Career Technical Education as a Pathway to Adult Success: National, State and Local Perspectives

Pathways to Adult Success Conference
October 23, 2019
Panelists

• **Austin Estes**, Senior Policy Associate, Advance CTE
• **Tiara Booker-Dwyer**, Assistant State Superintendent, Division of Career and College Readiness, Maryland Department of Education
• **M. Eric Williams**, Assistant Director and Lead Instructor, Department of Paramedicine, Jones County Junior College, Ellisville, MS
• **James Stockdale**, Academy Coordinator, William J. “Pete” Knight High School, Palmdale, CA
Our Vision for CTE

**Career Technical Education** is an educational option that provides learners with the knowledge and skills they need to be prepared for **college, careers and lifelong learning**. CTE gives purpose to learning by emphasizing **real-world skills** and practical knowledge within a selected career focus.

**Our vision** is to transform and expand CTE so that each learner – of any background, age and zip code – is prepared for career and college success.

**Strategic Priorities**
- All CTE programs are held to the highest standards of excellence.
- All learners are empowered to choose a meaningful education and career.
- All learning is personalized and flexible.
- All learning is facilitated by knowledgeable experts.
- All systems work together to put learner success first.
SHIFT FROM VOCATIONAL EDUCATION TO CTE

THEN
VOCATIONAL EDUCATION

VS.

NOW
CAREER TECHNICAL EDUCATION

for a Few Students

for ALL STUDENTS

In lieu of Academics

ALIGNS & SUPPORTS ACADEMICS

6 to 7
“Program Areas”

16 CAREER CLUSTERS®

79 CAREER PATHWAYS

for a Few “Jobs”

for ALL CAREERS

High-School Focused

High School & Postsecondary Alignment

CERTIFICATE
Terminal

LIFE-LONG LEARNING

www.careertech.org

@CTEWorks
11.9 MILLION LEARNERS PARTICIPATING IN CTE (2016–17)

- **8.28 MILLION** at SECONDARY LEVEL
- **3.63 MILLION** at POSTSECONDARY LEVEL

- **3.58 MILLION** CONCENTRATORS
- **1.91 MILLION** CONCENTRATORS
What Does the Research Tell Us?

**“Dosage” matters**
- Each upper-level CTE course a student completes is associated with a 2 percent increase in wages (Kreisman and Stange, 2019)
- CTE concentrators in Arkansas who completed 3+ CTE credits were more likely to graduate high school, enroll in college, be employed and earn higher wages (Dougherty, 2016)

**Work-based learning is correlated with higher job quality**
- Students who participate in “relationship-focused” work-based learning have higher job quality at age 29 than their peers (Ross et al, 2018)

**Credentials help students transition into high-wage employment**
- In Indiana and Florida, earning a credential is correlated with higher wages for workers who earn at least $20,000 annually and are at least 24 years old (ExcelInEd and Burning Glass, 2019)

**Majors matter**
- Associate’s degree holders who studied STEM earn $60,000 annually. This is more than bachelor’s degree holders who majored in the humanities and liberal arts (Carnevale and Cheah, 2018)
State Priorities for CTE

- Perkins V Implementation
- Program Quality
- Data and Accountability
- Equity
Strengthening Career & Technical Education for the 21\textsuperscript{st} Century Act

- Federal investment in CTE system (~$1.3 billion)
- Reauthorized in July 2018
The term ‘program of study’ means a coordinated, nonduplicative sequence of academic and technical content at the secondary and postsecondary level that—

• Incorporates challenging State academic standards,
• Addresses academic, technical and employability skills,
• Is aligned with the needs of industries,
• Progresses in specificity,
• Has multiple entry and exit points, and
• Culminates in the attainment of a recognized postsecondary credential.

Source: Texas Education Agency
Web Development Program of Study in Texas

Industry certifications and postsecondary credentials

Demonstrated economic demand

Work-based Learning Opportunities

Source: Texas Education Agency
Measuring Career Readiness in High School

Progress Toward Post-High School Credential
- Fundamental: 4
- Advanced: 14
- Exceptional: 22
- Out-of-Sequence Indicator: 0
- No Measure: 0

Co-Curricular Learning and Leadership Experiences
- Fundamental: 10
- Advanced: 2
- Exceptional: 0
- Out-of-Sequence Indicator: 0
- No Measure: 0

Assessment of Readiness
- Fundamental: 7
- Advanced: 24
- Exceptional: 12
- Out-of-Sequence Indicator: 0
- No Measure: 0

Transitions Beyond High School
- Fundamental: 7
- Advanced: 1
- Exceptional: 0
- Out-of-Sequence Indicator: 0
- No Measure: 0

[Visit https://careertech.org/resource/making-career-readiness-count-2019 for more information]
Measuring Career Readiness in High School

Many states are counting multiple measures of career readiness
Equity in CTE

Percent of High School Graduates who Achieved 3-Credit Concentrator Status (2013)

Race/ Ethnicity

- White: 22%
- Black: 18%
- Hispanic: 16%
- Asian/ Pacific Islander: 12%

Gender

- Male: 23%
- Female: 17%

Special Populations

- With an IEP: 25%
- ELL: 15%

Equity in CTE

• Persistent challenges
  • Use of data to identify and address access and performance gaps
  • Removing barriers to *access* (such as transportation or financial burden) and *success* (persistence, completion)
  • Confronting the stigma against CTE
  • Encouraging nontraditional program completion for students based on gender
  • Developing occupational identity at an early age
  • Increasing learners’ access to social capital
Austin Estes, Senior Policy Associate, Advance CTE

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www.careertech.org

Follow us at @CTEWorks
Division of Career and College Readiness

Three Branches with One Purpose: To establish a foundation for students to engage in challenging academic and technical education that will allow for success in postsecondary study and careers.

Career and Technical Education
Preparation for the workforce and postsecondary study.

Leadership Development
Fostering the growth of effective leaders.

School Improvement
Raising the quality of education.
Each student has access and the opportunity to engage in career programs of study that

✓ align to high-skill, high-wage, and/or in-demand careers;

✓ lead to earning industry-recognized and/or postsecondary credentials that will allow entrance and/or advancement in a specific career cluster; and

✓ provide career-based learning experiences that require the application of academic and technical knowledge and skills in a work setting.
Key Shift For CTE In Maryland:
Expanding the Reach and Scope of Career Guidance

Allowing Perkins Funds to Be Used as Early as Grade 5 for Career Awareness and Guidance

Leveraging Business and Industry Partners to Provide Career Counseling
Key Shift For CTE In Maryland:

Aligning CTE Programs of Study to:

✓ High-wage,  
✓ High-skill, and/or  
✓ In-demand careers

**High-Wage Careers**
Careers that exceed the state average annual wage. The 2018 average annual wage in Maryland was $58,770.

**High-Skill Careers**
1. Requires previous work-related skills, knowledge, or experience of one or more years;  
2. Requires over a year of training;  
3. Requires state or federal licensing or industry-recognized certification; or  
4. Requires a recognized postsecondary credential or degree.

**In-Demand Careers**
Careers with a growth rate over ten years of at least 7% or a two-year occupational projected growth of 2.5%.
Key Shift For CTE In Maryland:

Promoting Innovative Practices to Reshape Where, When, How, and to Whom CTE Is Delivered

Requiring each CTE program of study to:

- provide the opportunity for students to participate in work-base learning experiences;
- provide the opportunity for students to earn college credit and/or industry credentials;
- prepare students with disabilities and other student groups for occupations that will lead to self-sufficiency; and
- provide equal access and supports for students with disabilities and other student groups to successfully complete the program of study.
Increase Student Access to High-wage, High-skill, or In-demand Careers

42% of High School Students are Enrolled in CTE

Highest Enrolled Programs:
✓ Human Resource Services
✓ Business Management and Finance
✓ Information Technology
✓ Manufacturing Engineering and Technology
Key Shift For CTE In Maryland:

- Strengthen the CTE Teacher and Faculty Pipeline
- Aligning Curricula to Academic and Industry Standards
- Improving Instructional Supports for CTE Educators
- Supporting School Systems in the Recruitment of CTE Teachers
Key Shift For CTE In Maryland:

Improving CTE Program Quality Measures

- Four-Year Graduation Rate
- Academic Proficiency Reading/Language Arts
- Academic Proficiency Math
- Academic Proficiency Science
- Postsecondary Placement
- Non-traditional Program Enrollment
- Postsecondary Credential Attainment
- Technical Skill Attainment
Key Shift For CTE In Maryland:

Improved CTE Dashboards Coupled with Targeted Professional Learning Experiences

https://www.mdctedata.org
Establishing Target and Trend Performance Scores to Prioritize Need

Target & Trend Performance Score (TPS) = Target Performance + Trend Performance

<table>
<thead>
<tr>
<th>Priority Ranking</th>
<th>Value</th>
<th>Definition</th>
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<tbody>
<tr>
<td></td>
<td>0,1,2</td>
<td>Low Priority</td>
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<tr>
<td></td>
<td>3</td>
<td>Medium Priority</td>
</tr>
<tr>
<td></td>
<td>4,5</td>
<td>High Priority</td>
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<table>
<thead>
<tr>
<th>Target Performance</th>
<th>Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>Targets met for all three years</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Targets met for two years only</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Target met for one year only</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Target met for no years/ no data provided for all three years</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trend Performance</th>
<th>Value</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>Continuous positive trend</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Oscillating (inconsistent) trend</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Continuous negative trend</td>
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</table>
Target and Trend Performance Score Example

Target & Trend Performance Score (TPS) = Target Performance + Trend Performance

<table>
<thead>
<tr>
<th>Table 1: Cluster (Name)</th>
<th>1S1: Academic Proficiency – Four-Year Graduation Rate</th>
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<tbody>
<tr>
<td></td>
<td>2016 (40%)</td>
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<tr>
<td><strong>Student Group</strong></td>
<td></td>
</tr>
<tr>
<td>CTE Students</td>
<td>%</td>
</tr>
<tr>
<td>Male</td>
<td>24</td>
</tr>
<tr>
<td>Female</td>
<td>53</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>54</td>
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<tr>
<td>American Indian/Alaska Native</td>
<td>23</td>
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<tr>
<td>Asian</td>
<td>23</td>
</tr>
<tr>
<td>Black/African American</td>
<td>53</td>
</tr>
<tr>
<td>Native Hawaiian/ Other Pacific Islander</td>
<td>46</td>
</tr>
<tr>
<td>White</td>
<td>52</td>
</tr>
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</table>

Data is Fictitious for Example Use Only
CTE Needs Assessment and Local Application
A Holistic Review of CTE in the School System and Community College

Needs Assessment
• Comprehensive Review of Data
• Identifies Areas of Promise and Opportunities for Growth

Local Application
• One Year Plan of Action to Address Identified Needs

Community Colleges and School Systems Must Work Together to Address Regional Workforce Needs
Key Shift For CTE In Maryland:

Establishing a CTE Advisory Committee

Charge: Provide guidance and direction for the statewide system of CTE.

Members will include representatives from:

- Local School Systems
- Postsecondary Institutions
- Business and Industry
- Chamber of Commerce
- Department of Labor
- Economic Development
- Workforce Development Board
- Maryland Higher Education Commission
- Maryland Career and Technical Administrators Association
Equation for CTE Success

Academic Press + Technical Skills + Career-Based Learning Experiences = Workforce Ready
Thank You

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Knight High School Digital Design & Engineering Academy

Who we are:

• School within a school, 4 year cohorted program
• 250-300 students in school of 3,000
• Engineering emphasis
• Located in Palmdale, CA near plant 42 and Edwards Air Force Base
• Key industry partners include Northrop Grumman, Lockheed Martin, NASA, and Air Force Research Laboratories
Knight High School Digital Design & Engineering Academy

Key Student Successes

• Over the last 9 years, 96-100% of our seniors graduated and transitioned to either 4 yr college, community college, certificate program, military, or employment.
• In a highly transient aerospace sector, we have been able to help meet local workforce needs by providing stable, skilled, local talent to our industry partners
• Program transitioned from a handful of girls in the program at the onset, to a consistent 50/50 ratio of male/female students over the last 3 years
Key pieces of the puzzle

• Every student has mentors
• Beyond the theoretical, including makerspace and composites lab
• Genuine workplace skills taught... even when it hasn’t been done before
• Building connections and networks early
• Application of knowledge with competitions
Knight High School Digital Design & Engineering Academy
Knight High School Digital Design & Engineering Academy

Where’d all of those Girls come from?!!!
Knight High School Digital Design & Engineering Academy

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Emergency Medical Technology
Our Students
Our Service
Our Partners
Great group of instructors that demand nothing but the best out of each student! This is why we achieved the pass rates that we have. I’m beyond proud to call myself a #Jonesmedic.

Had a water rescue today when a 57 yo m was caught in a boat propeller. The smell of a cadaver lab is all around me in my ambulance at the moment and I remember benji going over organs during autopsies. Also was able to teach my partner where some of the organs where due to the propeller shredding his abdomen, and entire left leg. She was fascinated at how big the liver was in comparison to the body. Another reason why I love Jones, I’m able to teach others and save lives at the same time!

This program, in my opinion, is the best program. Great instructors and great preceptors. They prepare the students for success.

Wouldn’t wanna spend my time learning to be an EMT anywhere else! Amazing instructors, best all around!

This makes me smile! Thank you for being such a great ambassador for our program and an outstanding medic!