

DATA 101



A Briefing Book for Policymakers on Education to Workforce Data



DQC Data Quality
Campaign

When students, parents, educators, and policymakers have the right information to make decisions, students excel.

Whether you're a new or veteran policymaker, you need information about the schools and postsecondary and workforce options in your state. What programs are the most cost effective and work best for students and job seekers? How can your state attract and retain a talented workforce? What information do parents need to ensure that their kids are on track to graduate? Data is a critical tool to answer questions like these and help inform your policy decisions. Likewise, everyone involved in a student's unique journey through education and into the workforce needs access to timely, accurate data to provide insights and drive improvements for students and workers.

Data is a critical part of policy conversations in every state—and this briefing book is meant to bring you up to speed on 12 of the most pressing topics, with the following information:

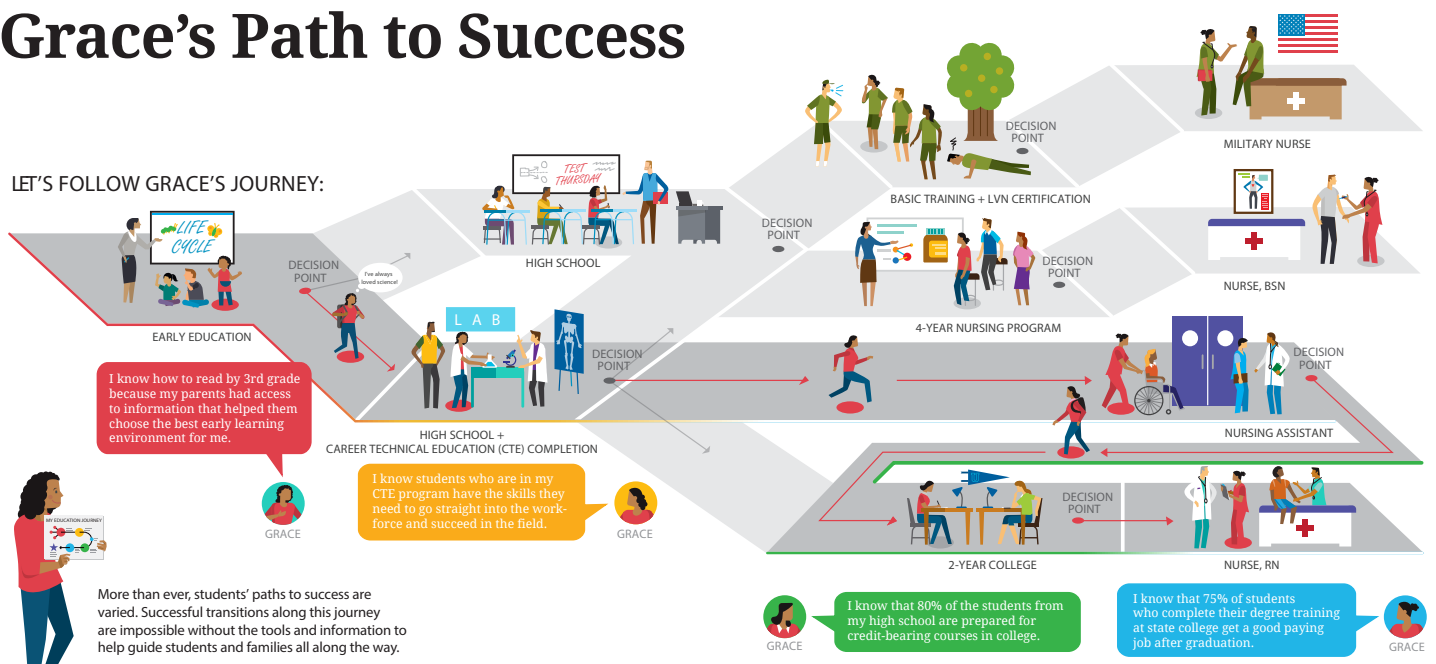
- A basic overview of the topic;
- Why it matters;
- The “state of play” on the latest progress in that area;
- Recommendations to take action; and
- Additional resources to help build your understanding of data topics and policies.

For help bringing these ideas to life, see the Data Quality Campaign's (DQC) [vision for state data systems](#). This vision lays out what is possible when people have access to data to make decisions about pathways through education and the workforce and provides recommendations for leaders to make the vision a reality. And please let DQC know if there are additional topics we may cover or other ways we can help you make data work for students: info@dataqualitycampaign.org.

12 things to know about state data:

1. Early childhood data helps ensure that children and families receive the services they need.
2. K–12 student data helps improve student achievement.
3. Postsecondary data provides insights about students, schools, and outcomes.
4. Workforce data helps identify trends and inform decisions about the future.
5. Statewide longitudinal data systems help answer questions and drive systemic change, economic mobility, and student success.
6. Data governance policies maximize investments in state data systems.
7. Student data must be kept private and secure.
8. Student growth data provides a more equitable picture of student and school performance.
9. Data generates the evidence that state and system leaders need to make decisions.
10. State report cards provide the public information about student and school performance.
11. Data empowers teachers and parents with information to better support learning.
12. Teachers must be equipped with the skills to understand and use data effectively.

Grace's Path to Success



1. Early childhood data helps ensure that children and families receive the services they need.

Early childhood data enables families, service providers, and policymakers to better understand the early childhood landscape and make informed choices that help young children thrive.



What Is Early Childhood Data?

- Early childhood data includes information about young children from birth through kindergarten, their families, and the people and programs that serve them through various care, education, or health-related services.
- This data commonly includes demographic characteristics, enrollment in services, or learning and developmental assessment results. Program data can include information about the setting where services are delivered, program capacity, enrollment, or quality.
- Programs include early care and education services like child care, prekindergarten, Head Start programming, home visiting, early intervention, and special education.



Why Does Early Childhood Data Matter?

- Families need information that allows them to find the appropriate services for their children and then helps them enroll in those services.
- Providers need information about the children and families they serve—and the broader landscape of services in their community—to provide high-quality services while complying with regulatory and reporting requirements.
- State-level policymakers in charge of cross-sector, statewide changes and local system leaders need access to early childhood data to understand access to and gaps in services so that they can leverage policy and funding to improve the early childhood ecosystem across the state.



State of Play

- The fragmented nature of early childhood data reflects how states fund, govern, and deliver early childhood services.
- Different early childhood services carry different data collection and reporting requirements depending on how they are funded and licensed.
- The early childhood data reported to states consists almost entirely of publicly funded services delivered in licensed settings, leaving a substantial data gap when it comes to private-pay services and services delivered in license-exempt or otherwise informal settings.
- Relatively few states maintain an operational early childhood integrated data system (ECIDS) that securely connects data to enable better systems-level analysis and decisionmaking, with progress across states hindered over time by inconsistent funding and capacity.



Take Action

- Because better data is critical to improving the early childhood ecosystem, **connect data across early childhood services** to understand the publicly funded early childhood ecosystem at the state level. States can approach this work in different ways, including by establishing an ECIDS.
- **Identify your state's priority questions** related to how its early childhood services are supporting children, families, and communities.
- **Learn what early childhood data your state collects**, or plans to collect, and how that data enables the answering of priority questions.
- Create data policies and implement practices that **center privacy** while enabling **meaningful data access** and use.
- **Encourage investments** in early childhood data systems and capacity that help raise data quality, trust, and use at state and local levels.



Learn More

Early Childhood Administrators Value Data for Decisionmaking DQC's 2024 national poll of early childhood administrators, conducted by The Harris Poll, surveyed early childhood administrators—educational or child care professionals in program director or general manager roles serving children from birth through age four—to find out how they are collecting, using, and reporting data.

Start Here: A Vision to Transform State Early Childhood Data to Meet the Needs of Children, Families, and Those Who Support Them This resource provides a vision for the use of early childhood data, sharing three use cases that highlight ways states can use their data systems to help improve child experiences and outcomes by meeting the data access needs of families, providers, and policymakers.

2. K–12 student data helps improve student achievement.

Student data helps teachers, parents, and policymakers answer questions about K–12 outcomes and take action to support student success.



What Is K–12 Student Data?

- K–12 student data is more than test scores. It includes information such as attendance, grades, student growth, outcomes, enrollment, and more.
- Schools, districts, and states collect student data and use it to make decisions about instruction, interventions, policy development, and resource allocation.
- The majority of student data is stored at the school and district levels. A limited amount is reported to states, which use and share it in anonymous and aggregate forms.



Why Does Student Data Matter?

- Student data provides teachers a more complete picture of the strengths and weaknesses of each child in their classroom; with this information teachers can improve and tailor instruction to fit students' needs.
- Student data empowers families with information so that they can be partners in their student's learning, supporting learning at home and making informed choices about schools, programs, and postsecondary and workforce options.
- School and system leaders can use data to identify the needs and trends of broader student populations to make more informed decisions around professional development and school support.
- Aggregate data about student and school success helps inform policymakers as they shape policy and allocate scarce resources.
- Multiple data points presented together can provide the fullest picture of student outcomes, making parents, teachers, and leaders better able to support student success.



State of Play

- Every school, district, and state collects information about students. Most of this information stays at the local level.
- Every state has a system to collect information about K–12 students over time, and many states have linked that data with other information, such as student progress in postsecondary institutions.
- State and federal laws drive data collection.



Take Action

- **Learn about the data your state collects** and how it is used.
- **Start with your questions**—determine your state's education priorities and explore how data helps meet them.
- Consider policies that **get data into the hands of teachers and parents** so that they can use it to support student success.



Learn More

Time to Act: Making Data Work for Students

This foundational report introduces DQC's Four Policy Priorities to Make Data Work for Students, which include a set of recommendations for state policymakers to ensure that data is accessible, useful, and secure.

What Is Student Data? This infographic and video show the types of data that can come together—guided by requirements like privacy and security—to form a full picture of student learning.

Who Uses Student Data? This infographic shows how student data—from schools to the US Department of Education—is and is not accessed and used.

3. Postsecondary data provides insights about students, schools, and outcomes.

Postsecondary data helps answer questions about postsecondary institutions and program outcomes and can be used to inform important choices by individuals and policymakers alike.



What Is Postsecondary Data?

- Postsecondary data is the universe of information collected to help better understand education options after high school. These options include two- and four-year college programs, applied career training through community and technical colleges, professional certifications, and any other noncredit training or education pursued after high school.
- Postsecondary data can include information such as admissions, enrollment, persistence, completion, courses or majors, use of support services or public benefits, financial aid, and student debt.
- Many state, federal, and accrediting agencies require postsecondary institutions to report data for compliance purposes (e.g., federal financial aid eligibility or state authorization requirements), and these reporting requirements shape much of the data collected in the field. Institutions may also collect additional data on individual students and education programs, which can be used to evaluate programs and improve the tools and support offered to students; however, this data is rarely collected at the state or federal levels.



Why Does Postsecondary Data Matter?

- Postsecondary data can help individuals identify and understand their postsecondary education options, costs, and financial aid eligibility and chart their pathway to and through college or training programs into high-quality careers.
- Postsecondary data can be used to implement and evaluate student support services (e.g., advising, mentoring, tutoring, or financial and social support) and to inform public policies based on need and impact.
- Postsecondary data is an essential component in aligning education offerings with state and local workforce needs, and when postsecondary data is linked with post-graduation wage and employment outcomes, it can provide more robust data for continuous improvement and accountability.



State of Play

- The structure of institutional systems (e.g., the University of California or the Maine Community College System) differs greatly between and within states, and the amount and kinds of data reported by institutions to systems and/or state agencies vary but are often limited to compliance data.
- State regulatory and data systems vary widely, from centralized models with coordinating agencies collecting information from all postsecondary institutions in a single data system to those with very little central coordination or data sharing among institutions.
- Different kinds of postsecondary institutions (e.g., public, nonprofit, for profit, degree granting, certification, and career and technical education) often operate within regulatory oversight silos, making comprehensive state-level data even more challenging to collect. In many states, little or no data is collected from private postsecondary institutions.
- Despite these varied structures, many states still publish at least some aggregate postsecondary enrollment data (e.g., public two- and four-year degree programs) for public use, and some have released additional indicators on outcomes (e.g., graduation and employment).



Learn More

Roadmap for K–12 and Postsecondary Data Linkages This roadmap outlines the key focus areas to ensure quality implementation of data linkages between K–12 and postsecondary data.

Safeguarding Student Data in Higher Education This resource highlights how higher education leaders can ensure that student data remains secure and properly used to help students succeed.

State and Local Governments Can Use Federal Funding for Education Data This infographic details the various federal funding streams that can support state data systems or related data activities.

Streamlined and Simplified: Using Data to Redesign Postsecondary Admissions This resource examines the role of stronger data systems in addressing challenges and barriers students must overcome to access postsecondary education, highlights efforts states and institutions are undertaking to streamline the admissions process, and identifies best practices that have emerged in the field.

- States leaders are using legislation to ensure that their state develops tools and resources to make information on college options, career pathways, costs, and financial aid publicly available. For example, Tennessee’s 2021 [Students Right to Know law](#) requires the state to collect data on in-demand jobs, student loans, student persistence in postsecondary programs, and salaries. The state makes this data, along with data on career planning, streamlined admissions, and more, publicly available to students, families, and job seekers through the [College for TN](#) tool.
- Programs like those created by Georgia State University and the City University of New York have successfully used data collected by their institutions to develop support systems to help students graduate.
- Postsecondary data needs further investment. Although there have been federal grant programs to support developing K–12 longitudinal data systems, there has been no dedicated pool of funding for postsecondary data improvements.

Take Action

- **Learn more about the status of your state’s postsecondary oversight and data systems**, including what data is collected where and by what entities, whether data is linked statewide and/or connected to other sources like K–12 and workforce data, and how it is—or is not—being used.
- **Set data use as a priority for improving education** and ensure that the data collected represents the experiences of all students.
- **Promote a statewide culture of data use** by ensuring that students and those closest to them have the resources they need to effectively use data to pursue postsecondary success.
- **Create data privacy and security policies that protect students** while also ensuring meaningful access to appropriately personalized data for individuals.



4. Workforce data helps identify trends and inform decisions about the future.

Workforce data helps answer questions about a state's or region's workforce resources and needs and can provide students and job seekers with information to make important choices for the future.



What Is Workforce Data?

- Workforce data includes any information relating to local or regional labor markets—such as data about the existing workforce; wage information; use of social assistance programs; demand for occupations; growing fields and industry trends; and information on available training, skills, and credentialing resources.
- Workforce data can come from a variety of sources, such as state unemployment records, tax data, public benefits programs, job posting sites, education institutions, job training programs, apprenticeship programs, the military, and adult education services.
- However, the amount of data incorporated into statewide data systems is often extremely limited. Even in states where the data is incorporated, it may include only unemployment insurance (UI) data, which contains information from employers on their employees and their wages but has many gaps and limitations. In many states much of the data may be available only to private entities and employers.



Why Does Workforce Data Matter?

- Workforce data can be used to help individuals identify and understand career pathways, professional development, and education opportunities to further their careers.
- Workforce data is essential for identifying industry trends and aligning postsecondary education offerings with state and local workforce needs.
- Employers use data about the local workforce and their existing skills to evaluate where to invest and expand their businesses, and states can use that same data to create incentives for employers and to support the creation of career pathways.



State of Play

- Workforce data is abundant, but the amount and kinds of data collected at the state level are currently very limited and have many gaps. Without substantial improvement and alignment with education data, individuals and policymakers will continue to lack access to critical pathways data.
- Employers, private entities, researchers, and local organizations may have access to additional data, but this information is often proprietary and not freely available to the public or incorporated into state data systems.
- Some states are using improved and expanded workforce data to build tools, such as New Jersey's [My Career NJ](#) and Kentucky's [Career Explorer](#), to help learners and those seeking opportunities to explore available pathways.
- 40 states have received grants to fund the development or enhancement of state workforce longitudinal administrative databases from the federal Workforce Data Quality Initiative since 2010, but the grants are relatively small and competitive. More funding must be widely available to support modernizing, improving, and expanding state workforce data systems.



Learn More

Enhancing Unemployment Insurance Wage Data to Better Understand Education and Employment Outcomes

This resource explores one type of workforce data: UI wage data. It makes the case for enhanced UI wage data, shares examples of states leading the way, explores challenges, and recommends actions state and federal leaders can take to drive UI wage data enhancements.

Roadmap for K–12 and Workforce Data Linkages

This roadmap outlines the key focus areas to ensure quality implementation of data linkages between K–12 and workforce data.

State and Local Governments Can Use Federal Funding for Education Data

This infographic details the various federal funding streams that can support state data systems or related data activities.

Take Action

- **Learn more about your state and local workforce systems**, especially the limitations of the workforce data that is currently available, and support system improvement efforts and the collection of expanded workforce data that is aligned with and connected to education data.
- **Ensure that state and local workforce infrastructures are well funded** to improve data collection methods and metrics and empower their effective use to serve individual, employer, and state workforce needs.
- **Advocate to make workforce data and resources more available and useful** to a variety of users, including individuals, community-based organizations, researchers, employers, and policymakers, in a manner that is tailored to their needs.
- **Ensure that individual data privacy and security are high priorities** while also prioritizing meaningful access to appropriately personalized data for individuals and those who support them.



5. Statewide longitudinal data systems help answer questions and drive systemic change, economic mobility, and student success.

Statewide longitudinal data systems (SLDSs) provide policymakers with cross-sector insights that enable them to answer questions about people's pathways and outcomes, inform resource allocation decisions, and drive systemic improvements.

What Is an SLDS?

- An SLDS, sometimes referred to as a P–20W data system or by other names, consists of data linked across sectors. It is:
 - ◆ **Statewide:** An SLDS brings together data from multiple state agencies (at a minimum early childhood, K–12 education, postsecondary education, and workforce).
 - ◆ **Individual level:** A robust SLDS includes data that is specific to individual people while it keeps the data private and secure.
 - ◆ **Longitudinal:** An SLDS is set up to capture data from the same population over multiple years.
- Effective SLDSs are governed by cross-agency bodies that can set priorities for the system and define clear purposes, roles, and responsibilities for all participating agencies (see page 11 on governance).
- An SLDS is not just an information technology project—building a quality SLDS requires senior leaders to set expectations for whom their systems are designed to serve and ensure that the system is providing value by enabling secure, role-appropriate access.

Why Does an SLDS Matter?

- Without a robust SLDS, data often sits in silos within state agencies, creating inefficiencies and preventing policymakers from fully understanding and acting on priority needs.
- SLDSs enable leaders to investigate new policy questions, such as *What factors in students' high school experiences affect the type of college program the students attend? What are the career outcomes of students who completed career and technical education programs during high school? Where are states' education and training investments having the greatest impact?*
- When made transparent through public dashboards, aggregate data from SLDSs can provide a fuller picture of people's education and career outcomes. Dashboards create an opportunity for policymakers to tell the story of the impact of their investments and build trust through transparency about where there is still work to do.
- Enabling access to cross-sector, longitudinal data for individuals and the public can empower individuals to make informed decisions about education and career opportunities and the pathways that will prepare them for success.

State of Play

- While an SLDS is a state-driven effort, as of 2025, the federal government had invested more than **\$930 million in SLDS grant funds** for state data systems.
- Every state has the ability to link individual-level data over time, but states are still working on building all the linkages necessary for a robust SLDS.
- As of 2024, only **25 states** had built an SLDS that links early childhood, K–12 education, postsecondary education, and workforce data.

Using **longitudinal data** is like being able to watch a video of student progress over time rather than in a series of snapshots.

Learn More

Funding What Matters: What Building and Sustaining a Statewide Longitudinal Data System Costs What does building and sustaining a high-quality SLDS cost? To find an answer, this brief digs into four examples of robust state data systems in California, Kentucky, Maryland, and Washington state. It also identifies three key lessons to guide any state leader seeking to make meaningful investments in their state's future.

Grace's Path to Success This infographic demonstrates how longitudinal data can support individuals in navigating transitions and achieving their academic and career goals.

Purpose Drives Design: Functions of a Statewide Longitudinal Data System This brief explores how policymakers can purposefully shape the design of their state's SLDS to effectively support any or all of the system's three functions: public reports and dashboards, research and analytics, and support for individuals.

Traveling Through Time: The Forum Guide to Longitudinal Data Systems (National Center for Education Statistics) This resource outlines the fundamentals of SLDS development and discusses the value that an SLDS can bring to a state's education system.

What Are Statewide Longitudinal Data Systems? This fact sheet covers the basics of SLDSs, including why they matter and why policymakers should continue to invest in their development.

What Now? A Vision to Transform State Data Systems This resource describes the types of data access that people need to successfully navigate decisions through education and the workforce, details four use cases in which SLDSs are necessary to support decisionmaking, and describes clear ways that state and federal leaders can take action to make this vision a reality.

Take Action

- **Learn what data is (and is not) linked in your state** and charge agency leaders with prioritizing the work to expand the data that is part of the SLDS.
- **Champion sustainable, cross-agency data governance** to provide a neutral forum that can create data policy while centering privacy, equity, and timely access.
- **Center privacy in discussions about the design of SLDSs** to ensure that the state implements all necessary privacy policies and practices to keep data safe.
- **Set a vision for an SLDS** that meets the needs of people. Policymakers—and their constituents—need SLDSs oriented toward access to data so they can get the information they need to support those navigating education and workforce decisions.



6. Data governance policies maximize investments in state data systems.

Cross-agency data governance is essential to provide leadership and accountability for the way state data is collected, kept secure, and accessed, and it is the best way to ensure system sustainability.

What Is Cross-Agency Data Governance?

- Cross-agency data governance is a formal, leadership-level body responsible and accountable for making decisions about how data linked between state agencies is connected, secured, accessed, and used to meet state education and workforce goals.
- Data governance bodies define clear purposes, roles, and responsibilities for participating agencies in the statewide longitudinal data system (SLDS) and ensure accountability for data quality, privacy, and security. (See page 12 in this briefing book.)
- The best way to ensure that governance bodies have the right membership and are sustained over time is by codifying them into state law. Best-practice governance bodies include senior leaders from each of the agencies that contribute data to the system as well as others who represent state education and workforce priorities (e.g., business leaders, district leaders, and community organizations).

Why Does Data Governance Matter?

- Through data governance, state leaders can set a vision for data use and create accountability for making decisions about data.
- Formalized data governance creates sustainability for the SLDS, especially when codified by legislation, by ensuring that decisionmaking authority is clear and responsibilities for data collection, privacy and security, and access are defined.
- Governance bodies can build trust by creating a space for cross-agency collaboration, facilitating a shared data culture, and ensuring that processes and decisions are transparent.
- Cross-agency data governance creates forums for communication and decisionmaking that are open to and include input from the public as well as local government.

State of Play

- Following in the footsteps of three early adopters of data governance (Kentucky, Maryland, and Washington), nine states have codified cross-agency data governance since 2022: Alabama, California, Colorado, Connecticut, Georgia, Mississippi, Montana, New Jersey, and Rhode Island.
- California's law, passed in 2021, set a new bar for designing a service-oriented governance structure by not just embracing transparency but also building trust and buy-in by giving more people a voice in what the systems should be designed to do.

Take Action

- **Be a champion** for sustainable cross-agency governance that maximizes investments in state data systems and increases transparency.
- **Make existing governance structures more effective** by ensuring that they have a clear and transparent vision, leadership-level representation, actual decisionmaking authority, public meetings, and clearly articulated roles and responsibilities.
- **Charge your governance body with building trust** in data by including representation from members of the public, being transparent about policies and practices, and demonstrating accountability for safeguarding data and using it ethically and responsibly.

The term **data governance** is sometimes used more narrowly to refer to oversight of the technical processes required to manage data within agencies.

Learn More

Data Governance 101: Cross-Agency Data Governance Accelerates State Education and Workforce Data Capacity This resource gives state leaders the information they need to understand the value of cross-agency data governance; evaluate their state's current policies; and identify concrete next steps to make improvements, regardless of their starting point.

The Art of the Possible: Data Governance Lessons Learned from Kentucky, Maryland, and Washington The three data governance bodies featured in this case study reflect the unique context of each state and have broken down the silos that tend to exist among state agencies that use data to support education and workforce efforts.

Investing in California's Data Future: How California's P-20W Cradle-to-Career Data System Could Take the State from Last to First This case study is a deep dive into what made the state's process so successful and provides insights for other state leaders looking to build or improve their own state data system.

Roadmap for Cross-Agency Data Governance This resource provides recommendations for states that are looking to develop and implement a high-quality cross-agency data governance committee.

7. Student data must be kept private and secure.

Safeguarding data—and building trust in how it is used—is an essential part of effectively using education data to support student learning.



What Is Student Data Privacy?

- Safeguarding students' information is about ensuring that individual student data is being collected for meaningful purposes and kept confidential, secure, and private. This can be done through both technical solutions such as secure systems and role-based access and nontechnical solutions such as training for those with access to students' information.
- To safeguard students' personal information, policies and practices must be in place at the state and local levels to provide guardrails for the protection of student data and ensure that systems are secure.
- The public, especially parents, must have a clear understanding of what data is collected, how it is used, who has access to it, and how it is protected.



Why Does Protecting Student Data Privacy Matter?

- Education data is used every day by teachers, parents, and state leaders to make decisions in support of student success. That information must be safeguarded and used only to help students.
- With high-quality policies and practices in place governing data protection and use, state leaders can more confidently rely on data to guide critical decisionmaking.
- Public trust in the privacy and security of data collected by schools, districts, and states is necessary for maintaining support for using data in service of student learning.



State of Play

- The Family Educational Rights and Privacy Act (FERPA) is the foundational federal law that protects the privacy of students' education data and provides families rights to review their children's information.
- State legislators have acted to build on the foundation of FERPA. Since 2013, every state has meaningfully and expressly addressed the privacy and security of education data through more than 150 different pieces of legislation.
- Since 2014, more than half of states have enacted privacy laws that govern the activities of online school service providers directly. These laws have created new rules for how providers access and use students' personal information.



Take Action

- Determine whether policies, laws, and practices in your state **promote robust governance and provide protection for students' information.**
- Support policies and allocate resources that **equip those with access to students' personal information, such as teachers, with training** to effectively and ethically use, protect, and secure students' information.
- **Communicate with the public** about the value of data and how states and districts protect the data they collect.



Learn More

Centering Privacy: Data Access and Data Protection Go Hand in Hand

This resource explores four key steps leaders can take to center privacy: establish governance, update policies, support people, and communicate clearly.

Key Elements for Strengthening State Laws and Policies Pertaining to Student Data Use, Privacy, and Security: Guidance for State Policymakers

(Education Counsel) This resource contains guidance for state policymakers around safeguarding student data.

Roadmap to Safeguarding Student Data

This brief provides specific, practical recommendations for state education agencies as they prioritize the safeguarding of student data and continuously review and update their data privacy policies and practices to address changes in technology.

State Data Legislation This topic guide collects DQC's annual reviews and analyses of state legislation related to education and workforce data.

A Stoplight for Student Data Use This tool summarizes some of the main provisions of FERPA and related regulations and identifies when students' personally identifiable information may be securely shared under the law.

8. Student growth data provides a more equitable picture of student and school performance.

When presented alongside proficiency measures, student growth measures provide a more comprehensive picture of student learning and school quality than one-time assessment scores alone.



What Are Student Growth Measures?

- Student growth measures use multiple years of data to capture changes in student learning over time. This distinguishes growth measures from proficiency measures, which capture student performance only at a given time.
- Student growth measures use data from statewide annual assessments. These tests provide comparable year-to-year data for every student, making it possible to see if each student is on track to meet their learning goals.
- There are different types of student growth measures, which offer different insights:
 - ◆ Value-added measures use statistics to show how individual educators affect their students' learning.
 - ◆ Student growth percentile measures compare students' progress to that of their peers with similar academic outcomes.
 - ◆ Value table measures use benchmarks above and below "proficient" (such as "below basic" or "advanced") to provide a more detailed look at student progress.
 - ◆ Gain score measures track year-to-year student improvement on state tests.
 - ◆ Growth to standard measures calculate students' rates of progress to estimate how long it will take them to reach grade-level standards.



Why Do Student Growth Measures Matter?

- Student growth measures capture valuable information that proficiency measures miss. Using growth data, parents and teachers can ensure that all students are making progress, even if they're performing above or below proficiency benchmarks. District leaders can use growth measures to identify schools that are especially successful in fostering student growth and explore promising practices at work.
- Student growth measures are also more equitable than proficiency measures, which often reflect student population characteristics (e.g., race/ethnicity and household income) as well as academic performance.
- Presented together, student growth and proficiency measures provide a more robust picture of how schools are supporting all students' growth.



State of Play

- Every state has the ability to calculate student growth; 48 states and the District of Columbia include growth in state accountability systems. States use different student growth measures, making comparing student growth across states challenging.
- All growth measures require a robust state K–12 longitudinal data system; as such, using student growth measures is one way states can maximize their investments in longitudinal data.



Take Action

- **Learn how your state calculates student growth.** Consider what this data tells parents and teachers about student learning and its implications for decisionmaking.
- **See what your state's annual report card says about student growth.** Transparency means not only sharing important information but also taking steps to ensure that people can understand what it means, why it matters, and how they can use it to support students.
- **Ensure that teachers and principals in your state can access individual student growth data.** Using updated growth data, educators can better ensure that every student is on track to achieve their goals.



Learn More

Growth Data: It Matters, and It's

Complicated This resource explores the ways states are measuring student growth and what this means for how parents, teachers, and education leaders understand student success and school quality.

Measuring Growth in 2021: What State Leaders Need to Know

This resource from DQC, the Alliance for Excellent Education, and the Collaborative for Student Success outlines considerations for measuring growth when missing annual assessment data for the prior year, discusses uses of this data, and lays out actions states can take to measure skip-year growth.

Parents Deserve Clear Information About Student Growth in Schools

Created in partnership with the National PTA, this brief outlines what parents need to know about student growth and how they can learn more.

9. Data generates the evidence that state and system leaders need to make decisions.

By using available data to support research, states expand understanding of how students learn and help to promote proven best practices.



How Does Data Generate Evidence?

- States and districts already collect a range of education data, such as enrollment trends, performance data, and long-term outcomes, through their longitudinal data systems.
- By using this data to conduct research, states and districts can explore critical questions like:
 - ◆ Are all students on track to meet their learning goals?
 - ◆ What instructional strategies are most effective to help students grow?
 - ◆ How can system leaders most effectively distribute resources?
- The answers to these questions are evidence—knowledge that is grounded in data and can be used to understand trends, make decisions, and pursue education goals.
- States and districts may conduct research internally or work with external researchers through research–practice partnerships. But all research requires robust data governance, which enables researchers to safely access student data, ensure research quality, and support the generation of valid and reliable evidence.



Why Does Evidence Matter?

- Evidence sheds light on the paths students take through K–12, postsecondary, and the workforce. Using this information, educators and system leaders can more effectively support students' long-term outcomes.
- Policymakers also rely on evidence to understand workforce trends, identify system needs, and allocate resources. Without evidence on these topics, they cannot make informed decisions.
- By valuing and supporting the generation of evidence, state and system leaders empower people at every level of the education system to challenge policy assumptions, promote proven strategies, and build the collective understanding of how students learn.



State of Play

- The Every Student Succeeds Act created additional “tiers of evidence” to compare and apply research to the field, making it easier to [use evidence](#) to make decisions.
- The Institute of Education Sciences supports research through cross-state initiatives like the [Regional Education Laboratories](#) and [state and local funding](#) for research partnerships.



Take Action

- **Consider your state's priorities, questions, and vision for using evidence.** Some key questions include:
 - ◆ How will your state prioritize, create, and use evidence to inform practice?
 - ◆ How will your state support districts' efforts to do the same?
 - ◆ What policy priorities, goals, and challenges can your state address through research?
- **Explore your state's data governance and sharing policies.** By shining a light on every step of the decisionmaking process, state leaders can secure public trust in and support for research and evidence.
- **Learn more about different research partnerships**, such as the [Tennessee Education Research Alliance](#).



Learn More

Research Partnerships Are Key to Improving Practice This resource details how states can benefit from research partnerships and outlines their core characteristics and drivers.

Roadmap for Effective Data Use and Research Partnerships between State Education Agencies and Education Researchers This report highlights eight focus areas for ensuring effective data use and building partnerships between education researchers and state education agencies.

Turning Data into Information: The Vital Role of Research in Improving Education This brief reviews the role of research in education and explores the factors states must consider to expand their research capacity.

Use Case: Provide Researchers Access to Data This use case unpacks what is made possible when states ensure that their data systems enable access: researchers will be able to get the data they need to produce information that enables the field to understand transitions, outcomes, and what works.

When Researchers Have Access to Data, Students Succeed This infographic demonstrates the various ways that research benefits students, educators, and policymakers.

10. State report cards provide the public information about student and school performance.

Parents and the public want and deserve information about how their students and schools are doing. State report cards present an opportunity to provide the public a clear picture of student and school success that is easy to find and understand.



What Is a State Report Card?

- States are required by federal law to produce a report card to help the public understand how students and schools are performing each year.
- Report cards provide information on the types of students that schools and districts educate (e.g., Hispanic students, students with disabilities), how well those students are doing academically, how often students come to school, the school's financial resources, and what types of qualifications teachers have.
- Report cards include information about the measures on a state's education accountability system alongside contextual information about students and schools.



Why Do Quality State Report Cards Matter?

- Everyone deserves to know how the public schools in their communities are doing.
- When information is difficult to find or understand, parents must cobble together information from different sources. This can breed mistrust between families and the education system serving their children.
- State report cards are an opportunity to communicate with parents and the public about state priorities and education goals.
- State report cards are also an opportunity to present a clear picture of student and school performance in a one-stop format that states are uniquely positioned to produce and provide.
- At their best, state report cards should answer questions and inform action. Quality report cards help parents make decisions about their child's education and help state and local leaders allocate scarce resources.



State of Play

- Every state produces an annual report card about school, district, and statewide performance, but the report cards are of varying quality and usefulness.
- The federal Every Student Succeeds Act requires that certain information be reported on a state report card, but states have the opportunity to provide additional data based on state and local needs.
- While report cards should be a key source of information, in many states, clunky formats, missing data, and technical jargon prevent the public from understanding the information available on report cards.
 - ◆ Just 25 states provide the option to translate their report card into a language other than English.
 - ◆ 23 states do not share achievement data broken down by all federally required groups of students, including 13 states that do not share data broken down by gender (a federal requirement since 2001).
 - ◆ The average state report card is written at a grade 15 reading level, making it difficult for all families to understand.



Take Action

- **Review your own state's report card** to see if it answers key questions using [DQC's tool](#).
- **Engage communities, including parents and teachers**, about what information they want to see on your state's report card and how it should be displayed.
- Work with fellow leaders (legislators, education board members, state education agency, the governor's office) to **improve the accessibility and usefulness of your report card**.



Learn More

Shining a Light on Equity: Opportunities to Use Data to Serve All Students This resource addresses how states can use equity data to improve transparency and take action on behalf of all students.

Show Me the Data DQC's analysis examines the information, accessibility, and usefulness of all 50 state report cards in helping the public ask and answer important questions about their schools and students.

State Guide to Building Online School Report Cards (ExcelinEd) This resource, created in partnership with DQC, features a step-by-step process guide for creating a high-quality school report card.

11. Data empowers teachers and parents with information to better support learning.

With access to the right information, those closest to students, especially teachers and parents, are positioned to make better decisions in support of their students' learning.



What Does Parent and Teacher Access to Data Look Like?

- Access to individual student data, including attendance, behavior, grades, progress, and assessment results, provides teachers and parents a holistic view of a child's learning.
- Parents need timely access to their child's current data as well as information on past performance presented with clear explanations on how to understand the data and what to do next.
- Teachers need timely access to data on their students' present performance and past progress so they can use it to inform their practice and better support learning for each student.
- Access to data about student progress over time can supplement traditional report cards, helping parents and teachers identify long-term trends and patterns in student learning.
- When they are the highest quality, secure portals or dashboards allow parents and teachers to regularly log in and see students' up-to-date information including attendance, grades, current performance, and past progress.



Why Does Parent and Teacher Access to Data Matter?

- When parents and teachers have access to information about student performance, they can be more effective partners in their students' learning.
- Empowered with their child's data, parents can select the right programs and school for their child and help boost learning at home.
- When educators have access to timely information they can strategically intervene with students who may be falling behind *and* help those who are ready to learn ahead go further.
- With access to longitudinal data, teachers can get a sense of their students' progress over time and tailor instruction to challenge and grow each student.
- Providing parents and teachers access to data that they find valuable and actionable helps build trust in student data.



State of Play

- Teachers need data about student progress over time. In 2019, [teachers reported](#) relying on data to plan instruction (86 percent of teachers), identify learning goals for students (88 percent), and know what concepts students are learning (89 percent).
- 9 in 10 parents say they need data like grades and test scores to understand their child's progress so they can help their child do their best.
- On average, teachers view data as "worth it" and report using it frequently in their practice, but time and efficiency remain obstacles. Just half of all teachers surveyed (48 percent) have access to a centralized online data platform, and 54 percent say that they spent more time accessing and prepping data than analyzing it and applying it to their teaching.



Take Action

- **Determine what information your state makes available** to parents and teachers.
- Consider policies that **provide educators and parents with timely and accessible student information.**



Learn More

Education Leaders Must Not Be Data

Gatekeepers This resource highlights real-life best practices in creating parent portals to demonstrate the importance of parent access to information to help their children succeed.

How Data Empowers Parents In this infographic and video see how accessible, relevant, and timely data empowers parents to make better decisions, provide better support, and be better advocates for their daughter Maria's learning success.

Ms. Bullen's Data-Rich Year In this infographic follow a teacher throughout the school year as she leverages a variety of data such as attendance, growth, assessment scores, and past performance to tailor instruction, guide conversations with parents, and improve her practice.

12. Teachers must be equipped with the skills to understand and use data effectively.

Teachers want and need data in their classrooms. To use data effectively, teachers must be equipped with the knowledge and skills to collect, interpret, and use student data.



What Is Data Literacy?

- Data literacy is the knowledge and skills educators need to use data to improve student learning as well as their own practice.
- Data use, along with content knowledge and pedagogical skills, is part of good teaching.
- Data literacy is about more than just assessment scores. While these scores are important, educators have access to a variety of information beyond assessments such as student growth, homework, and attendance and must understand how to use this information to inform their practice.



Why Does Educator Data Literacy Matter?

- Teachers need to use data to understand individual student strengths and needs, how to target class time, and how to select the best resources to help each student excel.
- Principals need to use data to make more informed decisions about schoolwide needs and resource allocation as well as to select professional development opportunities that best support teachers' needs.
- Data-literate educators and school leaders know the steps to take to protect student data and prevent misuse of student information.



State of Play

- Teachers need an introduction to data before they enter the classroom. Although in 2019 67 percent of teachers agreed that their school provides enough professional development about using data, only **17 percent of teachers** reported learning how to use data in their preservice teacher training program.
- **99 percent of superintendents** feel state data could be more useful. Specifically, they believe the following changes would make data more useful to them:
 - ◆ 49 percent want more useful tools or technology that let them see patterns and changes in their data; and
 - ◆ 44 percent want more training and ongoing support about how to interpret and use data well.
- The federal Every Student Succeeds Act gives states and districts flexibility to use Title II funds to train teachers and leaders on how to use data and keep it secure.



Take Action

- Give districts and schools flexibility to **provide educators time to collaboratively look at data**.
- Update policies, such as licensure and teacher evaluation, to **include data literacy skills as a measure** of quality teaching.



Learn More

Mr. Maya's Data-Rich Year In this infographic see how a school principal and his leadership team use data throughout a school year to enable teachers and students to set and meet education goals.

Ms. Bullen's Data-Rich Year In this infographic follow a teacher throughout the school year as she leverages a variety of data such as attendance, growth, assessment scores, and past performance to tailor instruction, guide conversations with parents, and improve her practice.

Teacher Data Literacy: It's About Time

This brief for state policymakers offers a proposed definition of data literacy along with recommendations on how to foster a data-literate teacher workforce.