Data and Information for Workforce Alignment
Statutory Reports

TENNESSEE LEAP

Annual Report 2019

Labor Education Alignment Program

LEAP

Tennessee Higher Education Commission

Academic Supply and Occupational Demand in Tennessee

Workforce Needs and Degree Production

Annual Report
January 15, 2019

THEC

Tennessee Higher Education Commission
Statutory Reports

• Producer AND consumer of workforce information.
  – Report to meet our own duties AND use other agency reports

• NOT individual level data; much more macro
  – Statewide
  – Region- and county-level
Future of Work

• Align industry and higher education
• Prepare for 2030 workforce and beyond

• Necessary credentials AND skills?

• Speed and agility from higher education
• Changes to:
  • Degree production?
  • Program approval?
## Future of Work

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Average wage</th>
<th>Automation potential</th>
<th>Typical education required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging &amp; Filling Machine Operators &amp; Tenders</td>
<td>$31,000</td>
<td>100%</td>
<td>Less than Bachelor's Degree</td>
</tr>
<tr>
<td>Food Preparation Workers</td>
<td>$23,000</td>
<td>91%</td>
<td>Less than Bachelor's Degree</td>
</tr>
<tr>
<td>Payroll &amp; Timekeeping Clerks</td>
<td>$44,000</td>
<td>87%</td>
<td>Less than Bachelor's Degree</td>
</tr>
<tr>
<td>Light Truck or Delivery Services Drivers</td>
<td>$35,000</td>
<td>78%</td>
<td>Less than Bachelor's Degree</td>
</tr>
<tr>
<td>Computer Network Support Specialists</td>
<td>$68,000</td>
<td>62%</td>
<td>Less than Bachelor's Degree</td>
</tr>
<tr>
<td>Medical Assistants</td>
<td>$33,000</td>
<td>54%</td>
<td>Less than Bachelor's Degree</td>
</tr>
<tr>
<td>Retail Salespersons</td>
<td>$27,000</td>
<td>47%</td>
<td>Less than Bachelor's Degree</td>
</tr>
<tr>
<td>Computer Programmers</td>
<td>$85,000</td>
<td>38%</td>
<td>Bachelor's Degree or More</td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>$72,000</td>
<td>29%</td>
<td>Bachelor's Degree or More</td>
</tr>
<tr>
<td>Maids &amp; Housekeeping Cleaners</td>
<td>$24,000</td>
<td>18%</td>
<td>Less than Bachelor's Degree</td>
</tr>
<tr>
<td>Home Health Aides</td>
<td>$24,000</td>
<td>11%</td>
<td>Less than Bachelor's Degree</td>
</tr>
<tr>
<td>Software Developers, Applications</td>
<td>$105,000</td>
<td>8%</td>
<td>Bachelor's Degree or More</td>
</tr>
<tr>
<td>Management Analysts</td>
<td>$92,000</td>
<td>4%</td>
<td>Bachelor's Degree or More</td>
</tr>
<tr>
<td><strong>U.S. total</strong></td>
<td><strong>$49,600</strong></td>
<td><strong>46%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Job Change from Automation, by Attainment

Source: Brookings analysis of 2016 American Community Survey 1-Year microdata (U.S. data).
Shift in Required Workforce Skills

Total Hours Worked in U.S. & Europe, 2016 vs 2030 estimate (billion)

- **Physical and manual skills**
  - 2016: 203
  - 2030: 174
  - Change: -29

- **Basic cognitive skills**
  - 2016: 115
  - 2030: 97
  - Change: -18

- **Higher cognitive skills**
  - 2016: 140
  - 2030: 151
  - Increase: 11

- **Social and emotional skills**
  - 2016: 119
  - 2030: 148
  - Increase: 29

- **Technological skills**
  - 2016: 73
  - 2030: 113
  - Increase: 40

Change in hours spent by 2030, %

These 14 skills, already in wide demand by employers, command salary premiums and are crucial for workers who want to keep pace with a changing job market.
P20 Connect – longitudinal data

• Individual-level data
  – Can link **K12, higher education, and workforce data** (i.e., employment intensity, unemployment insurance) at the person-level.

• Most often (though not always!) used for “capital R” research; collaborations with external parties.
72,865 Students
2007 Cohort of High School Freshmen

- 10,545 students did not graduate high school
- 22,334 students entered the workforce
- 40,235 students enrolled in postsecondary

$9,030 average income

16% chance of earning above minimum wage
P20 Connect – longitudinal data

• i.e., Working *while enrolled* in higher ed?

• i.e., High school grads who *do not enroll* in higher ed?

• Challenge: industry not occupation.
  – Work in healthcare, but we can’t tell if doctor or janitor
  • Wages proxy for this.
GIVE Act

GIVE
Governor’s Investment in Vocational Education
Two-pronged initiative

- Increased **dual enrollment grant** funding for courses in high-need fields
- **Community-based grants** to address local and regional industry/workforce demands.
Dual enrollment grants

• Crosswalk courses, programs, and high-need industry demands
  – THEC/TSAC are “keepers” of the high-need, high-demand list.

• Tangible, actionable, immediate use of linked data!
Community-based grants

• TCAT Covington – **Digital Agronomy Program**
  – Complete curricula for Digital Agronomy Programs at K-12, TCAT, and Community College levels
  – Hire instructors and work-based learning coordinators; equip TCAT classrooms
Community-based grants

- Motlow State Community College – Teaching Innovative Learning Technologies (TILT)
  - Expand the current middle college mechatronics program to additional local high schools
  - Create a computer coding program, beginning at the middle school level, expanding into high school and culminating in Python Certification.
In conclusion -

• We are still learning the best ways to marry higher ed and workforce data and use effectively!

• Data from many sources – not just US or TN Departments of Labor

• Reporting and research is critical, but how to make data/information actionable?
Questions? Thank you!

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