Workforce Data Quality Initiative (WDQI)

Curated Resources for WDQI Grantees

Resource #5
September 26, 2024

Kristin Wolff
Dallas Oberlee
Ben Mahrer
WDQI Technical Assistance Team

Acknowledgements

Many thanks to Toquir Ahmed and Greg Wilson at the US Department of Labor for their ongoing guidance and support. Sincere thanks to our SPR colleague, Krystal Hong, for supporting a community of practice, web convenings, and the overall project. Also, deep thanks to all our WDQI grantee teams, subject matter experts, and our Statewide Longitudinal Data System state and technical assistance team colleagues for making the WDQI project itself such a meaningful and rewarding experience.

This project has been funded, either wholly or in part, with federal funds from the US Department of Labor Employment and Training Administration under Task Order Number 1630DC-19F-00057. The contents of this publication do not necessarily reflect the views or policies of the Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement of same by the US government. More information about WDQI is available at this link: https://www.dol.gov/agencies/eta/performance/wdqi

Introduction

The US Department of Labor (DOL) launched the Workforce Data Quality Initiative (WDQI) in 2010 to support states in developing and improving their workforce longitudinal data systems (LDS) and increase linkages with the educational system. These efforts aim to enhance programs, evaluate new models, and incorporate evidence-based policies and practices.

With the help of WDQI grants, forty states have launched or enhanced their systems. Most WDQI grantees have leveraged grants from the US Department of Education's sister grant program, Statewide Longitudinal Data Systems (SLDS), operated by the Institute for Education Sciences' National Center for Educational Statistics. Over time, states have integrated data from a broad range of workforce, education, and human services agencies and programs, such as the Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF), and reentry programs.

This document compiles a subset of the data-related resources focused on topics of particular interest to the WDQI Round 8 grantees that were shared over the course of the project. These were among the curated resource collections distributed monthly and centered on key topics discussed during webinars, site visits, and in response to questions submitted via email to the Technical Assistance (TA) team.

Data Sharing and Partners

- Four Questions to Guide Decision-Making for Data Sharing and Integration. The paper introduces a Four Question Framework that is designed to assist data integration partners in establishing a robust governance and legal foundation for ethical data use. An effective governance process is vital for evaluating the legality, ethics, and appropriateness of data-sharing and integration within the local context. This framework can help stakeholders decide to proceed with data-sharing and integration, and it can be consistently revisited throughout a project's lifecycle.
- How Nashville Learned to Share Data Across Agencies. Smart-city technology solutions often focus on isolated urban problems, but cities need an enterprise system to enable comprehensive, high-quality service and community engagement. The Metropolitan Government of Nashville and Davidson County exemplifies this with its enterprise GIS platform, improving efficiency, workflow, and community involvement

across departments. Effective enterprise systems require strong leadership, cross-agency collaboration, and robust data-sharing policies to enhance citywide solutions and data literacy.

- New Report Urges Enhanced Collaboration for Fair, Competitive, and Safe Date Economy. A new report from IE University emphasizes the importance of enhanced collaboration to foster a fair, competitive, and safe data economy. It advocates for stronger cooperation among stakeholders to address challenges and capitalize on opportunities in the digital age. With insights on data governance, privacy, security, and innovation, this report underscores the need for collective action to build a more inclusive and sustainable data ecosystem.

- SLDS Webinar: Regional Collaboratives and Interstate Data Sharing. The September 2023 webinar focused on the efforts of states in utilizing their State Longitudinal Data Systems (SLDS) to examine postsecondary and workforce outcomes across state borders. Representatives from New Jersey, Kentucky, and Illinois shared insights into the benefits and governance of multi-state collaboration. The discussion included examples of reports generated through these collaborative efforts and was accompanied by a summary brief.

- Moving from Idea to Practice: Three Resources to Streamline the Creation of Data Sharing Agreements. Data collaborations are essential for leveraging diverse datasets to generate insights that drive impactful decisions. They require the development of robust data-sharing agreements (DSAs) that balances the interests of stakeholders—a new process for many data stewards. To facilitate the process, the Open Data Policy Lab and TrustRelay convened experts in law, data, and smart cities, and they created materials aimed at assisting data stewards in overcoming common barriers to DSA formation.

Transforming Data Systems

- What Now? A Vision to Transform State Data Systems to Inform People's Pathways through Education and Workforce. States have long invested in statewide longitudinal data systems (SLDS) to track individual-level data across education and workforce sectors. Despite this investment, these systems do not often provide individuals with the necessary information for informed decision-making. This DQC resource presents

a vision for enhancing data access to drive student success, economic mobility, and systemic change, and it outlines key steps for achieving that.

- Reimaging State Data Systems: Actionable Strategies from a Federal-State Conversation. In March 2024, the Data Quality Campaign (DQC) brought together federal and state data leaders to discuss modernizing statewide longitudinal data systems (SLDSs) to better meet people's data access needs for education and workforce decisions. This resource summarizes strategies that participants explored for transforming systems and creating meaningful data access to help individuals navigate their educational and career pathways.

- Complex Data Systems and Analytical Approaches: Facilitating Evidence-Based Decision Making. This resource explores the intricacies of data systems and analytical methods for evidence-based decision-making and describes the Coleridge Initiative's Applied Data Analytics (ADA) training programs, which many state teams have participated in. Additionally, Coleridge introduces a short course series diving into core data analytical concepts.

- How States Can use Longitudinal Data Systems to Map Equitable Pathways to Living Wage Jobs. The post discusses the importance of educational attainment in achieving economic stability and highlights the disparities in educational opportunities based on race, ethnicity, gender, and economic status. It emphasizes the need to use statewide longitudinal data systems (SLDSs) to understand the factors influencing students' pathways, degree attainments, and employment outcomes.

- Education and Workforce Data Systems Should Answer Our Questions, Not Shape What We Ask. Mathematica introduces its Education-to-Workforce Indicator Framework, which offers 20 essential questions every statewide longitudinal data system (SLDS) should be able to answer to provide actionable insights on how people are progressing on their educational and career journeys, and what they need to thrive.

- What Now? A Vision to Transform State Data Systems. Over the years, states have invested in statewide longitudinal data systems (SLDSs) that compile individual-level data across different stages of education and the workforce. While these systems possess the potential to offer valuable insights for informed decision-making at key

educational and career junctures, they often remain underutilized. A recent resource from DQC outlines a vision aimed at ensuring that everyone has personalized access to information, facilitating student success, economic mobility, and broader systemic transformation.

- Modernizing and Leveraging Education-Workforce Data Systems. The Project on Workforce brief, by the Harvard Kennedy School's Malcolm Wiener Center for Social Policy, provides a strategic framework for enhancing data systems to better integrate education and workforce information. The initiative aims to improve decision-making and policy effectiveness by leveraging comprehensive data insights and to encourage stakeholders to embrace data modernization as a cornerstone for fostering economic mobility and addressing workforce challenges effectively.

- How one state's data office improves government services. Chief Data Officer for the state of Indiana, Josh Martin, was instrumental in leading his team during the early days of the pandemic. They'd been requested to help a public health school determine COVID-19 prevalence using stratified random sampling. This resource describes Martin and his team's efforts to pull data from a wide range of state agencies and create a database of the state's residents. The state then used that information to distribute vaccines and fill vaccine clinic slots—based on a risk mitigation strategy. The case study showcases the power of connected datasets and identifies key elements that make them work.

Data Equity

- Integrating Equity Principles into the Data Lifecycle. This article emphasizes the importance of prioritizing equity throughout the data lifecycle and highlights Mathematica's approach to incorporating equitable and culturally responsive practices in data collection, interpretation, and utilization. It provides guidance on integrating equitable data collection practices into professional endeavors, underlining the significance of ensuring fairness and inclusivity in decision-making processes driven by data.

- The Power of Disaggregated Data in Workforce Development. The piece on Corporation for a Skilled Workforce's site underscores the importance of using disaggregated data to assess and enhance outcomes in the social and education

sectors. Drawing from an AIR report for the US Department of Labor (DOL), the piece calls for considering non-completers in evaluating college earnings data for federal aid eligibility and compliance. Further, by disaggregating data, workforce practitioners can address inequities, improve program outcomes, and foster a culture of data-driven decision-making to equity and effectiveness in workforce programs.

- Beyond Numbers: How Ethical Data Visualizations Tells the Human Story. This journal article emphasizes that data transcends abstract numbers, possessing the ability to communicate meaningful narratives about individuals' experiences. Effective visualization techniques can enhance the impact of these stories. Ethical considerations and data visualization are closely linked, as neglecting the human aspect behind data can result in incomplete and misleading narratives.

- Talking Data Equity is a recurring series of informal discussions designed to engage with individuals actively involved in implementing data equity principles. These weekly drop-in conversations revolve around practical inquiries. Participants collectively share their journeys in progressing from aspiring to integrate equity into data-related initiatives to genuinely mastering this process.

- Advancing Equitable Outcomes from Pre-K through the Workforce by Aligning State & Local Data Systems. The COVID-19 pandemic worsened existing disparities and changed how people engage with education, work, and the world. The impact was particularly significant in communities of color and those facing poverty, affecting learning, employment, and well-being. Recognizing the need for improved data infrastructure to address these inequities, many states are upgrading their statewide longitudinal data systems (SLDSs) to comprehensively track individuals' experiences and outcomes across Pre-K, K-12, postsecondary, and workforce domains.

- Advancing Educational Equity: Tools for Evidence Building. Mathematica's suite of measurement and evaluation (M&E) tools provides a road map for generating timely and actionable evidence about what works for whom, and in what context.

Data Visualization

- College-To-Jobs Maps, This website, spearheaded by the Project on Workforce (Harvard Kennedy School's Malcolm Weiner Center for Social Policy, David Deming &

team), is part of a comprehensive research initiative aimed at enhancing the links between higher education and the job market. This project uses Lightcast's data (documentation is available).

- The Workforce Almanac - Mapping the Workforce Development Sector Across the US. Historically, the US workforce development sector has functioned within a silo model with little to no sharing. This has resulted in practitioners and researchers having struggled to visualize it as a system that includes higher education institutions, registered apprenticeships, WIOA eligible organizations, and non-profit providers. The almanac seeks to remedy this with its open, accessible, data and mapping platform.

Data Governance and Frameworks

- Why Data About People is so Hard to Govern. The paper explores the challenges of governing digital data, highlighting its transferability, replicability, and co-creation by individuals. Also, it examines efforts like the EU's General Data Protection Regulation, Apple's privacy labels, and the First Nations Information Governance Centre in Canada as examples of governance approaches to balancing stakeholder interests.

- Data Labs Playbook. The Data Labs Playbook is a guide for civil servants and government officials who are working to initiate data-informed projects within their state. It includes solid methods, crucial questions, and tactical tools applicable to both new and existing data projects. These aspects are derived from insights gained through the Data Labs program. The guide is intended to help facilitate data-informed policy initiatives, foster collaboration between data and policy experts, and promote a culture of responsible data use and oversight within government.

- Making Data Governance Fun with Tiankai Feng, Data Strategy & Data Governance Lead at ThoughtWorks. In this podcast episode, Tiankai Feng (Data Strategy & Data Governance Lead at ThoughtWorks) discusses an innovative approach to data governance that makes it engaging and enjoyable. He shares insights on how to shift the perception of data governance from being perceived as dull and bureaucratic to something that is dynamic and integral to organizational success—and fun! Feng highlights the value of cultivating a culture of data governance that encourages active participation and continuous improvement.

- Blueprint for the Use of Social and Behavioral Science to Advance Evidence-based Policymaking. A new blueprint published by the White House Science and Technology Council outlines a strategic approach for integrating social and behavioral sciences into policy development, emphasizing the use of scientific evidence to create more effective and impactful policies. It encourages policymakers to leverage these insights for smarter, data-driven decision-making.

- Improving Program Data Delivery with Innovative Data Practices in the U.S. Department of Commerce. The American Rescue Plan (ARP), the Bipartisan Infrastructure Law (BIL), the Inflation and Reduction Act (IRA), and the CHIPS and Science Act have provided the U.S. Department of Commerce with unparalleled new resources for fostering economic growth and opportunity across communities. To maximize the impact of these programs, robust data practices are essential. The Commerce Data Governance Board (CDGB) established the Metrics Working Group to enhance data utilization in program design, delivery, and evaluation. This brief post summarizes their activities in the areas of high-quality data collection, streamlined processes, and linking program data with statistical datasets for comprehensive analysis to support evidence-building.

- Future-Proofing Transparency: Re-Thinking Public Record Governance for the Age of Big Data. This journal article explores the balance between privacy and transparency in public record management amid the era of "Big Data". With advanced algorithms, public records can reveal sensitive details or construct comprehensive profiles, raising concerns about privacy. The paper proposes a risk-based framework to govern public records, leveraging technology and legal methods to manage data publication and access effectively.

- Interwoven Realms: Data Governance as the Bedrock for AI Governance. This Data & Policy essay, by Stefaan Verhulst and Friederike Schüür, explores the overlooked connection between artificial intelligence (AI) governance and data governance, emphasizing the necessity of integrating robust data governance into discussions on AI governance. It provides six reasons why effective AI governance relies on comprehensive data governance and emphasizes the importance of a cohesive approach to governing transformative technologies to ensure ethical, legal, and societal alignment.

- Building on Education-to-Workforce Data Framework. This is a new, free website to help states and local entities gain a better understanding of how well their education systems are serving students. State and local leaders can use the Education-to-Workforce Indicator Framework to adopt a more comprehensive, seamless, data-driven approach to supporting students on their journeys from Pre-K to the workforce.

Using Artificial Intelligence (AI)

- Choosing AI's Impact on the Future of Work. OpenAI made waves with the release of ChatGPT, thrusting "generative AI" into household conversations globally. As AI reshapes the workforce, whether it exacerbates or alleviates inequality remains uncertain. While AI's potential mirrors past transformative technologies, its impacts depend on decision-makers steering its development. Whether AI augments human capabilities or replaces workers is contingent on how we manage its deployment in a workplace (and workforce) context.

- State of Skills: Unleashing AI into the Skills Development Ecosystem. The report discusses the integration of artificial intelligence (AI) into skills development ecosystems. It examines how AI technologies can enhance various aspects of skills development, such as identifying skill gaps, personalizing learning experiences, and improving workforce planning. The author explores the potential benefits and challenges of incorporating AI into skill-building initiatives and emphasizes the importance of strategic collaboration between stakeholders to maximize AI's impact on the skills development landscape.

- Applying AI to Rebuild Middle Class Jobs. This paper discusses how the original optimism surrounding the Information Age, expecting democratization of information through computerization, has led to the opposite effect of consolidating economic power among elite experts who control decision-making processes. The author, David Autor, argues the emergence of Artificial Intelligence (AI) presents a unique opportunity to extend the relevance and value of human expertise in the labor market and to contribute to revitalizing the middle-skill, middle-class segment of the US labor market eroded by automation and globalization.

- Inspiring Action: Identifying the Social Sector AI Opportunity Gap. In this paper, Project Evident and Stanford's Institute for Human-Centered Artificial Intelligence provide insights into the current state, interest, and potential of AI in the social and education sectors. Relying on survey and other data, the paper highlights existing AI applications, opportunities, and challenges, and it emphasizes the need for broader participation and investment in AI to ensure inclusive and equitable development and use.

- New Data Consortium Wants College to 'Own' Their AI Future. This article discusses the establishment of a data consortium aimed at empowering colleges to take control of their artificial intelligence (AI) initiatives. Led by a group of colleges and organizations, the consortium seeks to provide institutions with the tools and expertise needed to develop and implement AI technologies tailored to their specific needs and goals.

- Artificial Intelligence and Machine Learning for Workforce Evaluation. The article discusses how artificial intelligence (AI), and machine learning (ML) can be utilized to extract insights from large datasets collected by workforce development agencies. "Developing Analytical Capacity and Techniques for Large-Scale Workforce Data: An Annotated Bibliography" (a linked resource) compiles methods for agencies interested in employing advanced analytical techniques for evaluation purposes. The annotated bibliography provides references organized by evaluation topic area, aiding evaluators in building evidence portfolios and conducting evaluations using large-scale data.

- The Enduring Power of Data Storytelling in the Generative AI Era. This article emphasizes the ongoing significance of data storytelling in the age of generative artificial intelligence (AI). Despite AI's ability to produce extensive data, the author underscores the importance of human storytelling in interpreting and communicating insights effectively. He highlights the enduring relevance of narrative-driven approaches for making data understandable and actionable, particularly within the context of AI-generated information.

- Labor Department Experiments with AI in the Unemployment Systems. This article discusses the US Department of Labor's (DOL) exploration of artificial intelligence (AI) applications within unemployment systems. It highlights experiments conducted to

enhance efficiency and effectiveness in managing unemployment claims using AI technologies. The DOL aims to leverage AI to streamline processes, improve service delivery, and address challenges faced by unemployment systems.

- AI in Employment and Hiring: A Fireside Chat with EEOC Chair Charlotte A. Burrows. U.S. Equal Employment Opportunity Commission (EEOC), Chair Charlotte A. Burrows, and Senior Fellow, Nicol Turner Lee, have an in-depth conversation on the use of the use of AI in recruitment, hiring, retention, promotion, performance tracking, and dismissal.

Conclusion

During WDQI Round 8, grantees showed a strong interest in resources related to data-sharing practices with partners, transforming their data systems, and incorporating data equity and visualization. They also sought guidance on establishing data governance frameworks and leveraging artificial intelligence (AI) to enhance data management and operational practices. In response, additional resources were provided, covering these key areas along with other relevant topics, including data-focused webinars, grant opportunities, and new Training Employment Guidance Letters (TEGLs) pertaining to data.