



Better Data, Better Outcomes:

Promoting Evidence, Equity, and Student Success through the Framework for State Postsecondary Data Solutions

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Executive Summary

State governments need robust data to answer critical questions about what works and what doesn't work to improve student progression through the educational system and to evaluate and improve racial and socioeconomic equity in higher education. Improving the data available to states, and enabling states to tap the power of that data to raise attainment can have an especially important impact because of the pivotal role states play in increasing postsecondary access, completion, and affordability. States, with the help of good data, can also support student transitions into the workforce—and, perhaps most important of all—state governments' effective use of data can fulfill their responsibility to close equity gaps in postsecondary attainment in order to serve all students justly and to meet statewide workforce goals.¹

In this brief we provide a model—The Framework for State Postsecondary Data Solutions—that highlights the barriers to effective data use by states, identifies approaches to eliminating those barriers, and provides guidance to state data experts in how they can develop advocacy strategies that will lead to improvements in postsecondary data use. These improvements include strengthening data infrastructure and expanding evidence-based decision-making in higher education.

By clarifying the key challenges and offering potential solutions and strategies for advocacy, the Framework aims to advance the conversation about how the postsecondary community can access and best use data to increase student success and achievement.

The need is timely: in a higher education landscape characterized by inadequate financial support for public institutions, rapidly increasing tuition and student debt, and by shifts in student enrollment demographics, states need to understand which programs and institutions are delivering effective results for which students. The right data can help these state leaders answer questions about college affordability and costs, about an individual student's likelihood of success, and help leaders to assess how a typical student might fare once that person enters the workforce. The answers to these critical questions in turn inform policy and practice so that state education agencies can serve all students more effectively.



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In addition to being helpful to state education agencies, better data can benefit postsecondary leaders, students, and families. Institutional and system leaders can better understand how their students experience higher education and identify how one institution performs in comparison to another or how their state compares to its neighbors. In addition, they can identify specific areas where they should strive to improve. Thus, improvements in data use will result in improved outcomes for students—and will do so especially for low-income students and students of color, as effective data use can transform policies and practices to better serve students whose opportunities to pursue and succeed in higher education have historically been limited. Finally, information from state data systems made available through public-facing consumer tools provides students and families accurate pictures of what to expect from different educational options, enabling them to make informed choices about postsecondary education.

Despite the critical importance and multiple ways in which data can drive improvement, considerable challenges have prevented states from fully leveraging the data they hold.

To evaluate states' most pressing concerns, and to explore solutions to these problems, IHEP convened experts working in states to identify their principal data-use challenges. The results of those conversations are presented here, clarifying what blocks the potential for effective data use, bringing to light opportunities for action to improve actionable state postsecondary data to drive student success, and suggesting strategies for advocacy on the issue. Throughout, we recognize that there are multiple ways to address these challenges, also knowing that, in each state, specific state context will dictate the most appropriate solutions.

The model we present in this report—The Framework for State Postsecondary Data Solutions—describes the challenges in three primary areas identified by our state Postsecondary Data partners:



Resource Allocation: Limits in resources, including financial support, the numbers and technical skills of agency staff, technological capacity, and other resources all create key barriers to effective state data use.



Cross-Agency and Cross – State Data-Sharing and Matching: State agencies get a fragmented picture of how students fare as they progress through their education and into the workforce both because of technical issues related to data-sharing and matching processes, such as incompatible data identifiers that inhibit combining data, and because of organizational cultures that do not prioritize the integration of information across agencies or across state lines.



Legal and Regulatory Compliance: Laws and regulations primarily intended to promote the all-important need for student data privacy and security can often severely limit data-use. In some cases, state laws were so restrictive that they entirely prevented states from using their data, while in others a lack of clear guidance about permissible uses of data under federal laws left some state agency staff reluctant to use certain types of data to inform policy or to communicate with students.

We explore each of these barriers in detail and provide potential strategies to overcome these problems. To develop an effective advocacy strategy for making positive change in state postsecondary data, states need to assess the full range of solutions available to meet their specific challenges. A wide range of individual state factors may influence each state's approach and it is likely that leveraging multiple approaches across these streams will result in the most effective solutions.

For each of the challenges, we divide potential solutions into the following categories:



Federal: State education agencies can collaborate with federal partners or programs to ease challenges related to accessing employment-and-earnings data, while at the same time advocating for a comprehensive federal solution to state data challenges to be designed and implemented. In other areas in which federal practices are currently insufficient, states can advocate for more supportive or comprehensive federal roles. States can also turn to federal sources for financial support in the form of grant programs targeted at developing education data systems and their use at the state level.



State and Regional: State education agencies can pursue policy change within their jurisdictions. To make the most of all available data within the state, education agencies can build relationships with other state agencies to facilitate secure data-sharing practices. State data experts can also work with state legislators, encouraging them to allocate necessary funds for development and use of data systems, while at the same time promoting strong data governance, data use, and data privacy. Finally, states can develop and participate in regional partnerships, working with peers in other states to share data across state lines.



Messaging and Advocacy: This category of solutions—winning essential support from other stakeholders—will advance the specific recommendations of the first two categories. Effective messaging and advocacy strategies enable state data experts to influence state education agencies, federal and state policymakers, and the public, creating buy-in, advancing solid solutions, and creating allies in the larger campaign for data-oriented policies and financial investments in Postsecondary Data systems. Data advocates can tap their own expertise in state Postsecondary Data policy to effectively express what's needed and why it's needed; to deliver compelling and consistent messages around the value of data and the importance of evidence-based decision making; and to build a culture of data use in their agencies, states, and across state lines.

Introduction and Overview

In this brief we provide a model—The Framework for State Postsecondary Data Solutions—that highlights the barriers to effective data use by states, identifies approaches to eliminating those barriers, and provides guidance to state data experts in how they can develop advocacy strategies that will lead to improvements to Postsecondary Data use. These improvements include strengthening data infrastructure, expanding evidence-based decision-making in higher education, and ultimately, improving outcomes for students, especially low-income students and students of color. Effective data use can transform policies and practices to better serve students whose opportunities to pursue and succeed in higher education have historically been limited.

Today, the pressure on higher education grows, with enrollment increasing among low-income students, students of color, and other historically underserved groups; college costs and student debt continuing to skyrocket; and financial support from state legislators failing to rebound fully from the Great Recession. The result is that state education agencies are being asked to serve increasingly diverse groups of students with limited resources. Meanwhile, technological advances in data collection, analysis, and storage have created tremendous potential for data-driven policymaking across many sectors. Finally, the higher education institutions who have improved the most in recent years have done so through a concerted focus on student data, strongly suggesting that states can and should improve results by tapping robust, comprehensive data. (For a detailed overview of how institutions and other stakeholders can use data to evaluate and improve student performance, efficient allocation of resources, and equitable outcomes for historically underserved students, please see IHEP’s 2016 reports *Toward Convergence: A Technical Guide for the Postsecondary Metrics Framework*, and *Leading with Data: How Senior Institution and System Leaders Use Postsecondary Data to Promote Student Success*.)

EFFECTIVE DATA USE CAN TRANSFORM POLICIES AND PRACTICES TO BETTER SERVE STUDENTS WHOSE OPPORTUNITIES TO PURSUE AND SUCCEED IN HIGHER EDUCATION HAVE HISTORICALLY BEEN LIMITED.

States’ data collection and use has improved markedly, providing opportunities to drive data-informed policymaking, allowing decision-makers access to information on pressing questions about postsecondary enrollment, success, and whether students are being equitably served by the postsecondary institutions in their state. At the same time, however, many still face challenges: inadequate resources allocated to data systems and analysis, technical and cultural barriers to data-matching and sharing, and legal and regulatory compliance barriers that inhibit analysis and use of particular types of student data.

State Postsecondary Data experts have unparalleled first-hand knowledge of these limitations, and the experiences and knowledge they hold are critical in efforts to address these remaining challenges. Therefore, to better understand the experiences of state agency staff, IHEP convened a group of these data experts to identify their biggest barriers to successful collection and use of data.

This report provides an in-depth overview of what these participants believe is needed to improve the usability of student data at the state level. While the challenges any particular state faces depend on its context, including progress in developing, implementing, and using data, common themes and common barriers emerge across states. These include financial and other resource limitations, difficulty matching and sharing data both across agencies and with other states, and unclear or restrictive legal and regulatory compliance frameworks.

Based on these conversations, we built a tool with proposed solutions to states’ challenges: The Framework for State Postsecondary Data Solutions. The Framework classifies three categories of barriers (Resource

Allocation, Cross-Agency and Cross-State Data-Sharing and Matching, and Legal and Regulatory Compliance) and three categories of solutions (Federal Solutions, State/Regional Solutions, and Messaging and Advocacy Solutions). Together, they show how states can make change outside their borders through federal policy, within the state through state policy changes and regional partnerships with other states, and, in both settings, by building relationships and crafting advocacy strategies rooted in messaging the value of data.

Each category's challenges are described in depth and matched with recommendations that clarify how solutions can be applied on the ground. While the recommendations are presented as a list of strategies state education agencies or policymakers can draw on to promote better Postsecondary Data use, these are not mutually exclusive strategies, and in most cases, by tackling multiple strategies simultaneously states will maximize their odds of effecting change.

IN THE FRAMEWORK, THE CATEGORIES OF CHALLENGES ARE:



Resource Allocation: Limits in resources, including financial support, the numbers and technical skills of agency staff, technological capacity, and other resources all create key barriers to effective state data use.



Cross-Agency and Cross-State Data-Sharing and Matching: State agencies get a fragmented picture of how students fare as they progress through their education and into the workforce both because of technical issues related to data-sharing and matching processes, such as incompatible data identifiers that inhibit combining data, and because of organizational cultures that do not prioritize the integration of information across agencies or across state lines.



Legal and Regulatory Compliance: Many of these barriers have been the result of laws and regulations primarily intended to promote the essential need for student data privacy and security. In some cases, state laws were so restrictive that they entirely prevented states from using their data, while in others a lack of clear guidance about permissible uses of data under federal laws left some state agency staff reluctant to use certain types of data to inform policy or to communicate with students.

IN THE FRAMEWORK, THE CATEGORIES OF SOLUTIONS ARE:



Federal: State education agencies can collaborate with federal partners or programs to ease challenges related to accessing employment and earnings data, while at the same time advocating for a comprehensive federal solution to state data challenges to be designed and implemented. States can also turn to federal sources for financial support in grant programs targeted at developing education data systems and use at the state level.



State and Regional: State education agencies can pursue policy change within their jurisdictions. To leverage all available data within the state, education agencies can build relationships with other state agencies to facilitate secure data-sharing practices. State data experts also can work with state legislators to allocate necessary funds for development and use of data systems, and promote strong data governance, data use, and data privacy. Finally, states can develop and participate in regional partnerships, working with peers in other states to share data across state lines.



Messaging and Advocacy: This category of solutions—winning essential support from other stakeholders—will advance the specific recommendations of the first two categories. Effective messaging and advocacy strategies enable state data experts to influence state education agencies, federal and state policymakers, and the public, creating buy-in, advancing solid solutions, and creating allies in the larger campaign for data-oriented policies and financial investments in postsecondary data systems. Data advocates can tap their own expertise in state postsecondary data policy to effectively express what's needed and why it's needed; to deliver compelling and consistent messages around the value of data and the importance of evidence-based decision making; and to build a culture of data use in their agencies, states, and across state lines.

The Framework in Action: State-Identified Challenges and Solutions

The Framework for State Postsecondary Data Solutions articulates the challenges facing state postsecondary data experts and, for each challenge, solutions for improving Postsecondary Data availability and use.

RESOURCE ALLOCATION

State education agencies need funding, sufficient numbers of skilled staff with access to ongoing training to carry out data analysis and evaluation, and information technology resources to protect and secure state Postsecondary Data systems and to analyze the data those systems hold. But available resources in each of these categories vary from state to state, with many states reporting shortages in capacity making it hard for staff to both complete required data-reporting activities and also conduct much-needed analysis and research to drive improvements in policy and practice. Education agency staff should work with state legislators and access federal grant programs to ensure the availability of sufficient resources. To make the case, and to build a culture that understands the value of data to strengthen policymaking, both essential to ensure that funding and other resources will be made available in future years, staff need to communicate the importance of data use and demonstrate the value of past investments.

CHALLENGES:

- **Insufficient financial resources:**
The financial investment in postsecondary data varies from state to state. To increase capacity, many state education agencies will need funding for some combination of additional staff, training, and system updates.
- **Competing data priorities:**
Reporting data to the state, to the system, or to external partnerships often consumes a significant amount of staff members' time, making it challenging to balance these required functions with the time needed to pursue a vigorous analysis and research agenda.
- **Limited staff capacity:**
Capacity barriers for state education research offices vary across states but include both the number of staff members in research offices and the skill levels of those professionals, resulting in limited capacity to analyze and explore existing data.
- **Limited Information Technology (IT) capacity:**
Similarly, technological capacity varies across states, as does the structure of data systems and the number of state agencies and post-secondary institutions reporting to the system.

POTENTIAL SOLUTIONS:

Resource allocation challenges identified by states are highly interrelated, whether the problem manifests in the form of lack of financial support, staff time, staff training, IT capacity, or other concerns. Many states reported that multiple resource limitations affected their work. Options for solutions include:

- **Federal: Support the creation of a student-level data network (SLDN):²**

A federal SLDN would share program-level outcome information with states based on data for all students who attended college in their state, even if those students transfer to an out-of-state institution or are employed in another state after they leave school. Developing a federal SLDN would provide a comprehensive, routinized solution to answering many state-level questions around student success, mobility, and post-college outcomes. Such a data network would allow states to focus data analysis efforts, allocating resources of money and time in other areas, including exploring new ways to interpret and analyze their data. Also, a federal SLDN could replace many of the current federal reporting requirements, allowing state education agencies to focus on research and analytic priorities. A federal SLDN would also help to solve problems with Cross-Agency and Cross-State Data-Sharing and Matching (see below).
- **Federal: Participate in the Federal Statewide Longitudinal Data System (SLDS) Grant Program:³**

Some states are limited in their funding, and therefore their capacity, to undertake the systemic changes needed to improve and maintain data systems. State education agencies in need of additional resources can apply for federal SLDS grants for financial assistance. Additionally, the federal government should continue to fund and expand SLDS grants to support state data systems' capacity and effectiveness. As the funding priorities used in the SLDS grants can greatly influence state-level goals, there is substantial potential here for federal grant-makers to focus on using data to promote equitable systems and outcomes for low-income students and students of color.
- **State: Adequately fund the development, maintenance, staffing, and use of state postsecondary data systems:**

While federal funding is available, states also have an obligation to financially support their postsecondary data systems to enable a better understanding of overall effectiveness, as well as a thoughtful examination of socioeconomic and racial inequities in the postsecondary system. Adequate state-level funding can support staff capacity by training staff, advancing privacy and security technologies, creating robust governance committees, and strengthening capacity in other areas. State legislators should provide this funding, and state agencies should advocate for reliable and adequate funding to meet their needs. Advocacy should include strategies to showcase the value from existing data systems and analysis, thereby highlighting the value of and return on past investments, and the importance of effective data use in advancing equity.
- **State: Drive an evidence-based culture that relies on and prioritizes data so that data-related tasks take priority when managing competing demands:**

Leadership that prioritizes the use of data will be more likely to support funding requests, provide adequate training and support to staff, and invest in IT support and capacity-building. If policy decisions rely on data and evidence, then policymakers will need to maintain robust data capabilities. State leaders—from the campus to the SHEEO to the Governor—should demand quality data to inform their policy decisions and should nurture evidence-based problem-solving centered around ensuring that effective and

affordable postsecondary opportunities are available for all students. State agency officials can encourage this culture shift by sharing their stories of effective data use, developing ways to share their messages in digestible formats with those around them, and building relationships with those who can influence change.

- **Messaging and Advocacy: Craft a compelling message around the value of data:**

Data advocates need talking points and resources to communicate with state agencies, policymakers, and the public to create buy-in for data-oriented policies and financial investments in postsecondary data systems. A data champion can cultivate relationships with key stakeholders and with partners in other agencies to develop and push for budget requests rooted in state-specific goals and needs. Compelling messages should include:

1. Examples of how the use of data has led to policy and practice changes that have benefited students and the community—and, in particular, how data use has shed light on the most effective ways to advance student success for low-income students and students of color;
2. Common talking points to reinforce messages on the need for funding, staff training, and IT capacity to persuade others to invest resources in strengthening Postsecondary Data systems;
3. A variety of advocacy techniques and communications vehicles, such as social media tools that provide direct access to policymakers, depending on the specific state context; and
4. Prepared responses, like talking points shared across teams and common counterarguments on any opposition that may emerge to funding state data systems.

COMMON DATA CHALLENGES

Resource Allocation

- Insufficient Financial Resources
- Limited Staff Capacity
- Competing Data Priorities
- Limited Information Technology Capacity

SOLUTION OPTIONS



FEDERAL

State education agencies and state policymakers should:

- Advocate for the creation of a federal student-level data network (SLDN) to ease burdens related to reporting requirements and minimize inconsistent, duplicative reporting, freeing up staff time and resources to focus on developing and implementing a robust research agenda.
- Participate in and advocate for strong federal funding for the State Longitudinal Data System (SLDS) Grant program to support staff recruitment, retention, and training, and IT capacity.



STATE

State policymakers and state education agency leaders should:

- Adequately fund the development, maintenance, staffing, and use of state Postsecondary Data systems.
- Drive an evidence-based culture that relies on and prioritizes data so that data-related tasks take priority when managing competing demands.



MESSAGING & ADVOCACY

State agencies and data users should craft a compelling message around the value of data by:

- Describing examples of how data use led to policy and practice changes that benefitted students, including increasing success for low-income students and students of color.
- Developing common talking points and standard responses to predictable criticisms about the need for funding, staff training, and IT capacity to persuade others to invest resources in strengthening Postsecondary Data systems.

CROSS-AGENCY AND CROSS-STATE DATA-SHARING AND MATCHING

Some of the most powerful and actionable analysis comes as the result of data-matching and data-sharing across state agencies and across state lines, because it can help state leaders and other funders understand how students progress through the education to workforce pipeline, even if those students work or attend college in a different state after leaving school. In particular, robust data drawing on multiple sources is needed to uncover inequities in postsecondary outcomes and identify educational practices that work best for low-income students and students of color. However, cross-agency and cross-state data sharing is difficult to achieve. Education agencies must develop personal relationships, legal agreements, technical capacity, privacy protections, and governance protocols to enable them to share data with other intra-state or interstate agencies. Even in cases where there is mutual interest in sharing data across agencies, technical barriers in the form of incongruent data systems can often pose additional barriers. In particular, state education agencies and institutions often draw on data on earnings from Unemployment Insurance (UI) records held by a workforce or labor agency in the same state. However, these matching agreements enable only a limited assessment of students' post-college outcomes—including employment and earnings—because of the inability to determine which students leave the state, and, when they do, what their education and employment outcomes are.

CHALLENGES:

- **Policy or legal barriers:**

Some states lack the policy mechanisms or enabling legislation to build data systems or data linkages. For example, California is the largest state without a comprehensive state education data system, although legislation has been proposed to create one.⁴ The state education agency in Maryland find challenge in obtaining data on teacher credentials or apprenticeships. In Alabama, institutions share aggregate financial aid data with the state education agency, but do not convey specifics on the share or dollar amount of aid coming from Pell Grants, need-based awards, or other state or institutional aid.

- **Logistical, process, or turf issues and coordination with other state authorities:**

Data processes and culture vary across states and state agencies, and these differences can slow the development of data-sharing agreements or memoranda of understanding. Personnel at agencies may interpret laws, regulations, and agency responsibilities differently, complicating data-sharing relationships and the development of data-sharing agreements. In addition, developing the proper data-sharing agreements and coordinating with other offices takes substantial time and initiative on the part of agency staff, especially in cases in which turf or jurisdiction becomes an issue.

- **Lack of common identifiers/crosswalks and incompatibility:**

Different state education and workforce agencies sometimes use different individual identifiers to link data—for instance, some agencies assign students unique ID numbers while others rely on social security numbers (SSNs). When these identifiers are unavailable or inconsistent, the matching process becomes more difficult. For example, while many K12 systems do not use SSNs to identify students, higher education systems and workforce systems often do, making longitudinal matching challenging.

- **Data quality concerns:**

When state education agencies leverage data from a variety of sources (e.g., public/private postsecondary institutions, Unemployment Insurance records, workforce training programs), the structure and quality of data can vary. Depending on the source, data may also be incomplete, posing significant challenges to linking and interpreting data.

POTENTIAL SOLUTIONS:

States' challenges in forming successful data-sharing agreements occur in part due to technical issues and in part due to bureaucratic or interpersonal hurdles. Many cross-agency and cross-state data-sharing challenges can be addressed by one or more of the following strategies:

- **Federal: Collaborate with the U.S. Census Bureau's Longitudinal Employer Household Dynamics (LEHD) Program:**⁵

The U.S. Census Bureau's LEHD program combines data from multiple sources on earnings and employment nationwide. The Census Bureau recently launched the Postsecondary Employment Outcomes (PSEO), which draws on LEHD data to provide states with aggregate earnings records for former students based on school, degree level, and field of study. Working with the Census Bureau requires a significant investment from staff of time and resources, but the result will be access to the highest quality earnings data currently available, and is particularly valuable for institutions with a high share of students who leave the state after they finish school.⁶

- **Federal: Leverage other earnings data from the State Wage Interchange System (SWIS):**⁷

In lieu of—or in addition to—working with the Census Bureau, state education agencies can leverage several tools designed to facilitate the sharing of earnings data between states. Through SWIS, state education agencies can opt-in to exchange quarterly earnings data with other participating states. Because SWIS was developed to help states meet performance reporting requirements for education and training providers that participate in any of the programs under the Workforce Innovation and Opportunity Act (WIOA), earnings and employment outcomes for students who attend institutions of higher education that are not WIOA participants are not included in the data exchange.⁸

- **Federal: Advocate for the reinstatement of the Federal Employment Data Exchange System (FEDES):**⁹

FEDES, whose funding from the Department of Labor Employment Training Administration expired in 2018, was another interchange that provided earnings data to states on students working in the federal government or the military.¹⁰ FEDES supplemented the data provided by SWIS, which is provided by other participating state governments and therefore does not capture outcomes for federal employees. Without the data made available by FEDES—which includes employment records on Federal civilians and the military—gaps will exist in earnings data available to states, even if they opt into SWIS. State education agencies should push to reinvigorate the FEDES program as a way to close gaps in outcomes data.

- **Federal: Support the creation of a federal student-level data network (SLDN):**

Developing a federal SLDN would leverage existing federal data consistently across states, eliminating the need for states to seek piecemeal data-matching solutions. Data from the SLDN would provide program- and institution-level outcome information to states, allowing them to measure completion and employment outcomes, even for students who move across state lines.

- **Regional: Participate in regional cross-state data-sharing agreements:**

Regional partnerships help to build connections for cross-agency and cross-state data linking. For example, the Western Interstate Commission for Higher Education's (WICHE's) Multistate Longitudinal Data Exchange (MLDE)¹¹ is used to answer questions about student success and mobility. The multi-state exchange makes it possible for

participating states to match data across numerous data systems and receive back enhanced datasets with information about their students' post-college outcomes even if those students leave the state after finishing school.¹² MLDE is open to non-WICHE states, and agencies that are not a part of WICHE's MLDE should explore joining or identify other opportunities to engage in cross-state data-sharing agreements at the regional level.

- **State: Enact legislation that enables and promotes data systems, data matching, and data use:**

State leaders should drive an evidence-based culture that supports safe and secure data-use practices through legislation that is heavily informed by data users and state agencies. As part of this process, states should push for the adoption of common data definitions¹³—including common identifiers that can enable data-matching—across systems and states to enhance the quality and consistency of data and streamline data matching.

- **State: Collaborate with other state education agencies to learn about approaches to coordinating data sharing agreements and creating common identifiers that transfer across the P20W system:**

Data cannot be matched across agencies or states without some form of common identifier, so agencies must collaborate to build a matching mechanism. Also, agencies and states can learn useful lessons from each other about how to navigate data-sharing challenges. To assist in building partnerships, state data users can engage with groups such as IHEP's Postsecondary Data Collaborative¹⁴ or SHEEO's Communities of Practice.¹⁵ Building partnerships will enable them to meet others facing similar technical challenges or those who have successfully addressed a specific data-sharing barrier. They also can reach out to the Department of Education's SLDS State Support Team for technical support and best practices in building common identifiers, regardless of whether the state has a current SLDS grant. State education agencies that have found success should share their experiences to assist data partners in similar roles.

- **Messaging and Advocacy: Build personal relationships with data experts in other agencies to develop trust, goodwill, and shared goals.**

Relationship building and collaboration is an integral part of the logistical process for creating data-sharing agreements. Multiple stakeholders often must approve each specific data-sharing agreement, so individuals must trust each other. In addition, building common data definitions and employing common identifiers require active collaboration and compromise across agencies that hold data. Also, multiple stakeholders—such as education agencies and workforce agencies—often benefit from data-sharing, so strengthening personal relationships in pursuit of these agreements can widen the field of data champions and advocates in the state. Data experts during IHEP's convening shared the positive impact of building relationships both within the state and across states.

COMMON DATA CHALLENGES

Cross-Agency and Cross-State Data-Sharing and Matching

- Logistical or process issues and coordination
- Policy or legal barriers
- Lack of common identifiers/crosswalks
- Data quality issues

SOLUTION OPTIONS



FEDERAL

State education agencies and policymakers should:

- Collaborate with the U.S. Census Bureau's Longitudinal Employer Household Dynamics (LEHD) Program to access wage record data for students not included in the state's Unemployment Insurance wage records.
- Participate in the State Wage Interchange System (SWIS)¹⁶, which provides a mechanism for states to query wage records from other states to meet specific program reporting requirements, and advocate for the reinstatement of the Federal Employment Data Exchange System (FEDES) to provide access to wage record data for federal employees.
- Support the creation of a federal SLDN to leverage existing federal data consistently across states, eliminating the need for states to seek piecemeal data-matching solutions in order to measure completion and employment outcomes for students who move across state lines.



REGIONAL & STATE

State education agencies should:

- Seek regional partnerships and participate in cross-state data-sharing agreements in lieu of access to federal data. These partnerships, like the Western Interstate Commission for Higher Education's (WICHE) Multistate Longitudinal Data Exchange (MLDE), allow states to obtain data on students who leave the state.
- Enact legislation that enables and promotes data systems, data matching, and data use. Adopting common data definitions and metrics will also minimize data quality issues, while standard data definitions will help ensure that data are comparable enough to be matched across institutions, agencies, and states.
- Collaborate with other state education agencies to learn about approaches to coordinating data-sharing agreements and creating common identifiers that transfer across the P20W system. Those who have found success in data-sharing should share their experiences and use case examples.



MESSAGING & ADVOCACY

State education agencies and data users should craft a compelling message around the value of data and build public trust by:

- Build personal relationships with data experts in other agencies to develop trust, goodwill, and shared goals.

LEGAL AND REGULATORY COMPLIANCE BARRIERS TO USING STUDENT DATA

The design of any data system must make student privacy and data security a priority while valuing the use of quality data to build evidence. For many states, however, misconceptions about federal privacy and security laws and unclear guidance and regulations can stall data use. In other cases, lack of clear guidance on permissible uses of data, or public misconceptions about data privacy practices can limit the ways state agencies are able to use the data they hold. Ultimately, these limitations can impede the development of evidence-based policy to drive student success.

CHALLENGES:

- **Confusion about the Family Educational Rights and Privacy Act (FERPA):**
Interpretations of permissible data use under FERPA vary. Some state education agencies share data effectively within FERPA's confines, while other state education agencies' interpretations of this federal privacy law are overly restrictive. For example, state education agencies might interpret FERPA to go beyond personally identifiable information (PII) and prevent sharing of aggregate data for evaluation purposes.¹⁷ State leaders must comply with FERPA, and other privacy and security laws, and should proactively take additional steps to ensure privacy and security of the data they possess.¹⁸ However, it is also important that they do so in ways that allow for the insights and understanding that can be gained from the linking of student data.
- **Lack of clarity about financial aid and Free Application for Federal Student Aid (FAFSA) data use:**
The ability of states and institutions to use FAFSA data for applied research has also been called into question.¹⁹ The variety of interpretations of the Higher Education Act (HEA) Section 483 on permissible uses of financial aid data—particularly the Privacy Technical Assistance Center's (PTAC) 2017 guidance for researchers and the National Association of Student Financial Aid Administrators' (NASFAA) interpretation of it²⁰—affects how some state education agencies are leveraging and incorporating financial aid information into their systems and analyses. Some interpreted PTAC's 2017 guidance to restrict data-sharing of student financial aid with outside entities, including researchers and private scholarship providers.²¹ In 2018, Congress passed an appropriations rider to clarify data-sharing with private scholarship providers as a permissible use, but sharing remains under question for research purposes.²²
- **Unintended consequences of state privacy and security legislation:**
In some cases, state policymakers have enacted legislation that further restricts how state agencies can use data, often in the name of protecting student privacy. Louisiana's Act 837, for example, prohibited schools and districts from sending personally identifiable information about students to any private or public entities, including the Louisiana State Department of Education.²³ The law inadvertently complicated routine data-sharing for college students. For example, high schools were no longer able to automatically share student transcript data for students applying for state financial aid and college admission. While ensuring privacy and security are critical, doing so in ways that allow states to use data should be a priority.²⁴

- **Public skepticism of data use:**

If the general public or policymakers do not trust state agencies to protect their data and use it in appropriate ways, then they may call for greater—and sometimes extreme—restrictions on access to data and use of data. Communicating the value of data and the strengths of existing privacy protections can be difficult due to the complexity of the technology and legal and regulatory frameworks involved, but it is essential to build and maintain public trust on this issue.

POTENTIAL SOLUTIONS:

States must address these privacy and security challenges so they can use data as effectively as possible while also protecting student information and securing student data. The following strategies would enhance the use of data by the appropriate people for appropriate purposes:

- **Federal: Communicate clear, consistent guidance or technical assistance on appropriate use of financial aid data:**

The Association of Public and Land-grant Universities (APLU) and the Association for Institutional Research (AIR) issued a comment letter to the U.S. Department of Education (ED) providing recommendations to address the troublesome consequences from the 2017 PTAC guidance. This letter recommended that ED reaffirm that financial-aid data can be used for state and federal reporting through a new federal guidance letter, a “Notice of Proposed Policy Guidance” along with a request for public comment in the Federal Register, or an official interpretation that references previous guidance related to the Privacy Act.²⁵ Ensuring student data is protected and secured is a top priority for those who report, collect, or aggregate student data, and clear guidelines allow them to safeguard data appropriately.

- **State: Design legislation to promote data use and protect students:**

The creation of state legislation is one way to encourage data transparency, by authorizing the creation and implementation of state data systems and mandating well-designed student data privacy protections. Kentucky, for example, established the Kentucky Longitudinal Data System through state legislation in KRS 151B.132, to collect education and workforce data, to determine clear ownership of data, and to set funding for the system.²⁶ Other states, like Georgia and Utah, have passed proactive, favorable education data legislation that establishes student privacy protections while encouraging data collection and use.²⁷ While state legislators are ultimately responsible for legislation, state education agencies can influence legislation by building relationships with legislators and educating them, sharing their data stories and providing insights into how legislative and funding proposals impact the agencies’ work.

- **State: Collaborate with other peer states to learn from one another about approaches to common data challenges:**

Leveraging the experience of other state education agencies can be helpful to learn how FERPA guidelines are interpreted state-to-state and to inform future legislation, policy, and practices. To assist in building partnerships, state data users can engage with groups such as IHEP’s Postsecondary Data Collaborative²⁸ or SHEEO’s Communities of Practice.²⁹

- **Messaging and Advocacy: Craft a compelling message around the value of data and build public trust:**

Data stewards, users, and researchers need to make a clear case to students, policymakers, and the public about why data access is crucial. Because effective data policy relies upon trust, these stakeholders must build policymakers' and the public's understanding of privacy and security protocols and explain how data will and will not be used. Data stewards and data advocates share a unique role in making the case for data by creating talking points, sharing information, and educating stakeholders. They can share details about the value of data and the specific ways that the agency is safeguarding student data, including data governance protocols and the screening and training of staff. For example, state data leaders can use the "Five Safes" framework to implement and communicate clearly about strong privacy protocols for safe projects, safe people, safe settings, safe data, and safe outputs. For more information on the "Five Safes," see IHEP's 2019 report *Postsecondary Data Infrastructure: What's Possible Today?*

COMMON DATA CHALLENGES

Legal and Regulatory Compliance

- Confusion about FERPA
- Unintended consequences of state privacy and security legislation
- Lack of clarity on FAFSA data access
- Public skepticism of data use

SOLUTION OPTIONS



FEDERAL

State education agencies and policymakers should:

- Push for clear guidance from the U.S. Department of Education (ED) on the appropriate use of financial aid data for research and reporting purposes that both promotes data use and protects students.
- Seek support from ED in learning about privacy and security best practices, including legal interpretations that protect student privacy while ensuring that data can be used to promote student success and equity in higher education.



STATE

State education agencies and policymakers should:

- Design legislation and regulations that both promote data use and protect students.
- Collaborate with peer states to learn from one another about approaches to interpreting privacy and security laws, like FERPA.



MESSAGING & ADVOCACY

State education agencies and data users should craft a compelling message around the value of data and build public trust by:

- Making a compelling case to policymakers and the public about why data is needed, how it is used, and what safeguards are in place.
- Use the “Five Safes” framework to implement and communicate clearly about strong privacy protocols for safe projects, safe people, safe settings, safe data, and safe outputs.

Conclusion

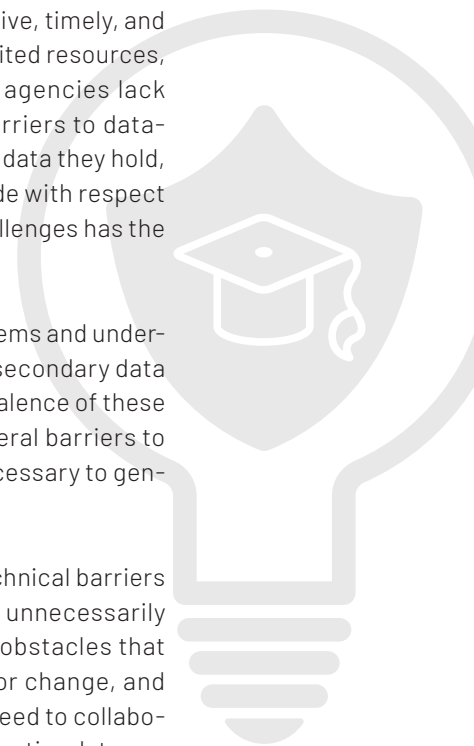
Today more than ever, data-informed decisions can lead to a more inclusive, efficient, and equitable higher education environment that centers on student success.

States have a responsibility to create an effective higher education experience for all students, especially low-income students and students of color who have been too often left behind and underserved by our higher education system. The policies and practices that will promote access, increase persistence, and improve employment and earnings prospects for low-income students and students of color can be identified through a robust and well-implemented research framework.

But doing so will be considerably more difficult if states lack the comprehensive, timely, and accurate data needed to understand their current performance, prioritize limited resources, and identify the areas where they must improve. When state education agencies lack resources for data support, struggle with technical and organizational barriers to data-matching and sharing, and face legal and regulatory restrictions on using the data they hold, informed decision-making cannot occur. Substantial progress has been made with respect to state's Postsecondary Data capacity, and addressing these remaining challenges has the potential to improve student performance and increase educational equity.

State data experts have considerable real-world experience using these systems and understand the nature and pervasiveness of the remaining limitations in the postsecondary data space. Because state data experts understand intimately the scope and prevalence of these challenges, they are exactly the voices we need to overcome state and federal barriers to better postsecondary data use, and to build the culture and relationships necessary to generate support from other stakeholders.

The problems identified here—resource limitations and allocation issues, technical barriers and a resistance to sharing data, and legal and regulatory frameworks that unnecessarily inhibit data use—can be addressed if state education leaders identify the obstacles that matter most in their state, evaluate the most powerful levers they have for change, and embark on a comprehensive strategy for improvement. They can expect to need to collaborate, persuade, listen to others, and create allies in the campaign for more effective data use with their own state legislators, with education and workforce leaders in other states, and with partners at the federal level. This report provides a foundation for that work.



Appendix

The Framework for State Postsecondary Data Solutions

Common Data Challenges	Solution Options
Resource Allocation	
<ul style="list-style-type: none"> • Insufficient financial resources • Competing data priorities • Limited staff capacity • Limited Information Technology capacity 	<ul style="list-style-type: none"> • Federal: State education agencies and policymakers should: <ul style="list-style-type: none"> ○ Advocate for the creation of a federal student-level data network (SLDN) to ease burdens related to reporting requirements and minimize inconsistent, duplicative reporting, freeing up staff time and resources to focus on developing and implementing a robust research agenda. ○ Participate in and advocate for strong federal funding for the State Longitudinal Data System (SLDS) Grant program to support staff recruitment, retention, and training, and IT capacity. • State: State policymakers and state education agency leaders should: <ul style="list-style-type: none"> ○ Adequately fund the development, maintenance, staffing, and use of state postsecondary data systems. ○ Drive an evidence-based culture that relies on and prioritizes data so that data-related tasks take priority when managing competing demands. • Messaging and Advocacy: State agencies and other stakeholders should craft a compelling message around the value of data by: <ul style="list-style-type: none"> ○ Describing examples of how data use led to policy and practice changes that benefitted students, including increasing success for low-income students and students of color. ○ Developing common talking points and standard responses to predictable criticisms about the need for funding, staff training, and IT capacity to persuade others to invest resources in strengthening postsecondary data systems.
Cross-Agency and Cross-State Data-Sharing and Matching	
<ul style="list-style-type: none"> • Policy or legal barriers • Logistical or process issues and coordination • Lack of common identifiers/crosswalks • Data quality issues 	<ul style="list-style-type: none"> • Federal: State education agencies and policymakers should: <ul style="list-style-type: none"> ○ Collaborate with the U.S. Census Bureau’s Longitudinal Employer Household Dynamics (LEHD) Program to access wage record data for students not included in the state’s Unemployment Insurance wage records. ○ Participate in the State Wage Interchange System (SWIS),³⁰ which provides a mechanism for states to query wage records from other states to meet specific program reporting requirements, and advocate for the reinstatement of the Federal Employment Data Exchange System (FEDES) to provide access to wage record data for federal employees. ○ Support the creation of a federal SLDN to leverage existing federal data consistently across states, eliminating the need for states to seek piecemeal data-matching solutions in order to measure completion and employment outcomes for students who move across state lines. • Regional: State education agencies should: <ul style="list-style-type: none"> ○ Seek regional partnerships and participate in cross-state data-sharing agreements in lieu of access to federal data. These partnerships, like the Western Interstate Commission for Higher Education’s (WICHE) Multistate Longitudinal Data Exchange (MLDE), allow states to obtain data on students who leave the state. • State: State education agencies should: <ul style="list-style-type: none"> ○ Enact legislation that enables and promotes data systems, data matching, and data use. Adopting common data definitions and metrics will also minimize data quality issues, while standard data definitions will help ensure that data are comparable enough to be matched across institutions, agencies, and states.

Cross-Agency and Cross-State Data-Sharing and Matching cont'd

	<ul style="list-style-type: none"> ○ Collaborate with other state education agencies to learn about approaches to coordinating data-sharing agreements and creating common identifiers that transfer across the P20W system. Those who have found success in data-sharing should share their experiences and use case examples. • Messaging and Advocacy: State education agencies and data users should craft a compelling message around the value of data and build public trust by: <ul style="list-style-type: none"> ○ Build personal relationships with data experts in other agencies to develop trust, goodwill, and shared goals.
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Legal and Regulatory Compliance

<ul style="list-style-type: none"> • Confusion about FERPA • Lack of clarity on FAFSA data access • Unintended consequences of state privacy and security legislation • Public skepticism of data use 	<ul style="list-style-type: none"> • Federal: State education agencies and policymakers should: <ul style="list-style-type: none"> ○ Push for clear guidance from the U.S. Department of Education (ED) on the appropriate use of financial aid data for research and reporting purposes that both promotes data use and protects students. ○ Seek support from ED in learning about privacy and security best practices, including legal interpretations that protect student privacy while ensuring that data can be used to promote student success and equity in higher education. • State: State education agencies and policymakers should: <ul style="list-style-type: none"> ○ Design legislation and regulations that both promote data use and protect students. ○ Collaborate with peer states to learn from one another about approaches to interpreting privacy and security laws, like FERPA. • Messaging and Advocacy: State education agencies and data users should craft a compelling message around the value of data and build public trust by: <ul style="list-style-type: none"> ○ Making a compelling case to policymakers and the public about why data is needed, how it is used, and what safeguards are in place. ○ Use the “Five Safes” framework to implement and communicate clearly about strong privacy protocols for safe projects, safe people, safe settings, safe data, and safe outputs.
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