Calculating the return on educational investments is a growing focus for states and the federal government, which want to ensure that students, their families, and taxpayers are getting their money’s worth. The capacity to do so is increasing with the development of statewide longitudinal data systems (SLDSS) that track individuals from early childhood education through K-12, college, and into the workforce. But in general the progress to date in linking data across education and employment has mostly been confined to the data available within a single state, even though individuals are more likely to be mobile as they acquire higher levels of education and industries, firms, and labor markets are also not confined within state borders.

To help address this gap, WICHE is working to expand its groundbreaking pilot Multistate Longitudinal Data Exchange (MLDE) project. The pilot effort combined four states’ data to better understand how investments in human capital development together with student and worker mobility contribute to a regional labor market. Figure 1 illustrates how the MLDE (in light blue) supplements a single state’s SLDS (in dark blue) to give a fuller picture of the complexities in those patterns.

**Figure 1: Human Capital Development and Flows**

- Assessing the return on higher education investments,
- Aligning educational production with state and regional workforce needs,
- Planning for economic development, and
- Understanding the mobility of talent.

The MLDE pilot provided a model for linking data across state lines while keeping personally identifiable information confidential in compliance with the Family Educational Rights and Privacy Act (FERPA) and the Privacy Act of 1974. The expansion will use this model and focus on continuing to build a framework for high-utility reporting tools and templates. As the federal government and individual states consider legislation about linked education and employment data and the employment outcomes of graduates, the lessons learned to date through WICHE’s MLDE will prove valuable.

**Demonstrating Value**

As part of the MLDE pilot project, WICHE led the assembly of a database of almost 200,000 students who graduated high school in 2005 or were first-time college students in academic year 2005-06 in one of the four participating states’ public institutions. Analyses of these data yielded a number of insights.

**Reduced uncertainty about outcomes.** Estimates of employment and earnings outcomes that are based only on data available to a single state cannot account for students employed outside their state of graduation. Incorporating wage records from just the three other MLDE states supplied substantial information about graduates’ employment that would otherwise be invisible to each state, and hints at the potential of additional states’ participation. For example, 22 percent of Idaho’s degree earners not found in Idaho wage records (but with a valid social security number) were found in Hawaii’s, Oregon’s or Washington’s. The corresponding additional employment results for Hawaii, Oregon and Washington degree earners were 17, 14, and 9 percent, respectively. The pilot also provided more information about recent graduates who are not working but still enrolled; as many as one-fifth of these students were continuing their studies in another state.

Funded by the Bill and Melinda Gates Foundation and working with state data leaders in Hawaii, Idaho, Oregon, and Washington, WICHE’s pilot combined data owned by all four states’ departments of elementary and secondary education, postsecondary education and labor/employment. The expansion will build on this work and aims to include at least 10 states. Together and individually, WICHE and participating states can use the expanded MLDE to assemble evidence for:
Increased information about the mobility of recently educated talent. Among the four pilot MLDE states, between 47 and 59 percent of graduates were found employed in the same state where they earned their postsecondary degree approximately a year later. The pilot MLDE provided information for between 6 and 14 percent more graduates from the respective state who were instead found to be working in one of the other three states or enrolled in postsecondary education anywhere else. Furthermore, the pilot MLDE offered a glimpse of how states were attracting recently educated talent from beyond their own borders. About 7 percent of recent graduates who were employed in one of the MLDE states had earned a degree elsewhere.

The Data Exchange pilot shows the additional information to be gained for employment and student mobility analysis by sharing data among states.

Outcomes for varying fields of study. The MLDE’s capture of regional data helps states investigate how well prepared students are for the jobs that are in demand within their states and across a regional labor market. For instance, the pilot data indicate that about 50 percent of STEM graduates produced by institutions in Washington were found to be employed in Washington approximately a year later, a much lower percent than graduates in other fields.

Figure 2: Mobility of Washington Bachelor’s and Higher Graduates by Field of Study

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Employed in WA</th>
<th>Employed Other of 3 States</th>
<th>Enrolled Anywhere</th>
<th>Not Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>31.3%</td>
<td>4.4%</td>
<td>62.0%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Health</td>
<td>30.0%</td>
<td>6.0%</td>
<td>60.9%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Other</td>
<td>34.8%</td>
<td>5.7%</td>
<td>55.0%</td>
<td>4.4%</td>
</tr>
<tr>
<td>STEM</td>
<td>33.9%</td>
<td>11.7%</td>
<td>50.0%</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

Outcomes for at-risk populations. The data captured through the pilot MLDE permit analysis of outcomes broken down by race/ethnicity, for Pell recipients, and even for those who start but ultimately fail to complete a postsecondary degree or certificate. Data from the exchange show, for example, that a greater percentage of students who received a Pell grant at least once completed Associate’s degrees compared to those who never received one. A lower percentage of these Pell recipients completed Bachelor’s degrees compared to non-recipients. Also, a higher percentage of Pell recipients who either were older when they started college or were from underrepresented racial/ethnic groups completed either an Associate’s or Bachelor’s degree than similar students who never received the grant.

States at the Helm

One of the unique characteristics of WICHE’s MLDE is its vision for preserving states’ central role as “owners” of the data. Doing so has multiple virtues, including:

- Complementing the hefty federal and state investments in SLDS development already made.
- Ensuring that the MLDE remains aimed at serving as a resource to states for policy development, strategic planning, and accountability purposes.
- Providing states with a means to combine the exchanged data with their own fuller and richer data resources in order to answer policy-relevant research questions across a wider spectrum than is possible with a stand-alone data resource. For instance, the pilot MLDE encompassed the variables needed for a state to merge back to a state’s internal remediation data and observe the outcomes for such students, without needing to share and house those detailed data centrally.
- More organic expansion because states voluntarily participate; the existence of the MLDE does not hinge on top-down federal legislation, which could lead to a lengthy start-up period and adoption of a compliance mentality. And even without an agreement among all states to participate, the MLDE can deliver valuable information about outcomes to those that do.

Moving Forward

WICHE has released reports on the lessons from the pilot and some student outcomes from the pilot cohort and is now undertaking the next phase of the MLDE. The expansion is aimed at making it a more permanent, sustainable, and flexible resource for state planning and policymaking. Several of WICHE’s member states, as well as others outside the West, have shown an active interest in joining the MLDE. We are examining how to assess states’ readiness to join and establish a process to allow them to do so. The MLDE’s value to state policy makers will only increase as additional states join.

Most importantly, a comprehensive picture of how states’ education investments are paying off in meeting workforce needs and how state labor markets are getting their needs fulfilled must take into account the mobility of educated talent across state lines. WICHE’s MLDE project is uniquely positioned to equip states with the information they need for that wider perspective.