

# Using State Data to Promote Continuous Improvement of Workforce Programs: Guidance for States Preparing Applications to the U.S. DOL Workforce Data Quality Initiative

**Davis Jenkins and Timothy Harmon\***

## Overview

Local workforce education and employment program providers — and the state agencies that oversee them — routinely collect lots of data on their programs. Too often these data are used primarily to comply with mandated reporting requirements. Too few providers and states take advantage of the potential of the data they already collect to inform improvements in participant outcomes and program performance.

The U.S. Department of Labor's recent announcement of the Workforce Data Quality Initiative (WDQI)<sup>1</sup> provides an opportunity for states to use the data they collect to promote continuous improvement of workforce education and employment programs. The WDQI will provide funding to selected state workforce agencies (SWAs) to strengthen and expand longitudinal data systems (LDSs) to facilitate the tracking of individual participants through education and employment programs and into the labor force. One goal is to provide consumers with user-friendly information that will help them select education and employment programs that best suit their needs. Another key goal — and the focus of this brief — is to make available timely information that can be used to help program providers and education and workforce systems overall improve their performance.

The WDQI envisions state longitudinal data systems that incorporate at a minimum, data from the following sources:

- WIA Title I;
- Wagner-Peyser Act;
- Trade Adjustment Assistance program;
- Unemployment Insurance (UI) wage records;
- UI benefit data; and
- Federal Employment Data Exchange System (FEDES) data.

In addition to these required data sources, states are encouraged to integrate data from other workforce and social service programs, including:

- Vocational Rehabilitation;
- Registered Apprenticeship;
- Temporary Assistance to Needy Family (TANF); and
- Supplemental Nutrition Assistance Program (Food Stamps).

The USDOL also expects states to show how their workforce LDS connects and builds on the Department of Education's Statewide Longitudinal Data Systems (SLDS) project, which DOL refers to as a "sister effort" to WDQI. The SLDS is designed to help states build the capacity to track the progress and outcomes of students within and across education levels, from K-12 and

\* Davis Jenkins is a senior research associate at the Community College Research Center, Teachers College, Columbia University. <http://ccrc.tc.columbia.edu/Home.asp>. Timothy Harmon is a project coordinator at the Office of Community College Research and Leadership, College of Education, University of Illinois at Urbana-Champaign. <http://ocrl.illinois.edu/>. They are providing technical assistance on using data for systemic improvement to states involved in the Joyce Foundation-funded Shifting Gears initiative.

adult basic education through postsecondary (<http://nce.ed.gov/programs/slds>). By linking their education with workforce data and tracking education and employment program participants over time, states can see how well students in education programs are securing career-path jobs in fields of importance to local economies. Connecting education and workforce data will also make it possible to see how readily employment program participants are able to take part in education and training that help build skills and earn credentials of value in the labor market.<sup>2</sup> Thus, states can use these linked datasets to monitor how well their education and workforce development investments are meeting labor market needs, and create powerful tools for supporting continuous performance improvement of local providers, including high schools, community colleges, One Stops, adult basic education programs, community-based job trainers and others.

This brief describes a process that SWAs, in partnership with other state agencies, can follow to capitalize on the opportunity created by WDQI and SLDS. It is designed to provide guidance to states preparing applications to the WDQI so they can build provisions into their proposals that not only strengthen workforce longitudinal data systems, but use the data they collect to improve outcomes for state residents seeking gainful employment and employers seeking qualified workers. This brief is based in part on our experience working with six Midwest states involved in the Joyce Foundation's Shifting Gears initiative, which is seeking to increase postsecondary education and labor market success for low-skill, low-income adults.<sup>3</sup> A key element of the Shifting Gears strategy is to build the capacity of the participating states to use data they collect to identify opportunities for improvement in policy and practice and evaluate the effectiveness of improvement efforts.

The next section outlines a process through which state agencies can use the data they collect to motivate and guide continuous improvement of education and employment programs at the local level. The final section presents guidelines that SWAs should follow when preparing their WDQI technical proposals to ensure that they put in place the necessary data systems and analytical capacity to promote continuous improvement in the performance of workforce education programs statewide.

## Using State Data to Promote Continuous Improvement

State agencies can play an important role in motivating and guiding efforts by local workforce education and employment providers to continuously improve their programs and services. One advantage state agencies have in this regard is access to data that can be used to answer key questions such as the following:

- 1) What is the demand by industry, occupation and region for family-supporting jobs, particularly for workers with less than a bachelor's degree?
- 2) How many education and employment program completers are able to secure family-supporting jobs in these fields? Are these completers sufficient to meet the demand?
- 3) How do individuals get into education and employment programs that enable them to secure career-path employment? Do particular demographic groups have trouble entering and completing these programs? How can access to these programs and completion rates once enrolled be improved?

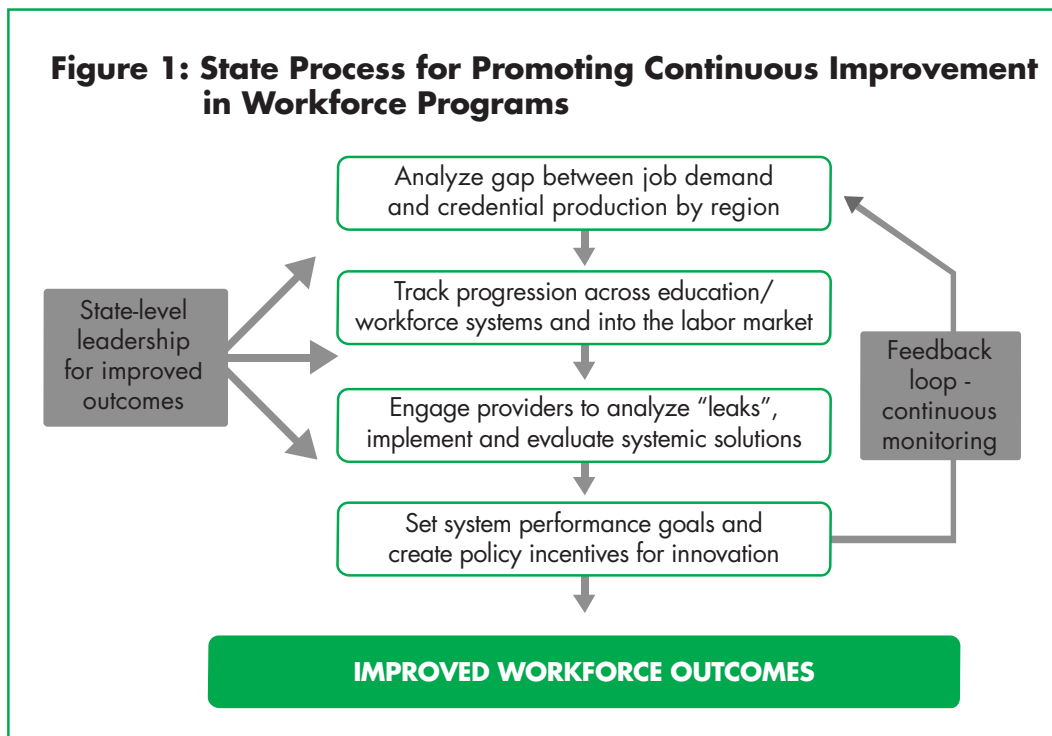


Figure 1 outlines a process by which state agencies can use data related to these questions to support innovation by local workforce education and employment providers. The steps in this process are described as follows.

### 1. Analyze the gap between job demand, education and employment program completers by region

State agencies can help to ensure that local workforce education and employment programs are meeting labor market needs by publishing analyses of the gap between projected job demand by occupation and program completers in related fields for each region of the state. This is relatively easy to do for postsecondary career-technical programs, since data on credentials awarded by field are available for community colleges and other postsecondary institutions through the Integrated Postsecondary Education Database System (IPEDS) compiled by the U.S. Department of Education. Figure 2

on page 4, compares for a given region in a state the projected job openings for occupations that require less than a baccalaureate with the credentials awarded annually in related fields by the community college that serves that region as well as other postsecondary providers in the region. Doing such an analysis for other education and employment programs such as K-12 career technical education, WIA Title I, adult basic education (WIA Title II) and others would require matching data on program participants with state Unemployment Insurance (UI) data — one key sort of data matching that the WDQI is designed to help states do. WIA requires that providers and states report similar data on employment outcomes for program participants. In all cases, data should be reported for each individual program provider and compared to labor market projections by region to see if there seems to be a gap between jobs in demand and the education and employment services being provided in the given region.

**Figure 2: Demand-Supply Gap Analysis**

SOC Code	Description	2009-2014 Avg Annual Opening	2009 Median Hourly Earning	2007 Completers Community College	2007 Completers - Region
43-3031	Bookkeeping, accounting and auditing clerks	317	\$14.49	0	11
43-4051	Customer service representatives	553	\$13.28	0	0
43-5071	Shipping, receiving and traffic clerks	113	\$12.68	12	12
29-2012	Medical and clinical laboratory technicians	19	\$19.47	5	13
29-2034	Radiologic technologists and technicians	39	\$27.29	34	34
29-2041	Emergency medical technicians and paramedics	52	\$14.43	0	0
29-2061	Licensed practical and licensed vocational nurses	119	\$21.38	62	133

Source: EMSI, based on IPEDS data from 2007 and state regional employment projections.

## 2. Track patterns of progression across education and employment systems and into the labor market

Tracking the progress of education and employment program participants over time across different program types and levels and into the labor force makes it possible to see how well a state’s programs are helping individuals advance to higher levels and education and employment and to identify “leaks” in the pipeline where individuals’ upward mobility is stymied. Tracking progression patterns of cohorts of education and employment participants also makes it possible to examine the labor market returns to particular types of programs and evaluate the effectiveness

of program innovations. States are much better able than local providers to do this sort of longitudinal tracking across systems and into the labor market.

With its new Workforce Data Quality Initiative, the U.S. Department of Labor clearly recognizes the potential of this sort of tracking. In following individuals through education and employment programs, states should pay particular attention to the rates at which individuals negotiate key transition points — such as between high school and college; between adult basic education and postsecondary occupational training; and between job search or non-credit occupational training and postsecondary career-technical

programs. Within particular program levels, states should examine the rates at which participants achieve key milestones or “momentum points” — such as passing a college-level math course for students entering community college needing remediation — which are correlated with “final” outcomes such as earning a credential.<sup>4</sup>

### **3. Engage providers to analyze opportunities for program improvement, implement and evaluate systemic solutions**

To ensure that the data they collect are used for program improvement, state agencies should involve providers in examining data on their performance and designing strategies for improvement. For this reason, state agencies should disaggregate and report the analyses they run in steps 1 and 2 by provider. Such analysis and reports by individual workforce and education providers are envisioned by the WDQI initiative, which encourages the creation of “user-friendly portals to publicize the data in ways that help consumers choose between different education and training programs.” Data on each provider should be shared with all others. This will enable an individual provider to compare its performance with others and develop benchmarks against which to measure improvement over time. Because different providers serve participants with different levels of need and readiness and a different mix of services, states should avoid ranking providers on this basis. Still, comparing performance across providers can create healthy competition and motivate providers to try to improve their outcomes on a par with their better performing peers. State agencies should create opportunities for local providers from across the state to meet to review performance data, identify opportunities for improvement and formulate strategies for capitalizing on such opportunities. Once program reforms have been implemented, states can use longitudinal

tracking of program participants to help providers evaluate the effectiveness of such performance improvement efforts.

### **4. Set system performance goals and create policy incentives for innovation**

To inspire providers to find ways to improve their outcomes, state agencies should set ambitious goals for system performance. These goals should go beyond the performance targets states are required to set as part of federally funded programs such as WIA Title I and II and Perkins, and should reflect the state’s strategic aims for its investment in education and workforce development. To the extent possible, agencies should set goals that encourage advancement of program participants across program areas, such as between adult basic education and community college occupational programs. State agencies should regularly report progress on system goals. How agency leaders communicate about strategic goals for system improvement is critical to building buy-in and support from both providers and policy makers.

State agencies should regularly consult with providers on what regulatory barriers to innovation exist and seek to change regulations in ways that remove such obstacles. State agencies can also provide incentives for innovation by directing discretionary funding to reward providers that achieve documented improvements in performance. State agency leaders also need to build support from policy makers to provide the resources needed to support local innovation. Experience suggests that policy makers respond favorably to requests for funding that can be backed up by data both on the need as well as on the effectiveness of the solutions once implemented. The state-level process is best implemented collaboratively by agencies that oversee the key components of a state’s workforce development system, including K-12 schools, community

colleges, adult basic education, employment services (including Workforce Investment Act Title I), displaced worker training, and others. This is why the WDQI places such a strong emphasis on building partnership among state agencies responsible for these various program areas to set strategic goals, share data and monitor improvement efforts. Such collaboration at the state level will encourage collaboration among local program providers, which is essential for improving outcomes for individuals and employers. State-level collaboration will not occur or be sustained over time without strong commitment from the leadership of the relevant agencies. So educating agency leaders about the potential of LDS data for improving program and system outcomes, and getting their support for working with other agencies to implement the four-step process outlined above, is critical.

## Guidelines for Preparing WDQI Proposals

The following are guidelines that states should follow as they prepare their WDQI technical proposals to ensure that their plans for improved workforce longitudinal data systems enable them to carry out the data-driven process for promoting continuous improvement in program and system performance outlined in the previous section. They are organized according to the main sections of the RFP.

### Statement of Current Longitudinal Database Capacity

State workforce agencies are required to characterize the current status of longitudinal workforce database development in their states, including data sharing agreements in place, the workforce data sources included and the current capacity to link these sources to education data, especially state longitudinal educational databases (SLDS) where they exist or are in development.

Identifying the state's "launch point" for WDQI is a key requirement under the SDA, because USDOL's expectations for state WDQI development will depend on how far along a state is in its progress toward creating a fully functional workforce LDS. In this section of the proposal, state workforce agencies should ensure that they:

- Create a matrix indicating, for each of the required and optional workforce data sources listed in the WDQI SDA:
  - \* The agency responsible for maintaining the data source and the contact information for the responsible agency personnel.
  - \* Whether or not the data are available at the individual student/participant or "unit record" level.
  - \* Whether or not data from each source are currently used in tracking individual students/participants over time and, if so, for what purposes.
  - \* Any interagency data sharing agreements or arrangements, including agreements with other states, through which these data can be available and to whom.
  - \* List the other data sources to which the data source is currently being matched, and identify other data sources to which it could be matched.
- Add to the matrix similar information for state-level education data on students in K-12, adult basic education, and postsecondary education (the sort of data collected through the USDOE SLDS program), and indicate where there are connections with workforce data sources. To what extent are these educational data sources already being matched with the workforce data sources listed in the WDQI? What is the potential for doing this? In particular, states should ensure that either the SLDS or workforce LDS will include individual-level records for all education and workforce

preparation programs, including WIA Title II Adult Education and Family Literacy program students, if not already included in the SLDS.

- Use the matrix to summarize the current strengths and weaknesses of the state to use longitudinal data to analyze outcomes for workforce and training program participants. Describe what types of analyses the state already does or has done, for what purposes, and for which audiences. Assess whether the state has the capacity to answer questions such as those listed on page 2 of this brief. (Ideally states should be able to use their workforce LDSs track the postsecondary and labor market outcomes over time for participants in WIA Title I, Adult Education (WIA Title II), TAA, TANF, Vocational Rehabilitation, Registered Apprenticeship, and K-12 and community college career-technical education.)

### Plan Outline

States are required to present an overview of their plans for development or extension of the workforce LDS that builds on the state’s “launch point” as outlined above.

- List the state’s strategic goals for workforce education and employment, and describe how the workforce LDS will help advance these goals.
- Indicate what data are currently available to measure the performance of individual programs and providers and the state as a whole in achieving those goals. What data are currently available to conduct the sorts of longitudinal analyses described in the previous section? What are the data gaps? What other information would be useful to the state in evaluating and improving program performance in relation to the state goals?

- Decide on the state’s priorities for providing access to data and analyses from its workforce and education longitudinal data system (LDS). What data and analyses not currently available would help the state achieve its strategic workforce goals? Who are the key audiences for this information and how would the information best be communicated or otherwise made available to them?
- Use the matrix created under the “Current Capacity” section to identify specific objectives for building or strengthening data sets and data analysis capacity to address the priority areas and achieve the goals identified above.
- List the major activities that will need to be undertaken to accomplish each objective and indicate who will be responsible for carrying out each activity and in what time frame.
- Describe how efforts to strengthen the state’s workforce LDS will be coordinated with its ongoing efforts to strengthen its education data systems and particularly any work funded through the USDOE SLDS initiative.

### Description of Partnership Strategies

States are required to describe their plans for building or expanding partnerships among state workforce agencies, with state education agencies, and with other agencies that have data that could be incorporated into the workforce LDS.

- Build a working relationship with the persons responsible for designing and implementing your state’s education longitudinal data systems, particularly those who are working on any USDOE SLDS-funded initiatives.
- Include as partners other state agencies — such as those responsible for economic development — that could provide data and useful perspective in strengthening the state’s workforce and education data systems.

- Educate the leadership of the partner agencies about the potential benefits for program and system performance improvement of strengthened workforce and education LDSs and get their buy-in for using data to promote continuous improvement through the process described in the previous section.
- Engage partner agency leadership in setting system performance goals and creating incentives for innovation as described in step 4 in the previous section.
- Partner with SWAs in neighboring states to share Unemployment Insurance (UI) wage record data to allow tracking of program participants across state lines.
- Consider partnering with universities or other research entities to conduct analyses of data from the state's workforce and education LDSs that the state does not have the capacity to carry out in-house.
- Ensure the capacity to report and otherwise make available information on program outcomes by individual provider to allow providers to benchmark their performance over time, highlight opportunities for program improvement and identify other programs from which they can borrow ideas for improving their performance as outlined in step 3 in the previous section.
- Build into the plan proposed uses provisions, resources for engaging local providers and providing technical assistance to them using data and analyses from the state's workforce LDS to bring about continuous improvement in program performance (as outlined in step 3 in the previous section).
- Follow guidelines provided by the Data Quality Campaign and other sources to ensure compliance with privacy laws.<sup>5</sup>

### **Description of Database Design, Data Quality Assurance and Proposed Uses**

Under this section, states must provide the technical details about their workforce LDS plans, including database design, use of a personal identifier, data quality assurance, data sources to be included, data security measures to ensure confidentiality, and planned uses of the system.

- The technical design of database systems should be dictated by their intended uses, so list the types of analyses and data to be produced through the strengthened workforce LDS along with the intended audiences and the purposes for which the information will be used.
- Consider the staffing implications of engaging local providers and providing technical assistance to them on using state data for continuous improvement, which are critical to the process for promoting continuous improvement outlined in the previous section.
- Consider the plan for ongoing development and maintenance of the workforce LDS following the three-year WDQI funding period.

### **Staffing Capacity**

States are required to present a staffing plan for the workforce LDS, including database administrator and other technical staff, along with qualifications, roles and responsibilities.



## Bonus Points: Other Data Linkages

In addition to the required data sources listed in the SDA, states may obtain bonus points for incorporating additional data sources in the workforce LDS, such as Vocational Rehabilitation, Registered Apprenticeship, TANF and SNAP records.

- Consider other data sources that could shed light on the analyses envisioned for the

workforce LDS. In addition to those above, the WDQI SDA includes sources such as:

- \* Local Employment Dynamics (LED)<sup>6</sup> (<http://lehd.did.census.gov/led/led/led.html>).
- \* Local Area Unemployment Statistics program (LAUS).
- \* Quarterly Census of Employment and Wages (QCEW) file Mass-Layoffs Statistics program (MLS).

## Endnotes

<sup>1</sup>Department of Labor, Employment and Training Administration, Notice of Availability of Funds and Solicitation for Grant Applications (SGA) to Fund Demonstration Projects SGA/DFA PY 09–10.

<sup>2</sup>For a succinct set of recommendations to states on linking SLDS data systems to postsecondary and workforce data, see Evelyn Ganzglass et al., “Recommendations for Incorporating Postsecondary and Workforce Data Systems in Statewide Longitudinal Data Systems,” March 2010, at [http://www.clasp.org/resources\\_and\\_publications/publication?id=0734&list=publications](http://www.clasp.org/resources_and_publications/publication?id=0734&list=publications).

<sup>3</sup>For additional information about the Joyce Foundation Shifting Gears initiative, see <http://www.shifting-gears.org/>.

<sup>4</sup>For guidance on how to use state data to identify momentum point progression of community college students, see D. Timothy Leinbach and Davis Jenkins, *Using Longitudinal Data to Increase Community College Student Success: A Guide to Measuring Milestone and Momentum Point Attainment*, CCRC Research Tools No. 2, New York: Community College Research Center, Teachers College, Columbia University, January 2008. Available for downloading at: <http://ccrc.tc.columbia.edu/Publication.asp?uid=570>. See also, Colleen Moore, Nancy Schulock and Jeremy Offenstein, *Steps to Success: Analyzing Milestone Achievement to Improve Community College Student Outcomes*, Sacramento, CA: Institute for Higher Education Leadership & Policy, Sacramento State University, October, 2009. Available for downloading at: [http://www.csus.edu/ihelp/PDFs/R\\_Steps%20to%20success\\_10\\_09.pdf](http://www.csus.edu/ihelp/PDFs/R_Steps%20to%20success_10_09.pdf).

<sup>5</sup>See for example the DQC’s guidelines on the maximizing the power of longitudinal data while ensuring compliance with federal data privacy laws, which were written for state education agencies, but apply to workforce agencies as well: <http://www.dataqualitycampaign.org/resources/32>.

<sup>6</sup>LED’s unique local labor market information is intended to aid businesses, workforce and economic development agencies, education and training providers, researchers, community-based organizations, and transportation and emergency planners needing to understand local workforce dynamics. This innovative data set is developed through a partnership between the Census Bureau and 41 state labor market information offices around the nation. LED is part of the U.S. Census Bureau’s Longitudinal Employer-Household Dynamics (LEHD) Program. <http://lehd.did.census.gov/led/led/led.html>. The Census Bureau distributed a prospectus to each SWA in mid-June inviting partnerships with SWAs under the WDQI initiative to include additional data elements, in particular educational and workforce program data in the LED data infrastructure to support “pilot studies of education-to-job and job-to-job flows within State and across States, as well as the evaluation of workforce training programs.” States should assess the status of their response to this prospectus as part of their WDQI planning efforts.