MAKING GOOD on the PROMISE

Examining Access and Achievement Gaps

This brief, the second in a series focused on equity in Career Technical Education (CTE), lays out a strategy for state and local policymakers to confront historical inequities by using data to examine and address gaps. It examines promising strategies from states that are using data to better understand where and how learners are being under-served, identify root causes and disrupt historical inequities.

Using Data to Identify and Resolve Inequities in CTE

State leaders can use data as a tool to understand the effects of historical inequities and arm local leaders to mitigate their impact. Data, when disaggregated to unmask differences in enrollment and performance, can be a powerful tool to diagnose problems, navigate course corrections and evaluate progress and impact. Yet there are some real challenges and limitations to CTE data. Historically, CTE data have been collected by separate, non-longitudinal data systems (with secondary and postsecondary CTE data often collected separately), relied on a mix of sound and self-reported information, and had limited distribution among stakeholders and the public. Such archaic systems limit the impact and usefulness of CTE data.

Some states, however, have invested in robust, linked data systems that allow for a closer examination of learner outcomes. In these states, policymakers have leveraged their data systems to identify and address the inequities in their own communities, working to close equity gaps by:

- Leveraging accountability to draw attention to inequities;
- Committing to data transparency; and
- Examining root causes of achievement and access gaps.

Accountability as a Lever to Highlight Equity Gaps

Accountability can be a powerful lever for promoting equity. What gets measured matters, and holding schools and institutions accountable for career readiness signals to local leaders that each and every learner should be able to access high-quality CTE programs of study and experience work-based learning, credentialing and instructional opportunities that will prepare them for success in the real world. Valuing career preparation in state and federal accountability systems also ensures that local and state leaders collect the data they need to identify access gaps in CTE programs of study and are empowered to act on this information to close gaps.

However, accountability and public reporting systems must be designed to effectively provide local leaders and community members with actionable information, as well as equip them with the skills to

Key Equity Questions for CTE

State leaders should consider the following questions as they examine CTE enrollment and performance data.

- Can all learners access high-quality CTE programs of study?
- How does your state define access?
- Are you considering the availability of high-quality CTE programs of study, transportation barriers, waitlists, admissions barriers, etc.? Just because a program is geographically close does not mean it is accessible.
- Are certain populations over-represented or under-represented in CTE programs of study? Do these trends persist within and across Career Clusters®?
- Where are the biggest achievement gaps?
- Are inequities persistent statewide, or are they isolated within districts, within schools or within programs?
- How are you engaging the learners and communities you serve to better understand the problem and identify solutions?

use this information. The widespread commitment by more than 30 states to measure career readiness in federal accountability systems should be celebrated.[1] Yet many of the indicators states chose to measure career readiness fall short of providing true transparency. For example, many states have adopted accountability measures that are commonly known as meta-indicators, which combine a menu of options for students to demonstrate college and career readiness. While this approach appropriately recognizes the many pathways to postsecondary success, it can often mask student achievement by blending different types of indicators. Without breaking down meta-indicators into their constituent parts, knowing which students are achieving college and career readiness and which pathways they are taking to get there may be impossible for the public. Furthermore, using meta-indicators may encourage school districts to focus on the students most likely to reach these benchmarks, while neglecting the rest. It is absolutely critical that states disaggregate performance data by sub-populations to highlight inequities and provide actionable information for local policymakers.

The Value of Disaggregating Data

States must commit to disaggregating data to highlight the performance of learners of color, learners with disabilities, low-income learners, female learners, etc. All too often, the achievement of these learners is masked by the performance of their peers. Being transparent with data allows families, community members and policymakers to more clearly identify where gaps exist and take action through either institution-based or policy-based solutions.

The Strengthening Career and Technical Education for the 21st Century Act (Perkins V), which was reauthorized in August 2018, includes requirements to enhance data collection and reporting for new learner populations — a move that will increase transparency in CTE. Meeting these requirements could be the opportunity state leaders need to strengthen CTE data collection

and reporting capabilities and ensure that data are available to inform decisionmaking, public accountability and learner interventions.[2]

Well-designed accountability systems allow states and local leaders to identify critical access and performance gaps and ensure that decisionmakers prioritize equity. But accountability alone is insufficient to equip students, families and policymakers with the information they need to make informed decisions. In addition to embedding career-focused indicators in their accountability systems, states must commit to CTE data transparency and make access and performance data available to the public.

Maryland's Commitment to CTE Data Transparency

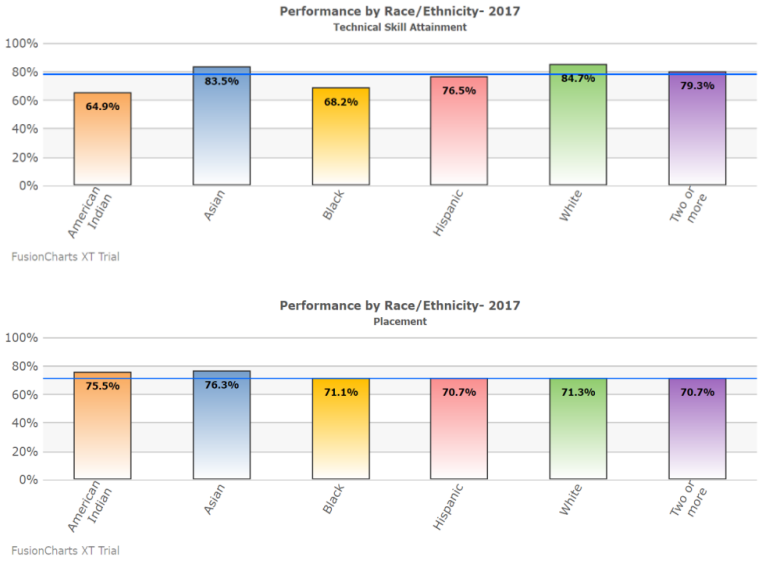
In **Maryland,** any member of the public can access enrollment and performance data reports for each of the state's 24 school systems and 16 community colleges.[3] Easy-to-use dashboards display enrollment and performance data and enable users to filter results by a number of sub-populations including gender, race/ethnicity, disability status, socioeconomic status and English proficiency.

Maryland makes CTE data available to the public in two primary ways. The first way is through accountability reports such as the annual Program Quality Index (PQI) report,[4] which demonstrates student performance on the six core CTE performance indicators under the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV), and the Local Performance Accountability Report (LPAR), which examines sub-population data. These reports allow the public to see whether recipients are above or below the target for academic performance, graduation, technical skill attainment and more. Both data dashboards are updated annually.

The second way Maryland makes CTE data available is through its CTE enrollment dashboards, which display the available programs for each school system and community college and the proportion of students participating in CTE, arranged by Career Cluster.[5] This display allows state and local policymakers to quickly determine where students are enrolled in programs that are aligned with high-wage, high-skill, in-demand occupations.

In addition to making the data accessible to the public, Maryland prepares CTE teachers and administrators to use and understand the data dashboards so that they can change school-based practices to improve

Maryland Public Schools CTE Outcomes - 2017



CTE performance outcomes for all Maryland public schools, disaggregated by race/ethnicity. Retrieved from https://www.mdctedata.org.

performance and ensure more equitable enrollment. Local leaders use the disaggregated metrics in the PQI and LPAR reports to make data-driven decisions when developing the annual Local Perkins Plan for Program Improvement, specifically focusing on student populations that are under-served or under-performing.

The accessibility of timely, accurate data also empowers Maryland state staff to flag performance and enrollment gaps in school systems and community colleges and, if necessary, intervene. Recently, state leaders noticed that schools with an application process for students to access CTE programs tended to create artificial barriers to enrollment. The Maryland State Department of Education convened a study group of state and local leaders and fielded a survey to gain a better understanding of the root causes behind the barriers to enrollment. As it turned out, the selection process that some school systems were using to recruit students into CTE programs relied heavily on interviews, grades, written essays and disciplinary records, making enrolling in CTE programs harder for students. With input from the study group, state staff quickly developed a Technical Assistance Bulletin (TAB) to provide guidance on more equitable recruitment practices to reduce bias in the selection process. The guidance was distributed to school system and school-based leaders in April 2017, and professional development was provided to local CTE directors. Thanks to the availability of the TAB and effective use of real-time CTE data, Maryland staff were able to intervene and expand equity and access in the student recruitment process. Many educators today are implementing the recruitment practices recommended in the TAB.

Source: Peninsula College, Port Angeles, WA

Minnesota's Graduate Employment Outcomes Tool Demystifies Postsecondary Pathways

Other states such as **Minnesota** go beyond federal reporting requirements to provide disaggregated data on labor market outcomes for graduates of different institutions of higher education. This approach aims to demystify the postsecondary system by equipping students, families and school counselors with information to make informed decisions about their postsecondary options. Additionally, Minnesota demonstrates how policymakers can use employment outcomes data to identify workforce needs and build the case for expanding pathways into the workforce.

In 2014, the Minnesota Department of Employment and Economic Development (DEED), in partnership with the Office of Higher Education, released the Graduate Employment Outcomes Tool to the public.[6] The tool was funded primarily through a federal Workforce Data Quality Initiative grant and was designed to meet the growing demand from both policymakers and prospective students for more transparent data on employment outcomes for graduates.[7]

The tool works by matching postsecondary student records with unemployment insurance data to provide wage and employment reports by institution and by program for individuals who graduated within the past few years. Learners can log in to the tool, search for a school or a program they are interested in pursuing, and quickly compare employment outcomes for different institutions.[8] Importantly, data in the Graduate Employment Outcomes Tool can be disaggregated by race, allowing users to compare outcomes for students like them.[9] To maximize awareness and use of the data, state officials at DEED and the Office of Higher Education reach out to counselors and other school-based leaders to teach them how to use the tool.

Expanding opportunities for under-served racial populations is a critical need in Minnesota. In recent years, the population of non-white Minnesotans between the ages of 18 and 64 has increased while the population of white Minnesotans has decreased. The fate of the economy, therefore, depends on an inclusive, accessible workforce. Policymakers and researchers at DEED have used the Graduate Employment Outcomes Tool to unpack workforce trends and build the case for strengthening education and training pathways into the workforce. They argue that closing racial gaps "is not only the right thing to do, it's the necessary thing to do if we're to provide our economy and its employers with the workforce necessary for success."[10]

Source: Region 10 Technical High School, Brunswick, ME

How Delaware Gets to the Bottom of Equity Gaps through Root Cause Analysis

State leaders must understand how to unpack their data to uncover inequities. Sometimes it can be difficult to know whether to prioritize gaps in enrollment, performance or post-program outcomes. Once gaps are identified, states leaders must then intervene in a structured way.

Delaware identifies gaps by sub-group through an analysis of CTE enrollment, completion and post-program outcomes data. The Delaware Department of Education (DDOE) looks at school-level, program-level and state-level data for different student populations, disaggregating data by socioeconomic status, race/ethnicity, disability, gender and more. Sub-group data are compared to the general student population to ascertain whether enrollment and performance for certain students deviate significantly from the expectation. This process is completed annually as part of DDOE's performance management.

For example, DDOE examines parity in student enrollment data across the aggregate high school population and CTE student group to identify inequities in participation. DDOE staff expect enrollment in a CTE program of study to mirror the population of students in the school and in the community. If only 4 percent of students in an allied health career pathway are students with disabilities, and the population as a whole is 16 percent students with disabilities, this finding would

Supporting English Learners in a Biomedical Science Program of Study
Beaverton, Oregon

Health & Science School in Beaverton, OR, an Excellence in Action award finalist, uses the Project Lead the Way curriculum in its Biomedical Science program of study.[11] Learners exercise hands-on, team-oriented skills and explore topics such as human medicine, physiology, genetics, microbiology and public health.

The high school is an options school, meaning it is one of six lottery-based admissions schools in the district that provide specialty education. As such, school leaders work actively to recruit a population of students that is representative of the district population. The school is 54 percent non-white, 53 percent economically disadvantaged, 33 percent English learners, and 10 percent students with disabilities.

Staff at Health & Science School use data to promote equity and deliver resources and supports to each student based on need, particularly focusing on the school's large English learner population. An equity team at the Beaverton School District provides professional development and resources to help school-based staff understand their student data. They look at graduation rates, postsecondary success, technical skill attainment and more for each student sub-group and pair this information with teacher testimony and qualitative survey data.

This information helps staff at Health & Science School work in partnership with district leaders to make programmatic changes to better serve students in need of additional supports. As a result, Health & Science School has modified teaching practices, developed resources, and embedded support staff in the classroom to allow for full inclusion of English learners.

suggest that these students do not have equitable access to that program. This analysis is facilitated by dynamic dashboards, similar to those used in Maryland, which allow DDOE staff to quickly drill down to the district, institution and program levels to closely examine student data.

When inequities are identified, a structured protocol is set into action. DDOE uses a partnership approach to performance management, opting for a collaborative conversation with school-based staff. DDOE staff provide district leaders with data reports, which illuminate specific gaps in enrollment and performance. They then co-construct a series of 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, DDOE and district staff debrief about the conversation and collectively develop a report summarizing the findings of the study. The report includes commendations, recommendations, compliance issues, and next steps for closing equity gaps. The report also highlights opportunities for local leaders to co-invest with the state in trainings, tool development and other interventions to support under-enrolled and under-performing students. Although local sites are not required to act on DDOE's recommendations, many recognize the need and seize the opportunity for additional state support. In this way, DDOE serves as a partner in equity,

empowering local leaders to examine root causes and pursue new strategies to achieve sub-group parity.

Delaware's approach demonstrates how states can use data to examine root causes and determine the appropriate steps to rectify inequities. The reason why gaps exist may not always be obvious. Policy barriers may prevent students from accessing and succeeding in high-quality CTE programs of study. Or classroom-based practices and behaviors may influence the choices students make about their educational options. Data alone will not answer these questions, but they can illuminate inequities and provide a roadmap for understanding root causes. In a state like Delaware, it takes a structured process to create room for collaboration and honest conversation.

A Path Forward

There is both a moral and an economic imperative for expanding access to high-quality CTE programs of study. Participating in CTE, work-based learning and other career-focused experiences provides learners with the technical, academic and employability skills to accelerate career growth and individual opportunity. For many, it can be a pathway out of poverty and into a sustainable career. Multiplied at scale, focusing on equity in CTE is a sure way to strengthen the talent pool and close critical skills gaps in the workforce.

What will it take to get there? State leaders should consider the following actions to understand the equity challenges in their own communities:

- **Acknowledge, and work toward dismantling, current and historical inequities in CTE:** Examining access and equity through a historical lens is important to contextualize equity gaps. In the past and even still today, students have been counseled into narrow, job-specific vocational programs based on income, disability, gender and race. By and large, today's CTE programs are more academically rigorous and career oriented than in the past, but work still remains to rebuild trust, stay the course on the drive for quality, and demonstrate that CTE is a viable option for career success for everyone. This history must provide the context for every decision a state leader makes to ensure that program quality, expansion and improvement are informed by a robust awareness of historical inequities in CTE.

- **Be transparent with state data:** State leaders should commit to using their data to make state policy and fiscal decisions and to making data available to the public to demonstrate how many students are enrolling and succeeding in CTE programs of study. Further, states should disaggregate data by program, institution and sub-population and make sure the data are actionable by offering professional development and training to administrators and policymakers. All too often, CTE enrollment and performance are masked by aggregating and reporting data statewide or by using meta-indicators that combine a menu of different data points. Providing transparent, disaggregated CTE data empowers students, families and counselors to make informed decisions about their educational choices and equips state and local policymakers to more easily identify gaps (although states should still exercise caution to ensure that privacy is not violated).

- **Use root cause analysis to get to the bottom of enrollment and performance gaps:** Data do not always tell a clear story. Once gaps have been identified, state leaders should investigate the root causes to better understand, and begin the work of addressing, equity gaps. This process requires speaking with school- and institution-based staff, interviewing students and families, and reflecting on the policies and practices that perpetuate historical inequities. This analysis should inform any efforts to close access and achievement gaps to ensure that resources are being used effectively.

By acknowledging and working to understand CTE's history, state leaders will have a better perspective to recognize and remedy inequities as they exist today. This work is not easy. It requires a bold commitment to equity and a willingness to confront institutionalized biases. This series aims to equip state leaders with strategies to take on this challenging work. In future briefs, we will explore how state leaders can work to rebuild trust among communities that have been historically under-served, expand opportunity for every learner, and put mechanisms in place to ensure learner success.

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[1] Advance CTE and Education Strategy Group. (2017). *Career readiness & the Every Student Succeeds Act: Mapping career readiness in state ESSA plans*. Retrieved from https://careertech.org/resource/mapping-career-readiness-essa-full

[2] Advance CTE and Association for Career and Technical Education. (2018). *Legislative summary & analysis: Strengthening Career and Technical Education for the 21st Century Act (Perkins V)*. Retrieved from https://cte.careertech.org/sites/default/files/AdvanceCTE_ACTE_P.L.115-224Summary_Updated082218.pdf

[3] Maryland State Department of Education. Maryland CTE data. Retrieved from https://www.mdctedata.org/index.php

[4] Maryland State Department of Education. Maryland school system reports. Retrieved from https://www.mdctedata.org/lss/index.php

[5] Maryland State Department of Education. Maryland public schools CTE enrollment — 2017. Retrieved from https://www.mdctedata.org/dashboards/summary.php

[6] Minnesota Office of Higher Education. DEED introduces employment outcomes tool. Retrieved from https://www.ohe.state.mn.us/mPg.cfm?pageID=2111

[7] U.S. Department of Labor. Grant recipient summaries. Retrieved from https://www.doleta.gov/performance/grantrecipientsummaries.cfm#mn

[8] Minnesota Department of Employment and Economic Development. Graduate employment outcomes. Retrieved from https://mn.gov/deed/data/data-tools/graduate-employment-outcomes/

[9] Minnesota Department of Employment and Economic Development. Outcomes by race: Racial disparities in employment outcomes after college. Retrieved from https://mn.gov/deed/data/data-tools/graduate-employment-outcomes/race-geo.jsp

[10] Hine, S. (2015). *Eliminating racial disparities is crucial to our success*. Retrieved from https://mn.gov/deed/assets/dec-2015-TRENDS-Steve_tcm1045-202480.pdf

[11] Health & Science School. Retrieved from https://www.beaverton.k12.or.us/schools/health-and-science