PUTTING IT ALL TOGETHER

Supporting Continuous Improvement in Education through Strategic Use of Data Systems

State education data systems have often been described as data rich but information poor. Historically, these systems were created for compliance purposes and, therefore, designed and managed as information technology projects, but a culture change is under way. Educators and other stakeholders are beginning to value data as a tool to inform continuous improvement of student outcomes and system performance.

As states work to meet the American Recovery and Reinvestment Act (ARRA) requirement to follow individuals through P–20 education and into the workforce by 2011, the reality is that these state systems cannot and should not collect the total universe of data on student, school and district performance. Collecting this vast amount of data would cost too much in terms of time, money, privacy and security. Rather, state longitudinal data systems should be created, managed and used strategically to meet the most critical information needs of key stakeholders.

The Data Quality Campaign (DQC) has identified 10 Essential Elements of a longitudinal data system and 10 State Actions to ensure effective use of these data. As states make progress toward implementing these Elements and Actions, they must engage in the following processes to foster a culture of data-driven decisionmaking and ensure that the Elements and Actions are integrated purposefully and not simply as a series of 20 checkmarks:

■ Prioritize, through broad-based stakeholder input, the critical policy questions to drive the development and use of longitudinal data systems;

■ Ensure data systems are interoperable within and across agencies and sectors by adopting common data standards, definitions and language; and

■ Protect personally identifiable information through governance policies and practices that promote the privacy and security of the information while allowing appropriate data access and sharing.

■ Prioritize, through broad-based stakeholder input, the critical policy questions to drive the development and use of longitudinal data systems.

Now that a growing number of states have the technical capacity to collect, share, link and analyze longitudinal data within and across multiple systems and agencies, governors, legislators, boards and agency heads must work collaboratively to define common goals and create a single vision that spans the various sectors and systems to ensure data are linked for a clear purpose and not simply for "data's sake." Rather than leading with the abstract goal of "aligning cross-agency data systems," progress will be expedited by prioritizing key policy questions to inform which data are linked and for what purposes, such as:

- To what degree does participation in early childhood programs increase kindergarten readiness? Are these gains sustained through 3rd grade?

- What indicators provide early warning that students are at risk of dropping out? On track for college and career readiness?

- How many high school graduates require remediation in their first year of postsecondary education?

- Which industries employ the majority of our state's high school and college graduates?

Identifying Key Questions

To drive the design of its longitudinal data system, **South Carolina** identified key questions by first conducting a landscape review of existing questions that stakeholders wanted answered through its data system. The state then prioritized the resulting list of almost 400 questions to narrow it down to six critical questions, based on the ease and availability to access the data needed to answer the questions. To learn more about prioritizing your state's critical policy questions, read the DQC resource *Connecting Policy and Data: What Are Your State's Critical Policy Questions?*

■ Ensure data systems are interoperable within and across agencies and sectors by adopting common data standards, definitions and language.

States currently have multiple data systems that often were built in silos and have been used primarily for accountability and compliance reporting within individual sectors. As a result, state agencies have established data standards, definitions and language in isolation or by adopting sector-specific standards to meet their unique collection and reporting needs without ensuring data can be linked across systems and, if a state priority, across state lines. But students are mobile, moving between schools and grade spans and from state to state, and states must be able to link data across traditional boundaries to answer questions such as "Where do our students go after high school, and were they adequately prepared?"

Common data standards are essential to creating interoperability, which makes data sharing among districts, between districts and states, and within and among agencies and states more efficient. The lack of common data definitions and technical specifications not only limits the ability of data analysis and use to inform critical questions but also

Transferring Records across State Lines

Following hurricanes Katrina and Rita, 180,000 **Louisiana** students were displaced from their local school districts. Using students' Social Security numbers (SSN), Louisiana was able to transfer records across state lines and institutions to minimize the disruption to the students' education. However, as states move away from collecting SSNs, they will need to adopt common data standards to continue to be able to share data across traditional boundaries, including state lines. To learn more about interoperability, read the DQC resource *The Right Data to the Right People at the Right Time: How Interoperability Helps America's Students Succeed.*

makes linking data across multiple systems costly and inefficient and inhibits the development of new tools and services. Without commonly agreed-to voluntary data standards, vendors have to tailor products to each system or state's specifications, increasing time and costs.

Common Data Standards (CDS) Initiative

A consortium including the **Council of Chief State School Officers** (CCSSO), the **State Higher Education Executive Officers** (SHEEO), **Schools Interoperability Framework Association** (SIFA), **Postsecondary Electronic Standards Council** (PESC) and the **Data Quality Campaign** (DQC) is collaborating on a common data standards initiative. Consortium members are represented on a technical working group led by the U.S. Department of Education that includes a broad spectrum of P–20 education organizations at the state, district and national levels. CCSSO and SHEEO, in association with their members, are working with the key standards-setting bodies — SIFA and PESC — to provide input on the technical process and encourage the voluntary adoption of these model data standards. The DQC is supporting these processes through an advocacy effort to engage a wide audience in understanding the necessity for common data standards as a critical component in the efforts to link data together and improve education. To read CCSSO and SHEEO's statement around the need for development and adoption of common data standards, please visit www.DataQualityCampaign.org/resources/883. To read the scope and purpose of the U.S. Department of Education's CDS technical working group, please visit www.DataQualityCampaign.org/resources/891.

◼ Protect personally identifiable information through governance policies and practices that promote the privacy and security of the information while allowing appropriate data access and sharing.

Not all data users need access to all data, and in fact, most data linking, sharing, analysis and reporting can provide rich, useful information with aggregated, de-identified longitudinal data. In those situations in which identifiable information is shared — for example, with parents, teachers and students — ensuring the security and privacy of this sensitive information is vital.

State leaders need to review their state-specific policies, practices and laws to ensure that personally identifiable information is protected; that all information is secure; and that linking, sharing, analyzing and using data across agencies is possible when appropriate and necessary. Inter- and intra-agency coordinating bodies offer critical forums to help define which stakeholders have access to what level of information — from teachers accessing individual student information to state policymakers analyzing aggregate trends based on longitudinal information. In addition, the continuing ambiguity and confusion around the Family Educational Rights and Privacy Act must be addressed federally to provide clear guidance on how states may access, share and use data as required by ARRA.

Establishing Data Governance Policies

Kansas focuses on the security and privacy of its data through the ongoing work of its Data Governance Board, which meets regularly and is directly responsible for managing data requests and ensuring data quality. The board ensures that all new measures regarding data collection and reporting are communicated to the necessary parties and enforced throughout the state.

To learn more about protecting privacy through data governance structures, read the DQC resource *State Action 3: Data Governance*, and for a set of steps to ensure privacy, read the DQC resource *Actions for State Policymakers to Ensure Privacy while Supporting the Use of Data*.

An ongoing process for continuous improvement

By engaging in this continuous process of ensuring data relevance, interoperability, privacy and security, states will operationalize longitudinal data systems that are not merely for compliance or accountability purposes but are used for continuous improvement.

More information about integrating the DQC's 10 Essential Elements and 10 State Actions, including additional state examples, can be found in the DQC policy brief *Linking Data across Agencies: States That Are Making It Work*.

DATAQUALITY
C A M P A I G N
Using Data To Improve Student Achievement
www.DataQualityCampaign.org

The **Data Quality Campaign (DQC)** is a national, collaborative effort to encourage and support state policymakers to improve the availability and use of high-quality education data to improve student achievement. The campaign will provide tools and resources that will help states implement and use longitudinal data systems, while providing a national forum for reducing duplication of effort and promoting greater coordination and consensus among the organizations focused on improving data quality, access and use.

Managing Partners of the Data Quality Campaign include:

- Achieve, Inc.
- Alliance for Excellent Education
- Council of Chief State School Officers
- Education Commission of the States
- The Education Trust
- National Association of State Boards of Education
- National Association of System Heads
- National Center for Educational Achievement
- National Center for Higher Education Management Systems
- National Conference of State Legislatures
- National Governors Association Center for Best Practices
- Schools Interoperability Framework Association
- State Educational Technology Directors Association
- State Higher Education Executive Officers

Endorsing Partners of the Data Quality Campaign include:

- 3 Rivers Connect
- Academy for Educational Development
- ACT
- Alliance for Quality Teaching
- American Association of Colleges for Teacher Education
- American Association of Community Colleges
- American Association of State Colleges and Universities
- American Board for Certification of Teacher Excellence
- American Federation of Teachers
- American Productivity and Quality Center
- American Society for Quality
- American Youth Policy Forum
- Arise Citizens' Policy Project
- Association for Career and Technical Education
- Business Higher Education Forum
- Campaign for High School Equity
- Center for Public Policy Priorities
- Center for Teaching Quality
- College Summit
- Complete College America
- Consortium for School Networking
- Educational Policy Institute
- ETS
- Forum for Youth Investment
- Foundation for Excellence in Education
- Great Schools
- Institute for a Competitive Workforce *(An Affiliate of the U.S. Chamber of Commerce)*
- Institute for Educational Leadership
- Institute for Higher Education Policy
- International Association for K–12 Online Learning
- James B. Hunt, Jr. Institute for Educational Leadership and Policy
- Jobs for the Future
- Knowledge Alliance
- League of Education Voters Foundation
- Learning Point Associates
- Maine Center for Economic Policy
- Midwestern Higher Education Compact
- Military Child Education Coalition
- National Alliance for Public Charter Schools
- National Association for the Education of Young Children
- National Association of Early Childhood Specialists in State Departments of Education
- National Association of Secondary School Principals
- National Association of State Directors of Teacher Education and Certification
- National Association of State Workforce Agencies
- The National Center for Public Policy and Higher Education
- National Council for Accreditation of Teacher Education
- National Council on Teacher Quality
- National Math and Science Initiative
- National School Boards Association
- National Staff Development Council
- National Student Clearinghouse
- Nebraska Appleseed Center for Law in the Public Interest
- New England Board of Higher Education
- Northwest Evaluation Association
- PathWays PA
- Pathways to College Network
- Pell Institute
- Policy Innovators in Education Network
- Postsecondary Electronic Standards Council
- Pre-K Now
- Public Education Network
- Roads to Success
- Southern Regional Education Board
- Statewide Poverty Action Network
- The Workforce Alliance
- Thomas B. Fordham Institute
- Western Interstate Commission for Higher Education
- The Working Poor Families Project

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