Finding New Ways to Answer Old Questions: The Case of Workforce Training and Credentials

Sharon A. Boivin, Ph.D.
Chair, Interagency Working Group on Expanded Measures of Enrollment and Attainment (GEMEnA)

APDU Annual Conference
September 1, 2015
Workforce Data Needs

1. What is the stock of credentials with labor market value in the U.S. adult population?
2. What is the process by which adults acquire the knowledge and skills to attain those credentials?
Partial Data Gaps

• Stock of credentials (attainment):
  – Number and characteristics of non-degree credentials
    • Industry-recognized certifications
    • Occupational licenses
    • Educational certificates

• Process of acquiring skills (enrollment):
  – Work experience programs
  – Non-credit college coursework
Percent of 25 to 34 year olds with at least a high school diploma who report “some college”, by state (Source: 2011 ACS)
Background

- An interagency group had considered measurement of certifications in the early 2000s, but the time wasn’t ripe.
- Policy makers began asking these workforce questions during the recession.
- 2009 SOTU called for every American to have at least one year of education or training beyond high school.
- GEMEnA commissioned in fall 2009.
GEMEnA Member Organizations

- National Center for Education Statistics (NCES), Chair
- Bureau of Labor Statistics
- Census Bureau
- Council of Economic Advisors
- Department of Education Office of the Under Secretary
- National Center for Science and Engineering Statistics (NSF)
- OMB Office of Statistical and Science Policy
Objectives

• Develop a parsimonious set of survey items to measure prevalence and key characteristics of non-degree credentials
  – Incorporate items into federal surveys of households and individuals

• Develop sets of items to measure:
  – Completion of work experience programs
  – Enrollment in education and training for credentials
Ongoing Development Process

• Experts help define the constructs
• Focus groups of potential respondents provide insight into relevant words/terms
• Cognitive interviews refine question wording and instructions
• Pilot studies test survey items on large numbers of respondents
Pilot Studies

• The Adult Training and Education Study (ATES) of 2010 (~3,700)
  – Seeded sample

• The National Adult Training and Education Study (NATES) response rate pilot in 2013 (~10,000)
  – Nonresponse Bias Study

• The National Household Education Study Feasibility Study (NHES-FS) in 2014 (~44,000)
  – Seeded sample
Overview of New Survey Items

Certifications and Licenses → Certificates → Work Experience Programs → Enrollment in Education and Training
Defining the Constructs

- **Certification**: A credential awarded by a certification body based on an individual demonstrating through an examination process that he or she has acquired the designated knowledge, skills, and abilities to perform a specific job. The examination can be either written, oral, or performance-based. Certification is a time-limited credential that is renewed through a recertification process.

- **License**: A credential awarded by a government agency that constitutes legal authority to do a specific job. Licenses are based on some combination of degree or certificate attainment, certifications, assessments, or work experience; are time-limited; and must be renewed periodically.
ATES* Item—Certification/License

6. Do you have a currently active professional certification or a state or industry license? Do not include business licenses, such as a liquor license or vending license.

A professional certification or license shows you are qualified to perform a specific job and includes things like Licensed Realtor, Certified Medical Assistant, Certified Teacher, or an IT certification.

☐ No ➔ Go to question 30

☐ Yes
ATES “Bucket” Questions

10. Is your most important certification or license required by a federal, state, or local government agency in order to do that kind of work?
   - No
   - Yes
   - Don’t know

11. Can your most important certification or license be revoked or suspended for any reason?
   - No
   - Yes
   - Don’t know
CPS Items on Certifications/Licenses

• Do you/Does [name] have a currently active professional certification or a state or industry license? Do not include business licenses, such as a liquor license or vending license. Help text: A professional certification or license shows you are qualified to perform a specific job. Examples include a realtor license, a teacher's license, or an IT certification. Only include certifications or licenses obtained by an individual.

• Were any of your/his/her certifications or licenses issued by the federal, state, or local government?

• Earlier you told me you/[name] had a currently active professional certification or a state or industry license. Is your/his/her certification or license required for your/his/her job?
More Data on Certifications--Now Available

• 2008 Survey of Income and Program Participation (SIPP), Wave 13 topical module fielded in fall 2012
• 2002/2012 Education Longitudinal Survey 10 year follow up of 10th grade class of 2002 (12th grade class of 2004)
• 2008/12 Baccalaureate and Beyond 4 year follow up of 2008 Bachelor degree recipients
More Data on Certifications—Available in the Near Future (availability)

- Re-engineered SIPP (~January 2016)
- National Survey of College Graduates (Summer 2016)
- Beginning Postsecondary Students (Spring 2016)
- Adult Training and Education Survey (Summer 2017)
Overview of New Survey Items

Certifications and Licenses → Certificates → Work Experience Programs → Enrollment in Education and Training
Defining the Construct

**Educational Certificate:** A credential awarded by an educational institution based on completion of all requirements for a program of study, including coursework and test or other performance evaluations. Certificates are typically awarded for life (like a degree). Certificates of attendance or participation in a short-term training (e.g., 1 day) are not in the definitional scope for educational certificates.
30. People sometimes earn certificates from an education or training program. These are different from certifications or licenses. Do not include certifications or licenses here. Have you ever earned any of the following types of certificates?

We ask about any kind of certificate...
...then we let them tell us what they have.

- A certificate for completing a training program from an employer, employment agency, union, software or equipment manufacturer, or other training provider
  - No
  - Yes

- A certificate for completing a vocational program at a high school
  - No
  - Yes

- A high school equivalency certificate, such as a GED®
  - No
  - Yes

- A certificate—not a degree—for completing a program at a community or technical college, or other school after high school. Do not include teaching certificates or college degrees
  - No
  - Yes

GO TO question 39
“Bucket” Questions for Certificates

32. Who gave you your last post-secondary certificate?
Mark ONE only.

☐ A community college
☐ A vocational, technical, trade, or business school
☐ Another college or university
☐ Someplace else – Specify: 

33. About how many hours of instruction did you complete in order to earn your last post-secondary certificate?

☐ 960 hours (1 full-time school year) or more
☐ 480 hours (half a full-time school year) to 959 hours
☐ 160 to 479 hours
☐ 40-159 hours
☐ Less than 40 hours
Overview of New Survey Items

Certifications and Licenses ➔ Certificates ➔ Work Experience Programs ➔ Enrollment in Education and Training
ATES Item on Work Experience Programs

39. Have you ever completed an internship, co-op, practicum, clerkship, externship, residency, clinical experience, apprenticeship, or similar program?

☐ No, and I am not in one now

☐ No, but I am in one now

☐ Yes, I have completed this type of program

We will refer to these as “work experience programs.” If you have NOT completed a work experience program, go to question 50. If you HAVE completed a program, continue on the next page, answering for the last work experience program you completed.
“Bucket” Questions for Work Experience Programs

- Type of work it was for (e.g. construction, health care, other)
- How long it lasted (< 3 months through 3 years or more)
- Type of wage earned (none, training, full)
- Received college credit, journeyman status, registration number
- Part of a formal education program (by level, h.s. through post-bachelor’s)
Overview of New Survey Items

Certifications and Licenses → Certificates → Work Experience Programs → Enrollment in Education and Training
Defining the Construct

• There are many different types of education and training for work and we cannot possibly measure everything that might have labor market value
• One approach: link enrollment constructs to attainment constructs and focus on education and training pursued with the goal of obtaining or renewing a non-degree credential
• Focus on non-credit-bearing education and training
• Current enrollment versus last 12 months
Development Plans

- Concept interviews (Aug/Sept 2015)
- Expert Panel meeting (October 2015)
- Cognitive interviews (Jan/Feb 2016)
- Pilot test (Jan 2017)

Stay tuned!
First Results on Certifications/Licenses

• Census Bureau released the first official statistics in January 2014

• *Measuring Alternative Educational Credentials: 2012*
  
Table 1.
Percentage With Alternative Credentials by Regular Educational Attainment for the Population Aged 18 and Older: 2012
(Weighted, numbers in thousands)

<table>
<thead>
<tr>
<th>Regular education level</th>
<th>No alternative credential</th>
<th>Professional certification, license</th>
<th>Educational certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
</tr>
<tr>
<td>Total</td>
<td>161,557</td>
<td>75.2</td>
<td>46,326</td>
</tr>
<tr>
<td>Less than high school</td>
<td>22,240</td>
<td>93.6</td>
<td>1,315</td>
</tr>
<tr>
<td>High school completion</td>
<td>59,056</td>
<td>83.1</td>
<td>9,891</td>
</tr>
<tr>
<td>Some college</td>
<td>32,134</td>
<td>76.5</td>
<td>8,064</td>
</tr>
<tr>
<td>Associate’s degree</td>
<td>11,457</td>
<td>63.8</td>
<td>5,409</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>26,196</td>
<td>67.3</td>
<td>11,447</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>8,291</td>
<td>52.5</td>
<td>7,018</td>
</tr>
<tr>
<td>Professional degree</td>
<td>1,015</td>
<td>31.6</td>
<td>2,178</td>
</tr>
<tr>
<td>Doctorate degree</td>
<td>1,531</td>
<td>58.8</td>
<td>1,004</td>
</tr>
</tbody>
</table>

Note: Nonrespondents are not included in estimates of alternative credentials.
Figure 1.
Alternative Credential Status by Regular Education Level: 2012

- Educational certificate
- Professional certification or license
- No credential

Note: Nonrespondents are not included in estimates of alternative credentials.
Figure 2.  
Median Monthly Earnings for Professional Certification or License Relative to No Alternative Credential by Education Level: 2012

Ratio of median earnings

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Ratio of Median Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school completion</td>
<td>1.26</td>
</tr>
<tr>
<td>High school completion</td>
<td>1.22</td>
</tr>
<tr>
<td>Some college</td>
<td>1.13</td>
</tr>
<tr>
<td>Associate's degree</td>
<td>1.18</td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td>1.04</td>
</tr>
<tr>
<td>Master's degree</td>
<td>0.93</td>
</tr>
<tr>
<td>Professional degree</td>
<td>1.40</td>
</tr>
<tr>
<td>Doctorate degree</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note: Nonrespondents are not included in estimates of alternative credentials. Only people employed full-time for the 4 months before the survey with positive earnings are included in these analyses. 
FIGURE 2. Among credentialed adults, percentage with a credential in selected subject fields, by adults’ educational attainment level: 2012

<table>
<thead>
<tr>
<th>Educational attainment level</th>
<th>Total</th>
<th>Doctorate degree</th>
<th>Professional degree</th>
<th>Master’s degree</th>
<th>Bachelor’s degree</th>
<th>Associate’s degree</th>
<th>Some college</th>
<th>High school completion (no college)</th>
<th>Less than high school</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>45</td>
<td>36</td>
<td>54</td>
<td>33</td>
<td>45</td>
<td>42</td>
<td>54</td>
<td>48</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>45</td>
<td>#</td>
<td></td>
<td>5</td>
<td></td>
<td>10</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>38</td>
<td></td>
<td>51</td>
<td>25</td>
<td>5</td>
<td>43</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>19</td>
<td>8</td>
<td></td>
<td>26</td>
<td>5</td>
<td>26</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>5</td>
<td>51</td>
<td></td>
<td>26</td>
<td></td>
<td>10</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td>3</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td>3</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td>2</td>
<td>37</td>
<td>37</td>
</tr>
</tbody>
</table>

# Rounds to zero.


Website: nces.ed.gov/surveys/gemena

- List of surveys with links to questionnaires and data (as they become available)
- Links to documentation on development process and published reports
- GEMEnA-developed working definitions of certifications, licenses, and certificates
- Link to LinkedIn group: GEMEnA Community
- Sign up for NCES Newsflash
For More Information

Sharon A. Boivin, Ph.D.
Chair, Interagency Working Group on Expanded Measures of Enrollment and Attainment National Center for Education Statistics

sharon.boivin@ed.gov