STAKEHOLDER BRIEF 5

Modernizing and Leveraging Education-Workforce Data Systems

In 2021, the Project on Workforce launched the College-to-Jobs Initiative, a multi-year research effort designed to examine the connections between postsecondary education and the workforce. The initial phase of research culminated in the College-to-Jobs Playbook, a comprehensive review of the evidence and implementation of programs that connect students to meaningful careers. Through our research, we identified six themes that warranted further exploration. This brief explores the fifth theme: modernizing and leveraging data systems. We convened expert discussion groups to dive into each theme and conducted additional research to produce memos detailing actionable recommendations for three main stakeholder groups in the college-to-work ecosystem: educators, employers, and policymakers.

Jump to Recommendations

Accurate and accessible education and labor market data are imperative for advancing economic opportunities for students.[1] Quality data have the power to reveal program and career outcomes, helping the public, policymakers, and practitioners make informed decisions about where to direct resources.[2] Data can capture the evolving needs of the education and workforce landscape, enabling collaboration across stakeholders while revealing underlying inequities.[3] Meanwhile, data can empower families and students to make informed decisions about their education and career journeys.[4] Unfortunately, the full potential of education and workforce data to drive systemic change has yet to be realized. This brief identifies key actions that policymakers, educators, and employers can take to build robust, user-friendly, and connected data systems.

Challenges to Modernizing and Leveraging Data Systems

Fragmented data sources.
Current legislation prevents the federal government from linking individual-level data to education and employment outcomes.[5] Instead, data sit in silos across states and private data providers, preventing a comprehensive view of learner and worker outcomes.

Inconsistent quality and functionality.
The lack of a cohesive and unified system creates disparities in the quality, content, and capabilities of data systems. Many data systems burden users with cumbersome experiences or store data in a manner that proves challenging for the average person to use.[6] Additionally, terminology and language can vary across higher education, industry, and policy–making it difficult to compare data in a meaningful way.

Resource and expertise constraints.
The data science function is still nascent in many states, schools, and businesses.[7] Due to the substantial investment required to establish data capabilities, resource and expertise constraints can limit the development and maintenance of robust and connected data systems. Additionally–and as a result of these constraints–many institutions do not have access to data or data science professionals.[8]

Underutilization of data.
The presence of data does not guarantee that employees, faculty, staff, and other practitioners will use the data strategically, given the complexities surrounding its use.[9] Data may be applied just to satisfy credentialing or reporting requirements, rather than to answer broader questions or support planning.[10]

Data privacy concerns.
Education and workforce data can include personal information, which raises concerns about potential misuse. Additionally, individuals with limited social or financial resources may be more likely to suffer from privacy violations.[11] Due to these concerns, many people are wary of public data collection efforts and want guardrails put in place to protect their identity.[12]

Guiding principles

Establish oversight and governance structures.
Well-defined structures for oversight and governance are essential for shaping directives regarding the use of data. There must be clear standards around data quality, privacy, and security. Oversight and governance structures also facilitate clear communication and a shared vision of the roles and responsibilities of different stakeholders, while fostering accountability.

Approach data with a longitudinal and cross-sector lens.
When possible, data collection, tracking, and reporting should be designed to extend over a long time period and across education and employment. This approach captures valuable insights about the long-term impact of programs and policies. Additionally, integrating information across sectors can offer a more holistic view of individuals' journeys and outcomes.

Develop data systems with long-term sustainability in mind.
Building data systems with sustained capacity enables those systems to meet evolving needs. This requires recruiting and retaining skilled personnel, establishing clear operational processes, and allocating financial resources for maintenance and improvement.

Design data systems with privacy as a priority.
It is essential to protect privacy while collecting and reporting data. To address public concerns, data systems should have built-in privacy measures, and the public should be involved in the process of data collection.

Ensure data are disaggregated to account for factors such as race, gender, ethnicity, and socioeconomic status.
Disaggregated data are vital for understanding the differences in efficacy of specific programs and policies, uncovering disparities and inequities that might be masked in aggregated data. This allows for more targeted and effective interventions, leading to better outcomes for students.

Recommendations

Policymakers

1 **States should invest in comprehensive, sustainable state longitudinal data systems (SLDS).**
Comprehensive SLDS contain individual record-level data that provide a longitudinal outlook of education and workforce outcomes. While states have made notable investments in SLDS over the past few decades, more needs to be done to provide program-level information that helps answer economic outcomes questions and guides effective policy. It is imperative that SLDS prioritize accessibility in addition to protections that safeguard individuals' privacy. Given how pivotal SLDS are for the education and workforce landscape, states must direct resources and investments towards developing SLDS. Efforts to establish SLDS should include:

▸ Assembling a cross-functional team to lead the development of a SLDS.

▸ Designating a neutral group of stakeholders to serve as the decision-making authority.

▸ Establishing transparent governance structures.

▸ Investing in technological infrastructure and data science professionals.

▸ Allocating consistent and sustainable funding.

▸ Enforcing safeguards to uphold the privacy of individuals and families.

▸ Disaggregating data to track disparate outcomes.

> **EXAMPLE**
> The state of Kentucky designated a specific center, the Kentucky Center for Statistics (KYSTATS), with the responsibilities of collecting and integrating education and workforce data. The center is funded through a sustainable blend of state appropriations, federal grants, user fees, and contributions from other agencies,[13] enabling the center to make data readily available to the public. Additionally, KYSTATS consistently produces data-based tools, resources, and statistical analysis that help policymakers and practitioners make data-informed decisions.[14]

2 **Expand, align, and increase the frequency of federal funding for SLDS.**
The U.S. Departments of Education (ED) and Labor (DOL) oversee parallel funding efforts. ED's Statewide Longitudinal Data Systems Grant Program and DOL's Workforce Data Quality Initiative (WDQI) administer competitive grants and offer a range of services and resources to states.[15,16] Both programs have been successful at funding a growing range of SLDS across the country, but funding is still limited in scope and offered infrequently. While states can receive up to $20 million from ED's SLDS grant program, the largest amount awarded under the WDQI initiative is $2.7 million. Most

states receive around $1 million under WDQI.[17] Additionally, for each round of funding, fewer than half of the states in the country are recipients, and a round occurs every couple of years. The federal government should consider expanding and increasing the frequency of grants to allow more regions to benefit from these programs and ensure sustainable streams of funding. ED and DOL must offer clear guidance on additional sources for SLDS financing, including resources on how to braid and blend different funding streams to maximize investments in SLDS.

3   Form or join cross-state data-sharing initiatives.

While SLDS offer valuable insights into education and workforce trends within a state, there are inherent limitations, particularly in tracking outcomes of individuals once they leave the state. Cross-state data-sharing initiatives address this limitation by enabling the collection and reporting of data across state lines.

> **EXAMPLES**
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> The Multistate Longitudinal Data Exchange (MLDE) is a collaboration between six states. These states aim to generate easily accessible information for the public through exchanging best practices and sharing data securely. This effort is working on improving its governance model to ensure transparent communication with the public and better collaboration between stakeholders—introducing practices that create a trusting community and build confidence.[18] The Coleridge Initiative and the Data Integration Support Center (DISC) at WestEd are two other models that provide platforms for securely linking data and educating the public on data literacy.[19,20]

4   Communicate the value of data to the public.

Quality data play an important role in shaping effective policies, but there is substantial public concern about privacy and data misuse. States should increase public awareness of the importance of collecting data, emphasizing the presence of privacy safeguards and secure collection methods. States should clearly communicate the processes and methods behind storing and using data. In addition, states must make proactive efforts to educate the public on what data are already available to ensure maximum utilization.

5   Improve access to public education and workforce data.

It is imperative that policymakers take into consideration the user experience of data tools. They might conduct one-on-one interviews or listening sessions with intended users, which will also help identify shortcomings in existing data. Additionally, policymakers should consider integrating data into existing platforms that are already frequented by target users, increasing the likelihood of public engagement with the data.

Higher Education Institutions

1 **Integrate data into decision-making workflows.**
Colleges should use data strategically and systematically to design academic programming and make system-level decisions. This requires gathering and analyzing internal data—on both credit and non-credit courses—as well as external real-time labor market information (LMI) on employment trends, skill requirements, and wage information.[21] Accessing external LMI may involve purchasing a license from a third-party provider, such as Chmura (through JobsEQ), Steppingblocks, or Lightcast. To integrate both internal and external data meaningfully, colleges should ensure that there is a dedicated leader with data expertise and consider establishing specialized teams.

> **EXAMPLE**
> Mississippi Gulf Coast Community College (MGCCC) has built a culture of continuous improvement by designating a specific department to focus on data. This team developed a user-friendly data warehouse, designing an intuitive dashboard that presents real-time data down to the program-level. Users can easily disaggregate by race, gender, and age. This initiative has enabled MGCCC to make informed decisions regarding school programming and address disparities highlighted by the data.[22]

2 **Educate faculty and staff on the benefits of using education and labor market data.**
To foster a culture where faculty and staff embrace education and labor market data as valuable tools, colleges should prioritize ongoing training initiatives. Structured development programs can educate faculty and staff on the advantages of data, including how it can enhance curriculum development, career guidance, and institutional planning. Additionally, colleges can establish a community of practice focused on data literacy. Through regular gatherings, workshops, and knowledge-sharing sessions, faculty and staff can exchange insights, address challenges, and explore innovative approaches together.

3 **Design career pathways and enhance career advising by integrating data.**
Many students pursue degrees without an accurate understanding of potential career trajectories. Colleges should provide students with clear career roadmaps that integrate labor market data, and career advisers should use data—including wage information—to guide students in their decision-making. By using data strategically, colleges can help students align curriculum choices with a career that best matches their strengths, interests, and aspirations.

4 **Collect data on alumni outcomes.**
Colleges should track post-graduation career trajectories of students. This can be accomplished by conducting alumni surveys that gather information on graduate career paths, employment status, and the relevance of their education on their professions. Colleges can use this information to inform academic programming and improve career services. In addition, colleges can conduct surveys or qualitative interviews with regional employers to gather further information on alumni.

> **EXAMPLE**
> The Wisconsin Technical College System collects student outcomes data by distributing a survey every four years to regional employers, gathering information on responses to questions such as whether the employers would "recommend a graduate to another employer" or "hire the graduate again."[23]

Employers

1 **Partner with education institutions to exchange data and insights on labor market trends.**
Institutions of higher education serve as hubs for employers seeking skilled talent. By exchanging data and labor market insights with these institutions, employers can help colleges better align curriculum with the skills they need. They should share industry-specific data, including evolving skill sets, technological advancements, and shifting job roles. Employers should engage colleges consistently through regular conversations or advisory committees that routinely provide feedback on curricula and academic programming.

2 **Collect and report disaggregated data on economic mobility metrics.**
Employers should collect and publicly report data on the economic mobility of their employees, disaggregated by race, income, and gender. This practice enhances transparency and accountability, while informing prospective employees who are researching career paths and colleges searching for partners in industry. The American Opportunity Index measures talent practices at large corporations across the U.S., encouraging movement towards better tracking of employee opportunity.[24]

Additional Resources

Data Quality Campaign (DQC).
The DQC presents an extensive array of resources aimed at assisting states in establishing and maintaining SLDS. The DQC also offers informative materials and literature for learning more about the relevance and value of education data.

Education Commission of the States.
The Education Commission of the States publishes a number of resources that offer examples of how states are developing safe and sound data systems, outlining lessons for other states to use.

The Education and Employment Research Center (EERC) at Rutgers University's School of Management and Labor Relations.
The EERC produces well-researched literature on labor market information and its adoption in education, offering guidance on how institutions can effectively engage with their local economies through leveraging data.

American Opportunity Index (AOI).
The AOI uses data to measure how well America's largest companies invest in their internal talent to uplift employees and drive business growth.

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