THE PROJECT ON WORKFORCE

PROMISING PRACTICES TO CLOSE EQUITY GAPS IN CAREER AND TECHNICAL EDUCATION

An Analysis of Perkins V performance data and state secondary CTE policies

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The Project on Workforce is an interdisciplinary, collaborative project between the Harvard Kennedy School's Malcolm Wiener Center for Social Policy, the Harvard Business School Managing the Future of Work Project, and the Harvard Graduate School of Education. The Project produces and catalyzes basic and applied research at the intersection of education and labor markets for leaders in business, education, and policy. The Project's research aims to help shape a postsecondary system of the future that creates more and better pathways to economic mobility and forges smoother transitions between education and careers. Learn more at www.pw.hks.harvard.edu.

Executive Summary

This report presents the findings of an analysis of promising state strategies to advance equity in secondary career and technical education (CTE). We examined state and territory Perkins V performance data, as reported to the Office of Career, Technical and Adult Education, across three indicators: post-program placement, postsecondary credential attainment, and work-based learning participation. We selected and interviewed states or territories in which marginalized student populations (including racially minoritized groups and special populations) are performing above the state aggregate level on these key indicators.

We found that many states are just beginning to identify performance equity gaps, and data quality and collection systems are inconsistent. Nonetheless, we also identified several promising strategies from four states, Massachusetts, Louisiana, Pennsylvania, Oregon, and the District of Columbia, which we highlight in this report. Common equity strategies include: deploying disaggregated data dashboards to illuminate equity gaps; conducting targeted communications campaigns to increase participation among underrepresented populations; convening diverse stakeholders to share best practices; braiding state and federal funding sources to support equity initiatives; and building cross-agency partnerships to facilitate data sharing and labor market connections. We conclude with recommendations for state and federal leaders to improve data quality and expand equity in CTE.

Introduction

Disparities in Career and Technical Education

Career and technical education (CTE) provides students with career-connected learning opportunities at the secondary and postsecondary levels. Programs vary across states, with most secondary instruction taking place at comprehensive high schools, while other programs are delivered at regional CTE centers or career academies. Participation in high-quality CTE programs has been shown to increase academic outcomes for students, including by boosting the probability of on-time high school graduation by 7 to 10 percentage points for students from higher-income backgrounds, with even larger effects for students from lower-income backgrounds.[1]

National data suggest that participation rates in CTE differ by student gender, race and ethnicity, and socioeconomic status, but trends may vary from state to state.[2] U.S. data from 1992 to 2013 show that male public high school graduates earned more CTE credits than female graduates, white and Black graduates earned more CTE credits than their Asian/Pacific Islander peers, and graduates whose first language was English earned more CTE credits than their peers who are English learners[3]. Researchers have found that race and ethnicity may affect students' perceptions of career opportunities and barriers, and impact their decisions to enroll in CTE coursework[4].

These data are colored by a long and problematic history of CTE disproportionately "tracking" students into different careers by gender, race/ethnicity, and socioeconomic status, replicating societal inequities and negatively impacting student outcomes, particularly for Black and Hispanic students[5]. It is even more important, therefore, that today's CTE leaders focus on building systems that promote equitable access and outcomes across CTE programs.

Perkins V

Equity in CTE is a central policy tenet of the Strengthening Career and Technical Education for the 21st Century Act (Perkins V), which was signed into law in 2018, reauthorizing the Carl D. Perkins Career and Technical Education Act. As the main federal statute governing CTE, Perkins V has equity principles integrated throughout, including through a set-aside in state funds for recruiting special populations, ongoing stakeholder engagement requirements, and reporting data that is disaggregated by race, gender, and special population.[6]

States and territories are required to submit to the Office of Career, Technical and Adult Education (OCTAE) annually data on eleven core indicators of performance, eight of which are at the secondary education level. One of these indicators must be a "program quality" indicator, which states are able to select from four options (including "other"). In this report, we examine three indicators, two of which are program quality indicators (5S1 and 5S3):

1. **3S1: Post-program placement:** The percentage of CTE concentrators who, in the second quarter after exiting from secondary education, are in postsecondary education or advanced training, military service or a service program that receives assistance under title I of the National Community Service Act of 1990, are volunteers as described in section 5(a) of the Peace Corps Act, or are employed.

2. **5S1: Attained recognized postsecondary credential:** The percentage of CTE concentrators graduating from high school having attained a recognized postsecondary credential.

3. **5S3: Participated in Work-Based Learning:** The percentage of CTE concentrators graduating high school having participated in work-based learning.[7]

Purpose

Based on the annual Perkins V data submitted by states and territories to OCTAE, we utilized a mixed-methods approach to (1) identify 2-3 states per indicator in which the disaggregated student populations are performing at or above state aggregate student performance levels on these indicators, and (2) identify promising strategies and policies for closing equity gaps among disaggregated student populations in secondary CTE. The goal of this report is to highlight state equity practices so that all states and territories can build high-quality and equitable CTE programs, with a focus on supporting historically disadvantaged student populations.

Key Terms

CTE concentrator (federal definition): A student who has completed at least two courses in a single career and technical education program or program of study.[8]

Equity gap: Disparity in outcomes between student subgroups. States with low equity gaps for a particular performance indicator have most of their disaggregated student populations performing at or above those states' aggregate.

National aggregate: The mean of *all* reporting state aggregate estimates, for a particular indicator.

Recognized postsecondary credential: A credential consisting of an industry-recognized certificate or certification, a certificate of completion of an apprenticeship, a license recognized by the State involved or Federal Government, or an associate or baccalaureate degree.[9]

Special populations: In this analysis, we focus on three special populations identified in Perkins V: individuals with disabilities; individuals from economically disadvantaged families, and English learners.

State determined performance level (SDPL) or *standard*: The aggregate performance standard set by states for a specific indicator, against which they are evaluated. States are required to set SDPLs for each indicator of performance under Perkins V. States are required to meet at least 90% of their SDPL to avoid the requirement to implement a program improvement plan in relation to a particular performance indicator.

State aggregate: The actual reported performance estimate for *all students* of each state, for a particular indicator. This metric is useful when evaluating individual states for a certain performance indicator. If the state aggregate is higher than 90% of their SDPL, that state has met their standard of performance for the indicator.

Work-based learning (WBL): Sustained interactions with industry or community professionals in real workplace settings, to the extent practicable, or simulated environments at an educational institution that foster in-depth, firsthand engagement with the tasks required in a given career field, that are aligned to curriculum and instruction.[10]

Data & Methodology

Quantitative Analysis

Data on 3S1, 5S1, and 5S3 performance indicators were collected by enrolled states, reported to OCTAE's Division of Academic and Technical Education, and stored within the internal Perkins Information Management System. We analyzed this data and selected promising states for each indicator to interview about their practices for improving student performance across marginalized groups.

Our Process

We developed the following state selection process for each Perkins V indicator, using three key criteria to evaluate state data:

Step 1: Overall state performance
We selected states with a state aggregate performance above the national performance mean for all participating states, for a particular indicator.

Step 2: Equity
We reviewed the number of historically underperforming sub-populations performing above the state's aggregate performance, and selected states with multiple groups performing at or above that level. (Ideally, all minoritized student groups are performing at the state aggregate level).

Step 3: Data reliability
Lastly, we reviewed the student counts for disaggregated populations to ensure the data was reliable (i.e., 100% of 10 students meeting an indicator is not sufficient to select that state for further analysis), as well as the performance calculation method, to verify that the data is meaningful (i.e., the threshold students are meeting is consistent with federal law).

Limitations

There are several limitations to the data, and therefore, our analysis, which must be acknowledged, as they compromise the comparability of data across states.

First, states do not have standardized definitions of CTE terms, such as "CTE concentrator," which makes it difficult to compare performance levels across states. For example, a CTE concentrator in one state may refer to a student who takes two CTE courses, while in another state, it refers to a student who takes three CTE courses. States also use different data collection processes, and the quality of data collection differs across states. For example, some states collect post-placement data only through student surveys, while others use data from the state Department of Labor database, which may be more accurate and complete.

Additionally, performance levels for states are not calculated the same way (i.e., there are different numerator/denominator definitions for each indicator). For example, one state may report 5S3 as the number of CTE concentrators who completed 250 hours of work-based learning, while another state reported 5S3 as the number of concentrators who participated in any job shadowing experience. Lastly, the data is not weighted to account for varying population sizes across states (e.g., it is difficult to compare the performance of Hispanic students in California to those students in Vermont).

We attempted to address these issues in step three of our process (the data reliability check), but this was a far from perfect solution.

Qualitative Analysis

Following the quantitative analysis of Perkins V performance data and selection of key states, we contacted seven states and D.C. for interviews. We conducted hour-long interviews with CTE leaders from six states (New York, Massachusetts, Arizona, Louisiana, Pennsylvania, Oregon), and the District of Columbia.[11] We discussed their use of Perkins V data, equity challenges, and strategies for promoting positive outcomes for traditionally marginalized groups, including funding mechanisms and stakeholder engagement. This report details findings from the five with reliable data: Massachusetts, Louisiana, Pennsylvania, Oregon, and D.C.[12]

We also conducted interviews with leaders from three expert organizations: Advance CTE, the Association of Career and Technical Education (ACTE), and National Alliance for Partnerships in Equity

(NAPE), to better understand the national landscape, equity trends, and best practices for closing historic performance gaps. In total, we spoke with 24 CTE experts and leaders, after which we coded interviews to identify commonalities.

Additionally, we conducted a brief literature review of CTE equity research, examined recent state policies related to equity, and scanned Perkins V plans from all states and territories. Our qualitative research surfaced several key trends.

Key Trends

We identified trends in the literature and in interviews with state leaders and experts, across all three indicators:

States are just beginning to identify equity performance gaps in CTE, have conversations about why such gaps exist, and discuss how they should address them. This is an important and necessary step in the process.

Data quality and collection systems are inconsistent, but disaggregation and key indicators encourage practitioners to focus on key outcomes.

Equity work takes time. Several leaders stressed the importance of persistence and patience, and many of the states we selected have been engaged in this work for several years.

Common Equity Challenges

State officials noted several challenges during interviews. The following obstacles were each mentioned by leaders from at least three of the five states and territories highlighted in this report:

- **CTE perceptions:** Students and families from racially minoritized groups, particularly Black and Hispanic populations, have concerns about CTE, based on its history of tracking students into low-paying jobs. (MA, LA, PA, OR, DC)
- **Academic preparation:** Many students are unprepared for CTE courses or need to be taken out of CTE classes for remediation in math or English before completing credentials or WBL. (LA, PA, OR)
- **Geographic barriers:** It is difficult to expand CTE opportunities to students in rural areas or into neighborhoods without reliable transportation. (LA, DC, OR)
- **COVID-19 closures:** As schools transitioned to virtual learning in response to the COVID-19 pandemic, it was difficult for practitioners to administer CTE courses, credential exams, WBL experiences, and collect data. (PA, OR, MA)

Common Equity Strategies

Leaders addressed these and other equity challenges using similar strategies. The following equity strategies were each mentioned by at least three of the five states and territories highlighted in this report:

- **Develop disaggregated data dashboards**: States are building out data dashboards to enable practitioners to explore enrollment and performance data trends by student population. (MA, LA, OR)
- **Include various stakeholders**: State leaders mentioned that effective equity initiatives - both locally and at scale across the state - require convening a variety of stakeholders, including community members, industry leaders, educators, and administrators to understand their needs and share best practices. (LA, PA, OR, DC)
- **Conduct communications campaigns:** States discussed devoting funds to building out communications campaigns targeted at underrepresented populations to highlight the value and promise of CTE. (MA, PA, LA, OR)

- **Build cross-agency partnerships:** Leaders mentioned the importance of partnerships with other state agencies to facilitate data sharing and labor market connections. (MA, OR, LA, DC)

- **Braid funding:** State leaders are braiding funds from a variety of sources, in addition to Perkins funds, such as Elementary and Secondary Education Act and state dollars, to support CTE equity initiatives. (DC, OR, LA, PA)

- **Engage external experts**: States are consulting experts, including ACTE, NAPE, and independent consultants, to identify root causes of equity gaps, implement best practices, and deliver equity training. (LA, OR, MA)

Indicator 3S1: Post-program placement

All states are required to report performance indicator 3S1, post-program placement rates, disaggregated by student population. These data are generally collected through surveys of CTE graduates and highlight the goal and importance of secondary CTE programs equipping students with the skills and competencies they need to advance in postsecondary education or employment in a related field of study.

Case Study 1: Massachusetts

Data Highlights

Massachusetts set a high post-placement performance standard of 97.9% and reported back a state aggregate of 94.7%. Although MA did not meet their standard, they did achieve 90 percent of the standard, as required in Perkins V, and the state aggregate was well above the 3S1 national aggregate of 77.0%. Similarly, even though some racial subgroups and special populations in MA perform below the reported aggregate performance, these students, including students with disabilities, economically disadvantaged students, and English language learners, are all performing well above the overall aggregate for 3S1 (90.4%, 92.1%, and 84.8%, respectively), and the performance gaps between populations are quite small.

Figure 1: 3S1 Performance by Gender, Massachusetts

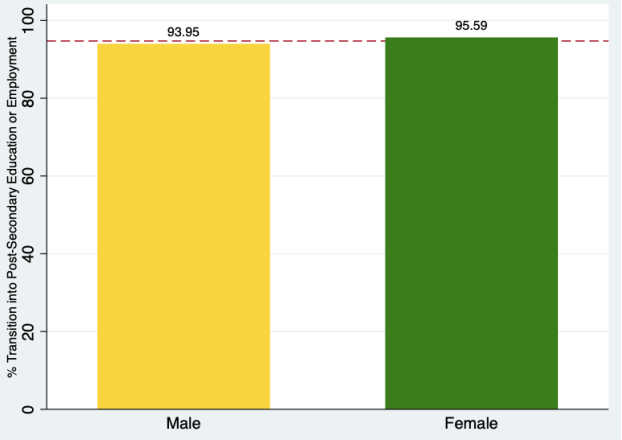
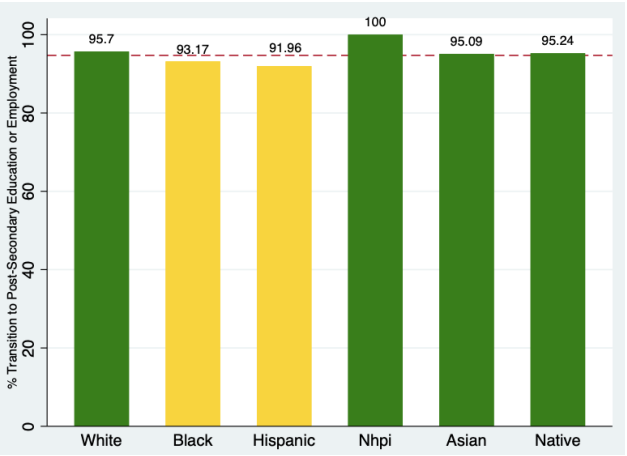


Figure 2: 3S1 Performance by Race and Ethnicity, Massachusetts



Interpreting the Graphs

The red dotted line represents the state aggregate performance. Green bars indicate that the student subgroup met or exceeded the state aggregate, while gold bars represent subgroups that fell below the aggregate.

Case Overview

CTE programs in Massachusetts include both state-approved programs (programs that meet the definition of vocational technical education contained in Massachusetts General Law Chapter 74, in which students spend about half of their time in technical training), as well as local CTE programs (in which students take at least two credits in a Perkins-approved program of study). Both types of programs are eligible for funding under Perkins V.[13]

Amid rising demand and long waiting lists for CTE programs across the state, MA leaders have focused on equitable access to CTE programs. They developed data dashboards around enrollment, disaggregated by student population, to allow school and district leaders to examine and compare admissions and enrollment data across schools.[14] The data spurred concerns about inequities in CTE enrollment, and MA recently enacted regulations requiring schools to develop equitable admissions policies. Schools must publish requirements in multiple languages and remove the requirement that grades, attendance, discipline records and counselor recommendations be used as admissions criteria, among other regulations.[15]

MA collects and validates 3S1 data locally through student surveys, but has aspirations to augment and validate this data by leveraging a data-sharing agreement with the state Department of Labor. Key to starting the collaboration between the agencies was the formation of a Workforce Skills Cabinet by Governor Charlie Baker, which brought together the Secretariats of Education, Labor and Workforce, and Housing and Economic Development around a common goal of supporting economic growth, in part through expanded technical education. The Skills Cabinet also provides grants to support innovative CTE programs across the state.[16]

In interviews, CTE leaders expressed concerns that students may not be aware of CTE program opportunities and that the admissions processes for CTE regional schools may be unfairly preventing students from racial minorities and special populations from enrolling. To address this issue, the state is leveraging Perkins leadership funds to support a communications center and campaign around CTE, including in the middle grades, to recruit students from underrepresented populations. The state also retains an equity consultant to provide training in gender equity practices and conduct outreach to families and communities in multiple languages. Recently, MA developed a data dashboard for school leaders to examine and compare 3S1 data by school, program, and student population, which allows school leaders and other members of the community to easily engage with outcome trends.[17]

3S1 Promising Equity Strategies

Promising strategies for increasing equity in post-program placement rates, gleaned from our research into Massachusetts' practices, include:

- **Reform CTE enrollment policies** to be equitable and accessible to all students, especially underrepresented student populations.
- **Develop a shared data pipeline** with the Department of Labor to reliably collect student data.
- **Deploy data dashboards** that are disaggregated by student population to evaluate equity gaps and inform policies.
- **Conduct communications campaigns** to increase CTE awareness among underrepresented student groups.
- **Enlist expert support** to deliver training on equity best practices.

Indicator 5S1: Postsecondary credential attainment

One of the Perkins V program quality indicators open to states, 5S1 refers to the number of CTE concentrators who receive a recognized postsecondary credential while in high school. Credential attainment can be a valuable sign of students' skills and knowledge, both to postsecondary education providers and employers, and lead to improved earnings.[18] Approximately 42% of states and territories selected 5S1 as a Perkins V quality indicator.

Case Study 2: Louisiana

Data Highlights

Louisiana set a 5S1 performance standard of 32.54% and reported a state aggregate of 39.78%. LA exceeded its standard of performance for 5S1 and is performing at the 5S1 overall aggregate level of 39.79%. Of note, LA appears to have equitable performance outcomes among several subgroups, with Hispanic students, Native American/Indian students, students with disabilities, students from economically disadvantaged backgrounds, and English learners all performing above LA's 5S1 state aggregate.

Figure 3: 5S1 Performance by Race and Ethnicity, Louisiana

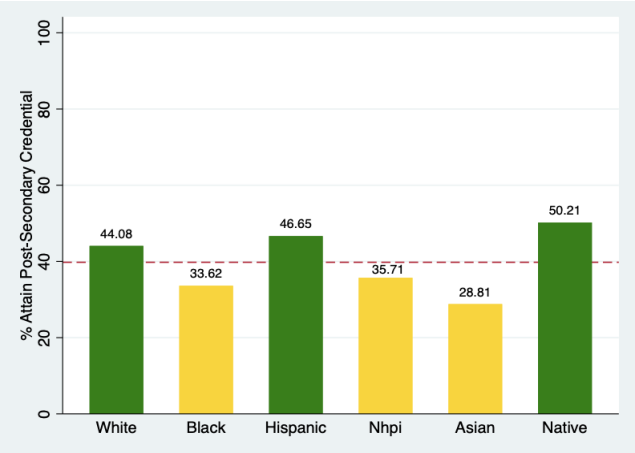
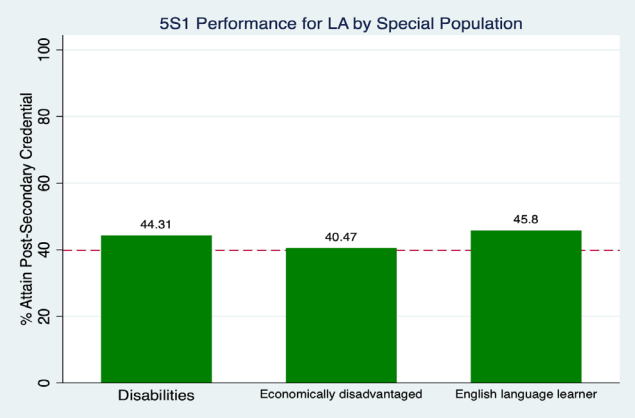


Figure 4: 5S1 Performance by Targeted Special Populations, Louisiana



Case Overview

In 2014, Louisiana kicked off the Jump Start initiative to rebrand CTE and bring rigor to the high school Career Diploma track, in part by requiring students to earn an industry-based credential to graduate.[19] Credential attainment is incentivized in the state accountability system, which weighs academic and technical achievements equally. These tracks do not operate in silos, however, and state leaders expressed concerns that students may not have the math and English skills they need for CTE programs.

The state maintains a focus list of credentials, governed by the Department of Labor's Workforce Investment Council, which includes stakeholders from across industry sectors and government agen-

cies.[20] To be included on the focus list, a credential must pass through a rigorous approval process, including by receiving support from industry and a school system, and by demonstrating that the credential leads to increased earnings. Proposed credentials may be rejected if they do not demonstrate market value.

Leaders emphasized the importance of the Department of Labor's oversight of the state focus list, which ensures that all credentials are of value to the labor market. The state also maintains a robust cross-agency data dashboard tool, which pulls together information from several government sources to allow practitioners to examine longitudinal student data, disaggregated by student population.[21] Dr. Lisa Vosper, the Associate Commissioner for Workforce Education and Training at the Louisiana Board of Regents has been known to say that Louisiana leaders are "serial collaborators," which is key to their progress in CTE.

They recently explored these data, while participating in a gap analysis workshop with ACTE. Discussing equity challenges helped state officials discover that educators and students were not aware of the accommodations available to them, such as credential testing for English learners in their primary language. Although there was no state policy prohibiting the use of these accommodations for credentialing, some schools assumed it was not permitted. A proactive campaign by the state to correct those misconceptions and share best practices helped promote equitable success in these programs.[22]

State leaders are also using reserve funds to overcome structural barriers - like geography – by supporting innovative pilots, such as mobile labs, to expand CTE access in rural areas.

Case Study 3: Pennsylvania

Data Highlights

Pennsylvania set a performance standard of 67.1% and reported a state aggregate of 68.2%. PA exceeded its standard of performance for 5S1 and performed well above the 5S1 national aggregate of 39.79%. NHPI students, Asian students, and students with disabilities are all performing above PA's reported state aggregate for 5S1, while economically disadvantaged students are performing just below PA's reported aggregate (67.4%).

Figure 5: 5S1 Performance by Race and Ethnicity, Pennsylvania

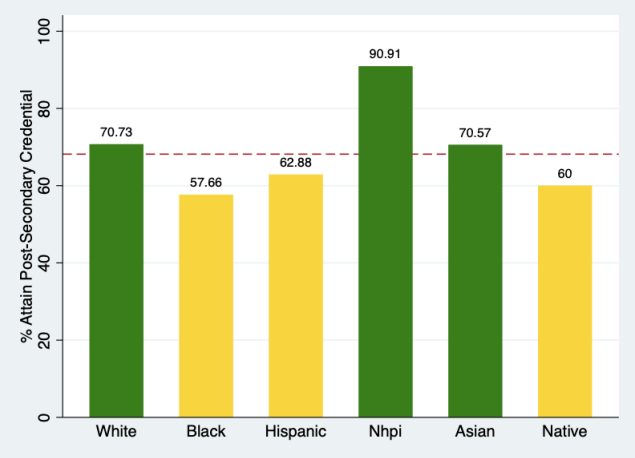
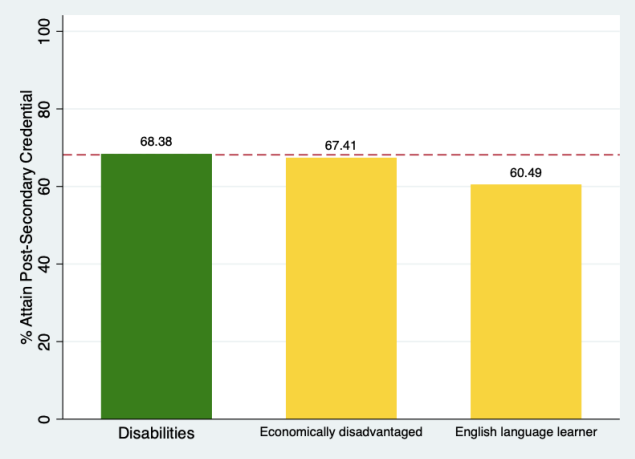


Figure 6: 5S1 Performance by Targeted Special Populations, Pennsylvania



Case Overview

Pennsylvania also reports postsecondary credential attainment data, which administrators enter into a state system governed by an independent office of data quality. Increasing the number of CTE students who receive postsecondary credentials has been a policy priority of Governor Tom Wolf, who has devoted significant state funding to the goal.[23]

The state examines local data to identify consortia

that are failing to meet standards and experiencing equity gaps, and leverages state funds to provide targeted technical assistance. The Pennsylvania Technical Assistance Program also provides optional and required training for administrators, including related to recruiting, advising, and serving students with disabilities.[24]

Leaders continue to notice that CTE is not considered a viable option in some parts of the state, and they are working on a communications campaign, pulling in STEM leaders and leveraging the rising popularity of programs in health sciences to raise awareness of these programs. Like in Louisiana, leaders discussed challenges bringing students to grade-level math and English levels before entering CTE programs and mentioned instances in which students were pulled out of CTE classes for remediation, causing them to miss credentialing assessments.

In our interview, state leaders highlighted a few effective equity practices. School counselors are integrated into the CTE planning process, for example, which improves equitable recruitment, and the state is working to build out career exploration opportunities for special populations. Leaders also mentioned bringing administrators together to share best practices at regional Perkins meetings so they can learn from others' challenges and successful strategies, such as the use of coaches for struggling students. Lastly, they mentioned that educators in Pennsylvania often encourage students with disabilities to use their additional year of high school to complete technical attainment assessments, which may contribute to their higher performance on this indicator.

5S1 Promising Equity Strategies

Promising strategies for increasing equity in post-secondary credential attainment, gleaned from PA and LA include:

- **Conduct a gap analysis** to identify equity trends and discuss root causes.
- **Disseminate information about accommodations** for special populations, including English learners and students with disabilities.
- **Fund innovative pilot programs** to address structural barriers, such as geography.
- **Bring local stakeholders together** to share challenges and best practices.
- **Provide training** for administrators and educators related to serving special populations.
- **Integrate counselors into the CTE planning process** to support recruitment of underrepresented populations.
- **Provide targeted technical assistance** to schools and districts with equity challenges.

Indicator 5S3: Work-based learning experience

Work-based learning (WBL) is another program quality indicator, which 53% of states selected to measure and report in Perkins V. WBL takes various forms, from internships and apprenticeships to workplace simulations and education cooperatives. It has been shown to improve student attendance and academic achievement, decrease school drop-out rates, and increase college enrollment[25] and can be a particularly powerful intervention for youth who are at risk of failing or dropping out of school[26]. Unfortunately, high-quality WBL experiences are not available to all students.[27]

Case Study 4: Oregon

Data Highlights

Oregon set a performance standard of 5.0% for work-based learning participation and reported a state aggregate of 33.5%. OR far exceeded its standard of performance for 5S3 and is performing above the 5S3 national aggregate of 30.9%. Relative to other 5S3 participating states, OR reports fewer equity gaps, with female students, Hispanic students, NHPI students, and English language learner students performing above OR's reported state aggregate for 5S3.

Figure 7: 5S3 Performance by Race and Ethnicity, Oregon

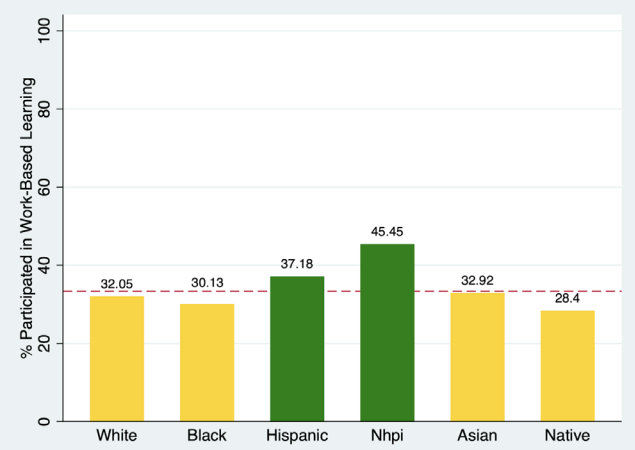
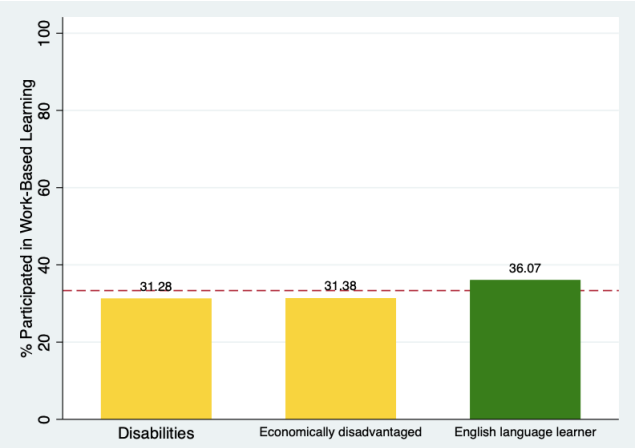


Figure 8: 5S3 Performance by Targeted Special Populations, Oregon



Case Overview

Oregon built its work-based learning program on an existing high school graduation requirement that students have a "career-related experience."[28] State leaders focused on developing standards that promote sustained interaction with employers and developed a rubric to delineate program requirements for schools and employers.[29] Leaders stressed that the effort is a collaboration between school leaders and community partners, with an explicit commitment to equity.

CTE leaders mentioned that they are focused on addressing several equity challenges, which include the lack of transportation in many rural areas, as well as disproportional access to social networks that are crucial to attaining high-quality WBL op-

portunities. Conversations with Black and Latino families have uncovered an existing mistrust of CTE programming, based in part on historical tracking of students into low-paying jobs in the old "vocational" programming paradigm. To help inform communities about the different opportunities that are now available in CTE, the state is engaged in a robust communications campaign highlighting the promise of CTE. This includes social media posts available in multiple languages.

The state has been working to identify and close opportunity gaps in CTE for at least the past ten years through a partnership with NAPE and the Regional Educational Laboratory Program, leading to root cause analyses and program improvement processes for equity. OR has a robust, disaggregated data dashboard, which illuminates disparities in the CTE pipeline, specifically, identifying which students participate in CTE courses and continue to become CTE concentrators.[30] The state also maintains an advisory council for continuous improvement, which was created under Perkins V and provides guidance and internal accountability around equity initiatives.[31]

Recent policy changes adjusting state funding formulas are leading to the integration of CTE into all districts' comprehensive planning processes, which leaders hope will expand stakeholder engagement around CTE.[32] They noted that career-connected learning has been an effective bridge between leaders in after school programming, STEM, and workforce boards, connecting previously disconnected stakeholders.

A particularly popular policy in Oregon is the Secondary Career Pathway incentive fund, which awards CTE programs funding (at least $2,000 and up to $45,000) for enrolling students from underrepresented groups in CTE, among other accomplishments.[33] The state encourages schools to leverage these funds for middle school recruitment of marginalized students. More broadly, Oregon has intentionally focused on equity from the beginning of its CTE system design, and WBL has been layered into this system.

Case Study 5: District of Columbia

Data Highlights

DC set a performance standard of 28.0% participation in WBL and reported an aggregate of 42.5%, exceeding its standard and performing well above the 5S3 national aggregate of 30.9%. It is encouraging to see Black students and English learners performing above DC's reported aggregate for 5S3, while economically disadvantaged students are just below the aggregate. It is also important to note that DC did not have robust data for NHPI and Native American/Indian students (due to small population sizes), so two groups were not factored into our evaluation of D.C.'s equity performance for 5S3.

Figure 9: 5S3 Performance by Race and Ethnicity, District of Columbia

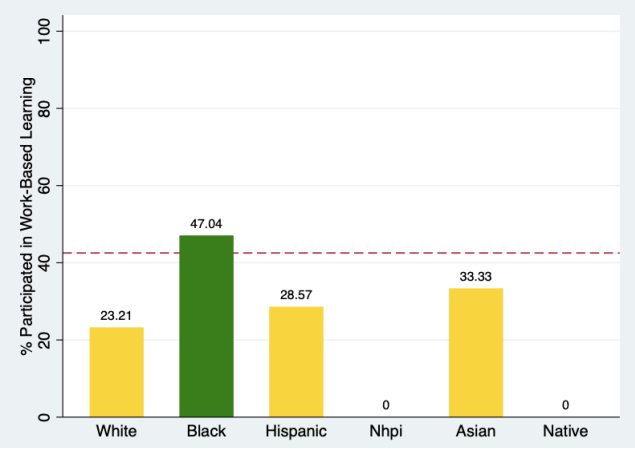
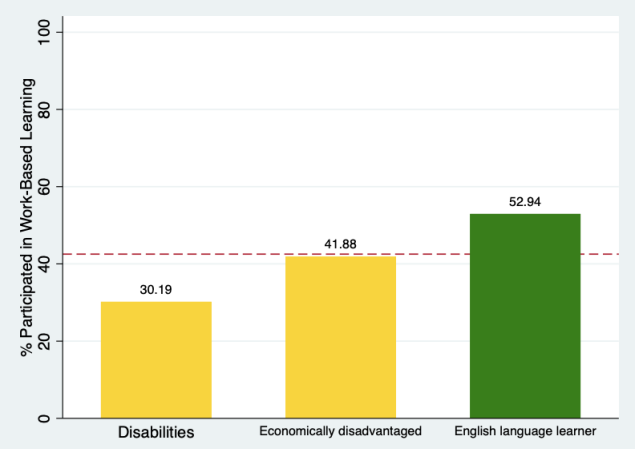


Figure 10: 5S3 Performance by Targeted Special Population, District of Columbia



Case Overview

CTE leaders in DC began designing and tracking work-based learning in 2018 because they believed WBL was the key to providing students with the experiences they needed to succeed after high school. The city focuses its efforts on student internships, while intermediaries drive apprenticeships in the area. City leaders noted that they are collecting high-quality data as the accountability systems mature.

The city designed its WBL system to dismantle equity barriers that many students face, particularly those living in Southeast DC who tend to be from lower-income backgrounds. They found that these students need to make difficult choices about how they spend their time because they are often relied upon to contribute to family finances. Therefore, they must prioritize jobs that pay minimum wage over unpaid internships. To address this challenge, DC appropriates funds to pay students minimum wage for 6-week summer internships that are connected to their programs of study.[34] In 2021, the city also launched an internship program during the school day. This funding also allows smaller businesses, which may not be able to pay interns, to participate in the program.

Transportation is another challenge for these students, and the city developed a process to provide interns with metro passes or car service to take them to and from internships. Schools also make efforts to bring diverse industry professionals into CTE classrooms – such as female coders or male nurses – especially in schools with minoritized populations, so that students can be exposed to professionals who look like them or are from their neighborhood and be encouraged to consider a variety of careers.

DC leaders laid out their comprehensive WBL strategy, which requires speaking the different "languages" of both businesses and educators. They have developed clear WBL standards, paired with strong accountability provisions for schools, and support across the WBL continuum, which extends from career exploration resources to internship matching. DC officials manage internships across all career clusters, including by building relationships with employers and providing direct service advising to student interns.[35] The office also conducts orientations for employers to prepare them to engage with students that may have significant challenges as a result of post-traumatic stress disorder.

DC centralized all industry advisory boards into one city-wide board and developed an office solely responsible for industry engagement, and they coordinate with the Mayor's Office of Latino Affairs to expand internships for English learners. In our interview, DC CTE leaders mentioned the importance of setting small, achievable goals, and building a WBL system slowly, with an eye on equity and quality over quantity.

5S3 Promising Equity Strategies

Promising strategies for increasing equity in work-based learning rates, gleaned from our research into Oregon and the District of Columbia include:

- **Be responsive to student needs,** including financial concerns. Consider paying students minimum wage for WBL experiences.
- **Develop and disseminate clear standards**, paired with accountability measures for schools.
- **Provide systemic support** for schools and students across the WBL continuum, including in career exploration.
- **Bring diverse industry professionals into classrooms** to encourage students to explore different careers.
- **Provide training to orient employers** to different student demographics and challenges.
- **Partner with nonprofit organizations** to conduct root cause analysis and continuous program improvement for equity.
- **Fund incentives** for the inclusion of special populations in CTE programs.

Conclusion & Next Steps

State Recommendations

This report presents several promising strategies for states to address equity gaps in secondary CTE programs and improve outcomes for students who have been poorly served by these systems in the past. From developing data tools, to building cross-agency partnerships, communications campaigns, and incentive programs, there are a variety of options for states to explore. That said, we would like to highlight three initial steps for states embarking on this work:

- **Examine disaggregated state and local data** related to CTE participation, concentration, and performance for equity gaps and "bright spots," or communities that may be deploying innovative practices to break down equity barriers. Just as valuable as the quantitative data is the qualitative data, and states should also:
- **Convene leaders and listen to stakeholders** in a meaningful way – including and especially students and families, but also education and industry leaders – to understand their needs and develop and share best practices. This work takes time, but it enables states to:
- **Intentionally design a system** of student, school, and industry supports and standards, with equity as a central principle, to scaffold stakeholder participation and set students up for success.

Federal Recommendations

In addition to state recommendations, we propose that OCTAE take steps to enable Perkins V data comparability across states and support state equity work by considering the following:

- **Standardize definitions and data cal-**

culation processes across states: This is the most essential step to enabling performance comparability between states. As articulated above, states have varying conceptual and operational definitions of core Perkins V indicators. For example, 5S3 (WBL) is defined and measured differently for New York and Ohio. New York considers CTE concentrators to have completed WBL if they participate in at least 54 hours of WBL, whereas Ohio sets their WBL requirement at 250 hours. A comparison of performance between NY and OH is not valid. Establishing uniform definitions and criteria for Perkins V performance measures will enable the calculation of valid and comparable performance estimates across states.

- **Apply weighting techniques to Perkins V data:** Weighting is a widely used statistical technique that is applied to survey data to account for varying population sizes. In addition to national state population differences, the sizes of student subgroups vary across states, and some population counts are very low (particularly NHPI and targeted special populations). This disparity is exacerbated when comparing large and small states. Applying appropriate statistical weighting techniques to the data will correct for these imbalances and allow for the calculation of unbiased and valid performance estimates. Weighting the data will improve the comparability, interpretability, and actionability of the data and results.

- **Provide grants to states for data quality system improvements and equity initiatives.** To support states and incentivize leaders to build reliable data systems and improve data collection, OCTAE should consider providing competitive grants to states for this purpose. These data are critical to examining the impact of CTE systems and programs, especially for students from marginalized groups, and ensuring CTE is living up to its promise of catalyzing economic mobility. Federal leaders may also consider issuing competitive grants to states and districts to implement innovative practices that specifically address state equity gaps, such as the practices recommended in this report. OCTAE should work with Congress to appropriate funding.

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