Employer-Driven Innovations in CTE: Promise, Practice, & Opportunities for Policy

Friday, October 20, 2017
Innovations in CTE

The “New CTE”: Models and Evidence

American Youth Policy Forum
October 20th, 2017
Innovations in CTE

“Career technical education must reposition itself, not just as a vocational alternative to college prep but as a pathway into postsecondary programs that links degrees and credentials to occupations.”

New CTE Models

- Career Academies
- Early College High Schools
- Regional Vocational High Schools
- Career Pathways
- Programs of Study
- Apprenticeships
- Sectoral Strategies
What is “Employer-Driven”?

• The Continuum

• How employers engage:
  – Serve on advisory boards
  – Offer WBL experiences
  – Drive decisions about CTE training offerings
  – Help shape CTE curriculum
  – Hire program completers
  – Ensure certification is valued in industry
Research and Evidence

• Types of research
  – Formative feedback
  – Implementation studies
  – Descriptive outcomes studies
  – Impact studies

• Types of evidence of impact
  – Promising evidence
  – Strong evidence
Theory of Change for a Typical CTE Model

Program

CTE Program for High School Students

Short-Term Outcomes

Engagement
Career Awareness
Soft Skills
CTE Skills

Medium-Term Outcomes

Academic Skills and Achievement

High School Graduation

College Credit in High School

Long-Term Outcomes

Postsecondary Education and Credentials

Employment and Earnings
Promising evidence of positive effects:

- CTE concentration (Dougherty, Kreisman, Stange)
- Career awareness\counseling (Karp, Visher)
- Integrated curriculum\project-based learning (Stone, Calmeyer)
- Small learning communities (Bloom, Unterman)
- Dual enrollment (Karp)
Evidence

Strong evidence of positive effects:

– 21st Century Skills (Palemeta, et.al)
– Internships (Urban Institute)
– Sectoral strategies (Hendra)
– Regional Technical Vocational Schools (Dougherty)
– Career Academies (Kemple, et al.)
Career Academies: Impacts on Employment and Earnings

Full Sample (8 Years Post-High School)
Operational Lessons Learned

- Secure strong leadership support
- Plan carefully and start small
- Build strong partnerships
- Have a strong intermediary
- Align with high growth/high wage sectors
- Identify state policy enablers
- Consider sustainability
- Measure progress and performance
P-TECH Grades 9-14 School Model

Stanley S. Litow
President Emeritus, IBM International Foundation and
Vice President Emeritus, IBM Corporate Citizenship
The new middle is “New Collar”

“(T)o create new collar jobs we will need new kinds of collaboration – involving federal and state governments, public school systems, community colleges and private business, across multiple industries. …Together, we must work to reform education, policy and strategic approaches – in the U.S. and around the world – for today’s job opportunities that will build a future of growth and prosperity.

-Ginni Rometty, Chairman and CEO, IBM Corporation

- Not “blue collar” or “white collar”

- Technology industry alone has more than 500,000 open jobs in the United States

- SKILLS are critical to filling these open position, but not necessarily a four year degree
A new model for education: P-TECH 9-14

- **Focus:** A new grade 9-14 public school model focused on STEM fields and Career and Technical Education

- **Mission:** Enable students to master the skills that they need either to graduate with a no-cost Associates in Applied Science degree that will enable them to secure an entry-level position in a growing STEM industry, or to continue and complete study in a four-year higher education institution.

**P-TECH: The pathway from classroom to career to a stronger economy**
P-TECH key tenets

- **Partnership** between school district, higher education partner and industry

- Six-year program, featuring **integrated high school and college coursework**, leading to an industry-recognized, postsecondary degree for *all* students. Students can graduate within the six-years, but the six-year model ensures that students have the time and seamless supports necessary to earn their degree.

- **Workplace learning strand**, including mentoring, worksite visits, speakers, project days, skills-based and paid internships

- **Open enrollment** with focus on historically underserved students

- **Cost-free** postsecondary degree

- **First-in-line for jobs** with industry partners
High School Re-design Movement

PTECH Replication

- U.S.: 70+ schools across six states
- Australia: 7 schools
- Morocco: 2 schools
- 300+ businesses
IBM partner schools

Pathways in Technology Early College High School (P-TECH), *Brooklyn, NY*

2011: New York City Department of Education, The City University of New York, New York City College of Technology

**Sarah E. Goode STEM Academy, *Chicago, IL***

2012: Chicago Public Schools, City Colleges of Chicago, Richard J. Daley College

**Excelsior Academy, *Newburgh, NY***

2014: Newburgh Enlarged City School District (NY), SUNY Orange

**Norwalk Early College Academy (NECA), *Norwalk, CT***

2014: Norwalk Public Schools (CT), Norwalk Community College

Federation College, *Ballarat, Victoria, Australia*

2016: Federation College (Ballarat, Victoria, Australia)

**P-TECH St. Vrain, *St. Vrain, CO***

2016: St. Vrain Valley School District, Front Range Community College

**P-TECH Baltimore, *Baltimore, MD***

2016: Baltimore Public Schools, Baltimore City Community Colleges
Real results

- P-TECH schools in Crown Heights, Brooklyn and Chicago’s South Side have graduated more than 90 students. More than half of these graduates completed the program early (some received their two-year college degrees before their high school diplomas).

- P-TECH Brooklyn’s first cohort, a majority of whom are low-income black or Hispanic students, achieved a graduation rate that is over four times the U.S. on-time average for all community college students.

- Many graduates go on to pursue their bachelor’s degrees, while some have taken positions at IBM in New Collar roles, ranging from digital design to data analytics.
Perkins Reauthorization

- $1.3B in CTE funding
- Alignment of secondary and postsecondary curriculum to labor market needs in high-growth industry sectors
- Strong collaborations among secondary and postsecondary institutions
- Participation by local employers in making link between curriculum and needed workplace skills
- Workplace experience for students through internships, apprenticeships and mentorships with local employers, and experiential teaching methods such as work-based learning classes and project based learning
High quality and fidelity

- www.ptech.org
- Effective practices
- Technical assistance
YouthForce NOLA
A SHARED VISION

New Orleans public school graduates are thriving economically, and are the most sought after talent for hiring and advancement in the region’s high-wage, fast-growing industries.
A COLLABORATIVE EFFORT

Steering Committee

- Baptist Community Ministries
- City of New Orleans
- Greater New Orleans, Inc.
- JPMorgan Chase & Co.
- Juma Ventures
- Junior Achievement
- New Orleans Career Center
- New Schools for New Orleans
- Orleans Parish School Board
- Recovery School District
- United Way of Southeast Louisiana
- Urban League of Louisiana
THREE GOALS FOCUS OUR EFFORT

Components of Career Readiness

1. **Job-specific Skills**
2. **Work Experience**
3. **Soft Skills**

YouthForce NOLA Goals

1. **Credentials.** 20% of the Class of 2020 will earn industry-recognized, culminating credentials that will place them on high-wage, high-demand regional career pathways.
2. **Paid Internships.** 10% of the Class of 2020 will complete YouthForce internships (aligned to student-selected pathway and coursework, includes 60 hours training and 90 hours of work).
3. **Soft Skills.** More graduates will demonstrate employer validated, career-ready soft skills.
FOCUS ON REAL-WORLD SKILLS AND OPPORTUNITIES

<table>
<thead>
<tr>
<th>Skilled Crafts</th>
<th>Health Sciences</th>
<th>Creative/ Tech</th>
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<tbody>
<tr>
<td>Workers Required</td>
<td>35,000</td>
<td>24,000</td>
</tr>
<tr>
<td>Range of Occupations Needed</td>
<td>Engineers</td>
<td>Nurses (aides, LPN, RN, NP)</td>
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<tr>
<td></td>
<td>Managers</td>
<td>Records management</td>
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<tr>
<td></td>
<td>Tradespeople</td>
<td>Technicians (lab, x-ray, etc.)</td>
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<tr>
<td>Related Regional Industries (sampling)</td>
<td>• Construction</td>
<td>• Healthcare</td>
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<tr>
<td></td>
<td>• Energy &amp; advanced manufacturing</td>
<td>• Bioinnovation</td>
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<tr>
<td></td>
<td>• Water management</td>
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<tr>
<td>Median Hourly Wages**</td>
<td>$17-$43/hour</td>
<td>$11-$55/hour</td>
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Job Openings in GNO region by 2025, source: EMSI; *GNO has the fastest growing tech cluster in the USA; ** Source: EMSI
YouthForce NOLA’s soft skills building blocks are based on MHA Lab’s *Skill Building Blocks* (http://mhalabs.org/skill-building-blocks/)
FIVE KEY STRANDS OF WORK

- School Engagement & Capacity
- Employer Engagement & Capacity
- Training Provider Engagement & Capacity
- Community & Family Engagement

Strategic Alignment
WE ARE ON TRACK TO MEET OUR GOALS

Seniors Earning Statewide Industry-Based Credentials in Target Industries

- Actual (to date)
- Target

Seniors Completing YouthForce Internships

- Actual (to date)
- Target

Class of...

<table>
<thead>
<tr>
<th>Year</th>
<th>2014 (Baseline)</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
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<tr>
<td>Seniors Earning</td>
<td>45</td>
<td>85</td>
<td>180</td>
<td>150</td>
<td>76</td>
<td>250</td>
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<tr>
<td>Seniors Completing</td>
<td>17</td>
<td>99</td>
<td>100</td>
<td>142</td>
<td>175</td>
<td>250</td>
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</table>
FAMILIES ARE CRITICAL PARTNERS
FEDERAL AND STATE FUNDING ARE CRITICAL

Carl D. Perkins
~$700,000 to Orleans Parish high schools
Awarded competitively

TOPS Tech Early Start
~$600 per academic year per eligible student

Career Development Funds
~$238 funding adder/student in CTE course

Supplemental Course Allocation
~$59/student enrolled with state-approved course choice provider

Federal  State
Transforming the Workforce Mission of the CA Community Colleges
October 20, 2017

Van Ton-Quinlivan, Vice Chancellor of Workforce & Digital Futures
vtquinnlivan@cccco.edu | @WorkforceVan
6.3 million job openings are predicted for California between 2010 and 2020.
“Some College” is the New Gateway Into The Workforce

THE LABOR MARKET IS INCREASINGLY DEMANDING A MORE SKILLED WORKFORCE.

**IN THE 1970s** | **IN 1992** | **BY 2020**
---|---|---
28% of jobs required more than a high school education. | 56% of jobs required more training. | 65% of job openings in the U.S. will require some postsecondary education or training—though not necessarily a four-year degree.

Source: Georgetown Center on Education and the Workforce analysis
California needs 1 million more AA, certificates, or industry-valued credentials.
CALIFORNIA

- Regional economies
  - Differing labor market needs
  - Industry sectors
  - Guided pathways

- 114 community colleges
- Student workforce outcomes
WORKFORCE MISSION
From $100M to $900M…
From afterthought to state policy priority…

- Ecosystem of intrapreneurs
- Tools to “free the data”
- Innovations-at-scale

All supportive of Chancellor Oakley’s emphasis on guided pathway development.
Ecosystem of intrapreneurs

Industry Sector

Region

Technical Assistance
Innovations-at-scale….to benefit students

Top Ten 21st Century Skills
- Adaptability
- Analysis/Solution Mindset
- Collaboration
- Communication
- Digital Fluency
- Entrepreneurial Mindset
- Empathy
- Resilience
- Self-Awareness
- Social/Diversity Awareness

doingwhatmatters.cccco.edu
@WorkforceVan
#StrongWorkforce
Student Success Outcomes That Count

- **Completion**: certificate or degree
- **Transfer**: to a four-year institution
- **Employment**: employment in 2\(^{nd}\) and 4\(^{th}\) quarter after exit; rate of employment in field of study
- **Earnings**: median earnings 2\(^{nd}\) quarter after exit; number of CTE students who improve earnings; living wage attainment
- **Skills-gains**: credit units and noncredit contact hours
Partnership with K12

Workforce Pathway Joint Advisory Committee

**Membership**
- 3 members of State Board of Education
- + 3 members of Board of Governors
- + 2 ex-officio members

**Areas of Focus:**
- Career Guidance / Counseling
- Dual Enrollment
- Data Sharing
- Work-based Learning
- System Alignment
- Defining and Promoting Quality Career Pathways

**Deliverable:**
- High level policy principles
Visit DoingWhatMATTERS.cccco.edu

Twitter @WorkforceVan #StrongWorkforce
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