DATAQUALITY
CAMPAIGN
Using Data To Improve Student Achievement

Pivotal Role of Policymakers as Leaders of P–20/Workforce Data Governance

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Executive Summary

States are working to ensure that every citizen is prepared for the knowledge economy. Achieving this goal requires unprecedented alignment of policies and practices across the early childhood; elementary, secondary, and postsecondary education; and workforce sectors (P–20W). Consequently, many policy questions require data from multiple agencies to answer. As states implement systems to enable this data sharing, four themes emerge among the challenges they face: turf, trust, technical issues, and time.

While most states have established data governance processes that span the P–20W spectrum, the majority of states' data governance structures lack the executive-level policymaker oversight necessary to systematically

overcome these obstacles (see box, "P–20W Data Governance Defined"). Yet policymaker leadership is critical to garner the political will and resources to address the barriers of turf, trust, technical issues, and time. **Policymakers can take the following actions to effectively develop and lead P–20W data governance and ensure that data systems meet stakeholder needs:**

» Establish the right structure

» Select the right people

» Empower the structure with the authority to make necessary decisions and implement charges

» Ensure that the structure is sustainable, protecting the continuity of the state's vision

Aligning P–20W Policy Initiatives and Information Needs

States are working to ensure that every citizen is prepared for the knowledge economy. Achieving this goal requires unprecedented alignment of policies and practices across

the early childhood; elementary, secondary, and postsecondary education; and workforce sectors (P–20W). Consequently, many policy questions require data from multiple agencies

to answer. Recognizing that the traditional boundaries between education sectors create inefficiency and prevent systems from capturing the reality of many people's movement through the P–20W system, states have invested in linking K–12 data with early childhood (46 states), postsecondary (38 states), and workforce (11 states) data.[1]

However, data system linkages are critical but not sufficient to meet policy needs. Formal governance structures and processes that operationalize the participation of agency heads are critical to guide P–20W linkage efforts and establish accountability for stewardship of data.

This brief provides the following information to guide policymakers' efforts:

» why policy leadership is critical to effective P–20W data governance

» the challenges states face and how effective P–20W data governance is a solution

» what actions policymakers can take to establish effective P–20W data governance

» examples from the field and additional resources to guide state efforts

P–20W Data Governance Defined

Data governance defines the roles and responsibilities needed to institutionalize the commitment to data quality and use. P–20W data governance organizes this work in a systematic way across multiple agencies. According to *Data for Action 2011: DQC's State Analysis,* while 39 states report they have established the processes of P–20W data governance (e.g., overseeing sharing requests, reviewing and approving data analysis and use processes, and establishing a privacy policy), policy leadership is not present in most cases. Without policy leadership states are unable to ensure that data governance bodies make the necessary decisions and implement charges around data access, sharing, and use. DQC highlighted the need for this work as a game-changing priority for states in 2011[2] and established it as a recommended action in *Preparing Every Citizen for the Knowledge Economy: A Primer on Using Early Childhood, K–12, Postsecondary and Workforce Data.*

The Case for Policy Leadership in P–20W Data Governance

Policymaker leadership is necessary for effective P–20W data governance as policymakers provide the authority to act and the strategic direction to ensure that data efforts are aligned across P–20W policy initiatives. As the term *data governance* typically conjures up images of information technology (IT) professionals discussing technical terms and processes and casually using obscure phrases such as *data model* and *data exchange framework,* policymakers may question their role at the governance table. However, while this technical work does represent the execution of data governance it cannot be done effectively without strategic direction and authority from policymakers. By committing to participation in data governance, policymakers establish the structure for multiagency ownership of and responsibility for data-driven decision making.

Benefits: What Do States Have to Gain?

When policymakers collaboratively lead P–20W data governance, they deliver results that could not have been achieved otherwise:

» **Data system and use decisions are based on the state's vision and goals and on stakeholder data needs that cross all agencies.** Policymaker leadership in P–20W data governance ensures that data system decisions are made through a multiagency policy lens. Only when agencies work together to break down data silos will data systems meet stakeholder needs.

» **All participating agencies are held collectively accountable for the development and transparency of longitudinal data systems.** Data still largely reside

solely within each sector, but to meet the data needs of all stakeholders agencies must now enhance their work by negotiating boundaries and coordinating efforts among multiple agencies to enable appropriate data sharing. Policymaker leadership in P–20W data governance is critical to manage this data flow and ensure transparency.

Leadership: Who Needs to Be at the Governance Table?

The benefits described in the previous section cannot be realized by only the IT, data, or research professionals that typically constitute state P–20W data governance bodies. Consequently, states should consider including the following executives as the leaders of a P–20W data governing body:

» governor

» state superintendent of schools

» secretary of higher education

» chancellor of the state's university system

» executive director of independent colleges

» leadership representing community colleges

» secretary of labor / workforce

» leadership representing early childhood education

» other policy leaders identified by the state

Responsibility: What Will Policymakers Do?

Policymakers are responsible for setting the strategic direction and ensuring that the charges of the P–20W data governance body are carried out successfully (see box, "Technical Guidance to Inform Your State's Policy Priorities"). More specifically, policymakers may take responsibility for the following typical charges of P–20W data governance bodies:

» Identify and prioritize critical policy questions

» Balance the access and use needs of stakeholders

» Assign an entity to be accountable for data-related efforts

» Develop and disseminate policies, guidelines, and standards, including adopting the Common Education Data Standards

» Ensure adherence to security and privacy policies

» Ensure that data collection and implementation are aligned to the state's vision and goals

» Oversee technical and research-oriented substructures (e.g., formal cross-agency IT or research working groups)

"It takes an executive not to break down the technological barriers. This isn't a technological problem. This is a political problem, and in order to solve that political problem, you need the chief political power, the executive, the governor in every state, to bring together the people from your K–12, from your local school boards, from your colleges and community colleges, lock them all in one room, and insist that all of this data flow on one gauge of railroad track."

GOVERNOR MARTIN O'MALLEY, STATE OF MARYLAND

Technical Guidance to Inform Your State's Policy Priorities

Efforts to realize policy goals such as all students graduating high school college and career ready demand the development of an efficient feedback loop that delivers robust information across traditional boundaries of the education and workforce sectors. The construction of an effective feedback loop depends on policymakers owning issues such as the following:

» Determine the critical policy questions that need to be answered by linking, matching, and sharing data across agencies

» Determine who has access to the shared data

» Determine who is responsible for securing and paying for the storage of matched datasets

» Determine the priority level of this work and who provides staff time to get it done

Anatomy of a Data Link: A Common Language to Bridge Policy and IT Conversations

Developing P–20W data systems with the capacity to provide the information necessary for a feedback loop demands collaboration among policymakers and agency IT staff. Policymakers benefit from developing enough knowledge to interpret the options that their IT staff will present to them to ensure that the state invests in solutions that best meet stakeholders' information needs.

Three technical processes facilitate information sharing among multiple agencies:

LINK SYSTEMS to allow for efficient matching of data that have been deemed necessary for specified purposes.

A link is a technical mechanism that enables individuals to be found in different systems.

*Example: In **Connecticut,** postsecondary institutions record the student ID from K–12 transcripts, thus creating a technical mechanism for linking K–12 and postsecondary data.*

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MATCH DATA to create datasets with connected records on the same individuals from two or more databases.

A link serves no policy purpose until matching occurs to create a new dataset of student records that combines information from the multiple systems.

*Example: **Many states** use their link to create matched datasets for compliance reporting (e.g., American Recovery and Reinvestment Act) but have not shared those data more broadly. Not all states have leveraged their technical link to create matched data sets.*

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SHARE INFORMATION to provide participating agencies and institutions knowledge that was unavailable prior to the data matching.

Matched data must flow back to the contributing agencies to enable dissemination to stakeholders who can put this powerful information to use.

*Example: **Kentucky** uses its linked data systems and matched data to populate high school feedback reports and proactively disseminates the information throughout the state.*

Policymaker Considerations for Technical Data Systems Solutions

Solutions that enable linking systems, matching data, and sharing information to develop a P–20W system will range from point solutions to integrated solutions.

Point Solutions

Point solutions involve the creation of "presliced" datasets that address specific questions—and nothing more. For example, how many high school graduates enrolled in postsecondary? A point solution will provide that answer but no other information.

Policymakers need to understand that this is generally a practical interim solution that states may have to pursue for immediate reporting requirements. They can look at the data only through the lens of the original question or intent of the data match. In the real world, this is like calling 411 to get an address.

Integrated Solutions

Integrated solutions involve the creation of a dataset that can be queried to answer a variety of questions that arise as stakeholders use the information. For example, how many high school graduates enrolled in postsecondary? Based on that answer, a user might then query the system to determine the persistence rate of the students who enrolled.

Policymakers need to understand that this is a more sophisticated, flexible, long-term solution. They can look at the data in multiple ways as questions and needs change. In the real world, this is like investing in a GPS system that in addition to identifying an address can respond to other questions that arise, such as finding the closest gas station when you realize the drive is much farther than anticipated.

To contribute to these systems design decisions, policymakers should be aware of the tradeoffs in terms of cost, time, and quality based on where their state's solution lands along the spectrum of P20–W point solutions to integrated solutions.

	Point Solution		Integrated Solution	
Cost	**ADVANTAGES**	**DISADVANTAGES**	**ADVANTAGES**	**DISADVANTAGES**
	» Lower cost in the short term	» Cost not justified by the time and effort required to produce information » Less control over costs if buying data from an outside organization	» Cost justified by the value of the information produced and staff time saved	» Larger investment on the front end
Time	**ADVANTAGES**	**DISADVANTAGES**	**ADVANTAGES**	**DISADVANTAGES**
	» Can satisfy immediate reporting requirements and other quick wins	» Slow manual effort required to produce any report	» Efficiency of linking, matching, and reporting processes	» Greater investment of time required in the beginning to construct
Quality	**ADVANTAGES**	**DISADVANTAGES**	**ADVANTAGES**	**DISADVANTAGES**
	» None	» Single deliverable outputs (i.e., answering follow-up questions would require a new investment) » Robustness of technical solution may not be adequate for intended use » Unsustainable due to the limited value of the outputs	» Comprehensive and flexible, which allows for adaptation to changing needs » Allows for more sophisticated and ongoing queries » Ease of use because of greater automation	» None

The technical designs of data-sharing solutions that produce actionable information vary by state. However, all states need policymakers to establish limited and appropriate data sharing as a priority, resource it appropriately, and advocate for its use. Only when these decisions are made by policymakers will states ensure that the solution chosen provides the information necessary to inform the state's articulated goals, such as college and career readiness.

Challenges States Face Require Policy Leadership

While each state will face unique obstacles as it attempts to align data capacity to policy goals, four themes emerge among the various challenges that states are tackling: turf, trust, technical issues, and time. Led by state policymakers, P–20W data governance bodies are best positioned to tackle these challenges.

Turf

CHALLENGE **Agencies are designed to work within their own boundaries (i.e., silos) and adhere to independent performance expectations.**

RESOLUTION P–20W data governance provides a forum to connect data and policy through multiagency conversations and relationship building. Individual agency concerns are addressed by defining clear and distinct roles and responsibilities aligned to commonly established goals. This creates and fosters a culture of shared responsibility and mitigates any concerns about one agency or sector having control and oversight over the entire system. As this challenge is largely political, resolution requires policy leaders to be at the table.

Trust

CHALLENGE **Agencies are concerned about how their data might be used once the data are linked, matched, and shared.**

RESOLUTION P–20W data governance is a formalized structure for all participating agencies to agree on the intended purposes of data use. The system also increases transparency and accountability by distinguishing an entity responsible for shared data decision making, including the protection of personally identifiable information. P–20W data governance sets the standards for data quality and use to ensure that all agencies and stakeholders trust the information. This resolution is strengthened by policymaker participation, as trust building is largely about changing institutional culture.

Technical Issues

CHALLENGE **Each agency defines its own data standards and protocols and procedures for data use, making sharing data difficult and inefficient.**

RESOLUTION P–20W data governance connects policy and data to authorize the execution of technical solutions agreed on by all participating entities to develop consistent, standardized processes, such as adopting the Common Education Data Standards. Resolution depends on policymakers leveraging their authority to convene multiagency technical working groups to advise on solutions, commit their agencies and related resources, and authorize implementation.

Time

CHALLENGE **Agencies have limited human capacity and make allocation decisions based on their individual needs.**

RESOLUTION P–20W data governance ensures that sectors are able to collaboratively prioritize, agree on how time is spent, and justify this use of taxpayer resources to the public. Roles and responsibilities are clearly defined within a hierarchy for decision making that facilitates coordination and ensures the efficient use of time. To reach resolution and prioritize resource allocation, policy leadership is critical.

# P–20W Governance Recommendations to Ensure Impact-Driven Data Systems

Policymaker leadership is critical to garner the political will and resources to address the barriers of turf, trust, technical issues, and time. Specifically, policymakers can take the following actions to effectively develop and lead P–20W data governance:

1. Establish the Right Structure

Policymaker leadership oversees a larger structure of P–20W data governance. A defined structure ensures that policymakers can focus on the purposes of the data system while others execute this vision by managing the technical aspects of data governance.

EXAMPLE   **NCES Model for P–20W Data Governance**

The National Center for Education Statistics (NCES) has proposed a three-tiered data governance model that defines the role for policymakers as members of a top-level executive board with ultimate decision-making authority for the data system and the power to hold staff within their respective agencies accountable to the goals of the system.[3] While the functions of the next two tiers of the system (see graphic below) are critical, Data Quality Campaign (DQC) focuses on providing guidance for the highest level of the system—the executive leadership. This body is responsible for ensuring that the technical work carried out by the Data Governance Committee and Data Steward Workgroup is coordinated and reflects the state's vision and policy goals.
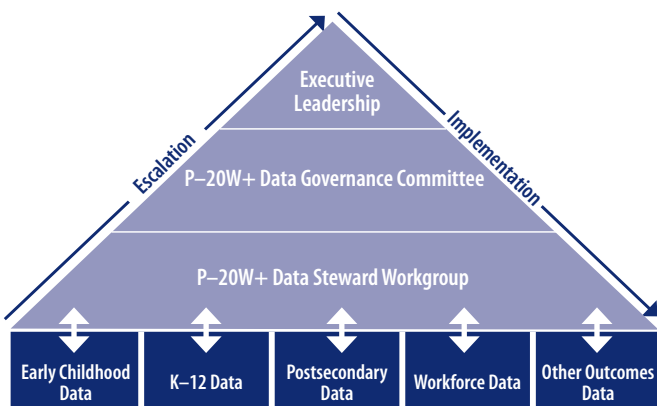
2. Select the Right People

When executives participate in top-level conversations, the P–20W data governance body can effectively prioritize work across agencies in alignment with the state's vision. This prioritization requires the leadership of the governor, agency heads from all relevant sectors, and other informed representatives for various stakeholders. Members must have the authority to implement the multiagency decisions and to commit resources to this effort.

EXAMPLE   **Maryland Longitudinal Data System**

Maryland Senate Bill 275 specifically designates the following:

"There is a Governing Board of the Center. The Governing Board shall include the following members: The Secretary of Higher Education, or the Secretary's designee; The Chancellor of the University System of Maryland, or the Chancellor's designee; The President of Morgan State University, or the President's designee; The State Superintendent of Schools, or the Superintendent's designee; The Secretary of Labor, Licensing, and Regulation, or the Secretary's designee; A representative of local superintendents of schools, appointed by the Governor with the advice and consent of the Senate; The Executive Director of the Maryland Association of Community Colleges, or the Executive Director's Designee; and Four members of the public, appointed by the Governor with the advice and consent of the Senate. One of the public members of the Governing Board shall have expertise in large data systems and data security. The Governor shall appoint a chair of the Governing Board from among its members."[4]

3. Empower the Structure with the Authority to Make Decisions

Conferring authority on the P–20W data governance body is a necessary foundation for effective decision making. The body must have the authority to make decisions that hold weight within each agency involved and be responsible for actions and consequences associated with governing P–20W data. (See "Example: Ways to Grant Authority" for details on three ways to give authority: executive order, legislation, and charter.)

4. Ensure That the Structure Is Sustainable

This work is not suited for voluntary or time-limited coalitions or one-time meetings but requires reallocation of current human and financial resources toward an aligned, multiagency vision for education. Sustainability of P–20W data governance varies depending on how authority is assigned. (See "Example: Ways to Grant Authority" for details.)

EXAMPLE   **Ways to Grant Authority**

Executive Order		
ADVANTAGES	**CHALLENGES**	**STATE EXAMPLE**
» Implement immediately with support of the governor » More formal than coming together voluntarily » Possible interim solution prior to enacting legislation	» May not outlast current governor if new executive has different priorities » Potential to politicize the process » Harder to get buy-in because less stable/sustainable » Ensuring that committees represent changing political landscapes » Membership may be "at will" per the governor's selection and not necessarily the right people/roles	The **Nevada** governor issued an executive order directing the P–16 Council to establish a multiagency governance structure with representatives who have decision-making authority.[5]
Legislation		
ADVANTAGES	**CHALLENGES**	**STATE EXAMPLE**
» Sustainable and likely to survive through changes in leadership » Broad input and agreement required to pass legislation » Transparency increased by creating a public process » Specific charges and clear authority/responsibilities » Increased accountability » Participation not voluntary for relevant agencies » Funding for data systems typically driven by legislation (according to DQC's *Data for Action 2011*, of the 36 states with policies in place mandating the system and/or requiring use, 75 percent also provide state funding in the budget to support these systems)	» Slower process to get buy-in from all the necessary players when considering new legislation » Agreement needed among many legislators and contingent on governor's signature » Potential time delays depending on legislative calendar	The **Maryland** legislature passed Senate Bill 275 establishing the Maryland Longitudinal Data System Center and a governing board to provide general oversight, ensure public transparency, establish the state's policy and research agenda, and oversee privacy and security policies and implementation.[6]
Charter		
ADVANTAGES	**CHALLENGES**	**STATE EXAMPLE**
» Original structure may be strong because of shared vision and desire to collaborate	» Voluntary; not required to participate so lacks accountability and sustainability » Depends on shared belief in value proposition of collaboration » Level of activity depends on current leadership	**Minnesota** describes its governance plan in the Minnesota P–20 Statewide Longitudinal Education Data System Charter, which lays out the statewide longitudinal education data system vision, purposes, and structures and establishes a multilevel governance structure with differentiated roles.[7]

Realizing the Impact of P–20W Data Governance

Effective P–20W data governance provides the structure, people, authority, and sustainability to ensure accountability and transparency through a formal process that determines the direction and use of the state's longitudinal data system based on the state's multiagency vision and goals. With the right P–20W data governance system, state data systems will transition from compliance systems to systems able to meet the data needs of stakeholders at all levels. Policy leadership is critical to this transition, allowing all agencies to allocate resources accordingly, act jointly, and work collaboratively to positively affect education.

P–20 Councils as Data Governance Champions

P–20 councils benefit from P–20W data governance, as these bodies are often the only entity with multiagency representation concerned about the state's education vision and they ask questions that require multiagency data to answer, such as the following:

» To what degree does participation in early childhood programs increase high school readiness?

» Do students meeting state standards, end-of-course criteria, and high school graduation requirements need remediation or basic training?

» How can teacher preparation programs currently evaluate and improve their programs by integrating K–12 student data and evaluations?

Depending on their established structure, people, authority, and sustainability, P–20 councils can serve as P–20W data governance bodies. However, P–20 councils are often better suited to be critical champions for this work. One direct action P–20 councils can take is to advise the state on its current capacity to begin establishing P–20W data governance. **Nevada's P–16 Council** tackled this work after the governor issued an executive order that required the council, among other responsibilities, to establish a multiagency governance structure with representatives who have decision-making authority.

For further consideration of P–20 councils and questions to guide policymakers on effective actors, agendas, and appropriation of resources, see the Education Commission of the States resource, *State P–16 and P–20 Council Considerations,* at www.ecs.org/clearinghouse/79/87/7987.pdf.

Endnotes

1 While states have invested in linking K–12 data with early childhood, postsecondary, and workforce data, the links may not be comprehensive. For example, of the states that link K–12 data with early childhood, most can link to special education and state prekindergarten programs but not to subsidized child care or Head Start/Early Head Start programs. In addition, the links may allow for the sharing of limited data, such as demographic information, but not child-level development data. Finally, the percentage of individual student records that can be matched among education sectors may be low. *Data for Action 2011: DQC's State Analysis,* Action 1. http://www.DataQualityCampaign.org/stateanalysis/actions/1.

2 *Data for Action 2011: Empower with Data*. http://www.dataqualitycampaign.org/files/DFA2011 Annual Report.pdf.

3 Statewide Longitudinal Data Systems Grant Program. (2012). *P–20W Data Governance: Tips from the States.* SLDS Best Practices Brief #4. Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. http://nces.ed.gov/programs/slds/pdf/brief4_P_20W_DG.pdf.

4 Maryland Senate Bill 275, Chapter 190. http://mlis.state.md.us/2010rs/chapters_noln/Ch_190_sb0275E.pdf.

5 Nevada Executive Order. http://www.DataQualityCampaign.org/files/exec_order.pdf.

6 Maryland legislation. http://mlis.state.md.us/2010rs/billfile/sb0275.htm.

7 Minnesota charter. http://www.DataQualityCampaign.org/files/Minnesota_Education_P-20_SLEDS_Charter_April_2010_with_attachments.pdf.

ADDITIONAL RESOURCES

POLICY QUESTIONS

Data Quality Campaign, *Connecting Policy and Data: What Are Your State's Critical Policy Questions?* http://www.DataQualityCampaign.org/resources/details/869.

PRIVACY

Data Quality Campaign, *Supporting Data Use While Protecting the Privacy, Security and Confidentiality of Student Information: A Primer for State Policymakers.* http://www.DataQualityCampaign.org/resources/details/1290.

Data Quality Campaign and Education Counsel, *U.S. Department of Education Final FERPA Regulations: Advisory and Overview.* http://www.DataQualityCampaign.org/resources/details/1475.

GOVERNANCE STRUCTURE

National Association of State Chief Information Officers, *Data Governance—Managing Information as an Enterprise Asset: Part I—An Introduction.* http://www.nascio.org/publications/documents/NASCIO-DataGovernance-Part1.pdf.

National Association of State Chief Information Officers, *Data Governance Part II: Maturity Models—A Path to Progress.* http://www.nascio.org/publications/documents/NASCIO-DataGovernancePTII.pdf.

National Association of State Chief Information Officers, D*ata Governance Part III: Frameworks—Structure for Organizing Complexity.*

http://www.nascio.org/publications/documents/NASCIO-DataGovernancePTIII.pdf.

Privacy Technical Assistance Center, *Data Governance and Stewardship.* http://www2.ed.gov/policy/gen/guid/ptac/pdf/issue-brief-data-governance-and-stewardship.pdf.

STATE POLICY DOCUMENTS

Colorado Office of Information Technology, *Cross-Departmental Data Protocol Project Charter,* House Bill 08-1364. http://www.DataQualityCampaign.org/resources/details/1267.

Illinois Legislature, *Longitudinal Education Data System,* Senate Bill 1828. http://www.DataQualityCampaign.org/resources/details/518.

Maryland Legislature, *Establishing Longitudinal Data System and Data Governance Board,* Senate Bill 275. http://www.DataQualityCampaign.org/resources/details/1237.

Minnesota Department of Education, *MN P–20 Statewide Longitudinal Education Data System Charter.* http://www.DataQualityCampaign.org/resources/details/902.

New Mexico Legislature, *Educational Data System,* House Bill 70a. http://www.DataQualityCampaign.org/resources/details/901.

Virginia General Assembly, *State Council of Higher Education for Virginia,* House Bill 7. http://www.DataQualityCampaign.org/resources/details/899.

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The **Data Quality Campaign (DQC)** is a nonprofit, nonpartisan, national advocacy organization committed to realizing an education system in which all stakeholders—from parents to policymakers—are empowered with high-quality data from the early childhood, K–12, postsecondary, and workforce systems. To achieve this vision, DQC promotes the development and effective use of statewide longitudinal data systems to ensure students graduate from high school prepared for success in college and the workplace.