Four Strategies to Address Equity in CTE

Programs are at once powerful tools for expanding opportunity and laden with a fraught history of doing the opposite.

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Career and technical education, or CTE, helps learners gain the skills they need for high-wage, high-skill, in-demand occupations, but this was not always the case. For much of the 20th century, what was then called vocational education offered watered-down academics in exchange for low-skill job training. Students enrolled in these programs were less likely than

their peers to complete high school, earn advanced math credits, or meet preparatory requirements to enter four-year colleges,[1] fixing vocational education as a second-tier educational pathway.

Given the U.S. history of segregation and racism in public education, it is unsurprising that learners of color were disproportionately counseled into these

low-quality vocational programs along with other learners who were marginalized based on their socioeconomic status, gender, or disability.[2] Some theories suggest that, in the era following *Brown v. Board of Education*, when schools were forced to enroll students they did not want to instruct, vocational programs served to reinstate segregation not between schools but between classrooms.[3] Unlike a lot of today's CTE programs—which integrate rigorous academics, real-world learning, and opportunities to gain early postsecondary credit—vocational education precluded learners from going to college and funneled students toward terminal, low-wage jobs.

An evolution has taken place in CTE over the past few decades. CTE students often go on to graduate high school, enroll in college, and secure high-wage employment at higher rates than their peers.[4] Every learner should have the opportunity to benefit from CTE, but even today many students cannot access these high-quality programs.

Despite interventions by the federal government and many reforms to make schools more equal and accessible, schools are as segregated now as they were in the 1960s, particularly by race and social class.[5] According to state and national CTE leaders, high-quality CTE programs thus are more likely to prevail in areas with more concentrated wealth, where communities can afford to equip classrooms with state-of-the-art equipment and attract experienced teachers with competitive salaries. Furthermore, the CTE teacher workforce is overwhelmingly white, while the majority of the U.S. student population is not.[6] Having improved the quality and relevance of CTE, state policymakers find themselves faced with an entirely new dilemma: ensuring access and success for all.

Addressing equity in CTE requires first recognizing its conflicted history and taking steps to dismantle historical barriers and construct systems that help each learner access and complete a high-quality CTE program of study where they feel welcome and can participate fully. One persistent barrier is the notion that educational and economic success is all or nothing and that one needs a four-year degree from a reputable institution to get a job with a family-sustaining wage. Such a notion, if true, would write off the one out of five students who do not complete high school, the two out of five high school completers who do not immediately enroll in college, and the two out of five college students who do not graduate in six years.[7]

The line between education and work is far more fluid than most people believe, and learners should have access to the knowledge and opportunities that will help them achieve their academic and career goals. In today's economy, there are 30 million family-sustaining jobs that don't require a four-year degree.[8] Accessing these opportunities can put workers on a path toward lifelong learning and economic success.

State boards of education in particular can expand access to and achieve equity within CTE programs by taking four actions: investigate the data to identify discrepancies in access, enrollment, and success for different student populations; rebuild trust by talking to students and families and reengaging historically marginalized populations; identify and remove barriers to access; and take measures to ensure learner success.[9]

Investigate Data

There is no more powerful tool than a state's data system to reveal discrepancies in access and success. State leaders can use data to gain an understanding of the CTE landscape, examine root causes, empower local leaders to take action, and hold local institutions accountable.

However, state leaders do not always have access to the data they need to make informed decisions. Challenges with data collection, student privacy laws, and cross-sector data linkages can limit the information available to state leaders. A high-quality data system should enable state leaders to answer the following questions:

■ Which student populations are overrepresented in CTE programs that are not aligned to high-skill, high-wage, in-demand occupations? Which are underrepresented?

■ How does the population of CTE students vary across Career Clusters®? Are students enrolling in programs aligned to industries in which individuals with their gender, racial, ethnic, or socioeconomic background are underrepresented?

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How does performance and success vary across student populations? Which students are graduating from high school, earning credentials of value, enrolling in further education, or securing high-wage employment?

Answering these questions gives state leaders the tools to understand and react to inequities in CTE. The next step is to dig deeper and examine root causes. There are many reasons why students of a certain gender or race might be underenrolled in a CTE program, but these reasons may not be obvious.

In **Maryland**, for example, state leaders in the education department surveyed local CTE program administrators to get more information about why more students with disabilities were not enrolling in CTE programs. They discovered that the academic requirements used to select students—which relied heavily on interviews, grades, written essays, and disciplinary records—were creating barriers to access for students with disabilities. The department updated existing policy to ensure that selection requirements would not disproportionately bar these students from enrolling.

Examining root causes should be conducted in partnership with state and local actors. As part of its annual performance management, the **Delaware** Department of Education looks at school-level, program-level, and state-level data for student populations, disaggregating data by socioeconomic status, race/ethnicity, disability, gender, and more. Subgroup data are compared with those for the general student population to ascertain whether enrollment and performance for certain students deviate significantly from the expectation.

When inequities are identified, a structured protocol is set into motion. The department uses a partnership approach to performance management, working with leaders in the local education agency to co-construct questions for study and conduct interviews with teachers, students, and parents to identify gaps and models of support. Student and parent opinions carry the most weight in this process, ensuring that the voices of those being served are elevated.

Once the interviews are completed, state agency and district staff collectively develop a report with commendations, recommendations, compliance issues, and next steps for closing equity gaps. Although local sites are not required to act on the department's recommendations, many recognize the need and seize the opportunity for additional state support. In this way, the education department serves as an equity partner, empowering local leaders to examine root causes and pursue new strategies to achieve subgroup parity.

Talk to Students and Families

Core to advancing equity in CTE is building trust with families and students. Learners will not participate in CTE if they do not view it as a viable mechanism to help them achieve their college and career goals. Building trust with families and students means intentionally including diverse voices—especially those who have been historically underserved by CTE—in conversations about policy and programmatic decisions that will affect them.

Providing a platform for students, families, and leaders to help inform policy and programmatic decisions empowers communities and increases their investment in CTE. Students and families should have multiple opportunities to provide feedback, and these feedback loops must be accessible to diverse groups of students and families.

Here are some questions to consider in examining the accessibility of information and feedback loops:

■ In what languages are plans, data, policy, and program information presented? What languages may community members use to provide feedback?

■ Is information presented in plain language that the average layperson can understand? Is jargon translated into lay terms?

■ What timeframe for providing feedback is given? Who may be excluded from providing feedback due to the times and dates of meetings?

■ What delivery methods may community members use to provide feedback (online, mail, in person)? Who may be unable to access these opportunities because of the location or time of day?

Another strategy for engaging historically marginalized populations is tapping trusted CTE

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champions who can demographically represent populations that states are hoping to support.

In 2017, Advance CTE, with support from the Siemens Foundation, commissioned focus groups and a national survey to explore the attitudes of parents and students currently involved in CTE, as well as prospective CTE parents and students. A key finding was that school counselors, teachers, and CTE students are among the most trusted sources of information about CTE for prospective parents and students alike.[10] By engaging trusted stakeholders, states can get critical insights into how CTE programs can better serve historically marginalized populations.

Remove Barriers to Access

In practice, much of the conversation about equity in CTE centers on access. Working toward parity in CTE programs is a good focus—particularly to ensure that learners are not under- or overenrolled in a specific program area—but such efforts must be coupled with a focus on quality.

To begin with, state leaders must set high standards for excellence and quality in CTE so that no student anywhere can enroll in low-quality programs that lead to terminal, low-wage occupations. State leaders must use their authority over program approval, funding, and standards to set a high bar for all CTE programs. Focusing on program quality means ensuring that all programs are aligned to priority industry sectors, teach the latest practices and techniques, are facilitated by experienced, well-trained educators, and give learners the opportunity to apply their learning in a real-world setting while accumulating early postsecondary credit and working toward an industry-recognized credential.

State leaders can expand access to high-quality CTE programs by identifying common barriers and working to meet students where they are. Some barriers that might inhibit access to high-quality CTE include the following:

■ geography and availability of high-quality CTE programs;

■ funding and resources, particularly for capital-intensive programs such as advanced manufacturing or health science;

■ at-home factors (family involvement, income, trauma, childcare needs, health needs);

■ academic preparation;

■ career awareness/advising;

■ lack of qualified instructors;

■ cultural awareness; and

■ physical and learning disabilities.

To help local institutions expand access, states must target their resources and funds to the communities and students most in need. Compared with other programs, CTE can be more expensive due to the cost of equipment, facilities, and educators, making it difficult for states to sufficiently fund high-quality CTE in high-need areas. State boards of education can advocate for legislation and enact regulations that ensure existing funds are leveraged appropriately.

State leaders can also work with stakeholders to expand geographic access to CTE. They can consider input from the business community and CTE instructors, for example, to identify the challenges to expanding access to specific zip codes. They can craft strategies to address these challenges, such as leveraging funds to provide appropriate transportation to CTE opportunities and leveraging technology to connect learners to industry experts virtually. For example, the **Ohio** Department of Education has developed a mapping tool using geographic information systems to identify key factors that support or inhibit learners' access to work-based learning and CTE.

Finally, state boards of education can advocate for legislation and pass regulations that help to address some of the significant barriers that prevent learners from entering CTE programs even when those programs are geographically available to them—for example, a lack of academic preparation, inadequate advising, and entrance requirements.

To address these barriers, state boards can pass regulations to ensure that each learner experiences rigorous academics, that academic and technical instruction are integrated and reinforced within a program of study, and that career exploration starts early so there can be a smooth handoff once learners officially enter a program of study. They can also examine whether entrance requirements are predictive

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of learner success in CTE programs and not just a means to deal with excess demand for given programs. State leaders can also promote bridge programs or summer-intensive programs as an alternative to entrance requirements. These programs help ensure that each learner has the foundational skills needed to succeed in CTE.

Take Steps to Ensure Learner Success

Too often, CTE students face teasing or harassment in programs that are not considered appropriate for their gender. Other emotional, financial, and academic challenges can also inhibit learners from reaching their full potential. To be successful in CTE, students must enter a safe, welcoming environment in which they can excel academically and build the skills and experiences they need in the workplace.

School and district leaders make most of the decisions affecting school climate and student supports, but there is still an important role for state leaders to play. For one, they can set policies on the availability and use of school climate surveys. One example is **Illinois State Board of Education**, which requires districts to administer one of three school climate and culture surveys each year.[11] The data, which are also available on the school report card, are used to determine student perceptions about their own safety and well-being and to inform school improvement planning.

State policymakers also can ensure learner success by making resources available to support academics, healthcare, and other student needs. For students living in poverty, minor health issues like cavities or untreated illnesses can have a dramatic impact on learning in the classroom. Some schools, such as the Traverse Bay Intermediate School District's Career-Tech Center in Traverse City, Michigan, provide free dental, mental, and health services for students so they can focus on learning.

Students also need help with the transition to the next step in their career pathways, whether they choose to go on to a four-year college, community or technical college, apprenticeship, or straight into the workforce. State boards can set policies and advocate for funding to expand rigorous academic and career advising so learners are aware of the variety of postsecondary options and the steps they need to take

to get there. College and career advising has been a focus of the **Massachusetts** Department of Elementary and Secondary Education, which recently unveiled a new advising framework and has begun training school-based teams of counselors and administrators on a student-centered approach to college and career planning.[12] As part of the training, participants attend a racial bias workshop to understand and counteract bias in college and career advising.

Additionally, state leaders can work to expand early postsecondary opportunities, work-based learning, and other experiences that facilitate successful transitions. Students who earn college credit in high school are more likely to enroll and persist in college after they graduate.[13] By expanding access to such opportunities in high school—and holding schools and local education agencies accountable for increasing student participation—state leaders can ensure more students graduate with the experiences they need to seamlessly take the next steps.

A Path Forward

With the right policies, systems, and attitudes, CTE can be a powerful tool for closing achievement and opportunity gaps. High-quality programs of study can prepare learners to earn valuable credentials that will advance their economic and social mobility, help them obtain employment in a career of choice with family-sustaining wages, and provide opportunities for advancement and lifelong learning. As CTE continues to grow in popularity and availability, state leaders should learn from and actively work to dismantle the aspects of CTE's history that contributed to equity gaps and make sure that each learner has access to high-quality opportunities and support.

State boards are uniquely positioned to influence equity and access in K-12 education. This authority includes expansion of access to CTE. They should leverage their power to ensure that each learner can access, succeed in, and feel welcome in high-quality programs. It is only through an intentional focus on equity that states will truly be able to put students first. ■

[1]James W. Ainsworth and Vincent J. Roscigno, "Stratification, School-Work Linkages and Vocational Education," *Social Forces* 84, no. 1 (2005); Ben Dalton et al., "From Track to Field: Trends in Career and Technical

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March 2019).

[4]I know of simulated workplace sites located in Ohio, Alabama, Missouri, Pennsylvania, North Carolina, and Australia.

[5]Governor Jim Justice, "West Virginia State of the State Address" speech (February 8, 2017), https://www.c-span.org/video/?423620-1/governor-jim-justice-delivers-west-virginia-state-state-address.

[6]To learn more about Simulated Workplace, visit www.simulatedworkplace.com.

Education Across Three Decades" (Washington, DC: National Assessment of Career and Technical Education, U.S. Department of Education, 2013), https://www.rti.org/sites/default/files/resources/cte-trends_finaldraft.pdf; Jay Rojewski and Xue Xing, "Treatment of Race/Ethnicity in Career-Technical Education Research," *Career and Technical Education Research* 38, no. 3 (2013): 245–56.

[2]Advance CTE, "Making Good on the Promise: Understanding the Equity Challenge in CTE" (Silver Spring, MD: author, September 2018).

[3]George Ansalone, "Tracking: A Return to Jim Crow," *Race, Gender & Class* 13, issue no. 1/2 (2006).

[4]Office of Career, Technical, and Adult Education, "Carl D. Perkins Career and Technical Education Act of 2006: Report to Congress on State Performance Program Year 2014–15" (Washington, DC: U.S. Department of Education, March 2018); National Center for Education Statistics, "Educational Longitudinal Study of 2002, Third Follow-Up," table H134 and table 5A (2012), https://nces.ed.gov/surveys/ctes/tables/h134.asp and https://nces.ed.gov/surveys/els2002/tables/CTE_ELS_table5a.asp.

[5]Gary Orfield and Erica Frankenburg, "Brown at 60: Great Progress, a Long Retreat and an Uncertain Future" (Los Angeles, CA: Civil Rights Project, May 2014).

[6]Tim Waid, "Race Issues in Career and Technical Education: A Snapshot in Black and White," *Techniques* 79, no. 3 (March 2004), https://www.questia.com/magazine/1G1-114168003/race-issues-in-career-and-technical-education-a-snapshot.

[7]National Center for Education Statistics, "The Condition of Education" (Washington, DC: US Department of Education, May 2019), https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2019144.

[8]Anthony P. Carnevale et al., "Good Jobs That Pay without a BA" (Washington, DC: Georgetown University Center on Education and the Workforce, 2017).

[9]Draws on Advance CTE, "Making Good on the Promise."

[10]Advance CTE, "The Values and Promise of Career Technical Education: Results from a National Survey of Parents and Students" (Silver Spring, MD: author, 2017).

[11]Illinois State Board of Education, "School Wellness: 5Essentials Survey" (Springfield, IL: Regulatory Support and Wellness Division, 2019), https://www.isbe.net/Pages/5Essentials-Survey.aspx.

[12]Massachusetts Department of Elementary and Secondary Education, "College and Career Readiness: College and Career Advising Professional Development Series," webpage (Malden, MA: author, 2019), http://www.doe.mass.edu/ccte/ccr/hqccp/.

[13]Institute of Education Sciences, "What Works Clearinghouse Intervention Report: Dual Enrollment Programs" (Washington, DC: IES, 2017).

There is also significant overlap between definitions and data requirements in Perkins, WIOA, and ESSA. Perkins V's "special populations" overlap in several areas with ESSA's "subgroups" and WIOA's "individual with a barrier to employment." As a result, Perkins V encourages states to be thoughtful in how they are collecting and using data for these populations in a way that is nonduplicative and can be applied toward each of the laws. In many cases, given that the agencies responsible for implementing ESSA, WIOA, and Perkins in a state may not be the same, leadership must ensure that agencies are being encouraged or required to coordinate.[8]

There are also opportunities for alignment in the construction of accountability systems. States that have selected the college and career readiness indicator as part of their ESSA accountability system may already have included one of the Perkins V measures of program quality. Those states may want to pick another indicator of program quality for Perkins V in order to maximize the ways in which they are assessing CTE program quality.[9]

Role for State Boards

While most states are already developing their four-year Perkins V plans, states will continue to operate under the one-year transition plans they submitted to the U.S. Department of Education in the spring. In addition, the first local needs assessment process is under way.

Members of state boards of education must ask the right questions of state agencies and encourage leadership to capitalize on the new opportunities in Perkins V. During the planning period, state boards should be asking these questions:

- How will Perkins V funds support increased access to special populations to close equity gaps and increase attainment of industry credentials?[10]

- What is the right division of resources between secondary and postsecondary programs?

- How will the expanded reserve fund be used to incentivize high-quality CTE programs and encourage innovation?