



SLDS Topical Webinar Summary

Postsecondary Outcomes

By integrating data from multiple education agencies and workforce programs, statewide longitudinal data systems (SLDSs) allow states to examine questions about the choices, experiences, and educational and professional outcomes of students in greater detail than in the past. Many states that have successfully linked data from K12, postsecondary, and workforce agencies within their SLDSs have begun using that data to learn more about the choices students make about education beyond high school and how those choices might impact their future careers.

SLDS leaders from Kentucky, Maryland, and Idaho share how their states are turning data such as high school graduation rates, postsecondary enrollment, and employment status into valuable insights into education-to-workforce transitions that can help educators and inform future policy in their states.

Kentucky

The Kentucky Center for Education and Workforce Statistics (KCEWS) maintains the state's centralized SLDS, which matches and stores data from early childhood programs, public K12 schools, public and independent postsecondary institutions, the state educator certification board, financial aid programs, and workforce services. KCEWS is an independent state agency established by state legislation. Among other duties, this legislation tasks KCEWS with developing state-level metrics to help evaluate education and workforce programs and policies. KCEWS has created several different metrics to evaluate postsecondary outcomes, including measures related to employment and earnings, post-bachelor's degree education, and teacher preparation institutions.

Employment and Earnings

When developing reports and products examining postsecondary outcomes, KCEWS works closely with stakeholders such as university and college presidents, institutional research staff, and high school educators to determine the questions and metrics that will be most valuable and interesting to those groups. A number of outcomes related to employment and earnings are incorporated into annual postsecondary feedback reports, which cover attendees and graduates of many of the state's public and private higher education institutions and are released publicly. Each report provides aggregated data for relevant cohorts of students to address

- enrollment and graduation numbers for the most recent academic year;
- the time elapsed between graduation and full-time equivalent employment;
- employment rates for graduates one, three, five, and 10 years after graduation by degree type and academic area of study;
- median earnings three and five years after graduation by degree type;
- academic performance characteristics of students who transferred out of the institution;
- enrollment in graduate-level academic programs by academic area of study; and
- demographic characteristics, academic performance, and employment and wage information for students who left the institution and did not transfer to another institution.

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For more information on the IES SLDS Grant Program or for support with system development, please visit <http://nces.ed.gov/programs/SLDS>.



In addition to the postsecondary feedback reports, KCEWS recently completed a white paper titled *More College = More Money* featuring employment and earnings information for postsecondary graduates across the state. As in the postsecondary feedback reports, the white paper presents this data for cohorts that are one, three, five, and 10 years removed from postsecondary graduation to create a broader picture of when graduates enter and leave the state's workforce. It also breaks down employment and wage information by degree type and academic area of study, and it lists the top industries of employment in the state. The paper found that three years after graduation, 80 percent of associate's degree recipients and 75 percent of bachelor's degree recipients were employed in Kentucky. Additionally, recipients of graduate and professional degrees had higher median earnings five years after graduation than those with associate's and bachelor's degrees (see figure 1).

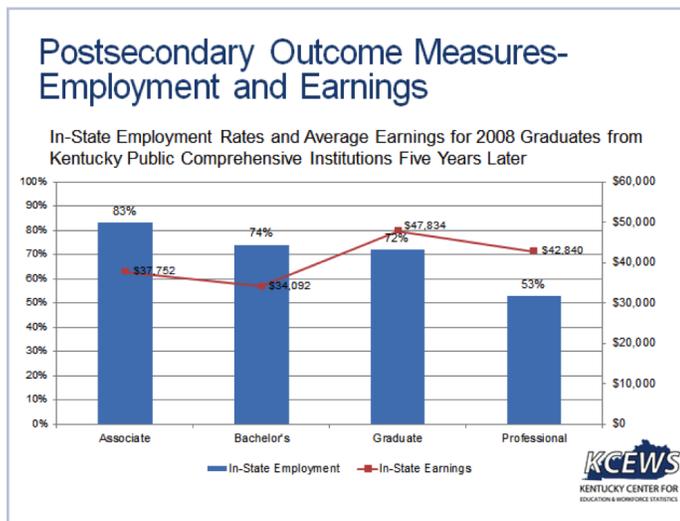


Figure 1. In-state employment and median annual earnings for Kentucky postsecondary graduates five years after graduation

Employment and earnings data are drawn from state unemployment insurance records, which do not include federal or military employees living in Kentucky. Even so, KCEWS estimates the records cover 90 percent of individuals employed in Kentucky, and the state is exploring alternative sources for more detailed employment data.

Post-Bachelor's Degree Education

Kentucky's postsecondary education stakeholders identified enrollment in post-bachelor's degree education programs as an area of strong interest. KCEWS reports the number and percentages of students graduating with a bachelor's degree who are enrolled in graduate degree programs one year later, and whether they are enrolled full or part time. The center also tracks how many of those students enroll at the same institution where they received their bachelor's degree, how many enroll at another Kentucky institution, and

how many move out of state to continue their education. In addition, KCEWS can show Kentucky's colleges and universities which academic majors are producing the most graduates who pursue further postsecondary education.

Teacher Preparation Institutions

KCEWS is working with Kentucky's Education and Professional Standards Board (EPSB), which contributes teacher licensure and certification data to the SLDS, to develop a new report for each of the state's teacher preparation programs examining employment outcomes for their graduates. The data available for graduates will vary based on whether the graduates are certified public K12 employees in Kentucky, certified employees of private K12 or postsecondary institutions in Kentucky, working outside the education industry in Kentucky, or working outside the state. KCEWS obtains detailed employment information on the state's public K12 educators from the Kentucky Department of Education's staff data system, including their length of employment and the schools where they work. EPSB provides more limited data for educators working in private K12 schools or postsecondary institutions in Kentucky. Data for teacher preparation program graduates working outside Kentucky or in industries other than education are limited to the information contained in unemployment insurance records.

The planned teacher preparation reports will show each program's graduates by employment status—whether in the public K12 system, a private school or postsecondary institution, a non-education industry, or out of state—and additional metrics based on where they are employed. For public K12 employees, the reports will track time to employment and retention rates for the first five years after graduation. For graduates not employed in Kentucky, the reports can show how many are enrolled in additional

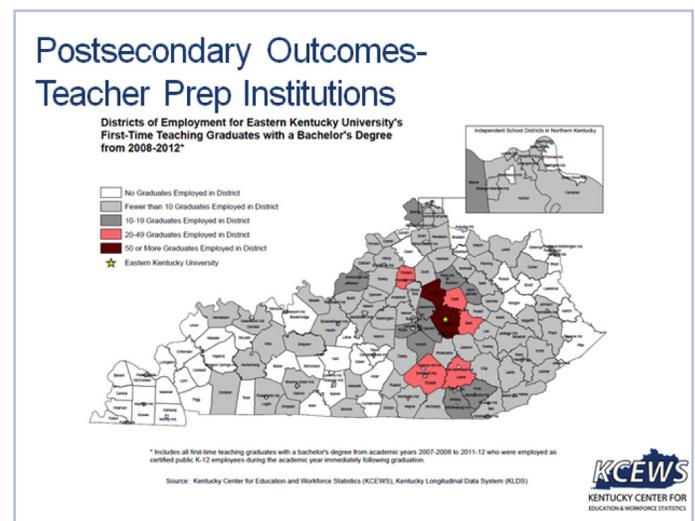


Figure 2. A heat map showing employment locations for teacher education program graduates from Eastern Kentucky University, 2008-2012

postsecondary education programs. The reports will also be able to map employment locations for graduates where that information is available, giving teacher preparation programs more information about where their graduates are teaching and working (see figure 2, previous page).

Maryland

Maryland’s SLDS incorporates public K12 education data from the Maryland State Department of Education, public higher education data from the Maryland Higher Education Commission, unemployment insurance and wage information from the Department of Labor, Licensing and Registration, and additional data from external sources including the National Student Clearinghouse. The Maryland Longitudinal Data System Center (MLDS Center) maintains these data in a centralized system with multiple databases containing data at different levels of de-identification and aggregation for use by stakeholders with different levels of access (see figure 3). The identifiable data used to match individual records from different sources is not available for any use once the matching is completed. MLDS Center employees work with de-identified detailed data from the operational data store (ODS) and with aggregated data from another data warehouse. Data products available to the public include reports and data cubes that allow users to examine de-identified, aggregated data along multiple dimensions.

Developing a Postsecondary Research Agenda

When determining the data products that will be produced to address postsecondary outcomes, the MLDS Center works to balance its partners’ differing policy objectives and definitions of postsecondary success. The Maryland State Department of Education is focused on producing K12 graduates who are college and career ready, and on closing the achievement gap among its students. For the Maryland Higher Education Commission, postsecondary success is equitable access to higher education and the

completion and attainment of a degree. Finally, the goals of the Department of Labor, Licensing and Registration are to encourage industry-defined training leading to high-quality jobs and to cultivate a thriving workforce.

Taking these objectives into account, the MLDS Center and its partners developed an agenda of research questions to guide data analysis related to student outcomes at different stages of their educational and professional careers. This agenda was approved by the center’s governing board and includes the following questions related to postsecondary outcomes:

- Postsecondary Readiness and Access
 - » Are Maryland students academically prepared to enter postsecondary institutions and complete their progress in a timely manner?
 - » What percentage of Maryland high school exiters entering college are assessed to need to take developmental courses and in what content areas?
 - » Which financial aid programs are most effective in improving access and success (i.e., retention and graduation) for Maryland students?
- Postsecondary Completion
 - » How likely are students placed in developmental courses to persist in postsecondary education and transfer and/or graduate?
 - » What are the differences in performance, retention, and graduation, including time to degree, of students beginning in dual enrollment programs, at two-year institutions, and at four-year institutions?
 - » What are the characteristics of two-year institutions that are allowing students to persist most effectively and either graduate or transfer?
- Workforce Outcomes
 - » What are the educational and labor market outcomes for individuals who use federal and state resources to obtain training at community colleges or other postsecondary institutions?
 - » What economic value do noncredit community college credentials have in the workforce?
 - » What do training and retention look like for Maryland’s early childhood workforce?

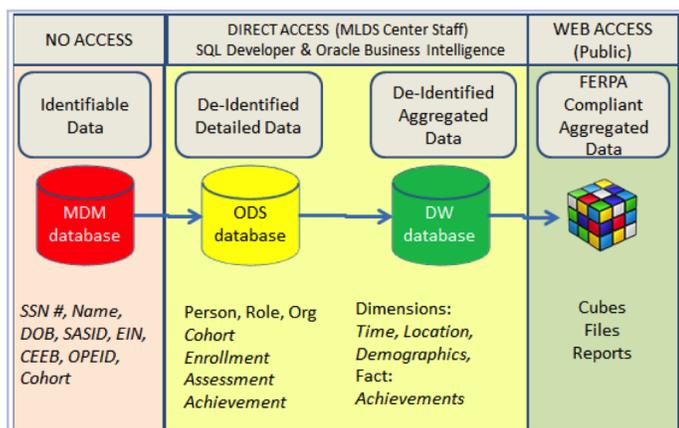


Figure 3. Maryland Longitudinal Data System databases and data products

The center is beginning to address some of these questions through dashboards available on its website to authorized users. For example, the dashboard in figure 4 (next page) helps to answer questions about the preparedness of Maryland high school graduates for postsecondary coursework and completion by displaying multi-year data related to the percentage of high school graduates enrolling in a college or university; the percentage of students needing developmental coursework in math, English, and reading; and the four- and six-year graduation rates for individual public colleges and universities in

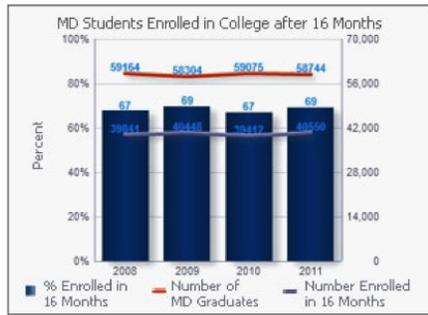
The Maryland Longitudinal Data System (MLDS) Governing Board will meet on Friday, June 13, 2014, at 200 West Baltimore Street, 7th Floor, Baltimore, MD, 21201 at 10:00 am. Click [here](#) to see the agenda.

The Maryland Longitudinal Data System (MLDS) links together data for Maryland students from preschool through college and out into their career. The data supports the continuous improvement of educational and workforce outcomes and research to increase student achievement and support accountability.

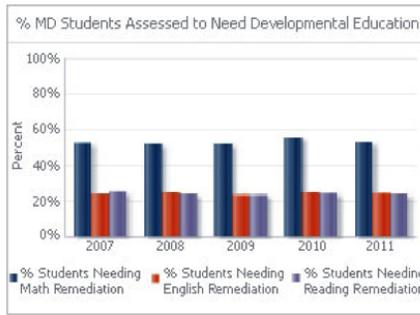


Featured Dashboards (Click on a dashboard to View)

What percentage of Maryland high school students enroll in college?



Are Maryland's High School graduates college ready?



How quickly and effectively do Marylanders graduate from college?



Figure 4. Screenshot of the MLDS Center website with featured dashboards on postsecondary outcomes

Maryland. In addition to the dashboards, the MLDS Center produces products and reports examining questions such as how well the degrees earned by postsecondary graduates align with the credentials sought by Maryland's employers. All of these products rely on data from each of the MLDS Center's three primary data-contributing partners as well as supplemental data from other sources to create a broader and deeper picture of education and workforce outcomes than each agency could obtain on its own.

Encouraging Further Data Use

On top of its data products, the MLDS Center conducts outreach and training activities to assist its partners and stakeholders in understanding and using the SLDS data available to them. The center hosts monthly seminars for users on topics such as causal inference in education policy research, labor force issues in the state, and group differences in statistical analyses of school and workforce outcomes. The seminars give stakeholders an opportunity to learn about data-use techniques, limitations of data and analysis, and current policy issues as well as a forum to discuss their data needs. The MLDS Center also operates the Research Academy, which invites graduate students to work on some of the center's projects, giving them in-depth experience with research methods and data tools while advancing the center's research agenda. Additionally, the center has plans to hold a hands-on training session on its web tools for state lawmakers, legislative staff, and leaders from its partner agencies and other stakeholder groups to help them better understand and utilize the center's resources.

Idaho

In contrast to the centralized data systems developed in Kentucky and Maryland, Idaho's SLDS follows a federated model that keeps data under the control and management of the contributing agency and matches records across agencies for specific purposes as needed. Therefore, while Idaho's education and workforce policymakers share many of the same questions related to postsecondary outcomes and success as other states, the state's approach to sharing data and developing products to address those questions is shaped by its federated system and a statewide desire to limit the sharing of personally identifiable information.

Idaho's State Board of Education (SBOE) oversees all public education in the state, including K12 and postsecondary education. The K12 entity, the State Department of Education, maintains a K12 data system, and the SBOE manages the higher education portion of the SLDS. The Idaho Department of Labor maintains the state's employment and wage data. Because the education agencies and the Idaho Department of Labor use different data to identify unique individuals, driver's license and state ID records from the Division of Motor Vehicles—part of the Idaho Department of Transportation—are used to bridge the gap between the demographic data that identify individual education records and the Social Security numbers used for workforce records. Education and workforce records are match using an algorithm and assigned a new unique identifier—called a labor unique

Common Challenges

Like many states beginning to analyze postsecondary outcomes data, Kentucky, Maryland, and Idaho face similar challenges in collecting relevant data and limitations in the level of detail in the data they do collect. In all three states, the state higher education oversight agency is an SLDS partner and can provide data for students enrolled in public postsecondary programs in the state. For students enrolled in other postsecondary programs, the states rely on alternative data sources, such as the National Student Clearinghouse for data on students attending college out of state or—as in Kentucky—data-sharing agreements with individual private and out-of-state colleges and universities.

Information about employment and wages for postsecondary graduates is also limited by the workforce records available. The primary source for employment data—unemployment insurance records—includes quarterly earnings and basic information about employers and industries, but they lack details about specific work locations, hours worked, and job type. This limits the state’s ability to analyze and report on whether postsecondary graduates are gainfully employed in positions that match their academic interests and credentials. For example, although a state can determine the number of individuals employed in a hospital, it cannot distinguish among those working as doctors or nurses and those employed as other positions such as administrators, accountants, or custodial staff. It also cannot see which employees work full time or part time. Moreover, unemployment insurance records do not cover individuals employed by the military or the federal government, making them less representative of the workforce in states with a high level of military employment or, as in Maryland, a large number of federal employees.

Despite these limitations, the availability of longitudinal education and workforce data—along with innovative record-matching processes—are already giving states a fuller picture of student achievement in higher education as well as answering key questions for education leaders and policymakers about their students’ preparedness for professional success.

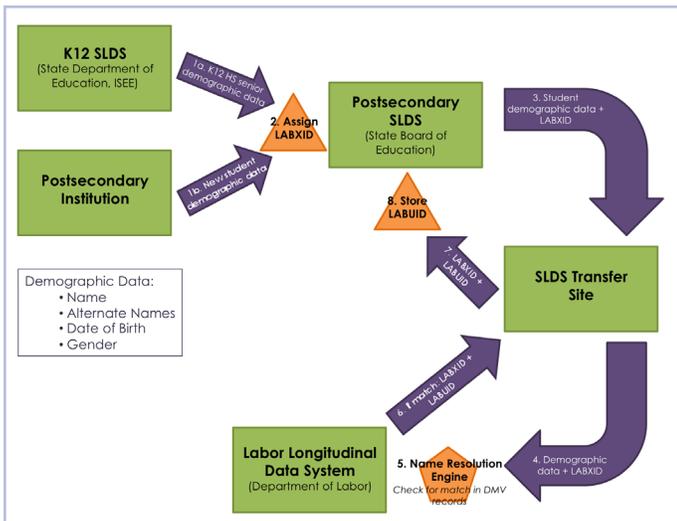


Figure 5. Idaho’s matching process for K12, postsecondary, and workforce data

identifier, or LABUID—that is stored by both SBOE and the Idaho Department of Labor and is used to match records in the future. Figure 5 illustrates Idaho’s system for matching individual records while minimizing the exchange of personally identifiable information.

Idaho has started some initial analysis of education and workforce data as it continues to process new and updated records through the matching algorithm and assign LABUIDs to individual records. A few early reports looked at employment locations for postsecondary graduates—including the number of graduates employed in Idaho and those employed in other states—and employment outcomes broken down by degree type within a year after graduating. Idaho uses the Wage Record Interchange System 2 (WRIS2) and data agreements with other states to track its postsecondary graduates who become employed outside of the state. The SLDS partners have also begun examining general wage information for different industries and demographic groups in the state, historical employment data for graduates of specific postsecondary programs, and wage data by industry and degree to help determine the types of jobs that pay the most for recent college graduates. On top of this initial work, Idaho plans to develop a set of standardized reports examining postsecondary outcomes and to make existing reports available online.

Additional Resources

Idaho State Board of Education
<http://www.boardofed.idaho.gov/>

Kentucky Center for Education and Workforce Statistics
<http://kcews.ky.gov/>

KCEWS 2014 Postsecondary Feedback Reports
<https://kcews.ky.gov/Reports/PSFeedBack/PSFeedbackReports.aspx>

KCEWS Special Report: More College = More Money
<https://kcews.ky.gov/Reports/MoreCollegeMoreMoneyJuly2014.pdf>

Maryland Longitudinal Data System Center
<https://wcp.p20.memsc.org/>

SLDS Webinar: Linking K12 Education Data to Workforce
<https://slds.grads360.org/#communities/pdc/documents/5871>

SLDS Webinar: Linking K12 Student Data with Postsecondary Data
<https://slds.grads360.org/#communities/pdc/documents/5793>

SLDS Webinar: Using DMV Records to Access Social Security Numbers
<https://slds.grads360.org/#communities/pdc/documents/5909>