



# Making the Most of Workforce Data

State Collaboration with External Entities for Actionable Research

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**WORKFORCE**  
DATA QUALITY  
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## Introduction

A variety of stakeholders recognize the need for state agencies to collaborate with each other and with external entities in order to collect longitudinal data and conduct research. Such analysis can contribute to effective policymaking and improve programs. State agency employees and national non-profit representatives have discussed this need at a number of national meetings, workshops, and webinars. The U.S. Departments of Education (ED) and Labor (DOL) have also promoted the benefits of longitudinal data analysis by providing states with millions of dollars through the Statewide Longitudinal Data System (SLDS) and Workforce Data Quality Initiative (WDQI) grants to build, expand, and utilize longitudinal data systems.

Many state agencies have used this federal funding to develop longitudinal data systems that enable valuable cross-agency data sharing and analysis. While building a strong data infrastructure is a crucial step, making use of the data is just as important. However, many states lack the requisite funding and staff to do so. Accordingly, some states have collaborated with subject matter experts and data scientists from outside the state government to analyze data and determine how to improve programs and promote effective policies. This external collaboration may allow states to increase their capacity for analysis at a minimal cost.

Kentucky, Minnesota, and New York all have unique processes to utilize data contained in their data systems. They have strategically collaborated with external organizations to enhance their capacity for research, data analysis and interpretation, and unbiased assessment of outcomes. Thus, these states are able to use their data not only to meet federal reporting requirements, but also to conduct actionable research that can help prioritize effective programs. In addition, these states have enacted significant privacy protections to ensure that confidential information remains private and secure as it is collected and used for research.



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### This paper will discuss:

- 1 **The composition of each state's data system;**
- 2 **State processes for making data available to external collaborators in order to maximize research and analytical assessment; and**
- 3 **How the agencies maintain the confidentiality of individually identifiable information.**

# Kentucky: Research Collaborations That Change Policy

Kentucky has effectively implemented and utilized a longitudinal data system modeled after several of the nation's top systems, including Washington state's Education Research Data Center (ERDC). Both states use independent state agencies to manage data collection, analysis, and system maintenance.

In 2009, state policy makers united across party lines to enact Senate Bill 1, which required Kentucky's PK-12 and postsecondary education agencies to create common standards of career and college readiness and provide students with a seamless transition from high school to college or the workplace. This bill increased the need for a comprehensive data warehouse to measure student outcomes throughout their education and professional careers.

During the same year, Kentucky received a federal data system grant from ED to establish a data warehouse and build a reporting solution for authorized

users across partner agencies. The Kentucky Longitudinal Data System (KLDS), was housed at a neutral site—the Education and Workforce Development Cabinet. State leaders credit this decision with facilitating key infrastructure and technology decisions, accelerating project implementation, and cultivating a culture of trust amongst the agencies contributing data.

KLDS is managed by the Kentucky Center for Education and Workforce Statistics (KCEWS). Currently, KLDS includes data from over 15 sources. Data includes early childhood learning, K-12 schools, higher education, and employment and wage records. The KLDS protects privacy by using a unique identifier to replace individual or agency identifiers (like social security numbers).

Kentucky's success in leveraging the KLDS for policy evaluation and research can be attributed to its outcome-focused approach. Stakeholders understood that the KLDS was not an information

technology (IT) project, but instead a research and evaluation tool that needed strong and secure IT support. Still, in order for the KLDS to accurately extract, match, and yield interpretable data, KCEWS staff had to consider technical questions, including:

- Threshold for "Employment"
- Privacy and Suppression Rules
- Timing/Reporting Lag
- Match Rates/Representativeness of Data

## KLDS partner agencies

- Council on Postsecondary Education
- Education and Workforce Development Cabinet
- Education Professional Standards Board
- Kentucky Department of Education
- Kentucky Higher Education Assistance Authority





Stakeholders understood that the Kentucky Longitudinal Data System was not an information technology project, but instead a **research and evaluation tool**.

In order to maximize the use of its data, Kentucky had to coordinate collaboration between participating agencies and external institutions by signing Memorandums of Understanding (MOUs) which enable data sharing and govern data use. These carefully drafted legal documents fully protect personally identifiable information by requiring adherence to strict security measures, and by placing tight restrictions on what data could be shared with collaborating agencies or external institutions. The required MOUs also provide guidance on sharing research outcomes and indicate that data may not be linked to any other system or outside request not already listed. Lastly, the MOUs provide terms and guidance on destroying the data after use.

### Data Access and Use

Users can only access data for which they have been authorized, as data owners control their own data even within the shared repository. There are three levels of access: 1) Participating agencies have

access to the de-identified reporting system as specified in their MOU, through a query and reporting tool called Business Objects; 2) External researchers may request de-identified datasets or aggregate reports from KCEWS. They may be charged a fee for the data; and, 3) The public can use the KCEWS website to access PDF reports and spreadsheets with de-identified aggregate data.

Kentucky currently has more than 10 collaborative agreements with external entities. These agreements are resulting in actionable research, such as a project conducted for AdvanceKentucky, a statewide initiative supported by federal and foundation funding. Through a quasi-experimental evaluation that compared the outcomes of AdvanceKentucky students with similar students not in the program, KCEWS assessed the impact of providing Kentucky high school students with college-level coursework. This research spurred the state to increase funding for AdvanceKentucky, and highlighted the importance of its programming for high school students.

# Minnesota: Establishing a Data Governance Body and Policy



Workers build terrain park in Afton Alps, Minnesota. © Kiravolkov | Dreamstime.com

Minnesota is committed to making its SLEDS data accessible to both government agencies and external researchers in order to promote a better understanding of education and workforce issues.

Minnesota has two data systems resulting from data sharing agreements between its Department of Education, Office of Higher Education (OHE), and Department of Employment and Economic Development (DEED). Its Statewide Longitudinal Education Data System (SLEDS) is jointly governed by the three state agencies, and links data from pre-kindergarten through postsecondary education (including workforce development programs) and into the workforce. Minnesota's WDQI system is housed at DEED, and is used to populate the Graduate Employment Outcomes tool, which jobseekers and students can use to set realistic expectations for employment and wages following graduation from specific programs.

Minnesota is committed to making its SLEDS data accessible to both government agencies and external

researchers in order to promote a better understanding of education and workforce issues. In order to do this, Minnesota has established a data governance body and policy manual for data access at a variety of levels (see Reference #2). This policy provides transparency in data access and use, as well as a framework for SLEDS partners to ensure data access is compliant with data security practices, and state and federal law.

## Requesting Data Access

Access to SLEDS data is governed by the Minnesota Government Data Practices Act (MGDPA, Minn. Stat. § 13), the federal Family Educational Rights and Privacy Act (FERPA, 34 CFR Part 99), as well as the Confidentiality and Disclosure of Unemployment Compensation Data (CFR 20 Part 603) section of the Code of Federal Regulations. Levels of

access are further defined by the classification of data, roles and responsibilities of the users, and compliance with data security policies and training.

All SLEDS requesters are required to submit a data access request, agree to the provisions set forth in the data sharing agreement, and complete the required data privacy and data security training prior to being granted access.

Request forms are specifically drafted for several categories of users: contributing state agency; partner data provider; external sponsored researcher (which gives sponsors specific responsibilities, including providing assurance that the results of research are shared with appropriate stakeholders); external non-contributing requesters (such as academic organizations or research organizations); and public

requesters. Access is based upon the category of the user.

In order to offset the costs of sharing data with external researchers, SLEDS charges data requesters a fee based upon the standard hourly salary of the IT programming staff members. The SLEDS Executive Committee may decide to waive the fee for particular data requests. This practice is consistent with the Minnesota Government Data Practices Act, which authorizes government entities to charge requesters for certain costs related to accessing government data.

Minnesota currently has two agreements with external entities that are using SLEDS data to study the effects of programs that allow high school students to earn college credit, with research results due soon.



## **Methods to protect privacy and security include:**

- **Assigning a unique SLEDS identification number with randomly generated numbers and/or letters to each individual, so that the system does not need to access social security numbers to match data.**
- **Granting different levels of data access to different users.**
- **Masking the data through suppression rules and releasing only aggregate data to ensure confidentiality of personal information in all public reporting.**
- **Developing and maintaining a list of users with access, and requiring authentication.**
- **Maintaining appropriate administrative, technical, and physical safeguards.**
- **Appropriately training staff to understand the sensitivity of SLEDS data and prevent unwanted disclosures.**
- **Enforcing a code of conduct for state employees, and maintaining clear oversight of all SLEDS-related work.**

## New York: Legislatively Mandated Data Sharing

New York has non-integrated, decentralized data systems that do not enable matching education records with employment outcomes. The New York State Education Department (NYSED) has a nascent P-20 data system which contains K-12 and higher education data, but not workforce program data or wage records. Because NYSED does not collect social security numbers, it would be challenging to match student data with employment outcomes. Likewise, the New York State Department of Labor (NYSDOL) lacks the requisite data sharing agreements to match education data to workforce data at the agency level.

Nevertheless, New York is still able to conduct some robust analysis because State Labor Law Sec. 537 was updated in 2013 to allow NYSDOL to share Unemployment Insurance wage records with federal, state, and local agencies to use for delineated purposes, including program evaluation or legally required reporting. The law was broadly supported by workforce development advocates in the state, such as the New York Association of Training and Employment Professionals.

Following the new legislation, state agencies created templates of MOUs and data sharing agreements (DSAs) that can be easily modified, and include specific details about who will handle and use the data, as well as why the data will be used. NYSDOL charges a flat fee of \$1,000 to establish a DSA and MOU, as well as an hourly fee to fill the data request. Some organizations report that despite setting up data sharing processes and timelines, NYSDOL has been slow in responding to data requests, and data access remains difficult.

### Sharing with Higher Education

NYSDOL has successfully established DSAs with entities like City University of New York (CUNY) and State University of New York (SUNY), which are considered state agencies under the labor law. CUNY's Office of Institutional Research and Assessment requests and matches its data (from each of CUNY's 25 institutions) with NYSDOL's wage record data. It then conducts comprehensive education and workforce data analyses, comparing labor market outcomes for all majors 3, 5, and 10 years after graduation. These analyses allow CUNY to assess the success of their students in the current job market. In addition, CUNY is hoping to use this information to understand the mobility of graduates with higher education and professional degrees.

New York has firm measures in place to keep sensitive information confidential and private. All data at NYSDOL is encrypted, and NYSDOL requires data requesters to conduct an annual self-assessment of their data security processes so NYSDOL can

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audit them if need be. CUNY's research office also holds monthly meetings with campuses to communicate data privacy expectations. NYSDOL provides online data confidentiality and security training to all CUNY employees who will handle the data.





# Recommendations

Kentucky, Minnesota, and New York have demonstrated various approaches to increasing analytical capacity and producing actionable research by collaborating with external entities. Here are some recommendations for other states exploring ways to share data that enables more rigorous research that can improve policy and practice.

- 1 **Identify key leaders** who will champion the use of data to improve policy and programs.
- 2 **Demonstrate the value of the data early** during the process of establishing a data system, so that stakeholders support and promote the system from inception.
- 3 **Secure a legislative mandate**, which can help to jumpstart data sharing (both between state agencies and with external collaborators) and clarify the value of data sharing to stakeholders.
- 4 **Encourage data requesters or collaborative research organizations to centralize requests** instead of making multiple small requests, as this will reduce the time agencies spend on filling the requests.
- 5 **Consider establishing and governing the data system in a centralized location** outside of the participating agencies.
- 6 **Grant different levels of access** to different users to help secure data and maintain privacy.
- 7 **Consider charging a reasonable fee** to cover the costs of providing data.
- 8 **Establish, within state agencies, networks and rules for sharing data** to better utilize the data collected in the state systems.
- 9 **Use best-practice methods of ensuring data quality**, which will ultimately help analysts to assess programs and policies more accurately.
- 10 **Prioritize using data to inform program and policy decisions**, instead of prioritizing collecting it.
- 11 **Establish strong cross-agency communication** to ensure that data is shared, used effectively, and kept private and secure.



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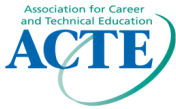
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