America Works: Education and Training for Tomorrow’s Jobs

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New Realities

I. American students are academically underperforming

II. U.S. workforce not keeping up with international competition

III. Skill demands are changing in the U.S. labor market

IV. Postsecondary education (certification or degree) is the “New Minimum” for access to the middle class and beyond

V. States are leading efforts to transform workforce systems to ensure students attain the “new minimum.”
NAEP & State Proficiency Levels
A Performance & Communication Problem
8th Grade Math - 2013 data

The sum of the two lines is equal to the percent of students proficient on the state assessment.

Gap between percentage of students meeting State Proficiency and NAEP Proficiency
Percent of students proficient on the National Assessment of Educational Progress (NAEP), the "Nation’s Report Card"
PISA: How U.S. Student Compare Internationally

Mean score in PISA 2012
Shanghai

Percentage of all students tested that scored at the highest levels of proficiency
55%
25%
8%

Singapore
Hong Kong
Korea

Japan
Switzerland

Netherlands
Finland
Canada, Poland

U.S. Average

Science
Shanghai

Hong Kong
Singapore
Japan
Korea

Finland
Canada
Poland
Netherlands
Switzerland

Canada, Poland
Netherlands
Switzerland

Average

Changing Skill Demands

High-Skill Occupations

Traditional Middle-Skill Occupations

Low-Skill Occupations

Source: The Vanishing Middle: Job Polarization and Workers’ Response to the Decline in Middle-Skill Jobs, Didem Tüzemen and Jonathan Willis, Kansas City Federal Reserve Bank, 2013.
Changing Skill Demands

High-Skill Occupations
Workers with analytical ability, problem solving, and creativity.

Traditional Middle-Skill Occupations

Low-Skill Occupations

Source: *The Vanishing Middle: Job Polarization and Workers’ Response to the Decline in Middle-Skill Jobs*, Didem Tüzemen and Jonathan Willis, Kansas City Federal Reserve Bank, 2013.
Changing Skill Demands

High-Skill Occupations
Workers with analytical ability, problem solving, and creativity.

Traditional Middle-Skill Occupations

Low-Skill Occupations
Service oriented, manual labor, security

Source: The Vanishing Middle: Job Polarization and Workers’ Response to the Decline in Middle-Skill Jobs, Didem Tüzemen and Jonathan Willis, Kansas City Federal Reserve Bank, 2013.
Changing Skill Demands

High-Skill Occupations
Workers with analytical ability, problem solving, and creativity.

Traditional Middle-Skill Occupations
Workers who perform routine tasks that are procedural and repetitive

Low-Skill Occupations
Service oriented, manual labor, security

Source: The Vanishing Middle: Job Polarization and Workers’ Response to the Decline in Middle-Skill Jobs, Didem Tüzemen and Jonathan Willis, Kansas City Federal Reserve Bank, 2013.
Changing Skill Demands

High-Skill Occupations
Workers with analytical ability, problem solving, and creativity.

Automation
Traditional Middle-Skill Occupations
Workers who perform routine tasks that are procedural and repetitive

Low-Skill Occupations
Service oriented, manual labor, security

Source: *The Vanishing Middle: Job Polarization and Workers’ Response to the Decline in Middle-Skill Jobs*, Didem Tüzemen and Jonathan Willis, Kansas City Federal Reserve Bank, 2013.
Changing Skill Demands

EMPLOYMENT SHARES BY SKILL LEVEL

Source: The Vanishing Middle: Job Polarization and Workers’ Response to the Decline in Middle-Skill Jobs, Didem Tüzemen and Jonathan Willis, Kansas City Federal Reserve Bank, 2013.
The “New Minimum”

Increasing Need for More Education Nationally

Changing Skill Demands

New High-skill Occupations
Bachelors Degree and Above

New Middle-Skill Occupations
AA Degree or Certificate with Labor Market Value

Low-Skill Occupations
Workers with no formal education beyond high school.

Source: The Vanishing Middle: Job Polarization and Workers’ Response to the Decline in Middle-Skill Jobs, Didem Tüzemen and Jonathan Willis, Kansas City Federal Reserve Bank, 2013.
A Better State System

ELEMENTS OF A SYSTEM TO PREPARE MORE STUDENTS AND ADULTS FOR SUCCESS IN THE WORKFORCE
A Better State System

ELEMENTS OF A SYSTEM TO PREPARE MORE STUDENTS AND ADULTS FOR SUCCESS IN THE WORKFORCE

1. Statewide vision
2. Improved data
3. Public-private partnerships
4. Aligned incentives
A Better State System

STATEWIDE VISION

1. State goal or vision for postsecondary completion and attainment.

2. State vision or strategy for economic development.

- Are they connected?

- Is there meaningful activity taking place related to the vision?
A Better State System

STATEWIDE VISION

TENNESSEE

• Increase the percentage of Tennesseans with college degrees or certifications to 55% by the year 2025.

• A mission for higher education, workforce and economic development.

• A drive to reduce unemployment and improve the quality of life.
A Better State System

STATEWIDE VISION

2013
Drive to 55 measures our workforce readiness. Research shows: To meet the workplace demands, 55 percent of jobs will require a credential or degree beyond the high school level.

2017
Every percentage point below that means a full percentage of Tennesseans will be unemployed or underemployed.

2021

2025

55%

Because of natural population growth, this number will increase gradually over time.

Our Challenge:
494,000
Additional Credentials

Where we will be without additional strategies.

Drive to 55 is a must for the future of Tennessee.

32%

39%
A Better State System

**IMPROVED DATA SYSTEMS**

- Identify Key Policy Questions
- Strengthen and Align the State’s Data Infrastructure
- Produce Relevant Products

A Better State System

1. Statewide Vision
2. **Improved Data Systems**
3. High-Quality Partnerships
4. Aligned Use of Incentives and Resources
The Maryland Longitudinal Data System (MLDS) links together data for Maryland students from preschool through college and out into their career. The data supports the continuous improvement of educational outcomes and research to increase student achievement and support accountability.

**Featured Dashboards (Click on a dashboard to View)**

<table>
<thead>
<tr>
<th>What percentage of high school students enroll in college?</th>
<th>Are high school graduates college ready?</th>
<th>How quickly do residents graduate college?</th>
</tr>
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<th>Are we producing the right degrees for state jobs?</th>
<th>What percent of students are engaged in STEM?</th>
<th>How many degrees awarded are STEM related?</th>
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**Featured Dashboards (Click on a dashboard to View)**

- What percentage of Maryland high school students enroll in college?
- Are Maryland’s High School graduates college ready?
- How quickly and effectively do Marylanders graduate from college?
- Are we producing the right degrees for Maryland jobs?
- What percentage of high school students are engaged in STEM education?
- How many 2-yr and 4-yr college degrees awarded in Maryland are STEM-related?
High Wage & High Demand

Low Wage & High Demand

KY Median Wage Line ->

KY 75th Percentile Wage Line ->

KY Average Percent Change Line

Low Wage & Low Demand

Low Wage & Low Demand

2010-2020 Percent Change

2012 Median Wage

KY Median Wage Line

KY 75th Percentile Wage Line

KY Average Percent Change Line

National Governors Association
A Better State System

**Statewide Partnership Support**

- Where does statewide system alignment take place?
  - State Workforce Board
  - P-20W Council
  - Other Cross-Agency Entity

**Regional Partnership Support**

- Where are the strongest examples of local or regional partnerships?

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1. Statewide Vision
2. Improved Data Systems
3. **High-Quality Partnerships**
4. Aligned Use of Incentives and Resources
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Aligned Use of Incentives and Resources

State Examples

- Statewide Asset or Capacity Mapping
- Performance Funding Programs
- Workforce Board Certification Process
- Cross-System Report Cards/Dashboards
- Cross-System Grant Funding and Review

A Better State System
1. Statewide Vision
2. Improved Data Systems
3. High-Quality Partnerships
4. Aligned Use of Incentives and Resources
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Aligned Use of Incentives and Resources

Virginia Performs

Virginia’s Workforce System Report Card

Measuring what matters to Virginians

STEM-H Pipeline
- GOAL: Increase the number of students with science, technology, engineering, math, and healthcare skills.
- Registered apprenticeships and secondary & postsecondary enrollments in STEM-H programs
- Registered apprenticeships and secondary & postsecondary STEM-H credentials earned

DATA SOURCES: VA Dept. of Labor and Industry, State Council of Higher Education for Virginia, VA Dept. of Education

Secondary Educational Attainment
- GOAL: Enable all students, including at-risk students, to complete high school and prepare for college.
- Advanced Studies diplomas earned
- Standard diplomas earned
- Enrollment in GED or adult high school diploma preparation program
- GED or adult high school diplomas earned

DATA SOURCE: VA Dept. of Education

Career & College Readiness
- GOAL: Increase student readiness for both postsecondary education and the workplace.
- Workplace Readiness Skills Credentials earned
- Career Readiness Certificates earned
- Community college certificates or degrees earned by secondary students
- Dual-enrollment credits earned
- Advanced Placement (AP) course enrollment and/or exam completion

DATA SOURCES: VA Dept. of Education, State Council of Higher Education for Virginia, VA Community College System

Emerging Workforce in Manufacturing
- GOAL: Increase credentials and enrollments in manufacturing-related programs; improve the reach of manufacturing instruction and overall employment.
- Dual-enrollment students in manufacturing-related career and technical education courses
- Participation by secondary students in project-based competitive events
- Completions of career and technical education within a manufacturing program of study
- Participation in manufacturing-related community college internship programs
- State-registered apprentices in manufacturing
- Secondary students earning certifications related to manufacturing
- Community college students earning credentials in a manufacturing program of study
- Annual new hires in the manufacturing industry
- Shared assets (labs, equipment, instructors)
- Shared manufacturing curriculum programs

DATA SOURCES: VA Employment Commission, VA Community College System, VA Dept. of Education, VA Dept. of Labor and Industry

Employment & Business Development
- GOAL: Reduce unemployment and increase both employment and income.
- Labor force participation rate
- Percentage change in total annual wages
- Unemployment rate
- Average weeks on unemployment
- Percentage change in employment
- Percentage change in establishments

DATA SOURCES: VA Employment Commission, VA Community College System, VA Dept. of Education, VA Dept. of Labor and Industry

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Elements of a system to prepare more students and adults for success in the workforce:

1. Statewide vision
2. Improved data
3. Public-private partnerships
4. Aligned incentives

The Education & Training System

The Workforce