WICHE’s Pilot Data Exchange

Hawaii Data Summit
Honolulu, HI ~ October 11, 2013
**Products**

1. Aggregated analysis tracking human capital development and mobility among four states.

2. Enhanced identifiable data returned to state agencies with legitimate interests.

3. The infrastructure – governance and architecture – necessary to sustain the data exchange and expand to or export to additional states.

**Research Questions Embedded in MOA**

1. What are the patterns of postsecondary enrollment and employment of high school graduates from each participating state?

2. What are the patterns of postsecondary enrollment and employment of students in public postsecondary institutions in participating states?

   – *Each with appropriate disaggregations* –

3. By more fully accounting for individual mobility across state lines, to what extent does sharing data among states supplement existing state data resources available for conducting evaluations leading to policy and program improvements?
Data Sources

• **Single Source States** *(State Longitudinal Data Systems that originally compiled the data owned by the responsible agencies in each respective state)*
  - Hawaii P-20
  - Idaho Office of the State Board of Education
  - Washington Education Research and Data Center

• **Multiple Sources (Oregon)**
  - Oregon Department of Education
  - Oregon Department of Community Colleges and Workforce Development
  - Oregon University System
  - Oregon Employment Department

Data Elements Exchanged

• **Identity and Demographics**
  - Randomly-generated Exchange ID#

• **Education (Term)**
  - High School Diploma
  - Postsecondary Institution
  - Credits Attempted, Passed
  - Postsecondary Awards
  - Field of Study

• **Employment: Unemployment Insurance Wage Records (Quarterly)**
  - Social Security Number
  - Gross Wages
  - Employer’s Industry Classification
Two Cohorts

A

Public high school graduates from the class of 2005

B

First-time public postsecondary students in 2005-06

Unpacking the “Not Found” Category

- Employed in WA
- Employed in another state
- Not in the workforce
- Military or federal government employment and self-employed
- No SSN available
Unpacking the “Not Found” Category

100% of completers from Washington institutions by December 2010

- Not in the workforce
- Employed in WA
- Employed in another state
- Employed in HI, ID, or OR
- Military or federal government employment and self-employed
- No SSN available
- Subsequent postsecondary enrollments (e.g., graduate school)

Key for the Next Slide

- Enrollment records
- Credential(s) earned
- Employed in HI
- Employed in ID, OR, or WA
How Far Does the Exchange Extend Coverage of Employment Outcomes?

Number of Completers of an Associate’s Degree or Higher

<table>
<thead>
<tr>
<th>Assoc+ Conferred by State</th>
<th>(1) Total Number of Completers by December 2010</th>
<th>(2) Number of Completers With a Valid SSN</th>
<th>(3) Number of Completers With an Employment Record in At Least 1 of the 4 States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>3,208</td>
<td>2,403</td>
<td>1,438</td>
</tr>
<tr>
<td>Idaho</td>
<td>3,640</td>
<td>3,014</td>
<td>1,956</td>
</tr>
<tr>
<td>Oregon</td>
<td>12,429</td>
<td>10,762</td>
<td>7,013</td>
</tr>
<tr>
<td>Washington</td>
<td>23,683</td>
<td>20,815</td>
<td>12,310</td>
</tr>
<tr>
<td>Elsewhere</td>
<td>7,939</td>
<td>4,471</td>
<td>959</td>
</tr>
<tr>
<td>Total</td>
<td>50,899</td>
<td>41,465</td>
<td>23,676</td>
</tr>
</tbody>
</table>

Note: Column 1 awardees for whom no SSN was available, multiple SSNs were found, or the SSN that was found was shared with another individual. These were excluded from Column 2. Column 3 excludes individuals for whom no employment record was found. "Elsewhere" means the award was conferred by a public or private institution anywhere outside of the four states.
Reducing Uncertainty About Employment Outcomes
Among Completers, Whether or Not an Employment Record Exists

<table>
<thead>
<tr>
<th>Assoc+ Conferred by State</th>
<th>(1) Number of Completers with a Valid SSN</th>
<th>(2) Number of Completers Without an Employment Record in State</th>
<th>(3) Among Completers Without an Employment Record in State, % With an Employment Record in At Least 1 of the Other 3 States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>2,403</td>
<td>1,197</td>
<td>19.4%</td>
</tr>
<tr>
<td>Idaho</td>
<td>3,014</td>
<td>1,342</td>
<td>21.3%</td>
</tr>
<tr>
<td>Oregon</td>
<td>10,762</td>
<td>4,366</td>
<td>14.1%</td>
</tr>
<tr>
<td>Washington</td>
<td>20,815</td>
<td>9,368</td>
<td>9.2%</td>
</tr>
</tbody>
</table>

**Column 1:** The students for whom an employment record might be obtainable.

**Column 2:** The number of students for whom an employment record cannot be located within the state that conferred the degree. In other words, employment outcomes for these individuals are not available to a single state's SLDS.

**Column 3:** The percentage of the completers for which the data exchange found an employment record outside of the state conferring the degree. In other words, this is the share of the employment record information that would remain missing in a single state's SLDS but which can be obtained through the data exchange.

How Far Does the Exchange Extend Coverage of Employment Outcomes?
Among Completers, Whether or Not an Employment Record Exists
Reducing Uncertainty About Outcomes for Those Without an Employment Record in State

<table>
<thead>
<tr>
<th>Award State</th>
<th>(A) Completers With a Valid SSN</th>
<th>(B) Employment Not Found In-State</th>
<th>(C) Found Employed In Another Exchange State</th>
<th>(D) Not Found Employed, but Found Enrolled</th>
<th>(E) Percent of ‘B’ Accounted For</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>2,403</td>
<td>1,197</td>
<td>19.4% + 9.4%</td>
<td></td>
<td>29%</td>
</tr>
<tr>
<td>Idaho</td>
<td>3,014</td>
<td>1,345</td>
<td>21.3% + 7.6%</td>
<td></td>
<td>29%</td>
</tr>
<tr>
<td>Oregon</td>
<td>10,762</td>
<td>4,366</td>
<td>14.1% + 15.7%</td>
<td></td>
<td>30%</td>
</tr>
<tr>
<td>Washington</td>
<td>20,815</td>
<td>9,368</td>
<td>9.2% + 12.4%</td>
<td></td>
<td>22%</td>
</tr>
</tbody>
</table>

Notes: Data are for individuals who completed an associate’s degree or higher by December 2010. Employment measured 10-12 months after receipt of award, and subsequent enrollment measured for a term concurrent with the quarter employment was sought. Additionally, among the 2,062 completers with no available employment record who were found enrolled instead:
- 19% were found enrolled at a private institution.
- 15% were graduate-level enrollments (only known for Exchange state public institutions).
- For Hawaii and Idaho, 64% of those further enrolled were found in another state; for Oregon and Washington, 28% were.

Mobility of Recent Graduates with Associate’s Degrees or Higher

<table>
<thead>
<tr>
<th>Award State</th>
<th>(A) Found Employed in Award State</th>
<th>(B) Found Employed in Another Exchange State</th>
<th>(C) Not Found Employed, but Found Enrolled</th>
<th>(D) Information Gained from Exchange</th>
<th>(E) Outcome Known Increases to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>50%</td>
<td>9.7%</td>
<td>4.7%</td>
<td>14%</td>
<td>64%</td>
</tr>
<tr>
<td>Idaho</td>
<td>55%</td>
<td>9.5%</td>
<td>3.4%</td>
<td>13%</td>
<td>68%</td>
</tr>
<tr>
<td>Oregon</td>
<td>59%</td>
<td>5.7%</td>
<td>6.4%</td>
<td>12%</td>
<td>71%</td>
</tr>
<tr>
<td>Washington</td>
<td>55%</td>
<td>4.1%</td>
<td>5.6%</td>
<td>10%</td>
<td>65%</td>
</tr>
</tbody>
</table>

Notes: Data are for individuals who completed an associate’s degree or higher by December 2010. Employment measured 10-12 months after receipt of award, and subsequent enrollment measured for a term concurrent with the quarter employment was sought. Additionally, among the 2,062 completers with no available employment record who were found enrolled instead:
- 19% were found enrolled at a private institution.
- 15% were graduate-level enrollments (only known for Exchange state public institutions).
- For Hawaii and Idaho, 64% of those further enrolled were found in another state; for Oregon and Washington, 28% were.
Variation in Median Wages by State of Award, Award Level, and Mobility

Notes: “Stayers” are those found to be employed in the state where they earned their degree. “Goers” are those found to be employed in one of the other three states. Individuals found to be subsequently enrolled in postsecondary education anywhere were excluded. Median quarterly wages are measured 10-12 months after award. Stayers found in state of award (n=18,699), Goers found elsewhere (n=1,820). Median wages for associate’s earners who left Hawaii (n=33) and Idaho (n=20) are based on few observations.

Fields of Study

- STEM
  - 04: Architecture and Related Services
  - 11: Computer and Information Sciences and Support Services
  - 14: Engineering
  - 15: Engineering Technologies and Engineering-Related Fields
  - 26: Biological and Biomedical Sciences
  - 27: Mathematics and Statistics
  - 40: Physical Sciences
  - 41: Science Technologies/Technicians
- 51: Health Professions and Related Programs
- 52: Business, Management, Marketing and Related Support Services
- Everything Else
Variation in Median Wages by Degree Level and Field of Study

Note: Median quarterly wages measured 10-12 months after award. Data are for individuals who completed an associate’s degree or higher by December 2010 for whom a wage record could be found, excluding individuals with a concurrent postsecondary enrollment.

Mobility of Washington Bachelor’s and Higher Graduates by Field of Study

Notes: Data are for individuals who completed by December 2010. Employment measured 10-12 months after receipt of award, and subsequent enrollment measured for a term concurrent with the quarter employment was sought.
### Degree CIP & Sector of Work

<table>
<thead>
<tr>
<th>Sector</th>
<th>Award CIP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STEM</td>
</tr>
<tr>
<td>Education &amp; health services</td>
<td>2%</td>
</tr>
<tr>
<td>Wholesale &amp; retail trade</td>
<td>2%</td>
</tr>
<tr>
<td>Leisure &amp; hospitality</td>
<td>1%</td>
</tr>
<tr>
<td>Prof. &amp; business services</td>
<td>3%</td>
</tr>
<tr>
<td>Pub. Admin., Construction, Trades &amp; Other</td>
<td>1%</td>
</tr>
<tr>
<td>Financial activities</td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td></td>
</tr>
<tr>
<td>Information, Communication &amp; Technology</td>
<td></td>
</tr>
<tr>
<td>Transportation &amp; utilities</td>
<td></td>
</tr>
<tr>
<td>Natural resources &amp; mining</td>
<td></td>
</tr>
</tbody>
</table>

Note: Percents are of all Associate’s degrees or higher awarded by December 2010 to individuals for whom a valid SSN existed for wage matching. Sectors correspond to the U.S. Bureau of Economic Analysis GDP groupings of NAICS codes.

### Why This Matters: Efforts to Measure Return on Investment

- Gainful employment
- **Student Right to Know Before You Go Act**
- President Obama’s college rankings
- collegemeasures.org

*Generally, these are aimed at accountability or consumer information, with very little attention given to improvement of policy or practice.*
Questions for Policy and Practice

**Policy**

- What percentage of graduates (and non-graduates) are employed, both in-state and elsewhere, or pursuing further education?
- How well are state education investments meeting the needs of state industries?
- To what extent is our state retaining our own residents after their studies, or attracting them back if they left for college, as well as non-resident students we educated here?
- What is our “balance of trade” in human capital?

**Practice**

- Where do our former students go to find employment and in what industries?
- How well are our former students performing after they leave and attempt to enter the workforce?
- Are we offering the right mix of academic programs to serve our state’s economic development needs?
- What curricular adjustments might more fully ensure that the programs we offer are delivering the knowledge and skills the labor market demands?

**More generally**

Now that we have a broad picture, what more do we need to know before we act?
<table>
<thead>
<tr>
<th><strong>Contact Information</strong></th>
</tr>
</thead>
<tbody>
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