

Data systems, policies and practices are fully aligned across agencies and learner levels.



CASE STUDY: NEW JERSEY

Education to Earnings Data System

For a data system to be effective, silos between and within state-level agencies must be broken down. Data alignment across agencies and learner levels is critical to understanding a learner's experience along the K-12, postsecondary and workforce continuum.

In 2012, New Jersey was awarded a grant from the U.S. Department of Education to develop a statewide longitudinal data system (SLDS) that would create a unified data warehouse for the New Jersey Department of Education (NJDOE), the New Jersey Office of the Secretary of Higher Education (NJOSHE), and the New Jersey Department of Labor and Workforce Development (NJLWD).¹ This new SLDS would make it easier for those agencies to share data; link data at the

individual learner level; and improve governance, policymaking, and the performance of education and workforce initiatives.²

New Jersey's SLDS: Aligning Data Across Agencies

New Jersey used its grant from the U.S. Department of Education to develop the New Jersey Education to Earnings Data System (NJEEEDS), which is aimed at helping educators, workforce program operators and other stakeholders make data-informed decisions to improve student learning and labor market outcomes. Managed by Rutgers University's John J. Heldrich Center for Workforce Development, NJEEEDS is designed to be a centralized data hub where state secondary, postsecondary and workforce data is securely

stored and made available to the associated agencies. The NJEEDS governance structure consists of two governing bodies: (1) the Executive Leadership Council, which includes designees from NJOSHE, NJLWD, NJDOE, and the New Jersey Higher Education Student Assistance Authority; and (2) the Data Stewards Work Group, which is co-chaired by executive-level representatives from the NJOSHE, NJLWD and NJDOE.³

NJEEDS pulls data from various sources including the New Jersey Standards Measurement and Resource Training Data System (NJ SMART), the state's K-12 data warehouse; Student Unit Record, the state's higher education data warehouse, which includes both two-year and four-year institutions; and the state's unemployment insurance wage record system.

It is important to note that NJEEDS is still in development. The governing bodies are still developing the processes for requesting data and what kind of data users can access. Because the data involves learner-level information, access to NJEEDS will be strictly limited to users within the

respective state agencies. However, NJEEDS is using the data to publish public reports, including a recent report⁴ that uses both NJEEDS and the National Center for Education Statistics data to document the migration of New Jersey high school graduates to neighboring states and the labor market outcomes for learners who choose to remain in state and attend one of New Jersey's 19 community colleges or 26 public or private four-year institutions.

Getting Creative: Developing Linkages Between Learners Across Agencies

A common challenge for state data systems is linking learner-level data once learners exit the K-12 system. NJOSHE and NJLWD both use a learner's Social Security number as a unique identifier; however, NJDOE does not collect learner Social Security numbers.⁵ Instead, NJDOE assigns each learner a student identification number. NJOSHE tries to collect this number, but it has only a 24 percent success rate.⁶

TABLE 1

NJEEDS Data Elements and Sources		
Learner Level	Data Elements	Data Sources
K-12	Student demographics, program participation, assessments, performance and interventions	NJ SMART and Strengthening Career and Technical Education for the 21st Century Act (Perkins V) enrollment and completion data
Postsecondary	Enrollment, remediation, degree attainment, certificate attainment and completion	Student Unit Record enrollment and completion data
Workforce	Wages, industry and employment location	Unemployment insurance wage data, Workforce Innovation and Opportunity Act (WIOA) case data, Vocational Rehabilitation Program case data, WIOA Consumer Report Card private training provider data

Source: New Jersey Department of Higher Education⁷

Despite these challenges, the Heldrich Center has found a creative strategy to fill the gaps and reliably link learner-level data across education levels using data from the New Jersey Motor Vehicle Commission when a common identifier is not available.⁸ The table below shows how New Jersey is able to link education and employment records using Motor Vehicle Commission information; data from NJLWD's unemployment insurance wage data; and America's One Stop Operating System, the NJLWD database used to track workforce services provided to low-income and unemployed job seekers.

NJEEEDS uses a complex matching and validation process to ensure that learner records are as complete and accurate as possible. This process has resulted in an 82 percent match rate.⁹

TABLE 2

New Jersey's Shared Identifier Problem			
Identifying Data Field	NJDOE	NJOSHE	NJLWD
NJ Smart Student Identification Number	X	*	
Social Security Number		X	X
First Name	X		X
Last Name	X		X
Date of Birth	X		
Year of Birth	X	X	
Sex/Gender	X	X	

** NJOSHE is able to capture some of this data but not consistently.
Source: New Jersey Education to Earnings Data System Report⁹*

Common Data Definitions: Collecting Consistent Career Readiness Data

NJDOE's Office of Career Readiness (OCR) is responsible for collecting data from secondary school districts, county vocational school districts and community colleges for all students enrolled in state-approved Career Technical Education (CTE) programs. Secondary CTE data is submitted by school districts through NJ SMART while each vocational school district and community college is responsible for submitting data through the state's Vocational Education Data System. To ensure consistency across the state, OCR has developed common definitions and a data dictionary specific to CTE programs serving secondary learners¹¹ and to CTE programs serving postsecondary¹² and adult¹³ learners. OCR plans to use NJEEEDS to better understand learner outcomes beyond program completion once the data is available.

For now, OCR receives data for postsecondary learners from NJLWD and uses Motor Vehicle Commission data to match learner records when common identifiers are not available. OCR currently tracks high school graduates by sending Excel files to local school districts with the student identification number and first and last names of graduated CTE completers. The district then completes the file by indicating whether the graduate is employed, is enlisted in the military, has continued on to postsecondary education, is volunteering in the Peace Corps, is participating in a national service program, is unemployed, or has an unknown employment status. This data is necessary for Perkins V, which requires states to collect and report the number or percentage of secondary and postsecondary CTE concentrators who are employed, pursuing further education or training, enlisted in the military, or enrolled in a national service program during the second quarter after completing a program.

TABLE 3

Matching Variables in Each Administrative Data Source				
Identifying Field	NJOSHE	Motor Vehicle Commission	NJLWD America's One Stop Operating System	NJLWD Unemployment Insurance
NJ SMART Student Identification Number	*			
Social Security Number		X	X	X
First Name		X	X	X
Last Name		X	X	X
Date of Birth		X	X	
Year of Birth	X	X	X	
Sex/Gender	X	X	X	

* NJOSHE is able to capture some of this data but not consistently.
Source: New Jersey Education to Earnings Data System Report¹³

Conclusion

New Jersey's SLDS is a collaborative effort of the state's secondary, postsecondary and workforce development agencies. NJEEDS illustrates what states can do when silos are broken down and agencies work together, share data, and find creative solutions to linking learner-level records between education and workforce agencies. Once fully operational, leaders from state agencies including OCR will be able to leverage the data to improve the way they report data, evaluate the quality of their programs and better track learner outcomes.

NOTES

¹ New Jersey Department of Education. (2012). *Statewide longitudinal data system proposal abstract*. Retrieved from <https://nces.ed.gov/programs/slids/pdf/newjerseyabstract2012.pdf>

² New Jersey Office of the Secretary of Higher Education. (2016). *The New Jersey state longitudinal data system fact sheet* Retrieved from https://www.nj.gov/highereducation/documents/pdf/research/Q3_2016SeasonalityGuide.pdf

³ New Jersey Education to Earning Data System. (n.d.) *Governance*. Retrieved from <https://njed2earndata.org/governing-bodies/>

⁴ Holcomb, S., Simone, S., Spear, S., and Hari, M. (2020). *Where students go: Postsecondary student migration in and out of New Jersey*. John J. Heldrich Center for Workforce Development. Retrieved from <https://njed2earndata.org/products-research/where-students-go-postsecondary-student-migration-in-and-out-of-new-jersey/>

⁵ Mabe, W., Seith, D., and Fatima, S. (2016). *Building a statewide longitudinal database: Matching data without a common unique identifier*. John J. Heldrich Center for Workforce Development. Retrieved from http://njed2earndata.org/wp-content/uploads/2017/01/Data_Forum_Report.pdf

⁶ *Ibid.*

⁷ New Jersey Education to Earnings Data System. (n.d.) *Frequently Asked Questions*. Retrieved from <https://njed2earndata.org/about/faqs/>

⁸ Data Quality Campaign. (2018). *Roadmap for K-12 and workforce data linkages: Key focus areas to ensure quality implementation*. Retrieved from <https://dataqualitycampaign.org/wp-content/uploads/2018/09/DQC-Workforce-Linkages-Roadmap-09262018.pdf>

⁹ Mabe, W., Seith, D., and Fatima, S. (2016). *Building a statewide longitudinal database: Matching data without a common unique identifier*. John J. Heldrich Center for Workforce Development. Retrieved from http://njed2earndata.org/wp-content/uploads/2017/01/Data_Forum_Report.pdf

¹⁰ *Ibid.*

¹¹ New Jersey Department of Education. (2020). *Career and technical education submission data handbook*. Retrieved from <https://www.njsmart.org/njr/ks/CTE%20Submission/CTE%20Submission%20Student%20Data%20Handbook%20v3.7.pdf>

¹² New Jersey Department of Education. (2020). *2020 vocational education data system county college data dictionary*. Retrieved from <https://www.nj.gov/education/cte/data/2020%20VEDS%20County%20College%20Data%20Dictionary%20Final.pdf>

¹³ New Jersey Department of Education. (2020). *2020 vocational education data system and adult data dictionary*. Retrieved from <https://www.nj.gov/education/cte/data/Adult%20VEDS2020%20Data%20Dictionary%20Final.pdf>

¹⁴ Mabe, W., Seith, D., and Fatima, S. (2016). *Building a statewide longitudinal database: Matching data without a common unique identifier*. John J. Heldrich Center for Workforce Development. Retrieved from http://njed2earndata.org/wp-content/uploads/2017/01/Data_Forum_Report.pdf