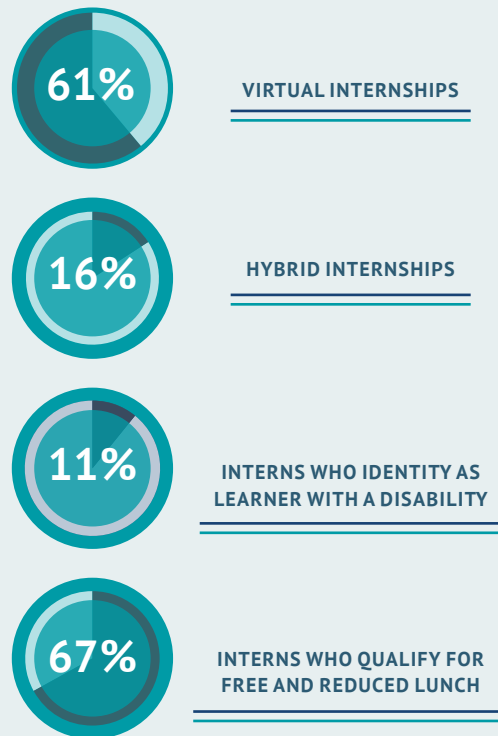
- **developed remote internship resources for employers**, including templates on how to create a remote internship project plan;

- **conducted remote orientations** for employers on strategies to host remote interns; parent orientations in English, Spanish and Haitian-Creole to prepare families on what to expect for a remote internship; and student orientations regarding deadlines, expectations and strategies to ensure a successful experience;

- **provided technological devices** to learners as a way to remove a common barrier to access; and

- **communicated regularly** with interns, including a minimum of three touch points per week by both instructors and employers.

The graphic to the right indicates the metrics of success for the SYIP virtual internship program in Miami.

FIGURE 3

2020 Miami Virtual Summer Youth Internship Program by the Numbers[25]

174

DUAL COLLEGE CREDITS EARNED

594

PARTICIPATING COMPANIES

2,675

LEARNERS ENROLLED IN A SUMMER INTERNSHIP

61% VIRTUAL INTERNSHIPS

16% HYBRID INTERNSHIPS

11% INTERNS WHO IDENTITY AS LEARNER WITH A DISABILITY

67% INTERNS WHO QUALIFY FOR FREE AND REDUCED LUNCH

SECTION 1

Establish a Statewide Vision for Equity in Work-Based Learning

A statewide vision creates common expectations for equitable access to work-based learning experiences among leaders and practitioners. A shared vision also supports consensus building through meaningful and sustained stakeholder engagement, particularly with employers. By setting a statewide vision that focuses on equitable access and success, states can ensure new and existing work-based learning opportunities are equitable and accessible. To establish and enact a vision for equity and access in work-based learning, state leaders should establish a policy environment that incentivizes high-quality, work-based learning experiences, build the infrastructure for stakeholders to realize the vision and set intentional goals.

TENNESSEE

Setting an Ambitious and Equitable Statewide Vision

Tennessee's vision for work-based learning for *every* learner is anchored by its statewide postsecondary credential attainment goal, which aims to increase the number of Tennesseans with a postsecondary credential to 55 percent by the year 2025. Tennessee's postsecondary credential attainment campaign, Drive to 55[26] — which was launched by Governor Bill Haslam in 2013 and sustained by his successor Governor Bill Lee — organizes an array of related initiatives including Tennessee Pathways.[27]

Tennessee Pathways is structured around three key elements: high quality college and career advisement throughout K–12 education; effective partnerships resulting in vertical alignment between K–12, postsecondary programs and career opportunities; and rigorous early postsecondary and work-based learning opportunities in high school. Designed to provide learners with transparent and supported pathways to transition into the workforce, Tennessee Pathways embeds the full continuum of work-based learning experiences into a learner's secondary journey.

Tennessee has prioritized equity in bringing its work-based learning vision to fruition. Tennessee selected work-based learning as one of its Perkins V[28] secondary program quality indicators and established a goal to double the number of learners participating in work-based learning experiences with an emphasis on economically disadvantaged learners, true to the state's vision of access for every learner. As part of its target for work-based learning completion under Perkins V, the Tennessee Department of Education (TDOE) has also set a goal of creating 10 new registered youth apprenticeship programs at the secondary level and certifying 100 work-based learning programs aligned to regional, high skill, high wage and in-demand career pathways by 2024.

TENNESSEE'S VISION FOR WORK-BASED LEARNING

"Every student in Tennessee will prepare for further education and long-term careers in an increasingly complex global economy by exploring careers, understanding their own strengths and interests and learning through hands-on application of valuable employability skills.

We believe work-based learning will help ensure a skilled workforce pipeline for Tennessee's growing industries. It benefits communities and families by promoting thriving local and regional economies. Educators, industry, communities and families will work together to create a world-class, work-based learning system with broad-based, efficient and effective participation of all stakeholders at statewide, regional, and local levels."

Source: Tennessee Department of Education

To increase equitable access to work-based learning, the state is leveraging subgroup enrollment data to determine gaps in participation and how to close them. As part of its efforts to expand access to work-based learning for every learner, the state is providing career exploration opportunities and wraparound services to learners targeted under the Workforce Innovation and Opportunity Act (WIOA). The Tennessee Department of Labor and Workforce Development (TDLWD) secured funding from the U.S. Department of Labor (DOL) to offer targeted resume and interview preparation services, transportation credits for ride sharing services, and funds for purchasing clothing and protective gear that learners may

WORKFORCE INNOVATION AND OPPORTUNITY ACT

WIOA supports workforce development in states by funding career services and job training programs. WIOA also funds adult education and literacy activities for out-of-school youth and adults without a high school diploma or with limited proficiency in English. The act targets adults and dislocated workers, underemployed workers and in- and out-of-school youth.

need on-the-job. TDLWD has also earmarked future funds for grants that help local workforce development areas offer job fairs and wages for high school work-based learners. Furthermore, three of Tennessee's regional workforce boards have changed their formulas for dividing available WIOA funding for in-school youth and out-of-school youth from 85/15 percent to an even 50/50 percent, after TDLWD received a waiver from DOL in regard to use of youth program funds.

In 2018, TDOE was awarded the Pathways to STEM Apprenticeship for High School Career and Technical Education Students[29] grant from the U.S. Department of Education. Tennessee used the funds from this grant to launch its first high school registered youth apprenticeship program, a machine operator apprenticeship with Gestamp, LLC in Chattanooga. The enrollment numbers for the first two years demonstrate the impact targeted services can have on increasing access to work-based learning, with 65 percent of apprentices identifying as economically disadvantaged. Together, Tennessee's selection of work-based learning as a secondary program quality indicator and a focus on increasing access to work-based learning oppor-

tunities for economically disadvantaged learners demonstrates the commitment to equity as part of the statewide vision.

Tennessee has created a policy environment that supports its vision for work-based learning. In Tennessee, learners engage in career/industry awareness and exploration in early grades, which can culminate in a capstone, work-based learning experience where learners can earn high school credit in their junior or senior years through a career practicum course. The work-based learning experiences learners receive are guided by Tennessee's work-based learning framework[30] that was adopted[31] in 2014 by the State Board of Education. The framework established a clear set of guidelines for work-based learning experiences. The Board also directed TDOE to provide school systems with work-based learning policy[32] and implementation guides[33] to address the training requirements, program expectations and legal requirements. TDOE developed and shared these guides with school districts in 2017.

Tennessee Pathways incentivizes alignment between CTE course standards and employability skills that learners can demonstrate in a high-quality, work-based learning opportunity. TDOE created the Tennessee Pathways Certification, a special recognition schools and districts can apply for if they create strong alignment between their high school programs of study, postsecondary partners and high-quality employment opportunities. As of 2021, 281 pathways in 136 high schools across 69 Tennessee school districts have earned Tennessee Pathways Certification.[34]

Tennessee has taken a number of steps to operationalize its work-based learning vision and build an infrastructure to develop and expand high-quality, work-based learning experiences. For example, Tennessee has created the work-based learning coordinator position to support successful implementation of work-based learning programs throughout the state. The work-based learning coordinator is a school-based position that oversees for-credit, work-based learning programs. Work-based

learning coordinators are also responsible for ensuring that students are appropriately placed in workplace settings that are aligned to their goals and programs of study, supporting learners to be successful in achieving the objectives of their work-based learning experiences and staying up-to-date with work-based learning policy changes as they are released by TDOE. Coordinators also help learners access wrap-around services and transportation to and from work-based learning sites, which are made available by the state.
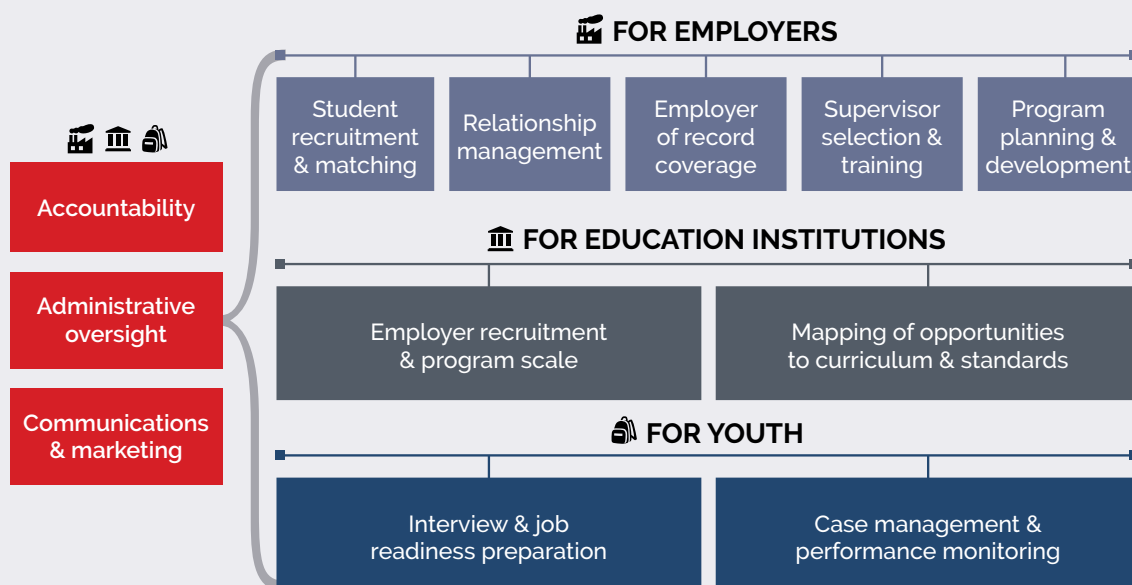
SECTION 2

Enable Intermediary Organizations to Equitably Expand Work-Based Learning
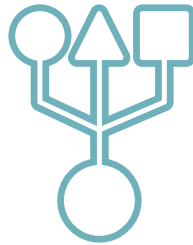
Intermediaries are essential players in enacting a statewide vision toward equitable, work-based learning opportunities. A work-based learning intermediary can be either an individual or an organization that supports work-based learning or other career development activities for learners.[35] Their role includes organizing field trips or career days that expose learners to different industries and professionals, recruiting new employers to participate in the full continuum of work-based learning activities, training and supporting employers throughout the work-based learning experience, monitoring student performance during a placement on a worksite and ensuring all laws are being followed. They interface with employers and educators to ensure student placements are aligned with and built upon their classroom learning. In many cases they also act as institutional agents, providing cultural, social and institutional support to learners seeking career training and development. Figure 4 illustrates the range of services an intermediary can provide across the work-based learning continuum. States play a critical role in supporting intermediaries through funding, building formal partnerships, or even tasking state-level organizations to serve as intermediaries.

FIGURE 4 — **Intermediaries Provide Services Across the Work-Based Learning Spectrum**

FOR EMPLOYERS

| Student recruitment & matching | Relationship management | Employer of record coverage | Supervisor selection & training | Program planning & development |

FOR EDUCATION INSTITUTIONS

| Employer recruitment & program scale | Mapping of opportunities to curriculum & standards |

FOR YOUTH

| Interview & job readiness preparation | Case management & performance monitoring |

Accountability

Administrative oversight

Communications & marketing

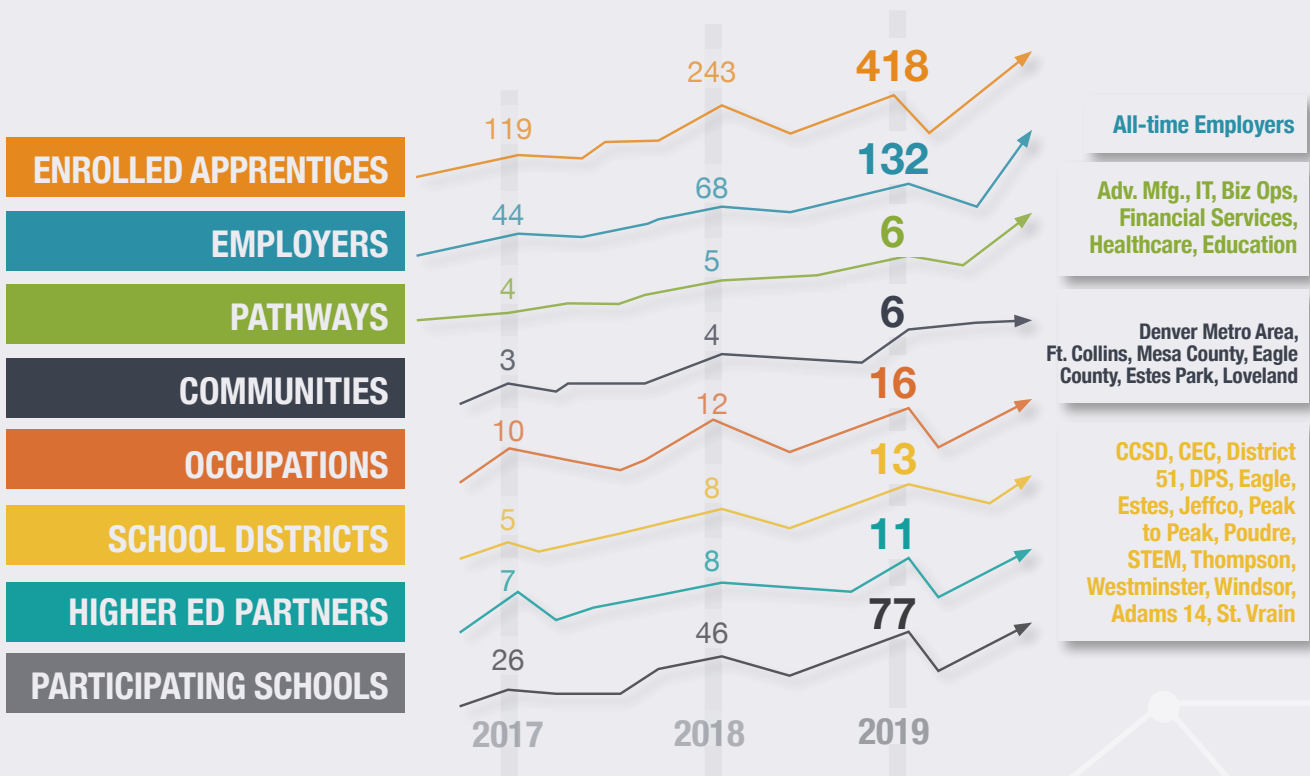*Source: Education Strategy Group[36]*

COLORADO

Leveraging Partnerships to Create Opportunities

State leaders in **Colorado** faced a gap between the skills and competencies employers needed in workers and the skills and competencies learners possessed when they graduated high school. In response to concerns from the business community, Governor John Hickenlooper created the business-led Colorado Business Experiential Learning (BEL) Commission[37] in 2015, which turned to the Swiss youth apprenticeship model to identify strategies for expanding experiential learning opportunities in Colorado.[38]

As a result of the commission's studies, Career-Wise Colorado was formed in partnership with the state government, local industries and the philanthropic community. CareerWise Colorado is an intermediary network that recruits learners for youth apprenticeships in their sophomore year of high school. The intermediary receives financial support from the state and has successfully acquired philanthropic grants to support expansion and sustainability.[39] As shown in Figure 5, CareerWise Colorado has tripled the number of youth apprentices enrolled, participating schools and employers served between 2017–2019.

FIGURE 5 **Colorado State Policy Enabling CareerWise Colorado's Growth**

	2017	2018	2019	
ENROLLED APPRENTICES	119	243	**418**	
EMPLOYERS	44	68	**132**	**All-time Employers**
PATHWAYS	4	5	**6**	Adv. Mfg., IT, Biz Ops, Financial Services, Healthcare, Education
COMMUNITIES	3	4	**6**	Denver Metro Area, Ft. Collins, Mesa County, Eagle County, Estes Park, Loveland
OCCUPATIONS	10	12	**16**	
SCHOOL DISTRICTS	5	8	**13**	CCSD, CEC, District 51, DPS, Eagle, Estes, Jeffco, Peak to Peak, Poudre, STEM, Thompson, Westminster, Windsor, Adams 14, St. Vrain
HIGHER ED PARTNERS	7	8	**11**	
PARTICIPATING SCHOOLS	26	46	**77**	

Source: CareerWise Colorado, 2020 Annual Report

FIGURE 6 Colorado Policy Enabling CareerWise Colorado's Growth

2018

HOUSE BILL 1266
Expanded the Career Development Success Program (piloted in 2016) in the Colorado Department of Education which provides financial incentives for participating school districts and charter schools to encourage high school learners to enroll in and successfully complete qualified industry-certificate programs, internship, or pre-apprenticeship programs, and advanced placement courses.

2009

CONCURRENT ENROLLMENT PROGRAMS ACT
Expanded the state's concurrent enrollment programs that CareerWise youth apprentices benefit from. The law allows high school students to take college credit-bearing courses.

2013

GRADUATION REQUIREMENT REVISED
The Colorado State Board of Education revised the state's graduation requirements allowing students to earn credit by demonstrating mastery as well as seat time.

2015

HOUSE BILL 1274
Directed the Colorado Workforce Development Council to coordinate with relevant agencies and industries to design career pathways for critical occupations in growing industries.

2010

SENATE BILL 108
Requires statewide degree transfer agreements for the transfer of associate degrees from one state institution of higher education to another.

2013

HOUSE BILL 1165
Required community colleges to design a manufacturing career pathway for the skills needed for employment in Colorado's manufacturing sector, one of the five articulated career pathways programs. CareerWise youth apprentices complete.

2015

HOUSE BILL 1275
Revised the 2009 concurrent enrollment policy to allow high schools to award credit for participation in youth apprenticeship and internship programs. Also established a tuition assistance program for students enrolled in CTE certificate programs.

2019

SENATE BILL 176
Further expanded concurrent enrollment opportunities by requiring concurrent enrollment be offered at no tuition cost to qualified students. Additionally, learners who complete a concurrent enrollment course must receive credit that applies to high school graduation requirements and that applies to a postsecondary degree, certificate, or developmental education course, or is transferable among state institutions of higher education.

CareerWise Colorado is committed to a "triple mandate": equity, growth and a high-quality experience that avoids the mistakes of the past (i.e., "tracking" learners into "dead-end" career pathways). CareerWise Colorado's approach to equity is two-fold: creating equitable access followed by creating an inclusive experience. One way CareerWise Colorado is intentional about equity is through the strategic use of resources — ensuring that schools with the greatest need have more access to the organi-

zation's attention and services that help instill learners with cultural capital (see text box for definition), including resume workshops and interview preparation. CareerWise Colorado also supports learners through informal partnerships with other non-profit organizations to provide wraparound services.

Through a formal partnership with local education agencies (both traditional public and public charter schools), CareerWise Colorado

IOWA

Establishing a Statewide Intermediary Network

has customer success managers who work with each of its partner schools. Not only are the customer success managers responsible for ensuring learners have access to youth apprenticeship opportunities, they are also responsible for managing the experience of the youth apprenticeship for the learner. The customer success manager works directly with employers, ensuring that each youth apprentice has a direct supervisor and a mentor who help the apprentice develop the social capital they need to be successful both during the youth apprenticeship and later in their career.

CareerWise Colorado also builds relationships and recruits employers through its networks, involvement with industry associations and digital tools.[40] Customer success managers support employers by helping them work through the logistics of sponsoring a youth apprenticeship program including onboarding, developing a training and supervision plan, assessing skills, tracking progress, and creating a schedule that works for both the employer and the school.

CareerWise Colorado's existence and success are due, in large part, to an enabling policy environment created by the state that includes career pathways, industry sector strategies, and efforts to drive state agency coordination on education and workforce.[41] Figure 6 shows some of the significant policy levers that supported CareerWise Colorado's existence and success.[42]

Another approach to building the capacity of intermediaries is to establish a statewide network. The **Iowa** statewide, work-based learning Intermediary Network program was created by state law[43] in 2014 to prepare learners for the workforce by connecting industry with education and offering work-based learning opportunities for learners. Managed by the Iowa Department of Education through the community college system, there are 15 regional Intermediary Network locations throughout the state that work with individual school districts and serve as one-stop shops for information on work-based learning opportunities.[44] The intermediary network targets in-demand industries for the state and regional economies with a focus on science, technology, engineering and mathematics (STEM), critical infrastructure, commercial and residential construction, advanced manufacturing, biosciences and information technology (IT). In 2020, the Iowa Intermediary Network facilitated 88,227 student and 1,925 educator work-based learning experiences[45] across the continuum including job shadowing, industry tours and connecting learners to local internship opportunities. In some instances, regional networks facilitate learners earning industry-recognized credentials of value through work-based learning experiences. Regional intermediaries work with local school districts to develop hands-on, work-based learning opportunities to assist learners and educators with career awareness and exploration.

BOSTON, MASSACHUSETTS

Over the 40 years of the PIC's existence, 87 percent of job and internship placements were filled by learners of color.

Facilitating Opportunities through Local Workforce Boards

Local intermediaries like the **Boston Private Industry Council (PIC)** are critical partners in implementing a statewide vision for equitable, work-based learning. The PIC is part of Massachusetts Connecting Activities,[46] a statewide network led by the Massachusetts Department of Elementary and Secondary Education and organized through the state's 16 workforce boards to connect employers and schools to support work-based learning and career development education activities for learners.[47] The PIC serves as the workforce board for the Boston region. The PIC's mission is to make connections between the city's marginalized neighborhoods and the business community, making it possible for people from these neighborhoods to participate in economic opportunities and access social capital.

The PIC, along with Massachusetts' other workforce development boards, is supported by a strong, statewide infrastructure. Massachusetts' Connecting Activities provides the infrastructure for schools and partners to connect locally, regionally and statewide, and responds to the strong desire for college and career planning experiences. Through the network, educators can exchange ideas and practices by accessing a wide range of tools, resources and experiences that support students. In spring 2020, Connecting Activities released an updated version of its Career Development Education Guide,[48] sharing best practices in career development education.

Through leadership meetings, professional development materials and other program resources, the network is able to share examples of a wide range of career development activities from across Massachusetts.

The PIC career specialists support learners through career exploration workshops, resume and interview preparation and career counseling with students. Throughout the year, the PIC organizes career panels and job shadowing and facilitates formal and informal mentorships. This work culminates with summer internships for learners in different sectors including business, finance, technology and healthcare. The PIC partners with major employers in the region to place students. Employer partners include the Massachusetts Bay Transportation Authority for learners studying machinery, electronic communications and automotive technology; large apartment complexes for learners studying facilities management; and the Federal Reserve Bank of Boston for learners studying electricity and carpentry.[49,50] The PIC career specialists provide support to these employers, helping them navigate the process of onboarding and managing summer interns.

In 2019, the PIC facilitated summer jobs or internships for 2,511 Boston Public School learners, mostly in professional and technical environments in high-growth industries.[51] Most impressively, over the 40 years of the PIC's existence, 87 percent of these opportunities were filled by learners of color,[52] demonstrating that intentionality about targeting resources and providing supports can have a positive impact on equity in work-based learning.

Using Data to Advance Equity and Program Quality
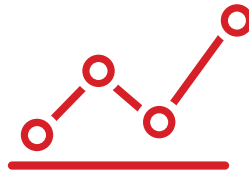
Data has many important functions in supporting work-based learning, one of which is to help advance equity and program quality. States need to develop high-quality data systems that allow them to monitor equity and evaluate the impact of work-based learning programs. Data systems also allow for continuous program improvement, accountability, and validating learner knowledge and abilities through skills assessments, certifications and more. Currently, it is difficult to answer simple, yet important, questions such as how many learners of color access high quality, work-based learning opportunities in high-wage, in-demand occupations compared to their White peers or whether economically disadvantaged learners complete work-based learning experiences at the same rates as their economically advantaged peers. For these reasons, work-based learning data should be disaggregated by population, institution and industry to identify discrepancies in access to and success in high-quality opportunities. Examining disaggregated data can help strategically support equity in work-based learning by identifying opportunity gaps and targeting services and supports to underrepresented populations. To advance equity and program quality, states should develop data systems that allow for reliable, valid and complete collection of work-based learning data; require work-based learning providers to collect demographic data on learners; leverage data to track learner participation and success in high-quality, work-based learning opportunities; and ensure data is actionable.

In order to use data to advance equity in work-based learning, states should build out robust data collection processes. Although many states have struggled in the past to capture information on learning that happens outside the classroom, ensure data is collected consistently, develop tools to assess on-the-job learning and differentiate types of work-based learning experiences, there is a significant push now in the right direction. As noted earlier in this report, 27 states have selected participation in a work-based learning experience as their Perkins V secondary CTE program quality indicator. This presents an opportunity for states to build systems that not only count the number of participants, but also provide high-quality and actionable data.

WASHINGTON STATE

Using Data Analysis to Support Equity

Washington State has made work-based learning data collection and analysis a priority. Career Connect Washington is a statewide initiative for work-based learning whose vision is "to ensure that every young adult in Washington will have multiple pathways toward economic self-sufficiency and fulfillment, strengthened by a comprehensive statewide system for Career Connected Learning".[53] Washington uses the phrase "career connected learning" to refer to work-based learning experiences. Career Connect Washington is a collaborative effort of public and private partners that report to the governor's office. It aligns statewide efforts to offer a continuum of work-based learning opportunities to learners, with a goal for 60 percent of secondary and postsecondary learners to participate in a Career Launch experience by 2030. A Career Launch program includes paid, meaningful work experience; aligned classroom learning; and the opportunity to earn college credit or an industry-recognized credential.[54] Career Connect Washington is developing

data-sharing agreements and protocols to support planning and evaluation along with collecting and disaggregating program participation and outcome data by race, gender, income, geography and other subpopulations.[55] Career Connect Washington is also leveraging data to identify opportunity gaps and to inform policy recommendations.

Washington State also requires Registered Apprenticeship sponsors to collect demographic data on apprentices as part of their equal employment opportunity plan. Sponsors must analyze the data to determine "enrollment deficiencies" — a mismatch between the percentage of minority or female workers employed as apprentices by the employer and the total number of workers in that field or industry compared to non-minority or male workers.[56] State, local or regional intermediaries can then use this data to track learner participation and success in apprenticeships with an equity lens.

For example, the **King County** Regional Youth Apprenticeship Consortium has developed an equity plan that focuses on community engagement, data and accountability. The equity plan includes a metrics framework to analyze and publicly report on learners' access to youth apprenticeship programs, program quality, and the efficiency of those programs. The Consortium collects apprentice demographic data from sponsors and disaggregates the data by race, education level and geography to identify gaps in the recruitment of youth apprentices. It then uses this data to target outreach to underrepresented learner populations.

Engage and Support Employers to Offer High-Quality and Inclusive Work-based Learning Experiences

The relationship between the state and the business sector is vital for the success of work-based learning programs. State and business leaders often work together to develop a talent pipeline that benefits both the state economy and businesses' bottom lines and provides learners with opportunities to excel in a career. States create the infrastructure for meaningful engagement, build local capacity, and leverage economies of scale to engage statewide industry networks and business leaders. States can support employer engagement while ensuring underrepresented learners have access to high-quality, work-based learning experiences by supporting and incentivizing employers to provide equitable and inclusive work-based learning opportunities; building the infrastructure for engaging employers at scale and making the case for them to participate in work-based learning; and supporting employers and the education sector in understanding legal liability associated with youth, work-based learning experiences.

SOUTH CAROLINA

Supporting Employers to Expand and Diversify Apprenticeship Opportunities

In 2007, **South Carolina** launched Apprenticeship Carolina within the South Carolina Technical College System to serve as a state-level intermediary, reactivate the state's Registered Apprenticeship system and expand apprenticeship opportunities to more learners.[57] Apprenticeship Carolina directly engages with employers through a team of consultants who work with employers and education institutions to establish programs and develop the three components of a Registered Apprenticeship program: on-the-job training, job-related education and a scalable wage progression. In some cases, Apprenticeship Carolina helps address liability and insurance concerns.[58] The state also supports recruiting employer sponsors by offering a $1,000 tax credit for each Registered Apprentice a participating company takes on; while evidence is mixed on the effectiveness of the tax credit, anecdotal evidence suggests that the support and engagement of intermediaries like Apprenticeship Carolina is a greater motivator for employers to establish a Registered Apprenticeship program.[59]

Apprenticeship Carolina's expansion of apprenticeships across the state and support for new employer sponsors is credited for increasing the diversity of Registered Apprentices, particularly women.[60] Prior to Apprenticeship Carolina, Registered Apprenticeship opportunities in the state were largely in male-dominated industries such as construction and skilled trades. Apprenticeship Carolina helped launch Registered Apprenticeships in occupations with greater gender diversity, such as pharmacy technicians. The expansion of occupations for apprenticeships reflected the state's commitment to recruiting and supporting diverse learners and ensuring that Registered Apprenticeship programs are inclusive.[62] This represented more than three times as many female apprentices than before Apprenticeship Carolina came into existence and were mostly registered with new Registered Apprenticeship sponsors.

DENVER, COLORADO
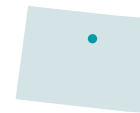
Partnering with Employers to Support Learner Success

Denver Public Schools (DPS) Career and College Success (CCS) — Career Development Programs partner with the local and national business communities to provide Denver high school learners expanded access to relevant learning opportunities in the classroom and in workplace settings across 10 industry sectors.[63] Launched in 2014 in partnership with the Denver Office of Economic Development, two- and four-year colleges and universities and business and industry partners, DPS CTE spans kindergarten through postsecondary education and includes relevant courses for all grades. CTE coursework is paired with hands-on, work-based learning experiences

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| FIGURE 7 | Women in Registered Apprenticeships |

33%

South Carolina

7%

Nationally

A 2017 data analysis completed by the Urban Institute found that 33 percent of Registered Apprentices in South Carolina are women, compared to seven percent nationally.[61]

Starting in fall 2020, partner training also includes equity training designed to prepare partners to work with learners from diverse backgrounds and life experiences.

including career exploration events, informational interviews, project-based learning, mentoring for middle and high school students, professional internships and three-year youth apprenticeship opportunities for juniors and seniors. The initiative is an outgrowth of sector partnership efforts spearheaded by the Colorado Workforce Development Council, which sparked a mapping project to identify data-driven strategies for improving college and career readiness outcomes in Denver.

The CCS Career Development Team recruits businesses for most work-based learning opportunities, with the exception of youth apprenticeships. DPS provides ongoing support to develop, implement and evaluate program activities in collaboration with business partners. Partners receive both formal and informal training as well as resources such as handbooks and planning tools to engage with students in the most meaningful and effective ways possible. School-based staff liaise with partners and students to ensure successful outcomes and provide support and coaching as needed.

DPS has also adopted an equity stance that is shared with prospective, current and future business partners to convey a clear message regarding the expectation to address anti-racist practices when working with DPS students.

In the case of youth apprenticeships, CareerWise Colorado develops paid opportunities for DPS students as well as learners attending other school districts across the state. CareerWise supports employers by providing clear guidelines for their role and responsibilities as a youth apprenticeship partner, tools and resources to support the different types of student engagement, evaluation components and access to staff to help troubleshoot. Business partners point to the ease of participation and a tangible return on investment for engaging with youth apprentices.[64]

The CCS Career Development Team has seen strong success since its founding in 2014. In the 2019–2020 school year, 5,100 learners in Denver participated in work-based learning experiences, including 312 interns at 196 Denver companies.[65] The overwhelming majority of CCS employer partners reported that interns contributed productive work, were well or adequately prepared to adapt to the norms and expectations of a professional work environment and believe that internships are a viable way to recruit and develop future employees.[66]

RHODE ISLAND

Guiding Employers Through Legal Liabilities

In **Rhode Island**, the Governor's Workforce Board successfully addressed employers' legal concerns about offering internships and other intensive, work-based learning experiences to secondary learners. Expanding participation in work-based learning was a priority for the state as part of the PrepareRI Initiative,[67] which is a partnership between state government, private industry leaders, the public school system, postsecondary institutions and nonprofits working together to close Rhode Island's skills gap. Through PrepareRI, the Governor's Workforce Board issued a guidance document that defines work-based learning activities for secondary learners and identifies standards for high-quality experiences.[68] In addition to defining activities and standards, the guidance document addressed frequently asked questions from schools and businesses about legal liability associated with providing work-based learning opportunities to learners under the age of 18. Furthermore, the guidance made recommendations to businesses, schools, intermediaries and families about how to make the work environment safe for everyone and provided links to relevant resources including the state's child labor laws and risk management trust.

SECTION 5

Scale Successful Programs Using an Equity Lens

The final component of implementing high-quality, work-based learning is to bring strong programs to scale and ensure they are available to every learner, including in communities with traditionally limited access. States have a critical role to play in scaling and sustaining successful programs and should place a strong focus on equity when scaling work-based learning. This includes supporting rural districts in implementing new work-based learning programs, as well as intentionally increasing access and success for learners of color and learners from low-income families.

The state is uniquely positioned to provide programmatic, technical and financial support to scale work-based learning programs in a strategic and deliberate way to increase equitable access. State agencies have the resources and the economies of scale to develop guidance and tools for use by stakeholders across the state. Additionally, a state agency can observe work underway in multiple districts and postsecondary institutions across the state and can identify and scale local innovations and promising practices.

Scaling a program is not as simple as passing legislation or regulations and assuming localities are equipped to implement the program in the way intended. The process must be deliberate and well-planned, and relevant stakeholders must be meaningfully engaged. States must also consider sustainability from the beginning and build processes for monitoring progress and making course changes as needed. States can scale successful programs by braiding funding from multiple federal and state sources; enacting policies to create an incentive structure that supports high-quality, work-based learning; meaningfully engaging stakeholders across systems and sectors; and building processes for monitoring progress and making changes as needed.

WEST VIRGINIA

Bringing Work-Based Learning Opportunities to Rural Communities

One successful example of scaling a work-based learning program that increased access for every learner is **West Virginia's** Simulated Workplace program.[69] The program launched as a pilot in 2013 after business and industry leaders expressed a need for students to learn professional skills — such as punctuality, teamwork and maintaining safe workspaces — in addition to the technical skills typically taught in CTE classrooms. Through the Simulated Workplace program, learners transform their classrooms and programs into businesses to create an authentic environment where they can develop and practice both technical and employability skills. For rural school districts without a local industry presence, the West Virginia Department of Education will occasionally bring in business leaders from across the state or, more often, connect them to the classroom through web-based video conferencing software. Students also participate in an industry evaluation where industry leaders act as inspectors, observing and rating programs based on their adherence to industry standards — not unlike an actual business. Students also have the opportunity to earn state and national industry certifications.

After the early pilots proved successful, the West Virginia Board of Education enacted new policies so the Simulated Workplace would be accessible to every high school CTE student in the state. In 2015, the Board of Education adopted 12 statewide protocols for simulated workplace environments that dictate important aspects for high-quality implementation such as hiring processes, safety requirements and accountability measures.[70] And in 2018, the board enacted a new policy to require the Simulated Workplace as a capstone experience for CTE concentrators.[71] Through this rule change, all state-approved CTE programs of study must include a simulated workplace experience to receive state or federal funding.

Implementing the program with fidelity required a culture shift at schools and input and buy-in from teachers, industry representatives and other stakeholder groups, including students and parents. The early pilot sites gave the Department the information and experience necessary to build these relationships and support teachers and administrators through these shifts, but they required a significant investment of time and resources. As the Department gradually scaled the program, staff made sure to spend time evaluating and refining processes and policies, so that the program could exist statewide but still maintain the levels of quality and rigor at the original pilot sites. These analyses relied heavily on engagement from multiple sectors, including industry and postsecondary leaders. The Department also found the use of student voice through testimonials, presentations and even unsolicited thank-you notes an effective method of creating support for the program.

The Simulated Workplace program has grown exponentially since its inception in 2013, starting with 2,252 participants at 20 pilot schools in 2013 to now more than 24,000 students participating in more than 1,300 simulated classrooms throughout the state.[72] Additionally, West Virginia adopted work-based learning as its Perkins V[73] secondary CTE program quality indicator. Learners who participate in the Simulated Workplace model will be counted toward the state's goal, along with those who participate in more traditional experiences such as internships, apprenticeships and clinical work.

Because the simulated workplace program is fully established and self-sustainable, the simulated classrooms were able to persist through the coronavirus pandemic.[74] While schools and businesses closed their doors in an effort to slow the virus' spread, some student-business enterprises continued operating remotely to support the coronavirus response in West Virginia. For example, some made personal protective equipment with 3-D printers or prepared lesson plans that were broadcast statewide through a partnership with the Public Broadcasting Service.

Each section in this report covers an important aspect of designing and implementing high-quality, work-based learning programs with an emphasis on equity, but none of these processes happen in isolation from one another. A clear and ambitious vision will drive decision-making in identifying and supporting intermediaries and in choosing what to measure, and intermediaries are often vital to engaging employers, overcoming legal barriers and generating support and feedback for how to scale up programs. States should consider all of the practices presented in this report and how they can be coordinated within the state's unique context. Additionally, no agency is ever focused on just one initiative at a time. Therefore, state agency staff must be aware of other initiatives and intentionally align efforts to ensure that policies and practices work well together to support learners' successes.

Work-based learning programs are uniquely positioned to prepare diverse learners for a range of in-demand, high-wage career opportunities. When access is equitable and supports for success are provided, work-based learning can provide real opportunities for every learner — regardless of race, ethnicity, socioeconomic status, gender, ability or geography — to gain industry experience, develop a professional network and pursue future education and career opportunities. Depending on a state's context, work-based learning programs might be structured very differently throughout the country, yet equity must be at the forefront. States must prioritize equity in opportunity and equity in success for every learner in a high-quality, work-based learning experience.

ACKNOWLEDGMENTS

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