



NCCER

SWICA

June 10, 2019

ABOUT NCCER



Mission: To build a safe, productive and sustainable workforce of craft professionals.

Vision : Recognized by industry, government and education as the training, assessment, certification and career development standard for the construction and maintenance craft professional.

- Not-for-profit education foundation
- Created in 1996 as *The National Center for Construction Education and Research* (affiliated with the University of Florida)
- Support of more than 125 construction CEOs, associations, and academic leaders
- Revolutionized training for the construction industry



COMPREHENSIVE WORKFORCE DEVELOPMENT SYSTEM



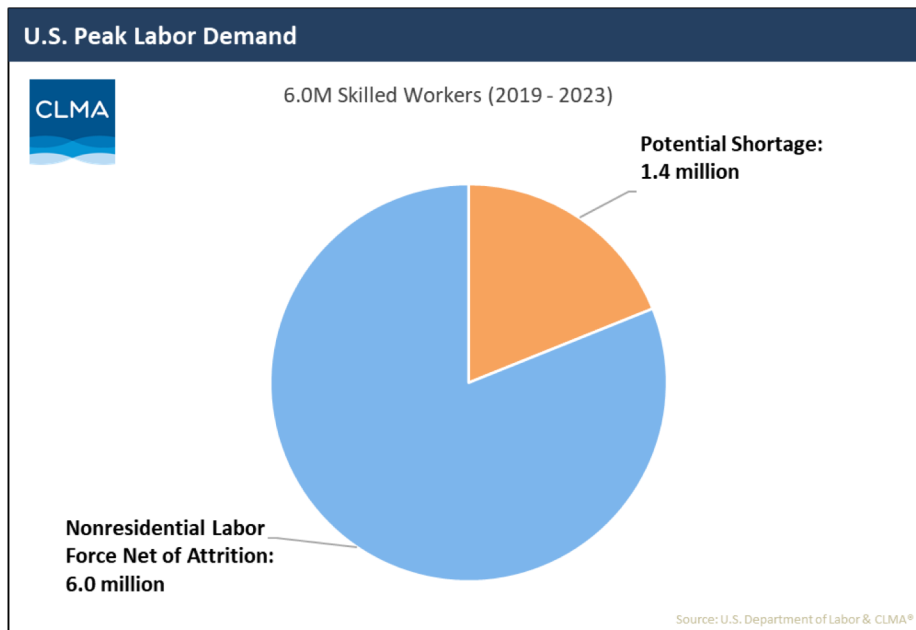
- Accreditation
- Instructor Certification
- Standardized Industry-Driven Curricula
- Nationally Recognized Skill Assessments
- Industry-Recognized Credentialing & Certification
- Construction Career/Recruiting Resources (Build Your Future)
- Construction Safety & Front-line Management Education



SKILLED LABOR SUPPLY/ DEMAND GAP



Anticipated Peak Non-Residential Labor Demand	6.0 M
Current Non-Residential Labor Force (BLS)	5.6 M
Less 5-Year Age Attrition ($\approx 10\%$ of Labor Force)	(1.0 M)
Non-Residential Labor Force Net of Age Attrition	4.6 M

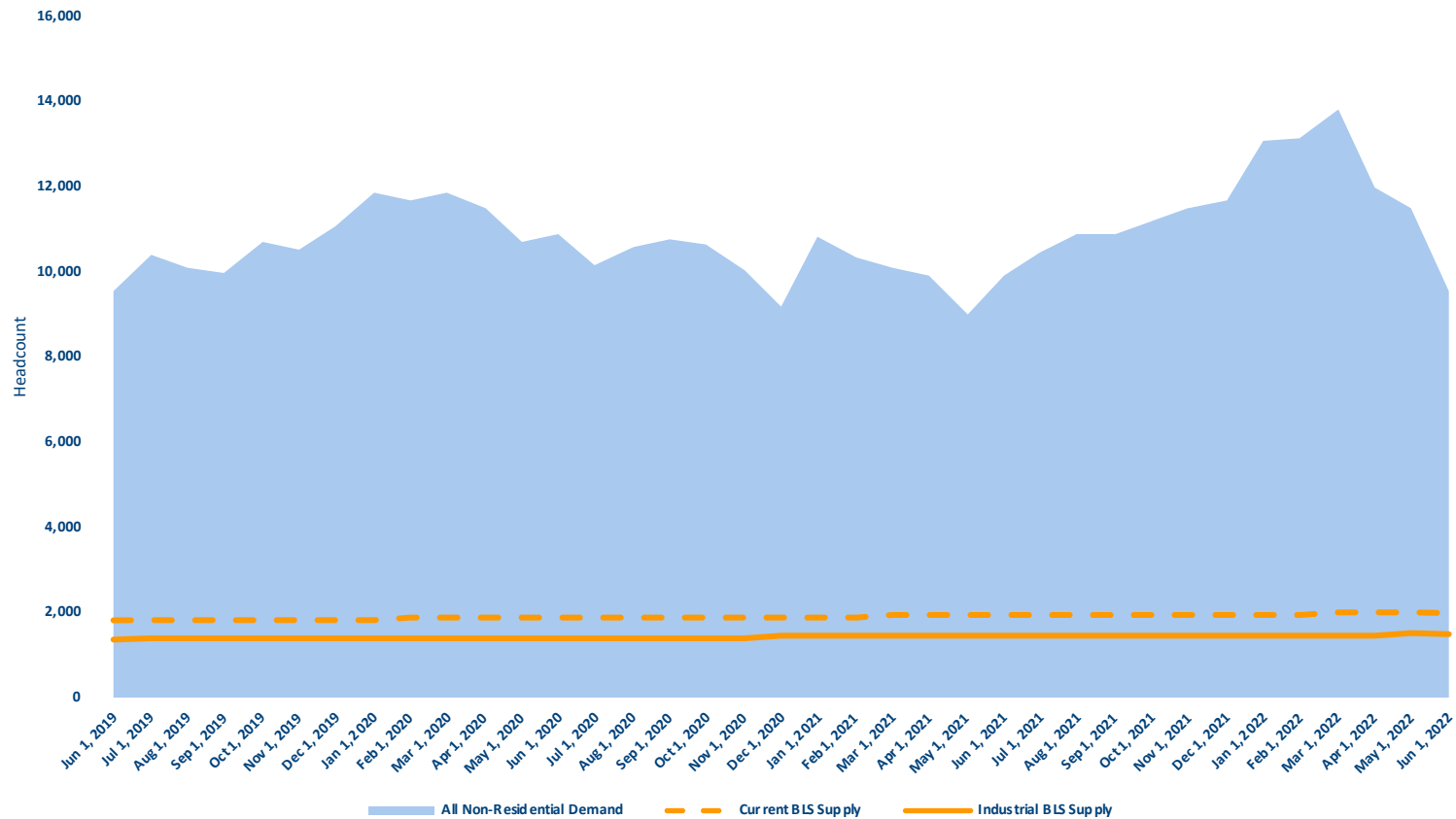


Some estimates predict
***shortages of skilled
Craft Professionals***
to be as high as
1,400,000 by 2021



Data as of:
06-Jun-2019

Insulator *Southwest* Skilled Labor Supply & Demand



EFFECT OF AGING WORKFORCE AND ATTRITION



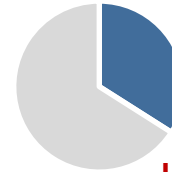
16%
workforce
retirement



22%
workforce
retirement



34%
workforce
retirement



47%
workforce
retirement



Last Baby
Boomers
turn 65

Enters Industry
New hire
begins craft
training

Craft Training
±4 years for
minimal
competency

Journey-Level
Additional 3-5 years to
become competent,
productive & experienced

Seasoned Professional
How long until journey-
level workers are ready to
replace retiring workers?

WHY TRAIN?



If 1% of the Project Labor Budget Were Invested in Training...

RT-231	Expected Average Improvement	
	Capital Projects	Maintenance Projects
Productivity	11%	10%
Turnover Cost	14%	14%
Absenteeism	15%	15%
Injury	26%	27%
Rework	23%	26%



\$1.00 invested \approx \$3.00 ROI

A close-up photograph of a welder's mask and a welding torch. The torch is emitting a bright, intense blue and white flame, which is focused on a metal pipe. The welder's mask is visible in the foreground, partially obscuring the view. The background is dark and out of focus.

Restoring the Dignity of Work

Transforming the US
Workforce Development
System into a World
Leader

Research Team 335



FLUOR

ZACHRY

hargrove



Restoring the Dignity of Work

THE NATION'S WORKFORCE DEVELOPMENT SYSTEM

"[A] confusing maze of training programs" - President Barack Obama, 2012



In his 2012 State of the Union address, President Barack Obama urged Congress to "cut through the maze of confusing training programs." Here is a chart of the current workforce development system.

Image Credit: Henry Rydick, The Noun Project

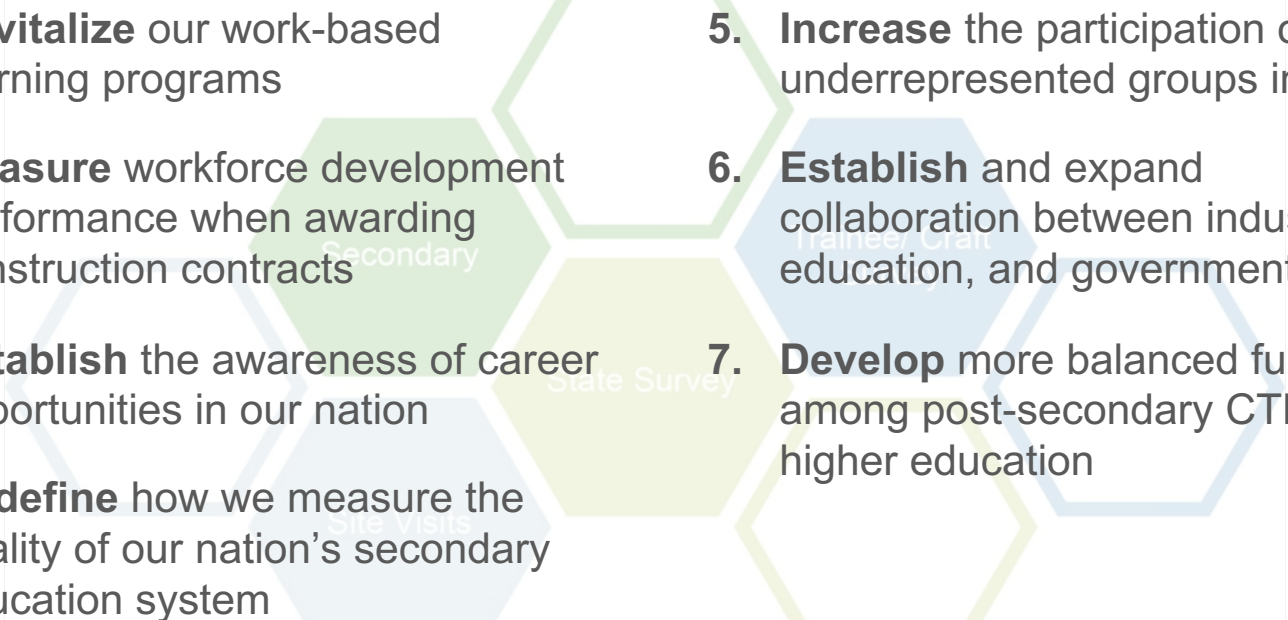
Restoring the Dignity of Work

What did we do?



Research to Results

ACTION STEPS

- 
1. **Revitalize** our work-based learning programs
 2. **Measure** workforce development performance when awarding construction contracts
 3. **Establish** the awareness of career opportunities in our nation
 4. **Redefine** how we measure the quality of our nation's secondary education system
 5. **Increase** the participation of underrepresented groups in CTE
 6. **Establish** and expand collaboration between industry, education, and government
 7. **Develop** more balanced funding among post-secondary CTE & higher education

Revitalize Work-Based Learning Programs



The three types of Work-based Learning Models

- Internships
- Co-Ops
- Apprenticeships

Restoring the Dignity of Work



New approach needed:
Education through Occupations
instead of education for occupations

Restoring the Dignity of Work

The average age
of a construction
apprentice in the
U.S. is:

27

Source: Rolland, K. L. (2016). *Apprenticeships and Their Potential in the U.S.*, CASCADE, No. 90, Winter 2016, Community Development Studies & Education.

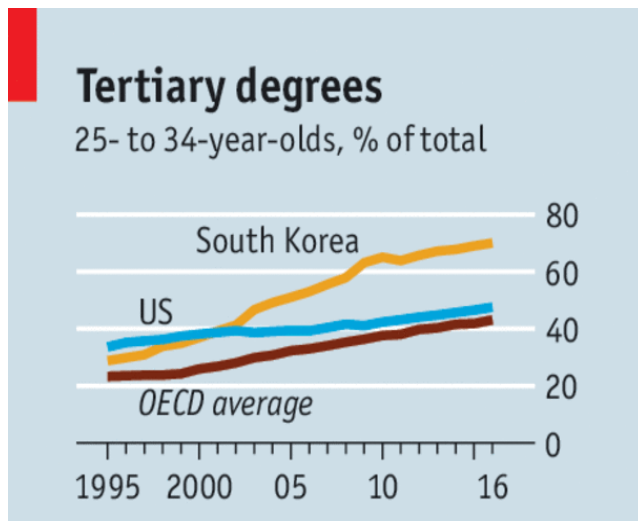
Restoring the Dignity of Work



What Can We Do?

- Streamline administrative processes to participate in registered apprenticeship
- Providing federal and state tax incentives for employers who invest in developing their workers
- Allocating funding to both apprenticeship and work-based programs and track enrollments and their performance

Establish Career Awareness Opportunities



Economist.com



Restoring the Dignity of Work

The Carnage of the New Arms Race

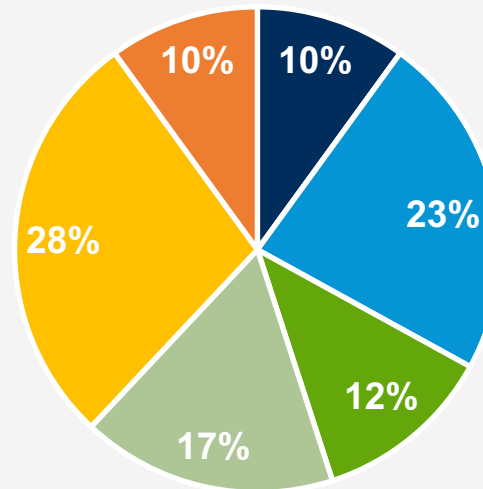
LABOR MARKET FACTS

Only **33%** of future jobs are expected to required a 4-year degree or more

1:2:7

Reference: Occupational employment projections to 2024 – Monthly Labor Review

2018 Job Projection's Education Requirement

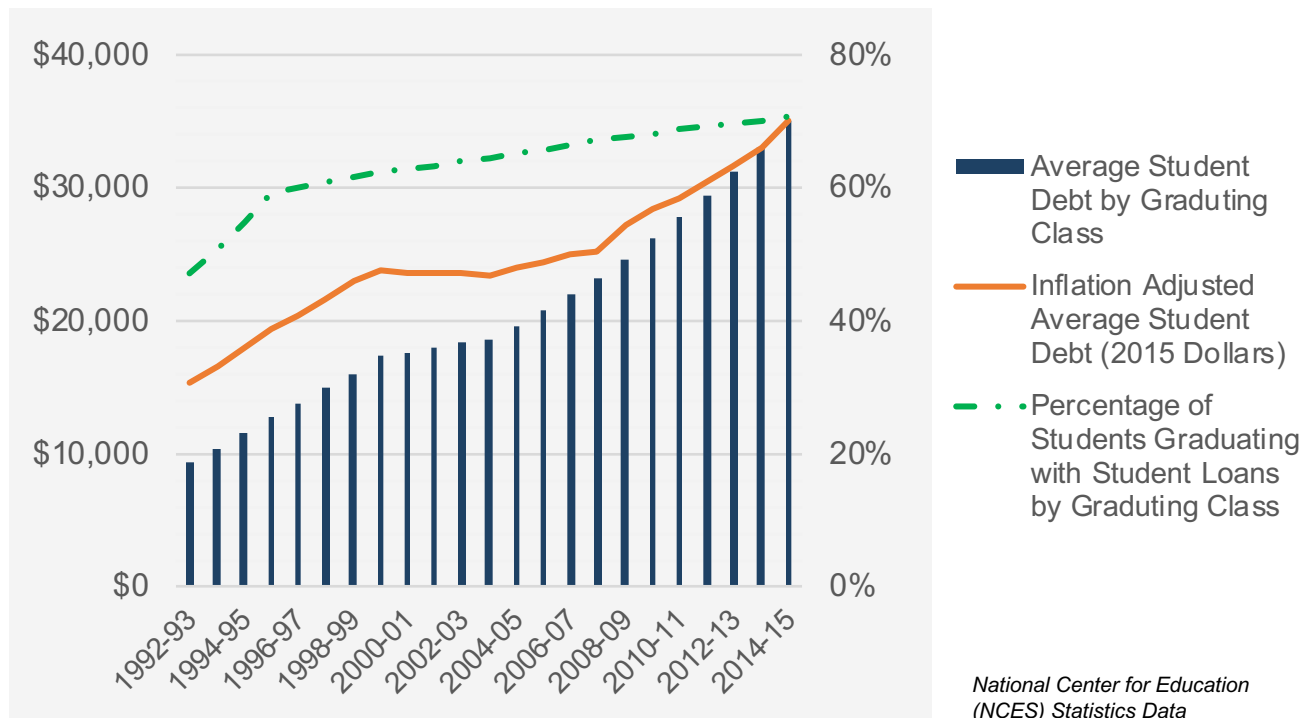


- Master's Degree or Better
- Bachelor's Degree
- Associate Degree
- Some post secondary education, no degree
- High school diploma
- No high school diploma

Carnevale, A., Smith, N., and Strohl, J. (2010). Help Wanted: Projections of Jobs and Education Requirements through 2018. Center for Education and the Workforce. Georgetown University.

Growth in Student Loan Debt at Graduation

**\$1.48
trillion**
in total
U.S. student
loan debt



What Can We Do?

- Inform young people and parents about career options and related costs
- Raise awareness about ALL career paths
- Rebuild image of Career and Technical Education (CTE)

Redefine How We Measure the Quality of Secondary Education

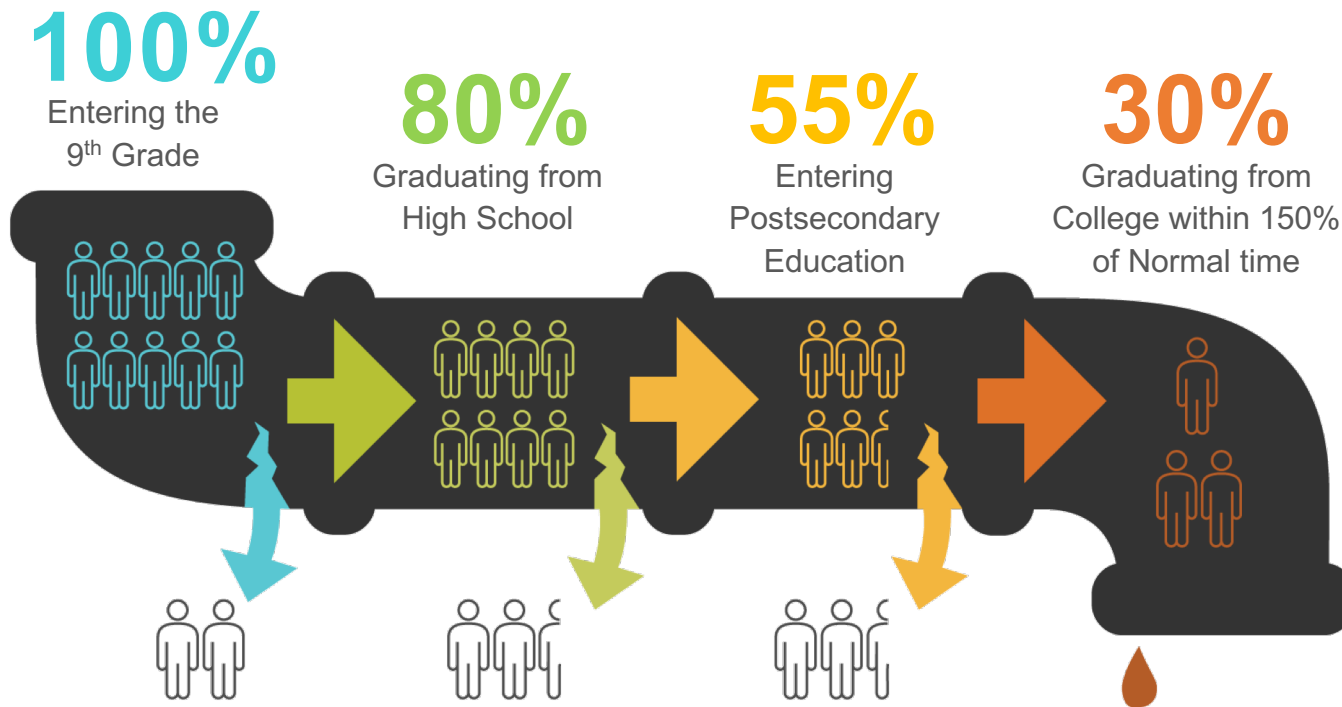


In today's economy, a “career” is not just a job, it provides:

- A family-sustaining wage,
- Pathways to advancement,
- And requires postsecondary training or education.

Career Ready: Having the knowledge and skills needed to qualify for and succeed in the postsecondary job training and/or education necessary for a chosen career.

Educational Pipeline



Source: U.S. Department of Education, National Center for Education Statistics. (2017). *The Condition of Education 2017* (NCES 2017-144), Public High School Graduation Rates, Retrieved from https://nces.ed.gov/programs/coe/indicator_coi.asp

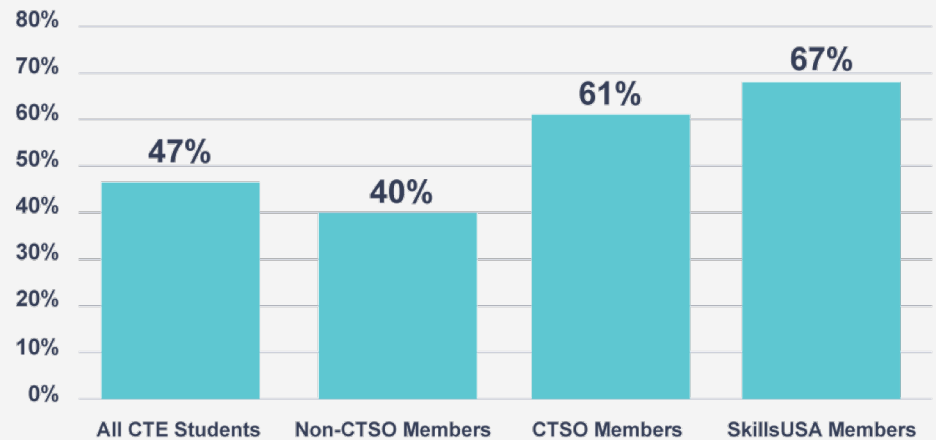
Positive Effects of CTE

- Significantly higher students' test scores
- Better academic grade point averages
- Improved graduation rates

93%		80%
students concentrating in CTE	vs.	national average

- Much clearer career path

Percentage of students said they have clearer career path due to participation in CTE programs



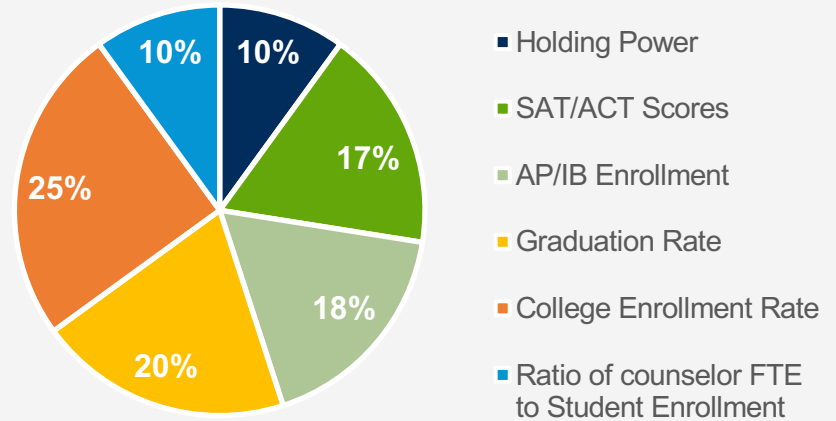
Source: SkillsUSA

High School Quality

COLLEGE VS. CAREER READINESS

- One of the main goals of education system is to **provide the economy with the inflow of required talents**
- **Significant weight on college readiness** by both governmental and societal measures

Newsweek Public School Rankings

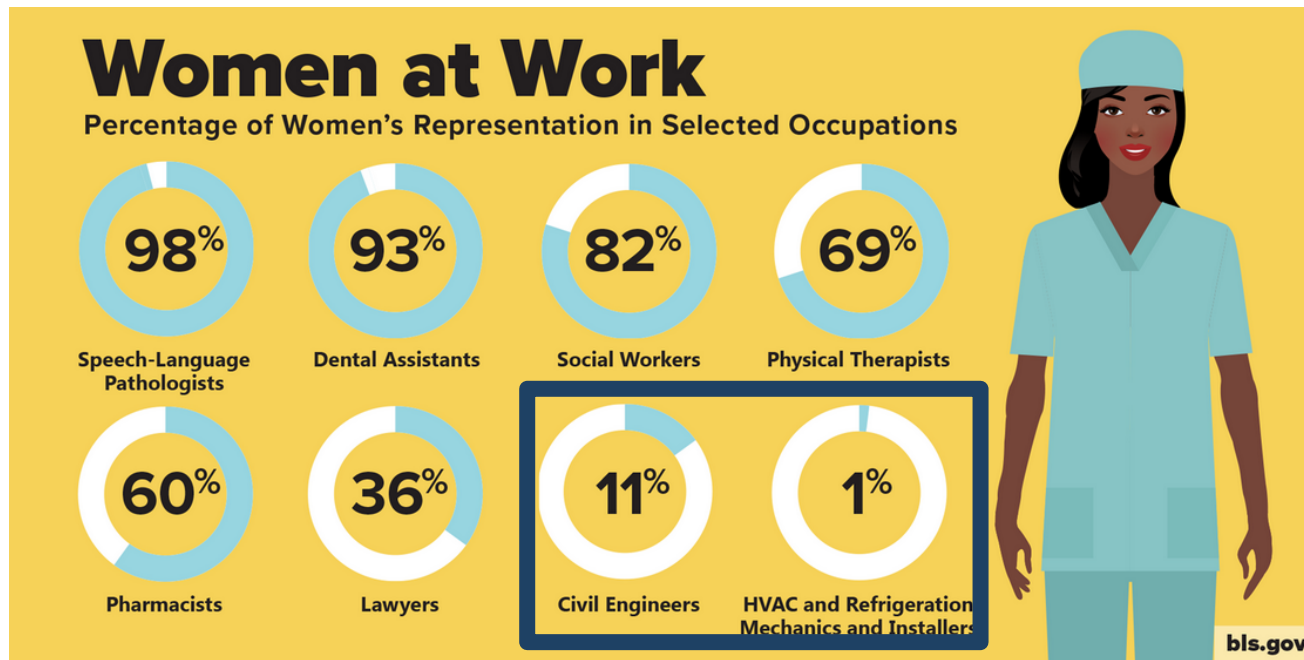


60% of ranking based on college readiness...
0% based on career readiness

What Can We Do?

- At a minimum, **all high school graduates should be career ready**
- In addition, all high school graduates must be prepared to pursue a variety of postsecondary opportunities
 - Career and technical education
 - Work-based learning
 - Higher education
- School systems should be evaluated with equal weighting to all post-secondary options

Increase Participation of Underrepresented Groups in CTE



Increase Participation of Underrepresented Groups in CTE

The construction industry **must**:

- Improve job site conditions and company policies to attract and retain **minorities and females** into construction
- Strengthen and support recruitment and career opportunities for **veterans**
- Better support vocational programs within **correctional facilities**

Establish & Expand Collaboration between Industry, Education and Government

LEAD



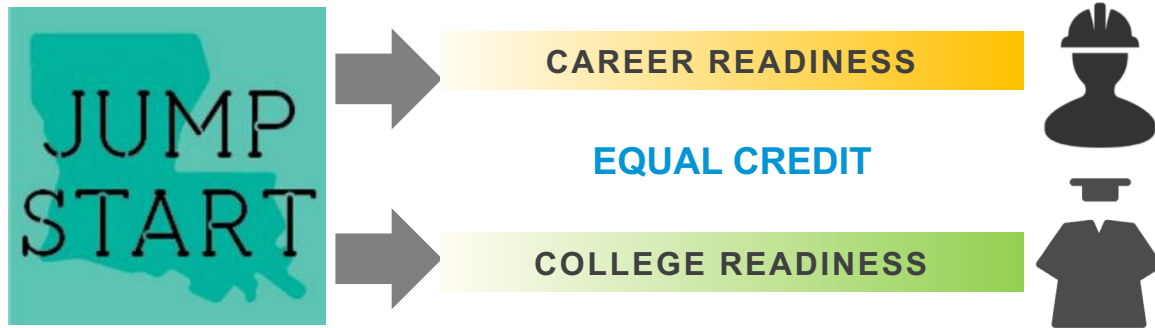
LISTEN



CHANGE



Collaborative Success Models to Imitate



Austrian Economic Chamber Organizations:

Craft and Trades



Industry



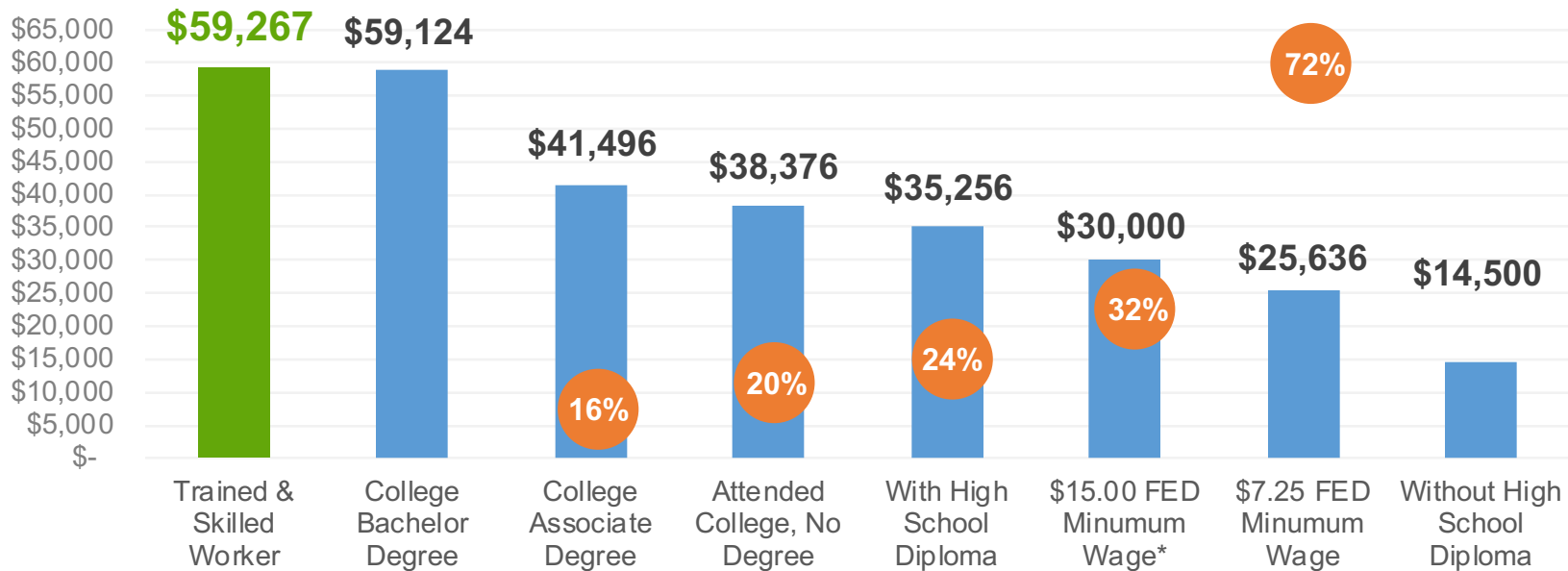
Commerce



Restoring the Dignity of Work

Careers vs. Poverty Prevention

AVERAGE CONSTRUCTION CAREER SALARY VS. OTHER JOBS



Source: Construction Industry Resources, LLC, 2018.

What Can We Do?

- Identify job competencies needed
- Identify career opportunities these jobs provide
- Promote CTE industry involvement and investment
- Assist industry and educational institutions in navigating
 - CTE-related government regulations
 - Work-based training programs



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Educate.
Advocate.*

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CRAFT PROFESSIONALS AREN'T BORN, THEY'RE BUILT.



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THANK YOU