

CTE Research Network Practitioner Training Modules



Using Research to Design Your CTE Program for Equity

Training Module Series #5

The work of the CTE Research Network Lead is supported by the Institute of Education Sciences at the U.S. Department of Education with funds provided under the *Carl D. Perkins Career and Technical Education Act* through Grant R305N180005 to the American Institutes for Research (AIR). The work of the Network member projects is supported by the Institute. The opinions expressed are those of the authors and do not represent the views of the Institute or the U.S. Department of Education

CTE Research Network



Mission

To expand the evidence base on the impact of CTE programs on student outcomes, by

- Increasing the number of CTE impact studies performed
- Strengthening field capacity to conduct and use rigorous CTE research

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Practitioner Training Modules

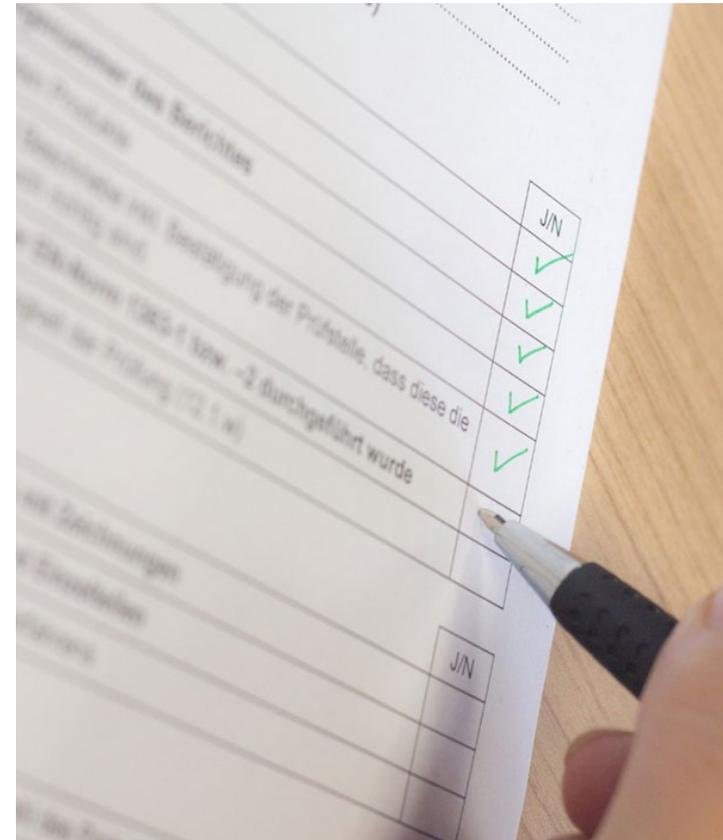
This series of six modules is designed to support CTE educators in learning more about data and research.

1. Understanding CTE data and why it matters
2. Using data and research to improve CTE programs
3. CTE program evaluation: Why it matters to practitioners
4. Using state data to partner with researchers
5. Using research to design your CTE program for equity
6. How communicate about your CTE program using research



Module Contents

- Defining Key Terminology
- Equity in CTE Student Subgroups and Special Populations
- Equitable Access and Outcomes
- What the Research Says About Equity in CTE
- Best Practices to Close the CTE Opportunity Gap



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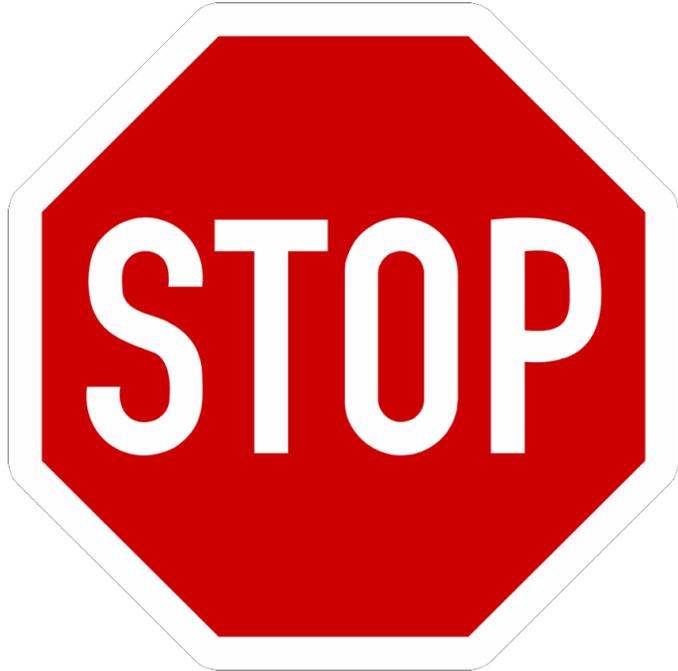
Objectives:



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- Define Special Populations
- Identify underperforming student subgroups
- Explain the implications of a local equity gap analysis
- Understand and apply what the research says about equity in CTE
- Use the Perkins V data disaggregation requirement to improve equity outcomes
- Explain the difference between equitable access and equitable outcomes
- Determine best practices for closing the CTE opportunity gap and ensuring equity in their CTE programs

Module Instructions



This module includes processes, activities, and tools you can use to drive change at your site.

Before you begin, we recommend downloading and printing the activity worksheets to help contextualize your viewing

Activity 1: Opening Self-Reflection



Think about the students enrolled at your site and the extent of their participation in CTE programming.

- Answer the questions included in the reflection activity worksheet provided
- Restart the module when you have completed the worksheet

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Defining Key Terminology

Equity in CTE



“All students and program participants should have access to high-quality opportunities and be supported to achieve equally high outcomes, regardless of their races, genders, socioeconomic backgrounds, or geographic regions.”
(MDRC, 2019, p. 2)

https://mk0deeperlearnihq2vs.kinstacdn.com/wp-content/uploads/2020/07/AMERICANED_SUTTON_027.jpg

https://www.mdrc.org/sites/default/files/CTE_Equity_Brief_2019.pdf

CTE Concentrators

Students who achieve a threshold level of coursework in a single CTE program or program of study



- Secondary education
 - Completed at least 2 courses
- Postsecondary education
 - Earned at least 12 credits
 - Complete a program of fewer than 12 credits or its equivalent

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Source: Perkins V, Section 5.

Special Populations

Students from unique demographic groups that may require additional services or supports to succeed in an educational program.

- Physical challenges
- Economic disadvantages
- Personal or family situations
- Diverse cultural or linguistic backgrounds



Source: Perkins V, Section 5.

https://cdn.pixabay.com/photo/2020/04/21/15/50/man-on-a-wheelchair-5073594_960_720.jpg

Nontraditional Fields



An occupation or field of work for which individuals from one gender comprise less than 25 percent of the individuals employed in that occupation or field.

https://mk0deeperlearnihq2vs.kinstacdn.com/wp-content/uploads/2020/07/AMERICANED_UCLACOMM_047.jpg

Source: Perkins V, Section 5.

CTE Opportunity Gap



The opportunity gap refers to racial, gender, and income disparities and inequities in access to and participation in high-quality CTE programs.

https://live.staticflickr.com/4069/4534362371_3da9090e51_b.jpg

Systemic and Societal Biases

- *Institutional bias*—systemic policies or practices within a school that give one group of students an unfair advantage over another
- *Implicit bias*—unconscious attitudes or stereotypes held by administrators or teachers that may lead to a preference or aversion to some groups of students
- *Cultural competence*—the extent to which differences in the appearance, behavior, or culture of some groups of students are acknowledged and/or accepted by educators

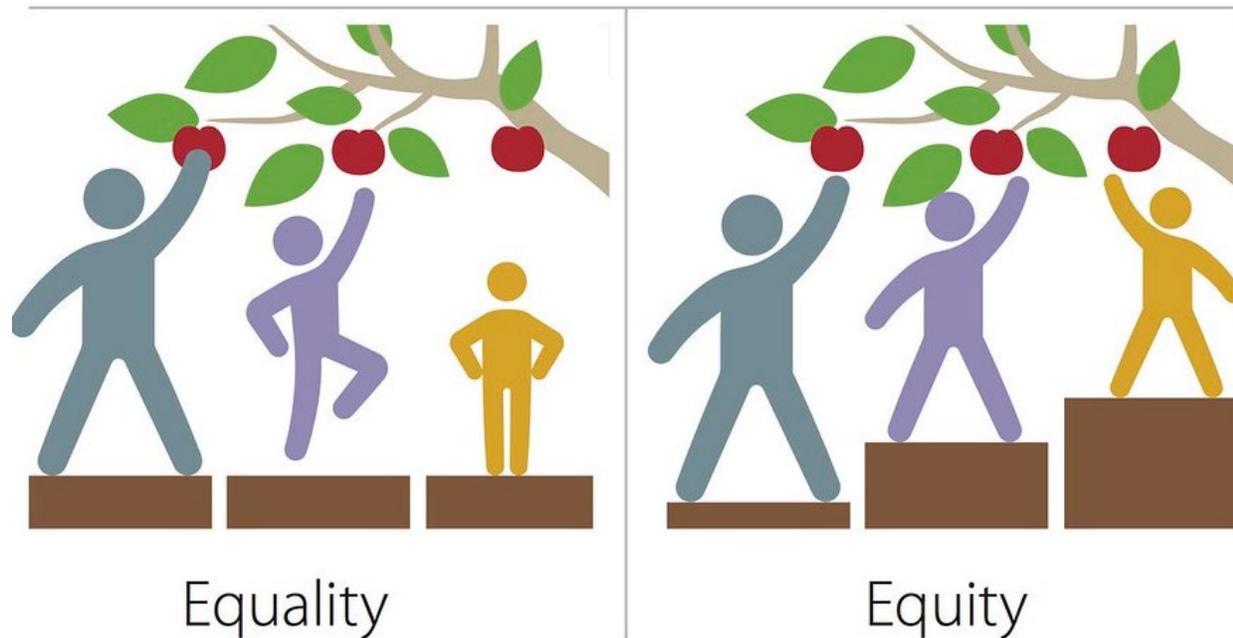


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Equitable Access and Outcomes

What is Equity in CTE?

Equality \neq Equity



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"Equity vs Equality" by MN Pollution Control Agency is licensed with CC BY-NC 2.0.

Equitable Access

- Access to a full range of high-quality CTE programs
- Admission, recruitment, and counseling practices do not discriminate
- Opportunity to acquire challenging academic and technical skills and experiences that prepare them for high-wage, high-demand jobs in their communities
- Culturally sensitive content
- Access to instructional supports, such as teachers, and opportunities to collaborate with peers
- Connections with employers including access to internships and apprenticeships



https://cdn.pixabay.com/photo/2016/11/21/16/53/action-1846427_960_720.jpg

Sources: Rosen & Molina 2019; Smith (2019); U.S. Department of Education Office for Civil Rights and Office of Adult, Career, and Technical Education (2016);

Equitable Outcomes



- Attaining CTE Concentrator Status
- High school graduation
- College enrollment
- Postsecondary credential attainment
- Employment
- Employment retention
- Wages

Equity in CTE Student Subgroups and Special Populations

Equity Requirements under Perkins V



Local CTE providers must undertake a Comprehensive Local Needs Assessment (CLNA) to evaluate student performance with the goal of:

- Identifying strategies to overcome barriers that result in lowering rates of access to, or performance gaps in, the courses and programs for special populations
- Providing programs that are designed to enable special populations to meet the state or local targets for performance
- Offering activities to prepare special populations for high-skill, high-wage, or in-demand industry sectors or occupations

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Source; National Alliance for Partnerships in Equity (2018b)

https://www.napequity.org/nape-content/uploads/NAPE-Perkins-V-Equity-Provisions-Summary_Final_10-15-18_ml.pdf

Equity Requirements under Perkins V

Providers must assess student performance and participation on the core indicators identified in *Perkins V*:

- Sites must assess the performance for CTE concentrators, for disaggregated subgroups and special populations
- Performances must be compared to statewide targets for all concentrators, including subgroups.
- Educators are required to develop strategies to close any equity gaps observed
- Sites failing to make progress over time may be required to develop a performance improvement plan



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Who is Measured?

Student Subgroups

- Gender
 - Male
 - Female
- Race-ethnicity
 - American Indian or Alaskan Native
 - Asian
 - Black or African American
 - Hispanic or Latino
 - Native Hawaiian or Pacific Islander
 - White
 - Two or more races
 - Unknown



https://mk0deeperlearningq2vs.kinstacdn.com/wp-content/uploads/2017/05/AMERICANED_SKYLINE_064-2.jpg

Who are Special Populations under Perkins V?

- Individuals with disabilities
- Individuals from economically disadvantaged families, including low-income youth and adults
- Individuals preparing for non-traditional fields
- Single parents, including single pregnant women
- **Out-of-workforce individuals**
- English learners
- Youth who are in, or have aged out of, the foster care system
- **Youth with parents on active duty in the armed forces**
- **Homeless individuals**

Source: Advance CTE and Association for Career and Technical Education (2018)

Role of Special Populations in the State Plan and the CLNA

- State plans must address special populations needs as part of its:
 - Strategic vision and goals development
 - Information dissemination about CTE
 - Efforts to ensure equal access to programs
 - Professional development of staff
 - Attainment of accountability performance targets
- Providers' CLNA must address special populations needs related to:
 - Ensuring equal access to programs
 - Attainment of accountability performance targets
 - Preparation for high-skill, high-wage, in-demand jobs

<https://www.congress.gov/115/plaws/publ224/PLAW-115publ224.pdf>

Special Populations CTE Recruitment

Critical questions to consider:

- Does your professional development to staff include accommodations for students who are members of special populations?
- How are you supporting eliminating inequities in student access to high-quality programs of study and effective CTE instructors?
- How are you leveraging CTSOs to expand participation?
- How are you using incentive grants to local providers making progress in closing achievement gaps among subpopulations who participate in CTE?

National CTE Student Profile Data: Secondary

Status of CTE among grade 9-12 public school students, teachers, and schools

- [Tables](#) Statistics on secondary/high school CTE, organized by topic.
- [Publications](#) List of NCES reports on secondary/high school CTE topics.
- [Findings](#) Summary of key findings from publications on secondary/high school CTE, with graphics, organized by topic.
- [Data Sources](#) List of data collections used to produce secondary/high school CTE tables and publications, with links to sites for accessing the data.

Source: National Center for Education Statistics, <https://nces.ed.gov/surveys/ctes/tables/index.asp?LEVEL=SECONDARY>, retrieved August 24, 2020.

Secondary Example: CTE Concentrators

Roughly 20 percent of high school graduates completed a 3-credit concentration in a CTE program in 2013. Results indicate that:

- White students and males were somewhat more likely to concentrate in CTE than students in other groups
- Students with an Individualized Learning Plan in 9th grade or speaking a first language other than English were relatively less likely to concentrate in CTE

Student characteristic	Concentrator
Total, all graduates	19.7
Race/ethnicity	
White	22.0
Black	18.2
Hispanic	16.4
Asian/Pacific Islander	12.1
Sex	
Male	22.8
Female	16.7
IEP in grade 9	
Yes	24.8
No	17.4
English is first language	
Yes	20.7
No	14.9

Source: National Center for Education Statistics,
<https://nces.ed.gov/surveys/ctes/tables/h191.asp>, retrieved August 24, 2020.

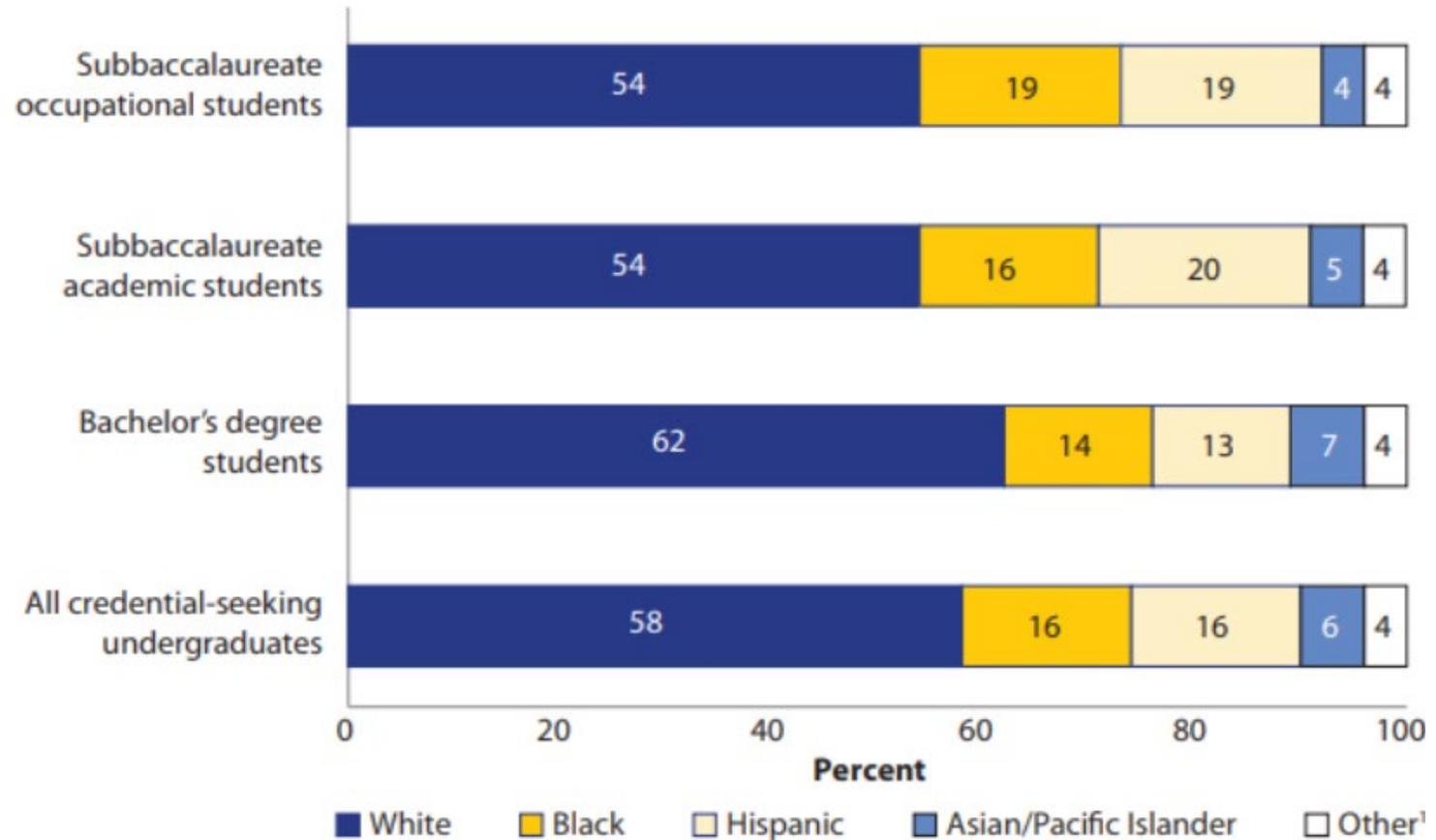
National CTE Student Profile Data: Postsecondary

Institutions that offer and students who take subbaccalaureate occupational education

- [Tables](#) Statistics on postsecondary/college CTE, organized by topic.
- [Publications](#) List of NCES reports on postsecondary/college CTE topics.
- [Findings](#) Summary of key findings from publications on postsecondary/college CTE, with graphics, organized by topic.
- [Data Sources](#) List of data collections used to produce postsecondary/college CTE tables and publications, with links to sites for accessing the data.

Postsecondary Example: Employment Rates

- The percentage of black students is larger in subbaccalaureate occupational programs than in subbaccalaureate academic or bachelor's degree programs
- The percentage of Hispanic students is larger in subbaccalaureate occupational programs than in bachelor's degree programs



Source: National Center for Education Statistics,
https://nces.ed.gov/surveys/ctes/figures/fig_2018149-4.asp, retrieved August 24, 2020.

Activity 2: Critical Student Subgroups



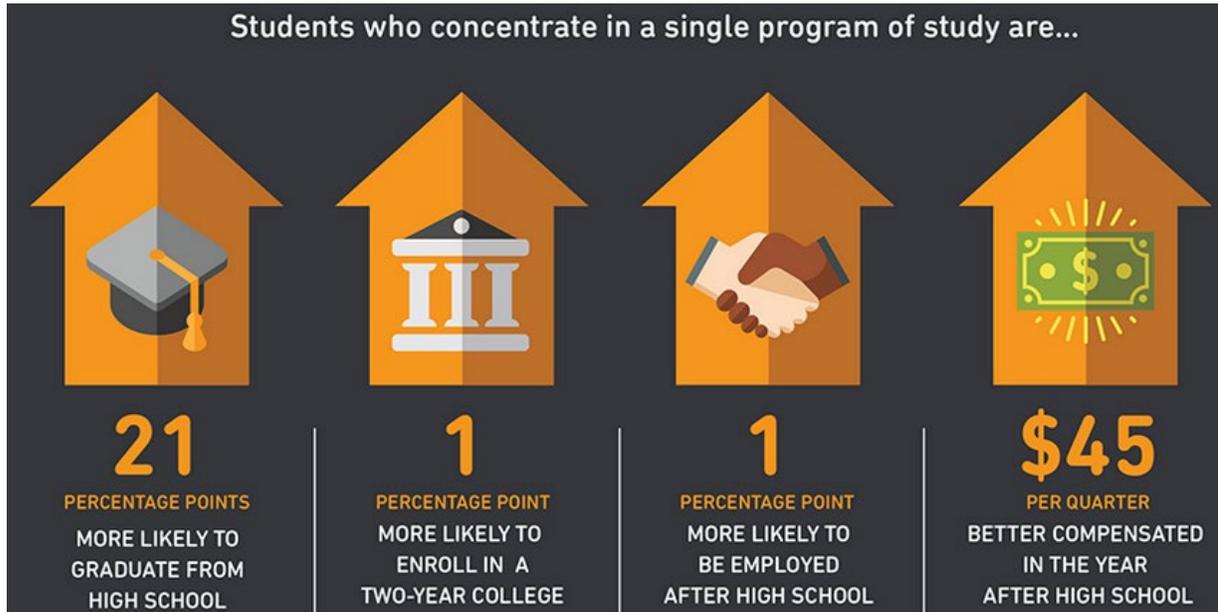
Review your student profile reports.

- Answer the questions included in the reflection activity worksheet provided
- Restart the module when you have completed the worksheet

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What the Research Says About Equity In CTE

Highlights from Recent Research Related to Equity in CTE

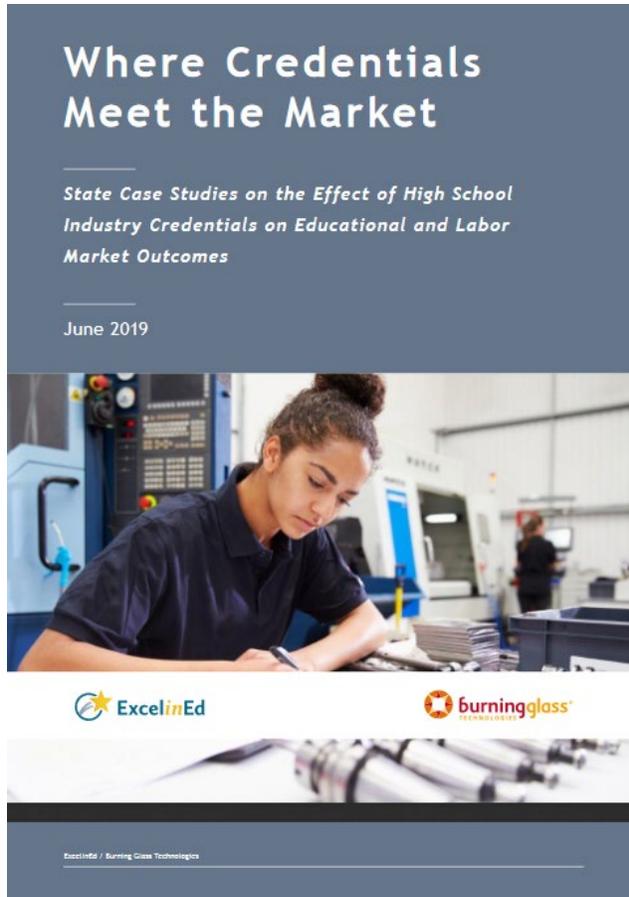


- “Arkansas students with greater exposure to CTE were more likely to graduate, enroll in a two-year college, be employed, and have higher wages”
- “Results suggest that CTE provides the greatest boost to the kids who may need it most—students from low-income families.”

- Dougherty & Zeehandelaar (2017)

<http://www.ascd.org/ascd-express/vol12/1209-dougherty.aspx>

Highlights from Recent Research Related to Equity in CTE

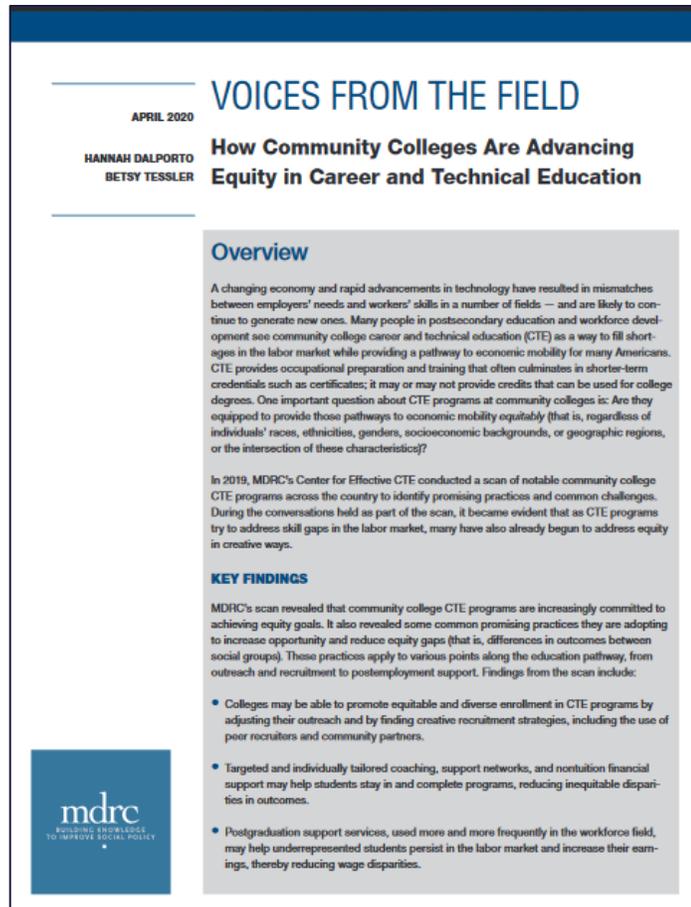


- “Earning a credential is associated with an increase in the probability of graduating from high school on time in Florida, Indiana, and Kentucky. This effect is stronger for female CTE students as compared to male CTE students.”
- “The positive effects of earning a credential on postsecondary outcomes were stronger for students who were not low-income. A possible explanation is that low-income and non-low-income students are earning different credentials.”

- Walsh, O’Kane, Noronha, & Taska (2019), p. 5

https://www.burning-glass.com/wp-content/uploads/credentials_meet_market_report.pdf

Highlights from Recent Research Related to Equity in CTE



- “Colleges may be able to promote equitable and diverse enrollment in CTE programs by adjusting their outreach and finding creative recruitment strategies, including the use of peer recruiters and community partners.”
- “Targeted and individually tailored coaching, support networks, and nontuition financial support may help students stay in and complete programs, reducing equity gaps.”

Source: Dalporto & Tessler (2020), p. 1

https://www.mdrc.org/sites/default/files/Equity_in_CTE_brief.pdf

Activity 3: Research Perspectives



Read the article:

Building Bridges to Life after High School: Contemporary Career Academies and Student Outcomes.

- Answer the questions included in the activity worksheet provided
- Restart the module when you have completed the worksheet

<https://pixabay.com/illustrations/question-mark-question-mark-sign-1722862/>

Source: Hemelt, Lenard, & Paepflow (2018)
<https://caldercenter.org/sites/default/files/WP%20176.pdf>

Best Practices to Close the CTE Opportunity Gap

Why the Opportunity Gaps Exist

Beware of systemic or societal biases that may affect students' ability to participate in CTE. Potential factors may include:



<https://pixabay.com/photos/away-feet-shoes-road-surface-4610699/>

- *Institutional bias*—systemic policies or practices within a school that give one group of students an advantage over another
- *Implicit bias*—unconscious attitudes or stereotypes held by individuals or teachers that may lead to a preference or aversion to some groups of students
- *Cultural competence*—the extent to which differences in the appearance, behavior, or culture of some groups of students are acknowledged and/or accepted by educators.

Best Practices to Address Inequities

Engage stakeholders by....

- Setting up a diverse cross-functional team
 - School leadership and staff
 - CTE community members
- Building trust with students and families
 - Take steps to minimize language barriers with families
 - Align your feedback timeframe and delivery methods with stakeholders' diverse needs

Sources: Advance CTE (2019a); Estes & McCain (2019), Williams (2016)

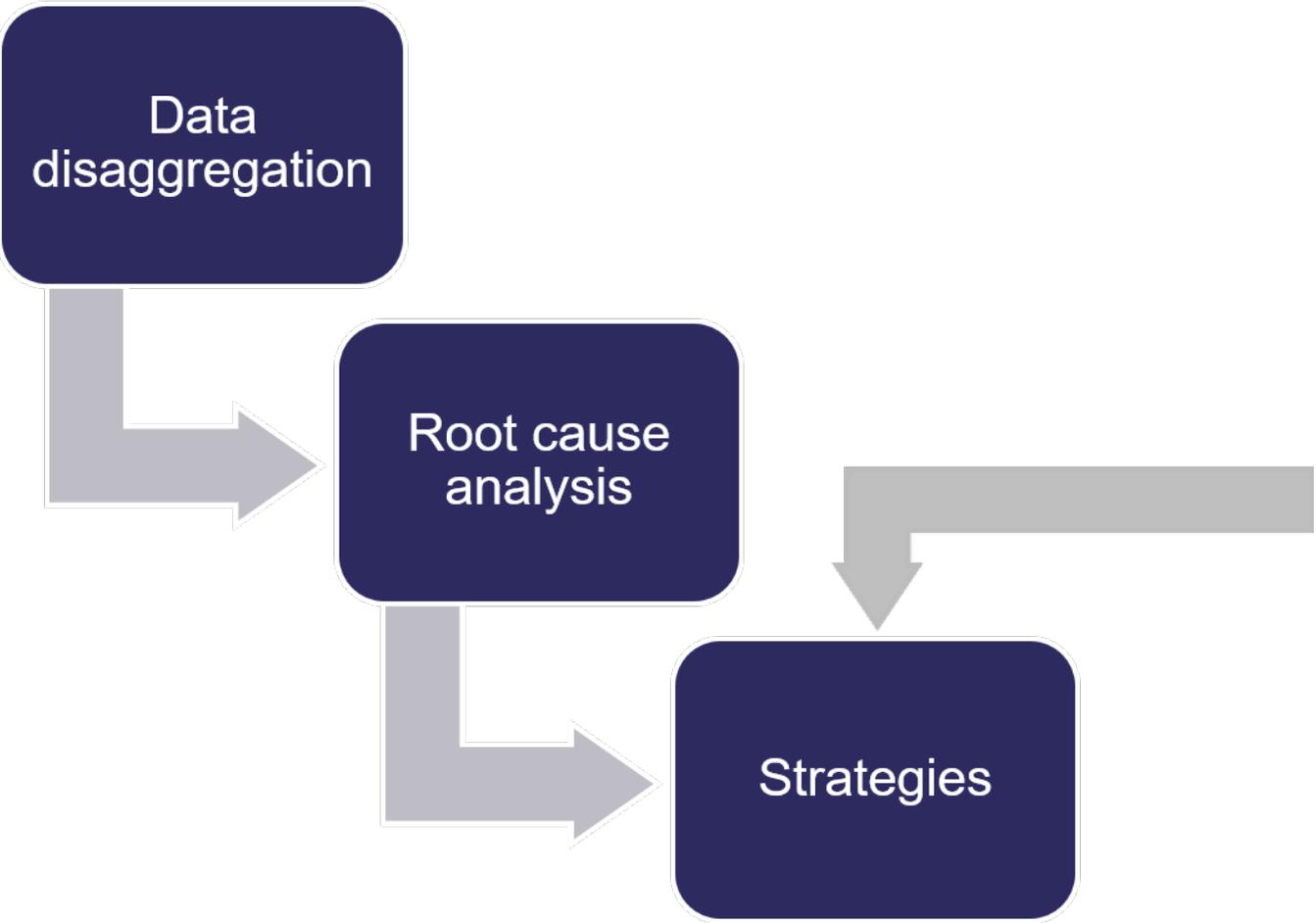
Best Practices to Address Inequities

Remove barriers to equitable access to CTE and support students accordingly.

- “Geography and availability of high-quality CTE programs in their school or institution of record
 - Funding and resources
 - At-home factors (parent involvement, income, trauma, childcare needs, health needs)
 - Academic preparation
 - Awareness/advising
 - Cultural awareness
 - Physical and learning disabilities”
- Advance CTE (2019b), p.1*

Sources: Advance CTE (2019b), Estes & McCain (2019)

Planning and Strategies to Address Inequities



Sources: Lufkin (2020)

Delivering Equitable, High-Quality Programs

Ensure equitable access to *high-quality* CTE

- Set high standards for excellence and quality
 - Align to priority industry sectors
 - Deliver up-to-date skills
 - Employ experienced, trained instructors
 - Apply learning in real-world settings
 - Offer postsecondary credits and industry credentials
- Identify and remove barriers to student success
 - Geographic
 - Programmatic
 - Demographic

Sources: Advance CTE (2018b, 2019b), Estes & McCain (2019)

Closing Reflection and Resources

Activity 4: Beginning the Journey

What are three strategies that you can apply from the research on equity in CTE to improve access, opportunity and outcomes for your nontraditional special population students?

- Answer the questions included in the reflection activity worksheet provided
- Restart the module when you have completed the worksheet



<https://pixabay.com/illustrations/question-mark-question-mark-sign-1722862/>

References and Resources

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References and Resources

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References and Resources

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Activity handouts 1–4

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