Testimony to the PA Higher Education Funding Commission

February 6, 2020
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The problem we’re trying to solve in higher education

Brief review
An appropriately educated workforce is critical to PA’s health and well being

60% of today’s jobs require employees with a higher education credential (degree, certificate, certification, licensure)

- Presently 47.5% have such a credential
- Middle skills jobs alone require 54% of which the state has 43%

To meet that need by 2025 (the need is now!) would require 7+% CAGR in credential productivity

- Currently credential productivity in PA is traveling at -1.2% CAGR (196,477 in 2013-14 to 186,950 in 2017-18).
A viable workforce requires we close significant higher education attainment gaps...

**By income groups** (high income students are five times more likely than low income students to receive a degree by age 24)

**By rural/urban** (urban adults over 25 are 1.7 times more likely than rural adults to have a college degree [34% and 20% respectively in 2017])

**By race/ethnicity** – (percent of adults 25 and older with a BA degree or higher)

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>2016</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>35</td>
<td>31</td>
</tr>
<tr>
<td>Black</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>Hispanic</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>Asian</td>
<td>54</td>
<td>60</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>Two or more races</td>
<td>34</td>
<td>29</td>
</tr>
<tr>
<td>All</td>
<td>31</td>
<td>28</td>
</tr>
</tbody>
</table>
ensure adults up- and re-skill continuously to remain viable in the workforce...

Here’s a few reasons why

Robotics
  • Robots will displace at least 75M jobs globally by the mid 2020s

Artificial intelligence
  • By 2060 artificial intelligence will be capable of replacing nearly all jobs currently done by humans today

The number of new jobs will equal or exceed the number eliminated, but we don’t know what they are
...address issues arising from high worker turnover

Today:

- 1 in 4 workers has been with their employer for less than a year (1 in 2 less than 5)

The US Department of Labor estimates that today’s learner will have 10-14 jobs by age 38
The higher education landscape
It involves formal credentialing after high school

Degrees & Certificates
Awarded for life, by colleges and universities, for completing a program of study or course work

Certifications
Time limited (must be renewed), awarded by professional associations, industry groups, vendors and governments agencies, for passing a written, oral or performance exam

Licenses
Time limited (must be renewed), awarded by government agencies, for fulfilling specified requirements, and needed to perform certain jobs
Scope and salary impacts of formal credentialing

Out of 142 million workers in the United States:

- **47 million** workers have a Bachelor’s degree
- **38 million** workers have either a certification or a license
- **17 million** workers report a certificate as their highest level of education

On average per year...

- Certifications/licenses and no other postsecondary credential earn
  - AA-holders earn $46,000
  - BA-holders earn $60,000

- Women earn $24,000

48% of job openings for certification-holders are in the healthcare industry.

It also includes a wide and growing variety of “alternative credentials”

**Apprenticeships** – 22.5k registered apprenticeships (400k apprentices)
**Military certificates** – 1400
**Badges** – 191k unique digital badges/programs
**Micro-credentials** – 629
**Coding boot camp certificates** – 1k
**Industry** – $88B worth of employer-based training annually*

Source: credentialengine.org and training magazine (https://trainingmag.com/trgmag-article/2018-training-industry-report/)
Today’s landscape is chaotic, disconnected, hard to navigate for students and employers.

**TODAY’S CREDENTIALING LANDSCAPE**

With 334,000+ unique credentials and 500,000+ programs in the U.S. alone, today’s credentialing landscape is complex and disconnected.

Source: Credential Engine - https://credentialengine.org/
Design principles for a high-functioning higher education landscape
Adopting a learning-worker centered design approach

Introducing:
• Alessandro
• Eugenia
• Charles
Working-learner centered design principles

• Support multiple life-long educational pathways that
  • are aligned with workforce needs
  • enable working-learners to evolve skills/abilities & remain relevant/viable ("stackable credentials")
  • have multiple on-ramps with credit transfer, credit for prior learning etc

• Enable working-learners to navigate education/career development options with reliable information, and employers to understand the value of different credentials

• Ensure equitable outcomes
Recommendations
Set meaningful goals

• Account for expected workforce/economic need, demographic changes, and social mobility (are data driven)
• Have measurable outcomes (so you know whether progress is being made)
• Use leading indicators for constant monitoring and (where necessary) course correction
Surface the data so we don’t fly blind

- **Develop a state longitudinal data system** built on publicly held education, population, workforce, GIS, health outcome, employee salary and related data
- **Surface the data** allowing for development of third-party services to employers, working/learners and education providers
- **Stimulate applied research** (building demand for continuous improvement in data and data services)

FL, GA, KY
In a high-functioning higher education environment, data will enable the following:

<table>
<thead>
<tr>
<th>Employers will be able to:</th>
<th>Learning workers will be able to:</th>
<th>Education providers will be able to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal hiring requirements</td>
<td>Signal obtained competencies, credentials, and skills</td>
<td>Use employer signals to improve alignment with workforce and learner needs</td>
</tr>
<tr>
<td>Recruit qualified candidates</td>
<td>Search and discover career and education opportunities</td>
<td>Search and discover changing hiring requirements and gaps</td>
</tr>
<tr>
<td>Improve application processes through screening and verification</td>
<td>Manage application submissions, screening and verification</td>
<td>Improve learner services to career readiness</td>
</tr>
<tr>
<td>Address onboarding and development concerns</td>
<td>Streamline participation and transitions by managing personal information</td>
<td>Align programs, credentials, and learner records</td>
</tr>
<tr>
<td>User performance analytics to recognize top performing employees and education providers</td>
<td>Use performance analytics to plan best career and learning options</td>
<td>Use performance analytics to update programs and credentials</td>
</tr>
</tbody>
</table>
Use policy to engage and incentivize working learners

• Tuition guarantees / reimbursements, scholarships for students going into high demand occupations PA Smart, UTeach
• Low interest loans and income share agreements that reduce future and/or existing student debt Ample research
• Support for food and housing insecure students and those needing child care, transportation, etc. ASAP (NY and OH), Hope Labs
• Fully use federal dollars (e.g. “fill out FAFSA” campaigns) TN
• Grants for students pursuing non-degree credentials
Use policy to engage and incentivize education providers

Reward / encourage performance in key areas:

• Student outcomes (completion, employment, equity)
  IN, OH, College Scorecard

• Pathway integration / alignment
  St Louis (for engineering), CCRC, FL, VA for 2- and 4-yr alignment

• Operating efficiency
  PASSHE
Engage and incentivize employers

Reward / encourage engagement in shaping and supporting students along career-aligned pathways:

- employee tuition assistance programs Starbucks, Aetna
- participation in work-based learning (apprenticeships, internships, coops) Denver
- integrating formal and informal employee based training into clearly articulated credentialing pathways Boeing, Lockheed Martin
- defining competencies for high-demand occupations Tech co’s digital foundations, advanced manufacture
Bonus recommendation: Optimize expenditure of existing public dollars

• Optimize use of public facilities (education, corrections, health and human services) in education and training delivery
• Regionally coordinate student and public mental health and wellness services
• Use scale of public sector employers to drive efficient education-workforce alignment
• Repurpose the fourth year of high school
Bonus recommendation: quality assurance and assessment for alternative credentials

We have:

• ABET, ABA, AMA, etc. for professions
• regional accreditors for degree-granting entities,
• trade, employer, and professional associations for licensure and apprenticeship
• white space for certifications, certificates, micro-credentials, badges, etc.

Is there a role for state-wide / regional quality assurance and assessment entities?

EQUIP, Lumina funded initiatives
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