

Strengthening Data and Evidence to Improve Education Programs

Karen Levesque, Dorothyjean Cratty, and Nicole Ifill
RTI International

RTI International is an independent, nonprofit institute whose mission is to improve the human condition by turning knowledge into practice. RTI staff are experts in education data from system development to data collection, linking, analysis, reporting, communication, and use, and including administrative and survey data at both the K12 and postsecondary education levels.

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Introduction

US education is an enormous enterprise facing daunting educational challenges. Practitioners, policymakers, researchers, parents, and other stakeholders seek evidence-based strategies for improving student outcomes. In this brief we describe several important opportunities for strengthening state and federal education data to help improve K12 and postsecondary education programs.

State Education Data and Evidence

Important Data Differences

Some federally funded programs that are administered at the state and local levels—such as unemployment insurance and the Supplemental Nutrition Assistance Program (SNAP)—collect standardized individual-level data, which are reported to the relevant federal agencies. While K12 education is also administered at the state and local levels (with some federal funding), state and local education data systems vary widely and, in addition to being used for state and local purposes, report aggregate data only to the US Department of Education (USED).

Federal Investments in State Education Data

Historically, state education agencies collected aggregate administrative and performance data from school districts for state and federal reporting purposes. After *No Child Left Behind* was enacted in 2001, most states began building student-level longitudinal data systems to track individual student performance over time. Since 2006, USED has awarded six rounds of competitive grants to states to support the development, building, securing, and use of these statewide longitudinal data systems (SLDSs). Early grants focused on building K through 12 data systems and states have increasingly been able to collect and link the following at the student level:

- demographics, disabilities, and behavior
- courses, tests, and grades
- assigned teachers' qualifications and experience
- participation in career and technical education, gifted programs, etc.
- K12 outcomes such as high school graduation and college readiness
- school climate survey data and social emotional learning data

Subsequent SLDS grants focused on integrating data from additional sectors, including early childhood education, postsecondary education, and workforce. Additional federal grants (USDOL Workforce Data Quality Initiative and USDHHS early childhood learning) have also helped to expand SLDSs beyond K12 to P20W+ data systems, covering the complete pipeline from early learning through postsecondary and workforce preparation and outcomes, and including nontraditional paths through adult education.

Turning Data into Evidence

Student-level longitudinal data make it possible for educators, policymakers, researchers, and even parents and students to understand the factors that are associated with better outcomes as students transition to the next education level or into the workforce, including improved learning; persistence, promotion, and completion; and labor market success. These data can help to determine predictors of positive outcomes, develop early warning tools, and identify effective programs and practices.

In addition to addressing state and local information needs, SLDSs can support federal evidence requirements. The new Every Student Succeeds Act, Workforce Innovation and Opportunity Act, and Education Department General Administrative Regulations now require state and local agencies and awardees to link cross-sector data and to propose, develop, and use an evidence base for federally funded programs. The new grant evidence categories encompass traditional causal studies, such as RCTs and quasi-experiments, as well as well-designed correlational studies, all of which can be informed by SLDS data.

States and districts have developed sophisticated and secure data systems that link cross-sector data and offer access under the relevant federal, state, and district privacy laws. However, more support is needed to develop new administrative data science methods that produce credible evidence and to encourage appropriate use of the data and evidence to inform policy and practice.

Recommendations

We recommend that CEP:

1. Encourage continued federal investment in the development and use of SLDSs; and

2. Promote development of administrative data science methods that produce sound and accessible correlational, quasi-experimental, and causal evidence.

Developing these systems and methods will simultaneously help to meet federal, state, and local demands for evidence of effective education practices, programs, and policies.

Federal Education Data and Guidance

RTI is a member of the Postsecondary Data (PostsecData) Collaborative, which made several recommendations in comments provided to CEP in November. Below, we develop several of these recommendations further.

1. Make recommendations that address the administrative and legal barriers to data linking and access.

Administrative data, when de-identified and linked appropriately, can provide important context for understanding the education landscape. Understandably, access to Internal Revenue Service (IRS) and Social Security Administration (SSA) data is highly controlled for privacy and security reasons. However, as the recent release of Raj Chetty's paper, *Mobility Report Cards: The Role of Colleges in Intergenerational Mobility*, shows, linked data can be handled properly and enable new analyses that cannot be undertaken using currently available data such as the institution-level Integrated Postsecondary Education Data System (IPEDS) or the National Center for Education Statistics' sample surveys.

While IPEDS and the sample surveys are important sources of data, each has its limitations. IPEDS can only be used to explore differences at the institution level and does not, for example, currently collect detailed outcomes on all student populations. Because these data are not student level, they cannot be merged with other data that could provide the missing student characteristics. Further, while a useful source of student-level education data, the National Postsecondary Student Aid Study, Beginning Postsecondary Students Longitudinal Study, and Baccalaureate and Beyond Longitudinal Study are constrained by their sampling designs. Because they are nationally representative, but not state representative in most cases, these surveys cannot currently be used to make comparisons across or within states, despite a growing interest in making such comparisons.

The Western Interstate Commission for Higher Education Multistate Longitudinal Data Exchange, the Southern Regional Education Board State Data Exchange, and the University Innovation Alliance are examples of individual states and institutions agreeing to share data with a common goal of understanding the enrollment and completion patterns of students and improving student outcomes. By recommending actions to simplify the sharing and comparing of data across states, the Commission can signal its support of these existing agreements and encourage other states to explore similar agreements.

2. Align definitions and metrics across federal laws.

Establishing common definitions for data metrics across federal laws would reduce administrative burden and create comparable outcome measures across federal programs. Federal laws such as the Higher Education Act, the Workforce Innovation and Opportunity Act (WIOA), the Perkins Career and Technical Education Act, and the Elementary and Secondary Education Act contain similar metrics that could be streamlined. While these recommendations require Congressional action, consistent definitions can cut costs and reduce security risks by minimizing the number of redundant data collections across the federal government. The Commission can recommend a legal framework that uses the proposed national clearinghouse to align metrics around:

- student enrollment rates in colleges and programs
- college readiness
- college and program completion
- employment rate or job placement rate
- earnings
- credential attainment

Aligning metrics across federal agencies would streamline existing reporting and allow consumers to make informed decisions about programs that span agencies. Standard definitions would also create opportunities to combine and expand data dashboards and reporting for additional purposes such as consumer information and regulatory compliance. For example, the College Scorecard could include data from DOL's WIOA reporting in order to show training program outcomes and serve as a resource for students to understand outcomes for different career pathways.

Source: Adapted from PostsecData Collaborative November 14, 2016 comments to the Commission.

3. Leverage existing data to decrease burden, streamline reporting, and answer critical stakeholder questions.

Existing administrative data can help policymakers, institutions, and students answer critical questions about postsecondary access, success, post-college outcomes, and affordability, such as:

- How many low-income, Pell Grant-recipient, first-generation, veteran, adult, transfer, and part-time students—who make up the new majority on today's campuses—attend each college? Do these students graduate?
- How long does it take students, particularly those who enter college with less academic preparation or fewer financial resources, to complete college?
- Do students who don't graduate transfer—or do they drop out?
- How much money do different types of students borrow for college and how do their repayment outcomes vary?

- Can students find jobs in their chosen field and how much do they earn?

Data from the USED, SSA, Department of Defense (DoD), and Department of Veterans Affairs (VA) provide valuable information on important subgroups of students who are often overlooked, including Pell Grant recipients, student loan borrowers, and student veterans. For example, SSA and IRS tax records have, in limited instances, been used to report employment and earnings outcomes at the program level to better understand students' workforce outcomes. USED's IPEDS and National Student Loan Data System include information on financial aid and student access and success that can be disaggregated to examine progress for student subpopulations. DoD and VA, which house data on student veterans, financial aid, and recruiting, can be used to answer these questions specifically for the veteran population. Linking these data sources can reveal opportunities to eliminate duplicative data collections and decrease reporting burden on data providers.

RTI recognizes the importance of limiting data collections to those metrics that have a specific and valuable purpose in meeting administrative, policymaking, and research needs. These data collections should also include a robust reporting function, returning data back to colleges and programs for benchmarking and improvement purposes and to add value for the data providers. Any clearinghouse or data system solution that is considered by the Commission should focus on answering critical questions about student outcomes; balancing reporting burden with analytic value; and including outcomes data on employment and earnings for all students, at all postsecondary levels and in workforce programs.

Source: Adapted from PostsecData Collaborative November 14, 2016 comments to the Commission.