

Roadmap for K-12 and Postsecondary Linkages

Key Focus Areas to Ensure Quality Implementation



Where are we going?

States rely on data from both the K-12 and postsecondary sectors to inform policy discussions; chart the progress of students, schools, districts, colleges, and the state; pinpoint best practices and areas of need; allocate scarce resources; and make other important education decisions every day. However, states need to securely link limited, but critical, K-12 and postsecondary data to ensure that high school graduates are ready for postsecondary education and to identify the K-12 practices and programs that best prepare students to succeed in college. Having high-quality data linkages between state K-12 and postsecondary data systems allows states to answer questions such as the following:

- What percentage of graduating high school students go on to take and successfully complete remedial courses in college?
- Are the expectations of our K-12 and postsecondary education systems aligned?
- What is the relationship between high school course-taking patterns and college access, remediation, and success?
- Which high-poverty K-12 schools produce graduates who succeed in credit-bearing college courses, and what can be learned from the schools' efforts?

Every state can create secure, robust linkages between K-12 and postsecondary data and effectively use the information resulting from these linkages to implement initiatives to support schools and improve student achievement, answer key policy questions, and provide transparency to the public on how the state's schools prepare students for success after high school graduation. While the linkages are technical mechanisms that enable the state to find individuals in different data systems, this document addresses the policies and supports that enable a high-quality link rather than focusing on the technical aspects of this work.

How do we get there?

What does great implementation of this work look like? The Data Quality Campaign (DQC) recommends focusing on six key areas:

- 1. Coverage of K-12 and Postsecondary Linkages:** Connect data from the different types of K-12 school systems with the different types of postsecondary institutions.
- 2. Data Shared in K-12 and Postsecondary Linkages:** Share critical data points between postsecondary and K-12 data systems.
- 3. Match Quality:** Implement procedures to ensure accuracy including training and auditing.
- 4. Governance:** Provide supports for the development and sustainability of secure K-12 and postsecondary linkages.
- 5. Transparency:** Share information publicly on what data are being linked and how the links are used.
- 6. Use:** Determine how data from the linkages can support other activities that improve education quality.

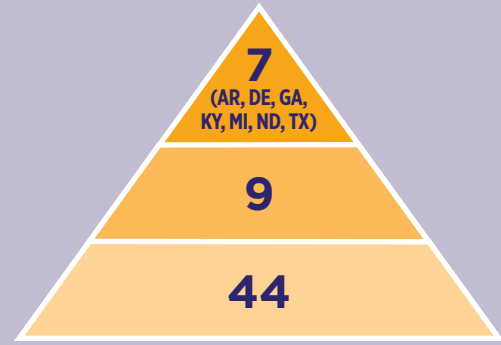


Where are we coming from?

On DQC's *Data for Action 2013* survey, 44 states reported annually linking K-12 and postsecondary data systems. Based on a review of states' survey responses and documentation, seven states (AR, DE, GA, KY, MI, ND, and TX) met the criteria for great implementation, and nine states (CO, FL, ID, IN, MD, OR, TN, UT, and VA) demonstrate good implementation of these linkages.

NUMBER OF STATES:

- Great implementation
- Good implementation
- Total implementing work



Future Considerations

As states develop secure, high-quality linkages between K-12 and postsecondary data systems, they can also begin to consider additional ways to increase the value and usability of these critical linkages such as the following:

- annually linking between public and public charter K-12 schools and all in-state institutions, including two-year and four-year public, private, for-profit, and nondegree or certificate institutions
- considering what additional data elements may be useful to share to answer key policy questions and support student achievement (e.g., progression for multiple diploma and completion types, postsecondary GPA [or the ability to calculate GPA], other transcript elements, class standing [e.g., junior, sophomore])
- developing a match process that is ongoing and iterative
- developing strong governance that is formalized (e.g., governance body has authority to exist and make decisions, all necessary stakeholders are represented, and governance structure is sustainable)
- making aggregate data (i.e., not data on individual students) resulting from the matches available to researchers and the public
- using information resulting from the linkages in discussions with state department of higher education leaders

These recommendations were developed by a group of experts including representatives from state departments of education, national organizations, and a local school district. For more information, read DQC's 2013 annual report.



Texas' PK-16 Public Education Information Resource (TPEIR) provides legislators, educators, parents, researchers, and the public with valuable information about public primary, secondary, and higher education in the state to inform research, planning, policy development, and decisionmaking. This tool was made possible by securely linking data from two state agencies: the Texas Education Agency (TEA) and the Texas Higher Education Coordinating Board (THECB).

TPEIR integrates data stored in separate databases at each of the agencies, including student, educator, and organizational data. TPEIR was implemented to ensure that the entire system of public education, from early childhood education to postgraduate study, is coordinated to provide efficient, effective, and high-quality educational services and activities. With legislative and funding support from the state legislature, the two agencies came together to develop uniform data definitions, formulas, and data matching processes to provide a cost-effective means for answering requests for information. This tool allows for longitudinal analysis to identify patterns, trends, outcomes, and impacts in Texas public PK-16 education.

The TPEIR website provides a variety of standard reports by user (e.g., legislators, parents), level (e.g., higher education), level of detail (e.g., region, district), and topic (e.g., dual credit, high school graduates enrolled in higher education). Users can also generate their own reports by selecting from variables such as higher education institution type, year, or level of detail (e.g., state, district). Legislators can find data for their legislative district. Reports are updated as new data become available, and detailed documentation provides transparency on what data sources are being used, how the data are linked, and how this work benefits the state.



Coverage of K-12 and Postsecondary Linkages

Coverage of linkages refers to the breadth of K-12 and postsecondary institutions included in the links.

Why do linkages with broad coverage matter?

Linkages that connect multiple types of both K-12 and postsecondary institutions provide a fuller picture of how different types of schools prepare students for different types of postsecondary experiences. When many K-12 and postsecondary institutions are not included within a state's linkages,

educators, education leaders, and policymakers have an incomplete picture of the pathways students follow. An incomplete picture makes it difficult for education leaders and policymakers to make funding and programmatic decisions.

What institutions should be linked for robust coverage?

There are annual links between all public and public charter K-12 students and all two-year public and four-year and above public institutions in the state with a known match rate.

How can a state achieve this?

States need to calculate the match rate, which is the percentage of unique individual records that are matched between two databases. It is important for states to know the match rate of individual student records to understand the coverage of the match and the potential quality of the information being generated from the matched records. Without a known match rate, the completeness and quality of the state's K-12 and postsecondary links cannot be ascertained.



Data Shared in K-12 and Postsecondary Linkages

When K-12 and postsecondary state data systems are linked, data on postsecondary enrollment, student postsecondary progress, and student characteristics can be shared. This means that the K-12 agency and the postsecondary agency are providing individual-level information that would not otherwise be available to the other agency.

Why does sharing specific types of K-12 and postsecondary data matter?

When states have the ability to link data sets they can share information to develop a more comprehensive picture of the schools and student

pathways in their state and can better answer a more diverse set of policy questions to make more informed decisions.

What does high-quality data sharing look like?

All of the following types of student-level data are shared:

- postsecondary enrollment
- postsecondary credits earned
- postsecondary enrollment intensity (i.e., full time, part time)
- postsecondary remediation or developmental courses
- high school transcript data or college readiness assessment scores (e.g., ACT, SAT)

How can a state achieve this?

States can bring together representatives from the K-12 and postsecondary agencies to develop the cross-cutting policy questions that need to be answered using the linked data, such as “how does college performance (e.g., enrollment, persistence, graduation) differ by high school and student characteristics (e.g., diploma types, Advanced Placement course participation)?” or “are there particular high school courses (e.g., calculus) or academic pathways (e.g., dual enrollment) that are correlated with academic success in college?”. By starting with questions like these, states can align data sharing efforts to meet the needs of education leaders and policymakers responsible for making informed education decisions.

Match Quality

A link serves no policy purpose until matching occurs to create a new dataset of student records that combines information from the K-12 and postsecondary data systems. Match quality refers to the characteristics of the matches and matching process that lend confidence to the accuracy and applicability of the data resulting from the matches. A high-quality matching process uses several data elements and includes processes for monitoring match quality, correcting false matches, and training staff.

Why does match quality matter?

For the information produced through K-12 and postsecondary data system linkages to be useful and allow educators and policymakers to have accurate information when making decisions, the linkages must be trustworthy. When match quality is low, policymakers and education leaders may make decisions based on inaccurate assumptions,

even as they try to use data effectively. In addition, procedures to monitor and correct the process ensure that any problems are remediated and that match quality can be maintained at a high level as available data elements, information needs, and technology change over time.

What does high match quality look like?

- Matching is done with a multistep process.
- Matches are made with a unique ID (e.g., student ID), student birthdate, student full name, and one additional confirming piece of data (e.g., location). Using multiple pieces of data to match the student records helps ensure that the records for the same individual are being accurately matched.
- There is a routine process for staff training to ensure that staff understand and consistently follow the matching process.
- There is a routine process for spot-checking matched records.
- There is a routine audit process.
- There is a process in place to update records when a false match is discovered.

How can a state achieve this?

States can create high-quality linkages by considering both the match process and supporting practices. States can work to articulate the data elements used to create linkages in consultation with representatives from K-12 and postsecondary to ensure that the best elements are chosen for the matching process. In addition, states can review and update their student data privacy policies to ensure that student data are being safeguarded while being linked and shared across agencies, especially as technology changes.

FOCUS AREA
4

Governance

Data governance, a critical aspect of data management, provides the K-12 and postsecondary agencies an opportunity to define the roles and responsibilities needed to institutionalize their commitment to data quality and use. Data governance includes the decisionmaking structures and processes that support the development and sustainability of the linkages between K-12 and postsecondary data systems.

Why does governance matter?

Governance structures and processes that operationalize the participation of the K-12 and postsecondary agencies are critical to guide the linkage efforts and establish accountability for stewardship of data. States need governance to ensure that their K-12 and postsecondary data links are secure and produce accurate, actionable data

for education leaders and policymakers. Governance helps establish the value of linking data between these two systems and build public trust in the links and the data they produce. Without data governance, there is no clear ownership of the data, no clear business processes for collecting and reporting data, and no accountability for data quality.

What does governance look like?

- There is a robust legal or policy rationale for the linkage of K-12 and postsecondary data systems.
- The work has cross-agency governance, ensuring that both the K-12 and postsecondary agencies have roles in the decisionmaking processes.

How can a state achieve this?

States can build governance provisions into the legislation that calls for the construction and use of the links. This legislation can articulate the value of education data in supporting student achievement and how the K-12 and postsecondary data linkages will be used to address key state priorities. In addition, the governance structure can include both policymaker and technical representatives from the K-12 and postsecondary agencies (and other state bodies as necessary) to ensure that both policy and technical requirements are met.

FOCUS AREA
5

Transparency

When a state is transparent about its data linkages, it provides information and resources to the public about why and how the links are created, how they are used, and how student privacy is safeguarded.

Why does transparency matter?

Transparency is critical to increase stakeholder understanding and support of data linkages. When a state is transparent about its data linkages, the public can trust the quality of the work being done by the

state, better understand school and policymaker decisions, and be confident that data are being linked for legitimate education purposes only.

What does transparency look like?

- The state provides transparency about the data linkages and what data elements are shared.
- The state provides transparency about the purposes and uses of the data linkages.

How can a state achieve this?

States can take advantage of numerous communication methods already at their disposal to increase transparency around K-12 and postsecondary data linkages. States can post information on their websites about which data elements are linked, how student data are safeguarded, how the state and others use the linked information, and how students and the public benefit from this work. States can also be transparent about what data are needed to create valued public resources, like high school feedback reports, to build support and increase understanding around their K-12 and postsecondary data linkages.



Use

Data from the K-12 and postsecondary linkages support resources and activities that improve education quality. The data help inform state decisionmaking and the development and monitoring of education initiatives.

Why does use matter?

The value of K-12 and postsecondary data linkages lies in their usefulness to better understand education pathways and to guide more effective decisionmaking to support students. Data created from linkages of the K-12 and postsecondary data

systems can be used both in the short term for research to answer pressing policy questions and in the long term for ongoing reporting on state outcomes and for decisionmaking by state leaders.

What does high-quality use of data linkages look like?

- The links are made using data from the state longitudinal data system (SLDS), making the most of states' investments in these systems.¹
- At least two publicly available statistics or indicators are created based on data from the linkages (e.g., percentage of high school graduates enrolled in higher education, percentage of high school graduates enrolled in higher education taking remediation courses in English or math).
- Linked data are used by the state for purposes beyond compliance reporting (see sidebar).
- The data resulting from the matches are used in state board of education discussions.
- There is flexibility in the data to build customized reports, or reports are tailored to different audiences (e.g., educators, parents).

¹ Many states contract with the National Student Clearinghouse to supplement SLDS data with information on students attending postsecondary institutions in another state.

How are states using the information from K-12 and postsecondary links?

States are using linked K-12 and postsecondary data for purposes beyond compliance reporting, including the following:

- setting strategic planning benchmarks
- examining program outcomes to identify and expand programs that are most successful and cost-efficient
- shaping policy questions and informing policy decisions
- enabling cross-agency analysis of data for research and policy reform, and enhancing understanding of long-term impacts of policy
- developing college readiness indicators
- determining how high schools and technical colleges can best support students' learning

How can a state achieve this?

States can create commonly used reports and indicators that are useful for everyone with a stake in education (such as reports on how the state's high school graduates fare in postsecondary) and also provide opportunities for educators, researchers, state boards, and the public to request or customize their own analyses to answer specific questions. States can engage with stakeholders to get feedback on the reports and indicators to ensure that these resources are meeting people's needs.