



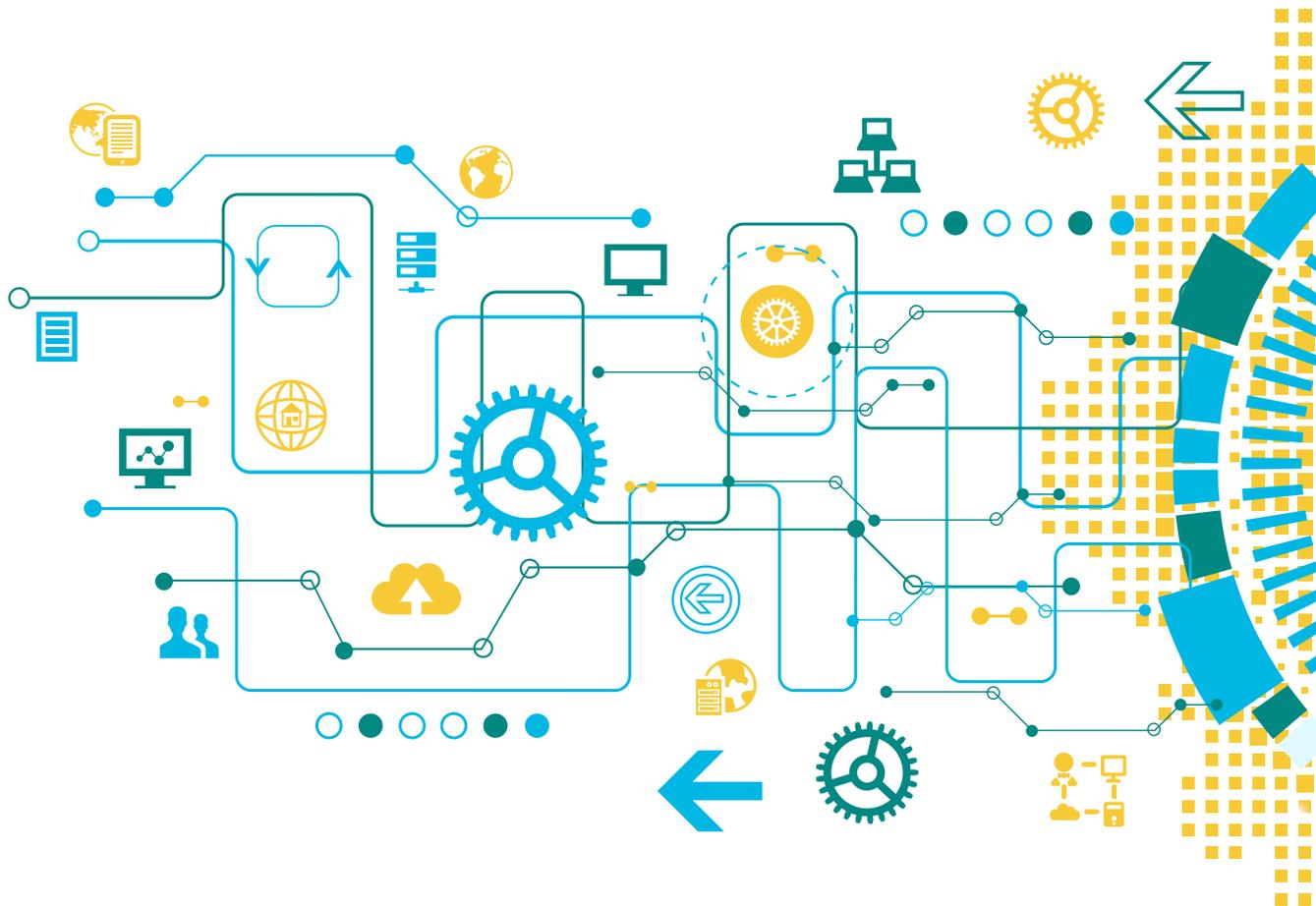
SHEEO

STATE HIGHER EDUCATION EXECUTIVE OFFICERS ASSOCIATION

THE STATE OF STATE POSTSECONDARY DATA SYSTEMS

STRONG FOUNDATIONS 2018

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EXECUTIVE SUMMARY

Since 2010, the State Higher Education Executive Officers Association (SHEEO) has periodically administered the *Strong Foundations* survey, which documents the content, structure, and effective use of state postsecondary student unit record systems (PSURs). This report highlights the results of the fourth administration of the survey, conducted in 2018.

PSURs exist in an increasingly complex postsecondary data environment, one in which the interplay between state, federal, and institutional data collections and policy contexts continues to evolve. Over the past decade, PSURs have been greatly influenced by increased linkages between different sources of administrative data and by the proliferation of state educational attainment goals. The evolving context notwithstanding, PSURs remain vital information resources necessary for states to analyze, understand, and improve their systems of postsecondary education.

This report includes:

- A description of the status of postsecondary data systems,
- An analysis of which educational sectors are covered by these systems,
- Detailed information about demographic and financial aid data elements contained in PSURs,
- An analysis of states' abilities to calculate performance metrics,
- A description of the growing prevalence of linkages between PSURs and other administrative data sets,
- An analysis of privacy and security practices, and
- A discussion of the effective use of PSURs and their chief value to states.

This year's report highlights new information regarding the types of information states collect from various educational sectors (two-year, four-year, public, and private). Previous iterations of the *Strong Foundations* survey indicated whether states collected information from these sectors, but did not attempt to discern which data elements were included.

The 2016 version of this report sought to determine, based on the presence of data elements within PSURs, states' abilities to calculate key performance metrics. The 2018 report includes states' self-assessments of their ability to calculate metrics regarding access, progression, completion, cost, and post-collegiate outcomes.

The report includes a detailed discussion of the pervasiveness of PSURs' use of benchmark privacy and security practices. These include privacy and security processes (i.e., data governance and physical security), standards (FERPA, state statute, etc.), and practices (destroying data, employee training).

The report concludes with **recommendations** for policymakers:

- **Advocate for resources:** Policymakers contribute to the sustainability and optimization of these systems when they prioritize resources to provide technical assistance and professional development for researchers and analysts, and to ensure that research staffs are of a sufficient size to perform both compliance activities and research on policy issues. Policymakers should advocate for PSURs in budget requests and prioritize within agency budgets.
- **Widely disseminate information generated from PSURs:** States and systems gain efficiencies and promote the democratization of higher education data by developing public data resources. Multiple public data resources should address the varying needs of different audiences (i.e., institutions, legislators, and consumers).
- **Foster collaborative relationships with other stakeholders:** Many of the barriers to effective use of PSURs may be alleviated by developing collaborative approaches to data governance. When administrative data is linked across multiple agencies in a state, all involved entities should have a voice in data governance decisions.
- **Benefit from the experience of other states:** Policymakers should promote opportunities for researchers, data practitioners, and policy analysts to work together on common issues with PSURs.
- **Fully adopt benchmark privacy and security practices:** Benchmark privacy and security processes, standards, and practices should be universally adopted by agencies that house PSURs. States may consider codifying privacy and security practices through legislation to ensure compliance.
- **Find ways to integrate independent institutions:** PSURs that do not include independent institutions provide an incomplete picture of a state's higher education environment. While barriers to integration exist, states that seek to clearly define data collection and usage expectations, find innovative methods to support institutions, and directly address governance issues will stand to accrue significant benefits.
- **Strengthen collection and reporting of student finance:** There is rapidly growing interest in information regarding student debt and loan repayment. State agencies should publicly acknowledge if gaps in student financial indicators currently exist in their PSURs and develop a plan to collect and report currently missing information.

INTRODUCTION

Since 2010, the State Higher Education Executive Officers Association (SHEEO) has periodically administered the *Strong Foundations* survey, which documents the content, structure, and effective use of state postsecondary student unit record systems (PSURs). This report highlights the results of the fourth administration of the survey, conducted in 2018. For a list of survey questions, see *Appendix A*. The 2018 version of the survey collected information from 58 agencies in 49 states. For a list of respondents, see *Appendix B*.

Before administering the 2018 *Strong Foundations* survey, SHEEO formed an advisory board of survey respondents and postsecondary data experts to suggest improvements over previous iterations. Several significant improvements were made for the 2018 version of the study:

- Detailed questions about privacy and security practices were added. Previous iterations of the survey asked respondents to describe their security practices in general terms; the current version allows us to document the prevalence of benchmark practices.
- Respondents completed a matrix indicating which data elements were collected by institutional sector. Earlier versions of the survey indicated whether states collected information from two-year, four-year, and private institutions, but not which data elements were included.
- More community college systems were included. Community and technical college systems in many states maintain large, statewide, student unit record systems. Ten such systems responded to the current survey.
- Eliminated questions about “warehouse” versus “federated” data-sharing models. Previous *Strong Foundations* surveys and reports attempted to measure the relative prevalence of models that store data centrally (files from multiple agencies are permanently housed in one location) or via federated model (temporary custom data marts are created from individual agency files). Recently, this distinction has become less meaningful, as many PSURs use a combination of methods to link data.

PSURs exist in an increasingly complex postsecondary data environment, one in which the interplay between state, federal, and institutional data collections and policy contexts continues to evolve.¹ The earliest PSURs were founded in the 1970s and '80s, mainly to distribute formula funding to institutions or for measuring compliance with federal civil rights mandates. PSURs began to be widely used to measure student success metrics beginning in the 1990s with the advent of the federal Student Right to Know Act.² Questions about the value of higher education, arising out of the Great Recession, led many states to link their PSURs to other administrative data systems within their states. This process was significantly accelerated by federal funding for

1. For a useful synopsis of the interaction between multiple levels of data policy, see Cubarrubia, A., & Perry, P. (2016). *Creating a thriving postsecondary data ecosystem*. Institute for Higher Education Policy (IHEP). Retrieved from http://www.ihep.org/sites/default/files/uploads/postsecdata/docs/resources/postsecondary_education_data_ecosystem.pdf

2. Ewell, P., Schild, P., & Paulson, K. (2003). *Following the mobile student: Can we develop the capacity for a comprehensive database to assess student progression?* Lumina Foundation. Retrieved from <https://www.luminafoundation.org/files/publications/researchreports/NCHEMS.pdf>

state longitudinal data systems.³ Since 2009, a large majority of states have adopted attainment goals that seek to increase the proportion of adults with postsecondary credentials. PSURs play a central role in developing and measuring progress toward those goals.

More recently, voluntary associations and foundations with a desire to link data systems beyond state borders have helped shape the context within which PSURs operate. The Western Interstate Commission for Higher Education's Multi-State Longitudinal Exchange provides a model for, and demonstrates the inherent challenges in, linking administrative data among multiple states.⁴ A pilot project by the U.S. Census Bureau and The University of Texas System offers systems and states the possibility of measuring employment outcomes in all fifty states.⁵ An important emerging example is the Postsecondary Data Partnership, funded by the Bill & Melinda Gates Foundation (BMGF) and Lumina Foundation, which seeks to develop a national data system that collects information necessary to calculate measures in the "Postsecondary Metrics Framework" using data from state systems and institutions submitted to the National Student Clearinghouse.⁶

This evolving context notwithstanding, PSURs remain vital information resources necessary for states to analyze and improve their systems of postsecondary education. "Since [PSURs] were developed, demand for accurate data has increased and the questions asked of these data have become more complex."⁷ It is important to note that policymakers and researchers who operate PSURs within an atmosphere of heightened expectations often do so with constrained resources. In both 2016 and 2018 versions of the *Strong Foundations* survey, respondents cited a lack of resources as a significant barrier to the effective use of PSURs.

In 2017, SHEEO launched its Communities of Practice project to provide a forum for states to respond to this challenging environment, and to work on solutions to common issues with their data systems. This work, funded by the BMGF, is closely related to and builds upon the *Strong Foundations* work. The core of the project is a series of Communities of Practice convenings, begun in November 2017, that bring together teams from multiple states and national postsecondary data experts to share information, workshop solutions, and aid practitioners in other states. Themes for the Communities of Practice include:

- Improving access to state postsecondary data systems (November 2017);
- Integrating independent colleges and universities into state data systems (March 2018);

-
3. Garcia, T., & L'Orange, H. (2012). *Strong foundations: The state of postsecondary data systems: 2012 Update on data sharing with K-12 and labor*. SHEEO. Retrieved from http://postsecondarydata.sheeo.org/wp-content/uploads/2018/05/SHEEO_StrongFoundations2012_Final.pdf
 4. Prescott, B., & Lane, P. (2016). *Fostering state-to-state data exchanges*. IHEP. Retrieved from <https://www.wiche.edu/files/info/Fostering%20State-to-State%20Data%20Exchanges.pdf>
 5. The Colorado Department of Higher Education will be the second recipient of matched data. See Foote, A. (September 4, 2018). *New national earnings data for graduates by institution and major*. U.S. Census Bureau. Retrieved from <https://www.census.gov/library/stories/2018/09/education-pilot.html>
 6. See Smith, A. (December 21, 2018). *Push for student-level data the feds don't collect*. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/news/2018/12/21/student-data-system-advocates-want-more-colleges-and-universities-join-them?width=775&height=500&iframe=true> For detailed information about the Postsecondary Metrics Framework, see Janice, A., & Voight, M. (2016). *Toward convergence: A technical guide for the postsecondary metrics framework*. IHEP. Retrieved from http://www.ihep.org/sites/default/files/uploads/docs/pubs/ihep_toward_convergence_0.pdf
 7. Armstrong, J., & Zaback, K. (2016). *Assessing and improving state postsecondary data systems*. IHEP. Retrieved from http://postsecondarydata.sheeo.org/wp-content/uploads/2018/05/state_postsecondary_data_systems.pdf

- Data modeling and visualization in support of state attainment goals (September 2018 and January 2019); and
- Developing guided pathways and financial aid metrics in state data systems (April 2019).

Findings from the Communities of Practice (and results from all versions of the *Strong Foundations* survey) are housed on SHEEO's State Postsecondary Data website (<http://postsecondarydata.sheeo.org>) and will be cited in this report when appropriate. The site also features blog posts and commentary from community members and provides reference material for state-level data practitioners.

CURRENT STATUS OF POSTSECONDARY DATA SYSTEMS

NUMBER AND SCOPE OF STUDENT UNIT RECORD SYSTEMS NATIONWIDE

Forty-nine states have one or more state- or system-level PSURs.⁸ For *Strong Foundations 2018*, SHEEO surveyed its membership and all respondents to previous iterations of the survey. In addition, SHEEO made a concerted effort to include more community and technical college systems in the latest administration. New respondents for 2018 were the Iowa Department of Education, the Iowa Board of Regents, the Michigan Community College Association, the Community College System of New Hampshire, and the Virginia Community College System. In all, 58 agencies in 49 states participated in the latest study. Multiple responses for a single state reflect the variation and complexity of state postsecondary governance and coordination and typically occur when separate state- or system-level PSURs have been established to serve the needs of different postsecondary education sectors. Iowa, Minnesota, New Hampshire, New York, North Carolina, Virginia, and Washington each had two respondents to the 2018 survey; California had three.

GENERAL USES FOR PSURSS

Nearly all PSURs are used to generate reports and statistics, and a significant majority support decision-making, research, and cross-sector collaboration. More than half of PSURs are used for each of the purposes included in the survey. Among those, PSURs are least likely to be used to provide consumer information for prospective students (see *Table 1*).

TABLE 1:
USES OF PSURSS⁹

	Number of Respondents	Percent
Generating reports and statistics	54	96%
Decision-making	51	91%
Research	51	91%
Cross-sector collaboration (with K-12, workforce, etc.)	50	89%
Policymaking	46	82%
External reporting	46	82%
Consumer information for prospective students	33	59%

The most common data elements collected in PSURs are those used to describe demographic characteristics (gender, race/ethnicity, and date of birth) and basic academic standing (degree-seeking status, degree awarded, full- or part-time enrollment). Almost all PSURs house these data elements. Detailed academic information (GPAs, course grades, instruction mode of courses) is less common but still held by a majority of PSURs. Relatively few PSURs collect information regarding net price, cumulative debt, or loan repayment status. See *Appendix C* for a full list of data elements by respondent.

8. Delaware is the only state that does not collect student unit record data at the state or system level, and is the only state that did not have a respondent for the 2018 administration of the *Strong Foundations* survey.

9. These figures do not include The City University of New York or the University of California system.

INSTITUTIONAL COVERAGE

Respondents to the *Strong Foundations* survey are state coordinating and governing boards for public postsecondary education, university systems, and community college systems; the data they hold is highly concentrated in the public sectors (see *Table 2*). Roughly one-third of respondents indicated they collect information from institutions in other sectors: 18 agencies collected information from independent (private, nonprofit) institutions, 12 from proprietary (private, for-profit) institutions, and three from tribal institutions. The reporting relationships between state agencies and private institutions can be artifacts of state licensing requirements tied to the ability to participate in state financial aid programs, or may result from cooperative relationships between organizations of independent institutions and the state.

TABLE 2:
PSURSS COVERAGE OF INSTITUTIONS¹⁰

State	Two-Year Public	Four-Year Public	Independent (Private, Nonprofit)	Proprietary (Private, For-Profit)	Tribal	Total Number of Institution Types
MN (MOHE), NM	●	●	●	●	●	5
CO, MA, MO, NJ, OH, SC, TN, TX	●	●	●	●		4
AL, AR, CT, KY, MD, OK, VA (SCHEV)	●	●	●			3
OR	●	●		●		3
IL		●	●	●		3
MN (MNST)	●	●			●	3
AZ, FL, HI, IA (BOR), ID, IN, KS, LA, MT, ND, NE, NH (DOE), NV, NY, RI, UT, VT, WA (SBCTC), WI, WV	●	●				2
CA (CCCO), IA (DOE), MI, NC (NCCCS), NH (NHCCS), PA, VA (VCCS), WY	●					1
AK, CA (CSU), GA, ME, MS, NC (UNC), SD, WA (OFM)		●				1

10. Throughout this report, the following acronyms will be used to distinguish agencies for those states with more than one respondent:

- BOR – Iowa Board of Regents
- CCCO – California Community College’s Chancellors Office
- CSU – California State University
- DOE – Iowa Department of Education / New Hampshire Department of Education
- MOHE – Minnesota Office of Higher Education
- MNST – Minnesota State
- NCCCS – North Carolina Community College System
- NHCCS – New Hampshire Community College System
- OFM – Washington Office of Financial Management
- SBCTC – Washington State Board of Community and Technical Colleges
- SCHEV – State Council of Higher Education for Virginia
- UNC – University of North Carolina
- VCCS – Virginia Community College System

While there are clear advantages for both parties (state agencies and private institutions) for integrating independent institutions in state PSURs, the number of states reporting their PSURs holds information from independent institutions has remained stable over each of the *Strong Foundations* administrations. In early 2018, SHEEO held a Communities of Practice convening during which teams from eight states discussed the opportunities presented by integrating independent institutions into PSURs, and potential barriers to doing so. Subsequently, SHEEO released a white paper summarizing key findings:¹¹

- States benefit from integrating independent institutions into PSURs in that they gain a more complete understanding of student “swirling” enrollment patterns, and a fuller understanding of the production of educational capital within a state and progress toward attainment goals.
- Independent institutions benefit from participating in state PSURs through improved information about student mobility, access to linked workforce and K-12 data, and a “seat at the higher education policy table.”
- To encourage integration, states and independent institutions and their associations should address potential privacy and legal concerns, and consider providing technical assistance to less well-resourced independent institutions.

A key improvement for *Strong Foundations 2018* was the addition of more detail about the data elements states collect by institutional sector. In earlier iterations, states indicated whether they collected information from two-year, four-year, and private institutions, but not which data elements were included. In 2018, respondents were asked to complete a matrix indicating which data elements were collected by institutional sector. Thirteen of the 18 states that collect information from independent institutions completed the matrix. A subset of data elements included in the matrix shows significant state-by-state variation (see *Table 3*).

11. Mata, C., & Weeden, D. (2018). *Communities of practice: Integrating independent institutions in postsecondary data systems*, SHEEO. Retrieved from http://postsecondarydata.sheeo.org/wp-content/uploads/2018/06/COP_IntegratingIndependentInst_FINAL_June2018.pdf For information about the meeting, see “Integrating Independent Institutions in State Postsecondary Data Systems.” Retrieved from <http://postsecondarydata.sheeo.org/events/integrating-independent-institutions-in-state-postsecondary-data-systems/>

TABLE 3:
DIFFERENCES IN DATA ELEMENT COVERAGE BETWEEN
PUBLIC AND INDEPENDENT INSTITUTIONS

	Course grade	Cumulative credit hours earned	Cumulative GPA	Federal financial aid	State financial aid	Student credit hours attempted
Alabama	NEITHER	BOTH	BOTH	NEITHER	NEITHER	BOTH
Arkansas	PUBLIC ONLY	BOTH	BOTH	BOTH	BOTH	BOTH
Colorado	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY
Connecticut	BOTH	PUBLIC ONLY	PUBLIC ONLY	BOTH	BOTH	PUBLIC ONLY
Illinois	NEITHER	BOTH	BOTH	PUBLIC ONLY	PUBLIC ONLY	BOTH
Kentucky	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY
Maryland	NEITHER	BOTH	BOTH	BOTH	BOTH	BOTH
Minnesota MOHE	NEITHER	BOTH	NEITHER	NEITHER	NEITHER	BOTH
Missouri	NEITHER	PUBLIC ONLY	PUBLIC ONLY	NEITHER	BOTH	PUBLIC ONLY
New Jersey	NEITHER	BOTH	BOTH	NEITHER	NEITHER	BOTH
Oklahoma	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	BOTH
Oregon	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY
South Carolina	PUBLIC ONLY	BOTH	BOTH	BOTH	BOTH	PUBLIC ONLY
Tennessee	NEITHER	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY
Texas	PUBLIC ONLY	PUBLIC ONLY	PUBLIC ONLY	BOTH	BOTH	BOTH
Virginia SCHEV	BOTH	BOTH	NEITHER	BOTH	BOTH	BOTH

BOTH
 NEITHER
 PUBLIC ONLY

DEMOGRAPHIC DATA

One of the important advantages PSURs afford state policymakers is the ability to investigate how students with different demographic characteristics access and progress through higher education systems, allowing them to measure the efficacy of programs designed to aid underserved populations. In Tennessee, the outcomes-based funding formula assigns extra weight to completions by low-income and adult students.¹² Texas’s “60x30TX” strategic plan establishes specific completion targets for Hispanic and African American students.¹³ Minnesota’s ambitious attainment goal calls for 70 percent of Minnesotans, and all racial and ethnic groups, to attain a postsecondary credential by 2025.¹⁴ For detailed information about the demographic data collected by the state, see *Table 4*. Compared with responses to the 2016 administration of the survey, more agencies have expanded their PSURs to collect students’ Pell Grant recipient status. Respondents from Arizona, Massachusetts, Montana, New Jersey, Ohio, and Rhode Island indicated that they had access in 2018 to Pell status (a proxy for low-income status) in their PSURs, where these agencies indicated they did not have access in 2016. Also, more states can collect information on a student’s military status compared with 2016 survey results.

TABLE 4:
DEMOGRAPHIC DATA

State	Gender	Race / Ethnicity	Age	Military Status	Citizenship Status	Pell Status	Total Number of Demographic Elements
AZ, CA (CCCCO), CA (CSU), FL, GA, HI, IL, IN, ME, MO, MN (MNST), MT, NH (NCCCS), NY, OR, SD, TN, VA (VCCS), VT, WA (OFM), WA (SBCTC), WI, WV, WY	•	•	•	•	•	•	6
MN (MOHE)	•	•	•	•	•		5
IA (DOE), KS, KY, MA, MD, NC (UNC), NV, OH	•	•	•	•		•	5
AR, CT, ID, LA, MS, NC (NCCCS), OK, RI, UT, VA (SCHEV)	•	•	•		•	•	5
ND	•	•		•	•	•	5
IA (BOR), NJ, SC	•	•	•		•		4
CO, NM	•	•	•			•	4
AL	•	•			•		3
TX	•	•				•	3
NE, NH (DOE)	•	•					2

12. Obergfell, M. (July 25, 2018). Aligning state goals: Insights from Tennessee’s performance based funding rollout. [Web blog post]. *New America*. Retrieved from <https://www.newamerica.org/education-policy/edcentral/aligning-state-goals-insights-tennessees-performance-based-funding-rollout/>
13. 60x30TX: Texas Higher Education Strategic Plan, 2015-2030 (2015). Texas Higher Education Coordinating Board. Retrieved from <http://www.theccb.state.tx.us/reports/PDF/9306.PDF?CFID=57485581&CFTOKEN=60423954>
14. Minnesota Office of Higher Education. (2017). Educational Attainment Goal 2025. Retrieved from <https://www.ohe.state.mn.us/mPg.cfm?pageID=2187>

FINANCIAL AID DATA

Financial aid is an important policy lever for states seeking to improve access to their systems of higher education. Pell status is the most commonly collected financial aid data element, collected by 42 states. After Pell status, the most common financial aid indicator that states collected was the amount of state financial aid dispersed to the student. Respondents from 41 states indicated they collected state financial aid data. As the prevalence of these data elements suggests, state, federal, and institutional aid policies intersect in important ways. The recent proliferation of statewide promise programs offers an example. Many of these, such as those in Oklahoma, Oregon, and Tennessee, are last dollar programs which rely heavily on federal Pell funding.¹⁵ Significantly fewer states indicated they had access to information about students' dependency status or family income (see *Table 5*).

TABLE 5:
FINANCIAL AID DATA ELEMENTS¹⁶

State	Pell Status	State Financial Aid	Federal Financial Aid	Dependency Status	Family Income	Total Number of Financial Aid Elements
AZ, CO, GA, HI, IN, KY, MD, ME, MN (MNST), NC (UNC), ND, NH (NHCCS), NM, NV, NY, SD, TN, TX, UT, VA (SCHEV), VA (VCCS), VT, WA (SBCTC), WI, WY	●	●	●	●	●	5
CA (CCCCO), CA (CSU), FL, KS, MT, OK	●	●	●	●		4
MA, OH	●	●	●		●	4
MO	●	●		●	●	4
AR, CT, ID, IL, LA, MS, NC (NCCCS), OR, RI, WV	●	●	●			3
SC		●	●		●	3
IA (DOE), WA	●					1

15. Carlson, A., & Laderman, S. (2018). *The Power of a promise: Implications and importance of adult promise programs*. SHEEO. Retrieved from <http://sheeoorg.wpengine.com/wp-content/uploads/2019/02/Adult-Promise-White-Paper-The-Power-of-a-Promise-copy.pdf>

16. Agencies that do not appear in this table indicated they collect none of these financial aid elements.

CAPACITY TO CALCULATE METRICS

PSURs have transitioned from administrative data systems primarily designed to support funding formulas, to increasingly comprehensive unit record systems which allow policymakers and analysts to measure student progress and outcomes. The scope of metrics used to evidence the need for policy change, inform strategic agendas, and evaluate college performance has grown to encompass a wide range of data elements.

In *The State of Postsecondary Data Systems: Strong Foundations 2016*, the authors used the inventory of data elements generated via the *Strong Foundations* survey to determine which respondents appeared to have the capacity to calculate selected metrics.¹⁷ The measures included in the 2016 report were suggested by the metrics framework outlined in the BMGF's *Answering the Call*, which seeks to identify metrics with "demonstrated...validity and value...over time," and "to support the widespread adoption and use of [the identified] metrics."¹⁸ In the 2018 administration of the survey, SHEEO asked respondents directly about their capacity to calculate metrics associated with the framework.

Table 6 outlines the percentage of states able to calculate individual metrics. Perhaps not surprisingly, given the historical development of these systems, a large majority of respondents are able to calculate metrics related to students' enrollment patterns and academic progress. Eighty percent or more of respondents can calculate progression metrics such as credit accumulation, remedial course completion, and transfer rate. Fewer respondents can calculate cost and post-collegiate outcomes metrics; these typically require matching with other data systems or involve non-academic data elements. Approximately half of respondents indicated they could calculate the median wage of college completers (53 percent) or graduates' employment status (45 percent). Very few respondents indicated they had the capacity to report on former students' financial health. Only 30 percent of respondents can calculate cumulative debt, and a mere 5 percent reported the ability to determine the loan repayment status of graduates.

17. Armstrong, J., & Whitfield, C. (2016). *The state of state postsecondary data systems: Strong foundations 2016*. SHEEO. 52-3.

18. Engle, J. (2016). *Answering the call: Institutions and states lead the way toward better measures of postsecondary performance*. Bill & Melinda Gates Foundation. Retrieved from <https://postsecondary.gatesfoundation.org/wp-content/uploads/2016/02/AnsweringtheCall.pdf>

TABLE 6:
METRICS CAPACITY¹⁹

	Type of Metric	Number of Respondents	Percentage
Graduation rate	Completion	50	91%
Retention / persistence rate	Progression	50	91%
Time to credential	Completion	47	85%
Credit accumulation	Progression	47	85%
Remedial course completion	Progression	47	85%
Transfer rate	Completion	45	82%
Credits to credential	Completion	44	80%
Credit completion ratio (credits completed vs. attempted)	Progression	44	80%
Completion ratio (completions per FTE)	Progression	39	71%
Gateway course completion	Progression	35	64%
Median wage of completers	Post-college Outcomes	30	55%
Employment status	Post-college Outcomes	25	45%
Median wage of non-completers	Post-college Outcomes	22	40%
Net price	Cost	19	35%
Cumulative debt	Cost	17	31%
Loan repayment status	Post-college Outcomes	3	5%

LINKAGES

In a preponderance of states, the ability to analyze student progress and outcomes is significantly expanded by linking postsecondary education data with information from other state agencies. Since SHEEO began administering the *Strong Foundations* survey in 2010, linkages between agencies have expanded dramatically.

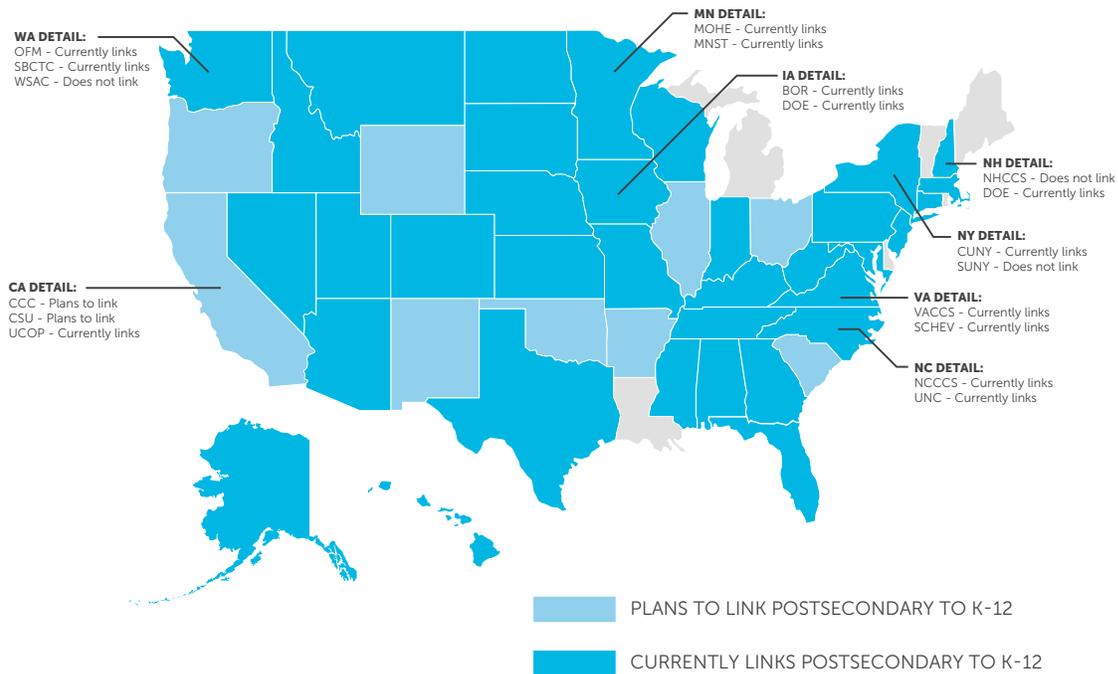
LINKAGES BETWEEN K-12 AND POSTSECONDARY DATA

Forty-seven agencies in 44 states link or plan to link postsecondary data to K-12 data (see *Figure 1*). Matching postsecondary and K-12 data allows researchers and policymakers to examine issues related to this key transition in the educational pipeline, including college-going rates by demographic category, the relationship between high school test scores and course-taking patterns and postsecondary remediation, and postsecondary success rates for individual high schools.

19. This table does not include information from the University of Alaska System, the City University of New York, and the University of California System.

FIGURE 1:
STATE LINKAGES BETWEEN K-12 AND POSTSECONDARY DATA, 2018²⁰

47 AGENCIES IN 44 STATES CURRENTLY LINK OR PLAN TO LINK POSTSECONDARY DATA TO K-12 DATA



The successive administrations of the *Strong Foundations* survey reveal an increase in states' ability to link K-12 and postsecondary data. Between 2010 and 2018, more than 20 states added or planned to add the capacity to link these data systems (see *Table 7*).

TABLE 7:
GROWTH IN K-12 LINKAGES

	Agencies Linking PS to K-12	States Linking PS to K-12
2010	23	15
2015	45	39
2018	47	44

20. UCOP refers to the University of California Office of the President.

Linked Data in Minnesota

The Minnesota P-20 Education Partnership administers and coordinates multiple agencies that contribute to the state's longitudinal data system (SLDS). The Minnesota Office of Higher Education (MOHE), the Department of Education, and the Department of Employment and Economic Development jointly manage the SLDS and contribute data.

On a public-facing website (sleds.mn.gov), a variety of metrics that describe the academic success of students after they leave high school are available via custom reports. ACT scores, college-going rates, remedial course enrollment, and college completions are among the available metrics. Each of these measures can be disaggregated at the school and district levels.

Information from this matched data also makes its way to policymakers. MOHE, in collaboration with Minnesota State (the governing board of two- and four-year public institutions in the state), produces an annual report on remedial enrollment and college readiness, entitled *Getting Prepared*.²¹

LINKAGES BETWEEN POSTSECONDARY AND WORKFORCE DATA

Fifty-one agencies in 46 states link or plan to link postsecondary and workforce data (nine agencies in nine states plan to link).²² Matching postsecondary education with workforce data (typically accomplished in cooperation with the state unemployment insurance agency)²³ allows researchers and policymakers to assess employment rates, average wages, and retention within employment for postsecondary completers and leavers.

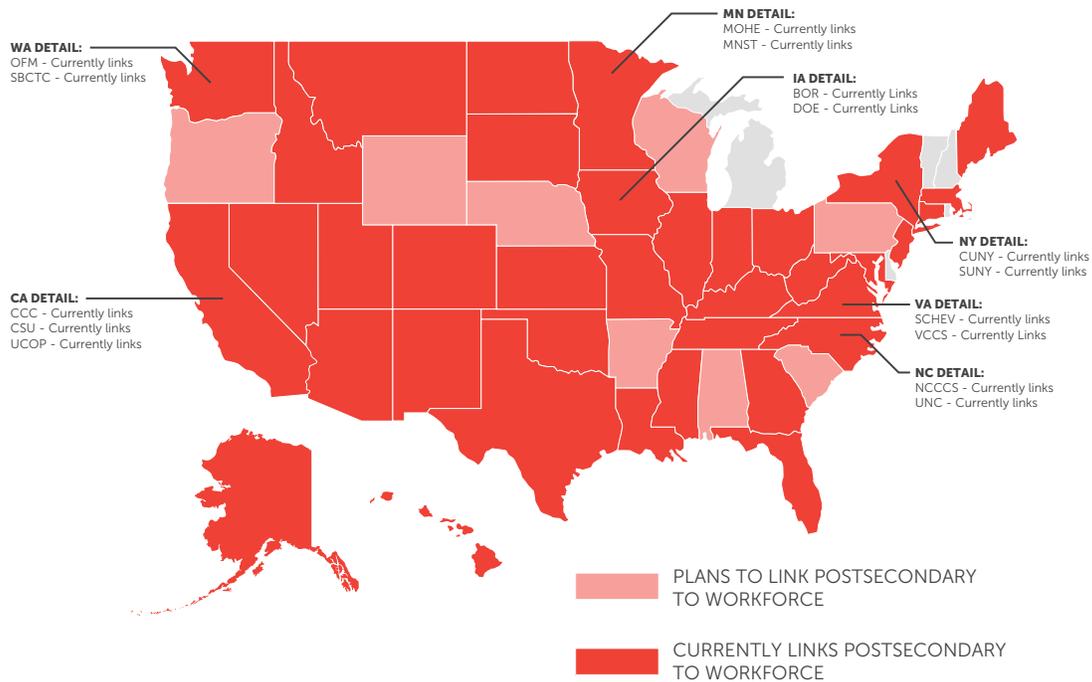
21. Fergus, M., & DeSalvo, A. (2017). *Getting prepared '17: Recent high school graduates and development courses*. Minnesota Office of Higher Education. Retrieved from <https://www.ohe.state.mn.us/pdf/GettingPrepared2017.pdf>

22. Linkages between postsecondary and workforce data were the most frequently reported in the 2018 survey. In addition to K-12 and workforce, respondents were queried about linkages with other agencies, including financial aid, health and human services, motor vehicles, and corrections. These latter connections were much less prevalent.

23. For a discussion of the strengths and limitations of these UI matches, see Armstrong & Zaback, (2016). *Assessing and improving state data systems*. Retrieved from http://www.ihep.org/sites/default/files/uploads/postsecdata/docs/resources/state_postsecondary_data_systems.pdf Generally, limitations include the inability to cross state borders and the exclusion of federal employees and the self-employed. The University of Texas System – U.S. Census Bureau collaboration referenced earlier provides a compelling model for addressing these limitations. See Troutman, D., Huie, S., & Foote, A. (May 2, 2018, Washington, DC). The University of Texas System and the United States Census Bureau Partnership. National Center for Education Statistics State Data Conference. [PowerPoint slides]. Retrieved from <https://apps1.seiservices.com/nces/ipeds2018/Materials/Overcoming%20Barriers%E2%80%9393Proposing%20Solutions%20-%20Slide%20View.pdf>

FIGURE 2:
STATE LINKAGES BETWEEN POSTSECONDARY AND WORKFORCE DATA, 2018²⁴

51 AGENCIES IN 46 STATES CURRENTLY LINK OR PLAN TO LINK POSTSECONDARY TO WORKFORCE DATA



Questions about the real and perceived returns on investment for higher education have spurred a steady increase in the number of agencies that link postsecondary and workforce data. Between 2010 and 2018, the number of agencies with this capacity more than tripled (see *Table 8*).

TABLE 8:
GROWTH IN WORKFORCE LINKAGES

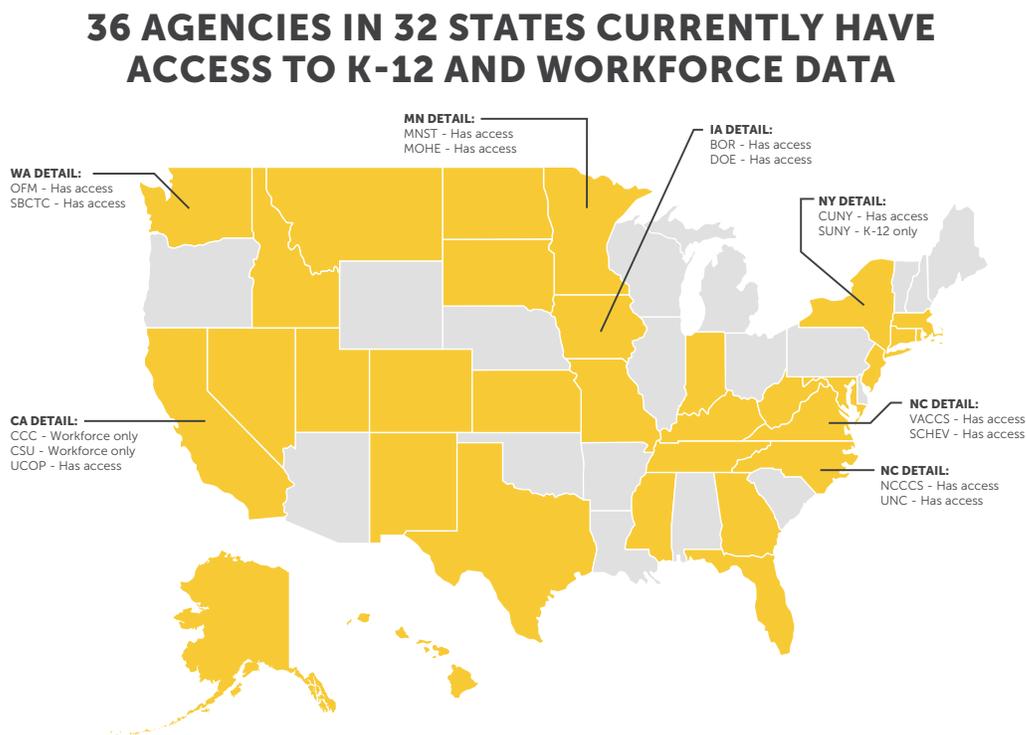
	Agencies Linking or Planning to Link PS to Workforce	States Linking or Planning to Link PS to Workforce
2010	15	15
2015	45	42
2018	51	46

24. CUNY Refers to the City University of New York.

LINKAGES BETWEEN K-12, POSTSECONDARY, AND WORKFORCE DATA

Thirty-six agencies in 32 states have the ability to link data across K-12, postsecondary, and the workforce. Linking data along the educational pipeline can provide policymakers with valuable information about the long-term effects of programs and interventions. For example, a recent report from the Kentucky Center for Statistics used linked K-12, postsecondary, and workforce data to measure the success of students who enrolled in career and technical courses in high school after they entered postsecondary education or the workforce.²⁵ Hawaii's Data Exchange Partnership produces dashboards that include transitions metrics for middle to high school, high school to college, and college to workforce.²⁶ The number of states with this capacity has risen in each iteration of the *Strong Foundations* survey. In 2010, 15 states reported this capacity. That number rose to 29 in 2016 and increased again to 32 in 2018.

FIGURE 3:
STATE LINKAGES BETWEEN K-12, POSTSECONDARY, AND WORKFORCE DATA, 2018



“Posed with the question, “Briefly describe the process used to ensure privacy of unit record data in your state,” one respondent indicated, “We don’t disclose even the processes of how we do this without a contract or MOA.”

25. Kentucky Center for Statistics. (2018). *Education and workforce outcomes for CTE students*. Retrieved from https://kystats.ky.gov/Reports/ShowReports?ReportId=EWOCCTE_2018&publishDate=20180901

26. Hawai'i Data Exchange Partnership. (n.d.) Dashboards. Retrieved from http://hawaiidxp.org/quick_data/index

PRIVACY AND SECURITY

PSURs function in a context of persistent concern about the privacy and security of educational records. State data practitioners must devise systems that protect sensitive data without stymieing valuable research.²⁷ Previous iterations of the *Strong Foundations* survey included a single prompt asking respondents to describe their process for ensuring data privacy. In recognition of continued public attention to privacy concerns, the 2018 administration of *Strong Foundations* expanded content related to protecting student information in PSURs. For the first time, the survey asked states to report detailed information regarding specific privacy and security practices. Given the potential sensitivity of these issues, this report will not identify practices of individual states, except in cases where publicly available resources are referenced. An indication of the sensitivity of these questions and the seriousness with which states address them is demonstrated in the following exchange. Posed with the question, “Briefly describe the process used to ensure privacy of unit record data in your state,” one respondent indicated, “We don’t disclose even the processes of how we do this without a contract or MOA.”

PRIVACY PROCESSES

States were asked to “briefly describe the process used to ensure privacy of unit record data in your state.” This prompt yielded detailed responses which describe robust and multifaceted approaches to privacy and security. For example, one respondent wrote, “Data security, which is integral to data privacy, is ensured through operational processes and technical, physical, and administrative cybersecurity safeguards. Privacy is ensured through audited role-based access to data, censoring of data reports at cell size below 10, and protocols for sharing of data that restrict how the data can be used.” This exemplifies several of the themes that emerged in response to this question. These include:

- Data governance and legal structures: 16 respondents referenced data governance arrangements, memoranda of understanding between agencies linking data, or data sharing agreements with researchers.
- Role-based access: 16 states included some version of role-based access in their responses. Role-based access is intended to limit access to personally identifiable information (PII) except in very specifically defined circumstances. “Within [our system],” wrote one respondent, “nobody is given unit record data by default. It is an added privilege.” Physical security: 13 respondents mentioned measures they have in place to ensure the security of the information technology resources that house and interact with their databases. These efforts extend from the macro — monitoring the integrity of enterprise data systems — to the micro (security systems that issue alerts if sensitive information is transferred to a flash drive or via email).

27. For more on this context, see Whitfield, C. (2016). *Privacy, confidentiality, and security in Arkansas: Effective use of state data systems*. SHEEO.

- Employee training: 11 respondents indicated that providing training to staff on privacy and security protocols or requiring them to sign non-disclosure agreements were part of their procedures.
- Reporting: Nine respondents addressed protecting privacy in their reporting practices by suppressing cell sizes below a specified threshold or aggregating data in publicly available reports.

PRIVACY AND SECURITY STANDARDS

Respondents were asked to identify the standards or protocols their agency uses to determine privacy and security procedures (see *Table 9*). A large majority — 45 of 55 respondents — explicitly cited the Family Educational Rights and Privacy Act of 1974 (FERPA) as a basis for their privacy protocols. This prevalence is not surprising; FERPA is widely understood as the de facto minimum threshold for the protection of student data.²⁸ Additional respondents referenced adherence to federal requirements without specifically naming FERPA.

TABLE 9:

PROTOCOLS AGENCIES USE TO DETERMINE PRIVACY AND SECURITY PROCEDURES

Standard	Number of Responses	Percent of Responses
FERPA	45	82%
NIST	14	25%
State or System	13	24%
HIPAA	12	22%
Other	10	18%
None Specified	8	15%

Other federal standards, perhaps less well-known or not directly associated with higher education records, were also cited as privacy and security standards by multiple agencies:

- National Institute of Standards and Technology (NIST): 14 respondents cited the NIST standards. In 2015, NIST published standards for protecting data shared by the federal government with non-federal agencies. These include PII regarding students and broader classifications of data addressing research, infrastructure, or information technology.²⁹

28. For an overview of FERPA and other federal privacy laws, see Grama, J. (2016). *Understanding information security and privacy in postsecondary education data systems*. IHEP. Retrieved from <http://www.ihep.org/postsecdata/resources/understanding-information-security-and-privacy-postsecondary-education-data> The U.S. Department of Education's overview of FERPA issues for postsecondary entities may be found at <https://studentprivacy.ed.gov/audience/school-officials-post-secondary>

29. Educause. (2016). *An introduction to NIST special publication 800-171 for higher education institutions*. Retrieved from <https://library.educause.edu/resources/2016/4/an-introduction-to-nist-special-publication-800-171-for-higher-education%20institutions> See also <https://csrc.nist.gov/>

- Health Insurance Portability and Accountability Act (HIPAA): 12 respondents cited the HIPAA standards.³⁰ The federal HIPAA, passed in 1996, is designed to protect individuals' health records. HIPAA has implications for postsecondary institutions (and for the PSURs that are custodians of their records) as providers of health care to individual students via campus health clinics, etc., and as trainers of practitioners and providers to the general population via medical training facilities.
- Gramm-Leach-Bliley Act (GLBA): While the GLBA was referenced specifically by only three respondents, its mention (categorized as "other" in *Table 8*) points to the further interaction between categories of data. The GLBA "governs the treatment of nonpublic personal information about consumers by financial institutions,"³¹ and applies to higher education data systems that collect information about students regarding their educational financial obligations.

Thirteen respondents referenced state or system requirements as additional security standards. In several cases, respondents indicated that state rules exceeded federal regulations regarding restrictions on acceptable use of higher education records. This additive effect is one of the advantages of effective PSURs. According to the Data Quality Campaign, "States play a critical role in developing, enforcing, and communicating policies that build on the foundation of federal privacy laws...and create robust and innovative data governance and privacy policies, engaging with the public to build value and trust in the use of education data."³² Examples of state policies cited by respondents include:

- The Arizona State System for Information on Student Transfer (ASSIST) provides information on students moving between two- and four-year institutions in the state. The ASSIST Security Plan outlines data governance and rules for institutional access to matched data.³³
- In Washington, the Office of the Chief Information Officer establishes security standards and policies for state agencies and provides oversight for any project considered a "major" investment in information technology.³⁴
- Kansas's 2014 Student Data Privacy Act (K.S.A. 72-6312) establishes more limitations on data sharing than FERPA and limits the ability of researchers in the state to conduct longitudinal research.³⁵

30. Multiple publications address the relationship between FERPA and HIPAA. See, for example, Ornstein, C. (October 22, 2015). When students become patients, privacy suffers. *The Chronicle of Higher Education*. Retrieved from <https://www.chronicle.com/article/When-Students-Become-Patients/233881> and Barboza, S., Epps, S., Byington, R., & Keene, S. (2008). HIPAA goes to school: Clarifying privacy laws. *The Education Environment. The Internet Journal of Law, Healthcare and Ethics*, 6 (2). Retrieved from <https://print.ispub.com/api/0/ispub-article/3751>

31. Federal Deposit Insurance Corporation. (n.d.). Gramm-Leach-Bliley Act. Retrieved from <https://www.fdic.gov/regulations/compliance/manual/8/viii-1.1.pdf>

32. Data Quality Campaign. (n.d.). *Safeguarding data*. Retrieved from <https://dataqualitycampaign.org/topic/safeguarding-data>

33. Arizona State System for Information on Student Transfer. (n.d.). *ASSIST Security Plan*. Retrieved from <https://www.manula.com/manuals/aztransfer/assist-users-manual/1/en/topic/security-plan>

34. Washington State Office of the Chief Information Officer. (n.d.). <https://ocio.wa.gov>

35. Kan. Stat. Ann. §72-6312

These examples, cited specifically by survey respondents, hint at the complex and evolving legal and regulatory contexts within which state data systems operate. Since 2013, 35 state laws have been enacted that “govern how private and public higher education institutions use student data.”³⁶

As of the writing of this report, states, systems, and institutions in the United States are only beginning to grapple with the implications of the European Union’s General Data Protection Regulation (GDPR). The GDPR, which became effective in May 2018, requires “institutions to take extra steps to protect the personal information of people in the E.U...the requirements [will]...apply to American students or faculty members who communicate with campuses while they are in Europe. In addition to understanding what data they hold, where data are stored and how they are used, institutions will need to be able to accommodate requests to retrieve, correct or erase the data. They must also promptly report any data breaches.”³⁷

PRIVACY AND SECURITY PRACTICES

The 2018 version of *Strong Foundations* reveals the prevalence of several privacy and security practices associated with data governance and stewardship best practices. Survey respondents were asked whether and how often their systems were audited, and whether there were protocols in place for responding to data breaches, destroying data, and training employees on privacy and security practices.³⁸

In each case, a majority of respondents indicated their system adhered to these privacy and security practices (see *Table 10*):

- Thirty respondents indicated their data systems were audited on a regular basis. Of those, 16 reported that their systems were audited annually, an additional 14 reported less frequent audits. Eleven respondents reported their systems were “never” audited, and 16 did not respond to the question.
- Forty respondents reported their systems had documented protocols for determining “what to do in the event of a data breach.”
- Thirty-eight respondents reported their systems had documented protocols for “destroying data.”
- Thirty-nine respondents indicated that agency employees “receive formal training for ensuring privacy, security, and confidentiality of student-level data.”

36. Vance, A. (January 29, 2018). Privacy laws protecting student data. *Educause Review*. Retrieved from <https://er.educause.edu/blogs/2018/1/privacy-laws-protecting-student-data>

37. Smarter Services. (n.d.) GDPR compliance. Retrieved from <http://www.smarterservices.com/resources/gdpr-compliance>
See also McKenzie, L. (March 13, 2018). European rules (and big fines) for American colleges. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/news/2018/03/13/colleges-are-still-trying-grasp-meaning-europes-new-digital-privacy-law>

38. For a more detailed description of these and other features of comprehensive approaches to privacy and security in longitudinal data systems, see Privacy Technical Assistance Center. (n.d.). *Data governance and stewardship*. Retrieved from <https://nces.ed.gov/programs/ptac/pdf/issue-brief-data-governance-and-stewardship.pdf>

TABLE 10:
PRIVACY AND SECURITY PRACTICES

Privacy and Security Practice	Number of Responses		
	Yes	No	N/A
Data Breach	40	8	7
Destroying Data	38	10	7
Employee Training	39	11	5

PRIVACY AND SECURITY LEGISLATION

As indicated above, there has been a flurry of legislative action related to privacy and security in recent years. Among survey respondents, 12 indicated that legislation proposed or enacted within the last five years had “affected how [they] store and analyze student unit record data.” Thirty-four respondents indicated they had not been impacted by legislation, and 12 did not respond to the survey item. Among those who offered descriptions of recent legislation, two themes emerged:

- Legislation that specifies or mandates particular security procedures: Recent legislation in Ohio, for instance, requires the Department of Higher Education to complete a “Privacy Impact Assessment” for each database it controls, the purpose of which is to “determine the privacy implications of collecting personally identifiable information...why PII is collected and how it will be used and secured.” Each assessment must be approved by legal counsel at the agency, and by an IT security officer.³⁹
- Legislative rules that impose limitations on data linkages between agencies: “Legislation,” wrote one respondent, “highly tilts towards data privacy versus availability, with great stymieing effect on cross-agency collaboration.”

39. See [http://infosec.ohio.gov/Portals/0/Docs/Guidance_on_ORC%201347-15_v1%201%20\(2\).pdf?ver=2015-09-22-102433-633](http://infosec.ohio.gov/Portals/0/Docs/Guidance_on_ORC%201347-15_v1%201%20(2).pdf?ver=2015-09-22-102433-633)

EFFECTIVE USE OF STATE DATA SYSTEMS – INFORMING POLICY DECISIONS

POLICY ADOPTION

Data from PSURs are regularly used by states during all phases of the policymaking process.⁴⁰ Before adoption, states use PSURs data to assess the need for a policy intervention. Data can help determine the magnitude of a problem or demonstrate whether a broader national issue is relevant at the state level. The creation of a need-based grant program in Georgia provides a recent example of how data were used to demonstrate the need for a policy intervention. According to a respondent from the University System of Georgia, “[S]howing debt levels, unmet need levels, and lower outcomes for students with financial need...was used for the fiscal note for legislation...enabling the development of a need-based aid program.” Georgia has operated a robust merit-based aid system for more than two decades but lagged other states in need-based aid. The ability to highlight the need to target low-income students was an essential part of the policy process that ultimately resulted in legislation being enacted.

“Just this month, we’ve responded to questions about summer enrollments, credit hour accumulation, transfer student progression, active duty military enrolled in our institutions, and other issues that are directly connected to policy discussions and decisions.”

Data are also frequently used to respond to requests from legislators and governors’ offices. By using PSURs data to answer inquiries, SHEEO agencies provide information on multiple institutions and create efficiencies in supplying information rather than policymakers requesting the information from each campus individually. As indicated by one respondent, the information provided through these ad hoc requests plays a valuable role in the policy development process. “Before any legislation (code or rule) is enacted, legislative liaisons request data from us to confirm the need for, or evidence against, proposed changes.” Requests for information can be on a wide range of topics. “Just this month,” wrote one respondent, “we’ve responded to questions about summer enrollments, credit hour accumulation, transfer student progression, active duty military enrolled in our institutions, and other issues that are directly connected to policy discussions and decisions.”

PSURs can provide additional nuance to policy discussions and help evidence-based policies move forward and counterproductive or redundant policy proposals receive additional scrutiny. One state mentioned that national data and benchmarks are not always useful standards of comparison for higher education institutions within the state. Through its PSURs, the SHEEO agency was able to explain the state context and help legislators better understand the quality of the higher education experience in the state. This state agency also used data to mitigate proposals that “would micromanage institutions or student behavior.”

40. See Weeden, D., & Whitfield, C. (2018). *Communities of practice: Improving access to state postsecondary data systems*. SHEEO. Retrieved from http://postsecondarydata.sheeo.org/wp-content/uploads/2018/09/CoP_ImprovingAccess_FINAL20180308.pdf

“We use data to make decisions about changes to the system to reflect the current policy and fiscal environment. We also use regularly reported information to guide program planning and disaggregated data to support the equity agenda.”

EVALUATION

Post-implementation evaluation can help determine if policy interventions have the desired effect and identify unintended consequences. States value the ability to evaluate the differential impact of policies across institutional sectors. Additionally, states rely on their PSURSs to evaluate policies and practices that require coordination between institutions, such as transfer policies. States indicated they rely on PSURS data to evaluate the effectiveness of transfer pathways, identify options to improve the transfer experience and to demonstrate the value and cost savings of transfer initiatives.

Financial aid programs were specifically mentioned by six states as important programs for evaluation. Recent policy innovations such as free tuition promise programs were a prominent topic for evaluation as policymakers sought to measure their success. These types of evaluations can also influence other states who are considering similar programs. The Tennessee Higher Education Commission, using information from its PSURS, publishes an annual report for the Tennessee Promise program. The 2017 version highlighted a decline in enrollment at four-year institutions, which is a potential unintended consequence that has been noted by other states.⁴¹

Several states mentioned that the evaluation of dual credit programs influenced policy decisions for the first time in 2018. In Idaho, evaluation demonstrated that students taking dual credit courses enroll in postsecondary institutions at greater rates, receive better grades, and have higher retention rates than students with similar GPAs who do not enroll in dual credit courses.⁴² In Ohio, a study of outcomes for dual credit revealed a minor number of courses being taken outside the core content areas. Using the PSURS to investigate further, the Department of Higher Education determined that some types of dual credit classes students were taking — personal fitness classes, for instance — did not reflect the intent of the dual credit program. The state’s policy response was to develop a new rule requiring that the first 15 hours of dual credit must be taken in courses that can transfer or are part of a degree program.

41. Tennessee Higher Education Commission & Student Assistance Corporation. (2017). *Tennessee promise annual report 2017*. Retrieved from https://www.tn.gov/content/dam/tn/thecc/bureau/research/promise/2017_TN_Promise_Report.pdf

42. Idaho State Board of Education. (2017). *Dual credit report 2017*. Retrieved from <https://boardofed.idaho.gov/wp-content/uploads/2017/06/Dual-Credit-report-2017.pdf>

FUNDING ALLOCATIONS

Performance-based funding systems used to allocate funding according to a predetermined formula using outcome metrics are made possible by PSURSs. The PSURS, wrote one respondent, “enables a performance-based funding model in our public universities to distribute state funds in ways that prioritize completion and equity.” In Tennessee, policymakers reported that the advent of performance-based funding was made possible by the presence of a PSURS and that the adoption of performance-based funding improved the quality of the data housed in the system.⁴³ By using PSURS data to calculate performance metrics, states can ensure these metrics are reported and used consistently across institutions.

Respondents also indicated that data within PSURSs could be used to influence funding distribution, including gaining financial resources for new initiatives. One respondent wrote, “The Board uses its SUR to calculate postsecondary funding distributions for community and technical colleges and has successfully increased technical funding by demonstrating an accurate measure of dollars necessary to implement strategic measures.”

Workforce Outcomes in Performance Funding

As a recent study⁴⁴ indicates, students are increasingly seeking postsecondary credentials to improve their career prospects, and policymakers have become more interested in tracking employment outcomes. Florida uses data from the PSURS as part of the process to calculate job placement rates and wages for the Florida College System performance funding system.⁴⁵ To calculate entry-level wages, Florida relies on five data sources, including the student unit record system for the Florida College System and Career & Adult Education institutions. The Department of Economic Opportunity, the Department of Revenue, the U.S. Office of Personnel Management, and the Wage Record Interchange System 2 (WRIS2) serve as the other data sources.⁴⁶ To collect job placement information, Florida relies on the same data sources but swaps Department of Economic Opportunity data for National Student Clearinghouse data.⁴⁷

43. Whitfield, C. (2017). *Data-informed policy innovations in Tennessee: Effective use of state data systems*. SHEEO.

44. Gallup & Strada Education Network. (2018). *Why higher ed? Top reasons U.S. consumers choose their educational pathways*. Retrieved from <https://stradaeducation.gallup.com/reports/226457/why-higher-ed.aspx>

45. These metrics are specifically required by statute. See FLA. STAT. § 1001.66(1) (2018).

46. Florida Department of Education. (n.d.). *Florida College System: Performance based funding model 2018-19: Entry level wages*. Retrieved from https://www.floridacollegesystem.com/sites/www/Uploads/Publications/Funding%20Formula/Wages_1819Model.pdf

47. Florida Department of Education. (n.d.) *Florida College System: Performance based funding model 2018-19: Job placement or continuing education measure*. Retrieved from https://www.floridacollegesystem.com/sites/www/Uploads/Publications/Funding%20Formula/JobPlacementContinuingEducation_1819Model.pdf

VALUE OF PSURSS

The *Strong Foundations 2018* survey asked respondents how their PSURSSs have provided the greatest value to their state. Overall, responses emphasized the role state data systems provide in data-driven decision making as “an objective source of facts.” Among the themes frequently cited:

- **Efficiency:** Twenty-one respondents indicated the PSURSSs provided one or more levels of efficiency. First, state data systems aid the research and reporting ability to comply with federal requirements. In addition to gaining efficiencies with Integrated Postsecondary Education Data System (IPEDS) reporting, states highlighted the value their data systems have provided in meeting compliance with state and federal performance metrics associated with the Carl D. Perkins Career and Technical Education Act and the Workforce Innovation and Opportunity Act (WIOA). Second, the “breadth” of the data has been useful for institutions complying with accreditation reporting requirements. Third, state data systems allow SHEEO agencies to respond to policymaker requests for information quickly. State data systems can answer questions about enrollment, retention, and completion across multiple institutions consistently. Having consistent data definitions between institutions across time makes interpretations and historical analysis easier. Answering legislative questions efficiently may also provide additional benefits. As one respondent stated, “We are able to rapidly answer legislative questions about our system, which lets legislators know that we are vigilant about tracking system trends and can be counted on to provide accurate, timely data to support budget and policy decisions.”
- **Public data resources:** Several states mentioned the creation of public dashboards or interactive websites as a means to improve access to data. These public data resources are populated with the information frequently sought by stakeholders and can be tied to tracking progress on attainment goals. According to one respondent, “We’re currently engaged in the final stages of building a public dashboard combining a searchable program inventory with employment and wage outcomes. We believe this will address persistent questions from legislators and other stakeholders in a way that’s engaging and support[s] requests for additional resources.” SHEEO’s “Improving Access to State Postsecondary Data Systems Community of Practice” is intended to increase access to the information resources housed within PSURSSs and to encourage SHEEO agencies to consider a wide range of constituents (legislative staff, journalists, advocacy organizations, and institutional users) when designing public-facing resources.⁴⁸
- **Student Success:** Several states indicated the ability to analyze student outcomes and initiatives designed to improve success provided the greatest value from their PSURSSs. Data were particularly useful for states to create support for strategic initiatives, student success efforts, and equity agendas designed to close attainment gaps. SHEEO’s “Modeling and Visualization in

48. See Weeden, D. & Whitfield, C. (2018).

Support of State Attainment Goals” Community of Practice supports states’ efforts to disaggregate statewide attainment goals by race/ethnicity, gender, or region, and to tailor visualizations to appeal to various stakeholder groups.⁴⁹

- **Workforce and K-12 Connections:** As previously indicated, the number of PSURs with the capacity to link postsecondary data with other types of administrative data has significantly increased over the last decade. Many *Strong Foundations* respondents cited linked data as a central value of their systems. One respondent cited the value of granular information about employment outcomes “available by sector, institution, year of completion, degree, CIP code, race/ethnicity and available at different points in time compared to when individuals started and completed their credentials.” The production of high school feedback reports and the ability to provide high schools with information about postsecondary and workforce outcomes was cited as a key benefit by several states. In addition to using linked data, respondents indicated that cooperative relationships with the workforce sector had aided state economic development efforts. “Providing completions information to determine [the] potential workforce [has been] used to recruit new business and industry to the state,” indicated a respondent.
- **Supplemental Funding:** State data systems also provided value when seeking outside grant funding. With competing pressures for state funding, many SHEEO agencies have faced several years of tight budgets leading some to actively seek supplemental funding through grant initiatives that can help fund or evaluate programs designed to improve student success. State data systems have played an instrumental role in several states successfully obtaining grant support.

49. Armstrong, J., & Whitfield, C. (forthcoming). *Communities of practice: Data modeling and visualization to support state attainment goals*. SHEEO.

BARRIERS TO EFFECTIVE USE

The *Strong Foundations* survey provided respondents with an open-response opportunity to “identify the largest barrier to the effective use of SUR data in your state,” and a multiple-choice question that allowed them to indicate whether they faced specific barriers (see *Table 11*). As was the case in the previous iteration of the survey, respondents were most likely to choose “resources” as a barrier to effective use of PSURs. Over half of respondents cited “FERPA concerns” as an obstacle, and sizable minorities identified barriers related to linking PSURs with other data systems (“lack of common identifiers,” “coordination with other state agencies,” and “lack of interest from other agencies”).

TABLE 11:
BARRIERS TO EFFECTIVE USE OF PSURs⁵⁰

	Number of Responses	Percentage
Resources	33	60%
FERPA Concerns	29	53%
Lack of Common Identifiers	25	45%
Coordination with Other State Authorities	24	44%
Data Quality Concerns	23	42%
Lack of Interest from Other Agencies	19	35%
Legislation	17	31%
Incompatible Data Systems	14	25%
Other Barrier	12	22%
Attorney General Opinion	1	2%

Responses to the qualitative barriers question provide additional insight into these broad categories. PSUR administrators referenced limitations on time, staff, and funding as components of their concerns regarding resources. Many respondents indicated that the amount of time and effort it takes them to populate their data systems and fulfill mandatory reporting left little capacity to pursue more strategic projects and longer-term research endeavors. “Our agency is limited by the size of our research staff and our statutory reporting requirements,” wrote one. “We spend so much time on reporting that we are unable to devote much time conducting other meaningful research.”

Closely related to resource considerations were technical barriers to effective use. Respondents cited concerns about the complexity and quality of data housed within PSURs, and the desire to more fully automate the processes of collecting, cleaning, and uploading data from institutions. Many PSURs are built on legacy systems — regarding both the structure of the data collection and the platforms on which they reside — sometimes making it difficult to adapt to changing specifications. A respondent who characterized their current “antiquated” data collection system as one which made it “difficult to make adjustments to data fields collected,” envisioned “system enhancements [that] could make data collection more agile and timely.”

50. These figures do not include the University of Alaska system.

Qualitative responses also clarified difficulties respondents might face regarding linking PSURs with other data systems. Survey respondents cited legal restrictions on data sharing and the length of the legal and administrative processes necessary to facilitate data linking as barriers. “It is tricky,” wrote one, “to figure out the legal pathway for linking education data to social services and health care agencies.” Respondents also reflected on the importance of state longitudinal data systems (SLDS). Those operating in states without an SLDS viewed its absence as a barrier to the effective use of their systems. Respondents in states with SLDSs cited lack of participation by particular agencies as a barrier.

Several respondents cited relationships with institutions as obstacles to optimal use of PSURs. These included a reluctance to share data, especially on the part of independent institutions. Other PSURs face institutional restrictions on how data within the system can be used. “No results can be published or used without the permission of all involved institutions,” wrote one. “If one institution objects, no usage is permitted. This is a very cumbersome process.”

RECOMMENDATIONS FOR POLICYMAKERS

Increasing the capacity, effectiveness, and utilization of PSURs will require support from all state policymakers. While governors and legislators set policy agendas and make decisions about where to invest limited public resources, SHEEO agencies are more closely tied to the development, operation, and management of PSURs. Because of their close connection to PSURs, the following recommendations are written chiefly for leaders and policymakers at SHEEO agencies and system offices.

- **Advocate for resources:** *Strong Foundations* survey respondents consistently identify lack of resources as a barrier to the effective use of PSURs. Policymakers contribute to the sustainability and optimization of these systems when they prioritize resources to provide technical assistance and professional development for researchers and analysts and to ensure that research staffs are of a sufficient size to perform both compliance activities and research on policy issues. As the legacy systems housing many PSURs continue to age, additional technological resources may be necessary to maintain these systems. Policymakers should advocate for PSURs in budget requests and prioritize them within agency budgets.
- **Widely disseminate information generated from PSURs:** States and systems gain efficiencies and promote the democratization of higher education data by developing public data resources. Interactive websites reduce the frequency of ad hoc requests regarding data housed within the PSURs. Ideally, multiple public data resources should be developed to address the varying needs of different audiences (i.e., institutions, legislators, and consumers).
- **Foster collaborative relationships with other stakeholders:** Many of the barriers to effective use of PSURs may be alleviated by developing collaborative approaches to data governance. Policymakers should ensure that institutions in all sectors (including independent institutions) have a clear understanding of the uses of PSURs data. Similarly, when administrative data is linked across multiple agencies in a state (or outside the state), all involved entities should have a voice in data governance decisions.
- **Benefit from the experience of other states:** SHEEO (through its Communities of Practice project) and other national organizations bring together networks of states with varying levels of capacity to share best practices and learn from peers. Policymakers should promote these opportunities for researchers, data practitioners, and policy analysts to work together on common issues with PSURs.
- **Fully adopt benchmark privacy and security practices:** Responses to the 2018 *Strong Foundations* survey indicated that a large majority of respondents have training programs to educate staff regarding privacy and security issues, and procedures in place to deal with data breaches and to destroy data that is no longer used for research. These benchmark practices should be universally adopted by agencies that house PSURs. Further, agencies should

review their privacy and security practices for compliance for less well-known and emerging standards. States may consider codifying privacy and security practices through legislation to ensure compliance.

- **Find ways to integrate independent institutions.** Approximately 20 percent⁵¹ of undergraduate and graduate students are enrolled at independent institutions nationally — though in some states the portion is over 50 percent. PSURs that do not include these institutions provide an incomplete picture of a state’s higher education environment. While barriers to integration exist, states that seek to clearly define data collection and usage expectations, find innovative methods to support institutions, and directly address governance issues, will stand to accrue economic and policy benefits.⁵² At a time when many independent institutions are facing difficult enrollment and revenue forecasts, integration into PSURs can also help demonstrate the value they add to the state economy.
- **Strengthen collection and reporting of student finance:** Responses to the 2018 *Strong Foundations* survey revealed that a majority of states are unable to accurately report student debt and loan repayment information. There is rapidly growing interest in this type of information. Indeed, a growing number of state legislatures require institutions to annually report total loan and payoff amounts and estimated monthly payments to students.⁵³ Given the context of growing concern regarding student debt,⁵⁴ state agencies should work to bolster their capacity in this area. State agencies should publicly acknowledge if gaps in student financial indicators currently exist in their PSURs and develop a plan to collect and report currently missing information. Doing so will increase public awareness of the utility of these data systems.

51. National Center for Education Statistics. (2016). Table 303.10. Total fall enrollment in degree-granting postsecondary institutions by attendance status, sex of student, and control of institution: Selected years, 1947 through 2026. *Digest of Education Statistics*. Retrieved from https://nces.ed.gov/programs/digest/d16/tables/dt16_303.10.asp?current=yes

52. See Mata, C., & Weeden, D. (2018)

53. Korn, M. (July 12, 2017). I owe that much? Having student-loan data leads to drop in borrowing. *The Wall Street Journal*. Retrieved from <https://www.wsj.com/articles/states-require-more-disclosure-on-student-loans-1499798161>

54. According to The Institute for College Access & Success (TICAS), the average debt at graduation rose at more than twice the rate of inflation between 2004 and 2014. TICAS (2015). *Student debt and the class of 2014*. Retrieved from https://ticas.org/sites/default/files/pub_files/classof2014.pdf For a state-by-state view of student debt, see <https://ticas.org/posd/state-state-data-2015>

CONCLUSION

PSURs are vital information resources for states and systems as they develop, implement, and evaluate policy solutions and promote student success. PSURs exist in a complex and changing postsecondary data environment where linkages across data systems are increasingly prevalent. They are called upon to support myriad reporting requirements and research activities, often with limited resources. As custodians of sensitive information, PSURs have developed sophisticated privacy and security protocols to protect student information. Policymakers and researchers can promote the effective use of PSURs by demonstrating their value through public data resources and advocating for staffing and financial resources to support the viability of the systems.

APPENDIX A: LIST OF SURVEY QUESTIONS

Q0

Thank you for participating in SHEEO's survey of state data systems. Please provide us with the following contact information.

- Name
- Email
- Agency
- Phone number

Q1

Please indicate the name of your student unit record (SUR) system.

Q2

What was the year this SUR was established?

Q3

Why was your agency's / entity's student unit record system originally established?
(Select all that apply.)

- Legislative mandate
- Audit compliance
- Institutional resource allocation / funding formula
- Awarding financial aid
- IPEDS reporting
- Increasing student achievement
- Tracking student retention / graduation
- Tracking students across institutions
- Federal civil rights mandates
- Other federal mandates
- Other reason, please specify

Q4

What legal authority assigns data collection and reporting responsibilities to your agency / entity? *(Select all that apply.)*

- N/A - Data collection occurs on a voluntary basis
- State law creating coordinating or governing board
- State law creating data system
- State law requiring the collection of student unit record data
- Administrative regulations / rules issued to interpret state law(s)
- Coordinating or governing board policy interpreting state law(s)
- Coordinating or governing board policy interpreting executive branch mandate
- Memorandum of understanding
- Attorney general opinion / statement
- Other legal authority, please specify

Q5

For what purposes does your agency / entity currently use student unit record data? *(Select all that apply.)*

- Decision making
- Policy making
- Generating reports and statistics (internal and external)
- Consumer information for prospective students
- Research
- Cross-sector collaboration (K-12, labor, etc.)
- External reporting (IPEDS, Complete College America, Achieving the Dream, SREB)
- Other purpose, please specify

Q6

Are there new uses of your student unit record system that are planned for the future? If so, please describe.

Q7

What, if any, are your procedures and plans for ensuring the sustainability of your SUR?

Q8

How has your SUR provided the greatest value to your state?

Q9

Please provide examples of how data from your SUR have been used to inform policy decisions.

Q10

If your SUR fulfills IPEDS reporting requirements, please check the surveys completed and your agency's role in completing these surveys.

	Verify Data	Submit Data
Institutional Characteristics (IC)	<input type="checkbox"/>	<input type="checkbox"/>
12-month Enrollment (E12)	<input type="checkbox"/>	<input type="checkbox"/>
Completions (C)	<input type="checkbox"/>	<input type="checkbox"/>
Student Financial Aid (SFA)	<input type="checkbox"/>	<input type="checkbox"/>
Human Resources (HR)	<input type="checkbox"/>	<input type="checkbox"/>
Fall Enrollment (EF)	<input type="checkbox"/>	<input type="checkbox"/>
Graduation Rate (GRS)	<input type="checkbox"/>	<input type="checkbox"/>
Finance (F)	<input type="checkbox"/>	<input type="checkbox"/>
Admissions (A)	<input type="checkbox"/>	<input type="checkbox"/>
Academic Libraries (AL)	<input type="checkbox"/>	<input type="checkbox"/>
Outcome Measures (OM)	<input type="checkbox"/>	<input type="checkbox"/>
200% Graduation Rates (200)	<input type="checkbox"/>	<input type="checkbox"/>

Q11

Does your agency use SUR data for analysis by the following categories? *(Select all that apply.)*

- Articulation
- Community college feedback
- Completions
- Course cost analysis
- Course taking patterns
- Demographics (age, gender, race/ethnicity)
- Distance education
- Dual credit / dual enrollment
- Economic impact / jobs
- Facilities utilization
- Financial aid
- High school feedback
- Institutional finance
- Institutional profile, public
- Institutional profile, private
- Mobility / migration
- Non-credit instructional activity
- Performance measures
- Remediation
- Retention
- Student learning
- Teacher effectiveness evaluations
- Transfer
- Tuition / fees / college costs
- Other, please specify

Q12

Does your state use SUR data to assess student learning at the course level?

- Yes
- No

Q13

Please briefly describe how course-level assessments of student learning are used.

Q14

Does your state use SUR data to process and allocate financial aid for students attending postsecondary institutions?

- Yes
- No

Q15

Does your state use a formula to allocate funds to postsecondary institutions based on performance (performance funding)?

- Yes
- No

Q16

How are SUR data used to inform the development or calculation of the performance funding formula?

Q17

Does your state use SUR data to assess employment outcomes of postsecondary graduates?

- Yes
- No

Q18

Are there mandates in your state for measuring workforce outcomes?
If so, please describe the mandate(s).

Q19

Are data from your SUR used to fulfill the workforce outcomes mandate? If so, please describe.

Q20

Does your state higher education agenda prioritize the completion of adult learners who have some college but no degree?

- Yes
- No

Q21

Is degree reclamation (reverse credit transfer policies and retroactive awarding of degrees) a priority in your state higher education agenda?

- Yes
- No

Q22

How does your SUR contribute to adult learner completion or degree reclamation efforts (if at all)? Please describe.

Q23

Please indicate the extent to which you agree with the following statements about your state's data capacity as it relates to student mobility.

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
The state's postsecondary data system is at the student unit record level and includes accurate course-level data for all students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The state's postsecondary data system includes accurate data on students' transfer institutions and transfer credit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The state's postsecondary data system includes accurate contact information for students (either address or phone number).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q24

What types of data are included in your agency's / entity's student unit record system?
(Select all that apply unless otherwise indicated. Responses refer to postsecondary data.)

- K-12 academic history
- Demographic
- Postsecondary enrollment
- Course-level information
- Postsecondary academic history
- Finance (tuition, fees, fiscal management)
- Financial aid
- Completions
- Non-credit institutional activity
- Academic program inventory
- Admissions scores
- Faculty / staff
- Institutional characteristics
- Facilities / capital projects
- Adult basic education (GED, English as a second language)
- Labor / workforce / unemployment insurance
- Remedial / developmental course information
- Continuing education course information
- Placement test scores
- Other type of data, please specify

Q25

Please select the types of postsecondary institutions from which your agency / entity currently collects student unit record data. (Select all that apply.)

- N/A
- 2-year Public
- 4-year Public
- Tribal
- Independent (private, non-profit)
- Proprietary (private, for-profit)
- Other institution type, please specify

Q26

Please indicate which elements your agency collects or can access by institutional sector. If your agency / entity does not have access to an element, please check "No access to this element."

	2-year public	4-year public	Private not-for-profit	Private for-profit	No access to this element
Student name	<input type="checkbox"/>				
Date of birth	<input type="checkbox"/>				
Gender	<input type="checkbox"/>				
Race / ethnicity	<input type="checkbox"/>				
Age	<input type="checkbox"/>				
Military status	<input type="checkbox"/>				
Social Security number	<input type="checkbox"/>				
K-12 unique identifier	<input type="checkbox"/>				
Institution of higher education identifier	<input type="checkbox"/>				
Postsecondary student unique identifier	<input type="checkbox"/>				
Citizenship status	<input type="checkbox"/>				
State residency status	<input type="checkbox"/>				
Admissions scores	<input type="checkbox"/>				
Placement scores	<input type="checkbox"/>				
Prior college(s) attended	<input type="checkbox"/>				
Transfer credit(s)	<input type="checkbox"/>				
Retention by term or year	<input type="checkbox"/>				
Enrollment status (first-time, transfer, continuing)	<input type="checkbox"/>				
Degree-seeking statuses	<input type="checkbox"/>				
Full-time / part-time status	<input type="checkbox"/>				
Term student first enrolled (fall, spring, summer)	<input type="checkbox"/>				
Program / major	<input type="checkbox"/>				
Dependency status	<input type="checkbox"/>				
Family income	<input type="checkbox"/>				
Federal financial aid	<input type="checkbox"/>				
State financial aid	<input type="checkbox"/>				

	2-year public	4-year public	Private not-for-profit	Private for-profit	No access to this element
Institutional financial aid	<input type="checkbox"/>				
Merit-based financial aid	<input type="checkbox"/>				
Need-based financial aid	<input type="checkbox"/>				
Other financial aid	<input type="checkbox"/>				
FAFSA fields	<input type="checkbox"/>				
Pell status	<input type="checkbox"/>				
Cost of postsecondary education (what student actually pays)	<input type="checkbox"/>				
Course mode of instruction	<input type="checkbox"/>				
Course grade	<input type="checkbox"/>				
Student credit hours attempted	<input type="checkbox"/>				
Student credit hours earned	<input type="checkbox"/>				
Academic term	<input type="checkbox"/>				
Degree awarded	<input type="checkbox"/>				
Degree date	<input type="checkbox"/>				
Cumulative credit hours earned	<input type="checkbox"/>				
Cumulative GPA	<input type="checkbox"/>				
Student tuition and fees	<input type="checkbox"/>				

Q27

Does your agency / entity have the authority to add or delete data elements and change definitions for any of the data elements above?

- Yes, full authority
- Yes, but only in conjunction with other stakeholders
- No

Q28

Which of the following sources does your agency / entity use to define data elements?
(Select all that apply.)

- IPEDS
- U.S. Census
- Agency staff / workgroup
- Common Education Data Standards (CEDS)
- Other, please specify

Q29

Which metrics are you able to calculate based on data elements your agency collects or has access to?

- Credit accumulation
- Credit completion ratio (credits completed vs. attempted)
- Remedial course completion
- Gateway course completion
- Retention / persistence rate
- Transfer rate
- Graduation rate
- Completion ratio (completions per FTE)
- Net price
- Cumulative debt
- Loan repayment status
- Employment status
- Median wage of completers
- Median wage of non-completers
- Time to credential
- Credits to credential

Q30

Does your agency / entity use the Social Security number as a primary student identifier?

- Yes
- No

Q31

Does your agency / entity have any plans to discontinue use of the Social Security number as a primary student identifier?

- Yes
- No

Q32

Does your agency / entity currently link or plan to link with the following agencies, either through a warehouse or a federated model? *(Select all that apply.)*

	Currently link?	Plan to link?
Pre-K / early childhood	<input type="checkbox"/>	<input type="checkbox"/>
State education agency (K-12)	<input type="checkbox"/>	<input type="checkbox"/>
State financial aid agency / entity	<input type="checkbox"/>	<input type="checkbox"/>
Labor / workforce	<input type="checkbox"/>	<input type="checkbox"/>
Child protective services	<input type="checkbox"/>	<input type="checkbox"/>
Foster care	<input type="checkbox"/>	<input type="checkbox"/>
Health	<input type="checkbox"/>	<input type="checkbox"/>
Human services	<input type="checkbox"/>	<input type="checkbox"/>
Motor vehicle division / dept	<input type="checkbox"/>	<input type="checkbox"/>
Juvenile detention	<input type="checkbox"/>	<input type="checkbox"/>
Corrections	<input type="checkbox"/>	<input type="checkbox"/>
Court system	<input type="checkbox"/>	<input type="checkbox"/>
Other agency / entity, please specify	<input type="checkbox"/>	<input type="checkbox"/>

Q33

Which primary ID number(s) is used to match your agency's / entity's SUR data to unit record data from other agencies / entities within your state? *(Select all that apply.)*

	Social Security number	K-12 ID	Postsecondary ID	Longitudinal data system (LDS) ID	Other ID
Pre-K / early childhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State education agency (K-12)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State financial aid agency / entity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Labor / workforce	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Child protective services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Foster care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motor vehicle division / dept	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Juvenile detention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corrections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Court system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other agency / entity, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q34

Which K-12 data elements does your agency / entity have access to and / or utilize through linking arrangements? *(Select all that apply.)*

	Have access?	Utilize?
Student name	<input type="checkbox"/>	<input type="checkbox"/>
Student date of birth	<input type="checkbox"/>	<input type="checkbox"/>
Student gender	<input type="checkbox"/>	<input type="checkbox"/>
Student race / ethnicity	<input type="checkbox"/>	<input type="checkbox"/>
Student resident county-district code	<input type="checkbox"/>	<input type="checkbox"/>
Dates of K-12 enrollment	<input type="checkbox"/>	<input type="checkbox"/>
Language spoken at home	<input type="checkbox"/>	<input type="checkbox"/>
Student free and reduced lunch eligibility	<input type="checkbox"/>	<input type="checkbox"/>
District / school code	<input type="checkbox"/>	<input type="checkbox"/>
Disability status	<input type="checkbox"/>	<input type="checkbox"/>
Course title	<input type="checkbox"/>	<input type="checkbox"/>
Course grade	<input type="checkbox"/>	<input type="checkbox"/>
Course type (regular, honors, AP, IB, dual credit)	<input type="checkbox"/>	<input type="checkbox"/>
High school grade point average	<input type="checkbox"/>	<input type="checkbox"/>
Assessment scores	<input type="checkbox"/>	<input type="checkbox"/>
Date student graduated (K-12)	<input type="checkbox"/>	<input type="checkbox"/>
Family income	<input type="checkbox"/>	<input type="checkbox"/>
Other K-12 data elements, please specify	<input type="checkbox"/>	<input type="checkbox"/>

Q35

Which labor / workforce data elements does your agency / entity have access to by virtue of linking arrangements? *(Select all that apply.)*

	Have access?	Utilize?
Employer name	<input type="checkbox"/>	<input type="checkbox"/>
Employer address	<input type="checkbox"/>	<input type="checkbox"/>
Employer ID number	<input type="checkbox"/>	<input type="checkbox"/>
Employer size; number of monthly employees	<input type="checkbox"/>	<input type="checkbox"/>
Employer county	<input type="checkbox"/>	<input type="checkbox"/>
Wages earned	<input type="checkbox"/>	<input type="checkbox"/>
Hours worked	<input type="checkbox"/>	<input type="checkbox"/>
Employment quarter code	<input type="checkbox"/>	<input type="checkbox"/>
Employment year	<input type="checkbox"/>	<input type="checkbox"/>
Date student / employee applied for unemployment insurance	<input type="checkbox"/>	<input type="checkbox"/>
Date student / employee received first unemployment insurance check	<input type="checkbox"/>	<input type="checkbox"/>
Other agencies / entities providing services during period individual is in receipt of unemployment insurance	<input type="checkbox"/>	<input type="checkbox"/>
North American Industry Classification System (NAICS) code	<input type="checkbox"/>	<input type="checkbox"/>
NAICS title	<input type="checkbox"/>	<input type="checkbox"/>
Standard Occupational Classification (SOC) code	<input type="checkbox"/>	<input type="checkbox"/>
SOC title	<input type="checkbox"/>	<input type="checkbox"/>
Other labor / workforce data element, please specify	<input type="checkbox"/>	<input type="checkbox"/>

Q36

Does your agency / entity link or share data with other states?

- Yes
- No

Q37

What data is shared or linked with other states? How is it used?

Q38

Which of the following currently allow your agency / entity to link or share with other unit record systems? *(Select all that apply.)*

- Legislative mandate
- Executive mandate
- Attorney general opinion / statement
- Memorandum of understanding / agreement
- Administrative rule / regulation
- Other, please specify

Q39

If applicable, please describe how your agency / entity modified its student unit record system to allow linking to other data systems (e.g., adding new data fields, creating new file structures, etc.).

Q40

What is the largest barrier to effective use of SUR data for your agency / entity?

Q41

Which of the following barriers prevent or inhibit your agency / entity from linking to any unit record systems? *(Select all that apply.)*

- N/A
- Legislation
- Attorney general opinion / statement
- Resources
- Lack of common identifiers / crosswalks
- Coordination with other state authorities / administrators
- Incompatible systems
- Data quality concerns
- FERPA concerns
- Lack of interest from other agencies
- Other barrier, please specify

PLEASE NOTE:

Responses for the remaining questions will not be reported or made available at the state level. Data will be analyzed in the aggregate and individual responses will be anonymized.

Q42

Please briefly describe the process used to ensure privacy of unit record data in your state.

Q43

Which standards or protocols does your agency use to determine privacy and security procedures (FERPA, HIPA, NIST, etc.)?

Q44

Does your agency have a documented protocol for what to do in the event of a data breach?

- Yes
- No

Q45

Does your agency have a documented protocol for destroying data?

- Yes
- No

Q46

How frequently is your data system audited?

- Yearly
- Once every 2 years
- Once every 3-5 years
- Once every 6+ years
- Never

Q47

Do employees in your agency receive formal training for ensuring privacy, security, and confidentiality of student-level data?

- Yes
- No

Q48

Has any legislation on student or consumer privacy (proposed or enacted in the last five years) affected how you store and analyze student unit record data?

- Yes
- No

Q49

Please describe this legislation and how it impacted your agency / entity.

APPENDIX B: LIST OF SURVEY RESPONDENTS

ALABAMA

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APPENDIX C: LIST OF DATA ELEMENTS BY AGENCY

LIST OF DATA ELEMENTS COLLECTED, BY AGENCY: 2-YEAR PUBLIC

State	Demographic						Identifiers						Course information				Degree information					
	Student name	Date of birth	Gender	Race / ethnicity	Age	Military status	Pell status	Social Security number	K-12 unique identifier	Institution of higher education identifier	Postsecondary student unique identifier	Citizenship status	State residency status	Course mode of instruction	Course grade	Student credit hours attempted	Student credit hours earned	Academic term	Degree awarded	Degree date	Cumulative credit hours earned	Cumulative GPA
Alabama	•	•	•	•					•		•	•			•	•	•	•	•	•	•	•
Arizona	•	•	•	•	•		•		•	•	•	•		•		•	•	•	•	•	•	•
Arkansas	•	•	•	•	•		•	•	•	•	•	•		•	•	•	•	•	•	•	•	•
California - CCC	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•
Colorado		•	•	•	•		•	•	•	•		•		•	•	•	•	•	•	•	•	•
Connecticut	•	•	•	•	•		•	•	•	•	•	•		•	•	•	•	•	•	•	•	•
Florida	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•
Hawaii	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•
Idaho		•	•	•	•		•		•	•	•	•		•	•	•	•	•	•	•	•	•
Indiana	•	•	•	•	•	•	•		•	•	•	•			•	•	•	•	•	•	•	•
Iowa - BOR			•	•	•			•	•	•	•	•		•	•	•	•	•	•	•	•	•
Iowa - DOE	•	•	•	•	•	•	•	•	•	•		•			•	•	•	•	•	•	•	
Kansas	•	•	•	•	•	•	•	•	•	•		•		•	•	•	•	•	•	•	•	•
Kentucky	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•
Louisiana	•	•	•	•	•		•	•	•	•	•	•		•	•	•	•	•	•	•	•	•
Maryland	•	•	•	•	•	•	•	•	•			•			•	•	•	•	•	•	•	•
Massachusetts	•	•	•	•	•	•	•	•	•	•		•			•	•	•	•	•	•	•	•
Minnesota - MNST	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•
Minnesota - MOHE	•	•	•	•	•	•		•	•	•	•	•			•	•	•	•	•	•	•	•
Missouri	•	•	•	•	•	•	•		•	•	•	•			•	•	•	•	•	•	•	•
Montana	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•
Nebraska	•	•	•	•	•			•	•	•					•	•	•	•	•	•	•	•
Nevada	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•
New Hampshire - CC	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•	•	•	•	•
New Hampshire - DOE		•	•	•				•	•	•		•			•	•	•	•	•	•	•	•
New Jersey			•	•	•			•	•	•	•	•			•	•	•	•	•	•	•	•

LIST OF DATA ELEMENTS COLLECTED, BY AGENCY:
2-YEAR PUBLIC CONTINUED

State	Student metrics										Financial aid										
	Admissions scores	Placement scores	Prior college(s) attended	Transfer credit(s)	Retention by term or year	Enrollment status (first-time, transfer, continuing)	Degree-seeking status	Full-time / part-time status	Term student first enrolled (fall, spring, summer)	Program / major	Dependency status	Family income	Federal financial aid	State financial aid	Institutional financial aid	Merit-based financial aid	Need-based financial aid	Other financial aid	FAFSA fields	Cost of postsecondary education (what student actually pays)	Student tuition and fees
Alabama			•	•	•	•	•	•	•	•											
Arizona		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•				
Arkansas		•	•		•	•	•	•	•	•			•	•	•	•	•	•	•		•
California - CCC			•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	
Colorado	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Connecticut	•		•	•	•	•	•	•	•	•			•	•	•	•	•				•
Florida	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•				•
Hawaii	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Idaho			•	•	•	•	•	•	•	•			•	•	•	•	•				
Indiana			•	•		•	•	•		•	•	•	•	•	•	•					•
Iowa - BOR	•	•	•	•	•	•	•	•	•	•											•
Iowa - DOE				•	•	•	•	•	•	•											
Kansas	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•			•	•
Kentucky	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Louisiana	•	•				•	•	•	•	•			•	•	•	•	•				
Maryland	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
Massachusetts		•	•		•	•	•	•	•	•		•	•	•	•	•	•				•
Minnesota - MNST	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Minnesota - MOHE	•		•	•	•	•	•	•		•											
Missouri	•		•	•	•	•	•	•	•	•	•	•		•		•		•			
Montana		•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•			
Nebraska						•	•	•	•	•											
Nevada		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
New Hampshire - CC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
New Hampshire - DOE					•	•	•	•	•	•											
New Jersey			•		•	•	•	•	•												

LIST OF DATA ELEMENTS COLLECTED, BY AGENCY: 2-YEAR PUBLIC CONTINUED

State	Demographic						Identifiers						Course information				Degree information					
	Student name	Date of birth	Gender	Race / ethnicity	Age	Military status	Pell status	Social Security number	K-12 unique identifier	Institution of higher education identifier	Postsecondary student unique identifier	Citizenship status	State residency status	Course mode of instruction	Course grade	Student credit hours attempted	Student credit hours earned	Academic term	Degree awarded	Degree date	Cumulative credit hours earned	Cumulative GPA
New Mexico	•	•	•	•	•		•	•		•			•	•		•	•	•				
New York - CUNY	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
New York - SUNY	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
North Carolina - CC	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
North Dakota	•	•	•	•		•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
Ohio	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•		•	•
Oklahoma	•	•	•	•	•		•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
Oregon	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
Rhode Island	•	•	•	•	•		•	•		•		•	•	•	•	•	•	•	•	•	•	•
South Carolina		•	•	•	•			•		•		•		•	•	•	•	•	•	•	•	•
Tennessee	•	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•	•	•	•
Texas	•	•	•	•			•		•	•			•	•	•	•	•	•	•	•	•	•
Utah	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Vermont	•	•	•	•	•	•	•	•		•		•	•	•	•	•	•	•	•	•	•	•
Virginia - CC	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
Virginia - SCHEV	•	•	•	•	•		•	•		•	•	•	•	•	•	•	•		•	•		
Washington - SBCTC	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
West Virginia	•	•	•	•	•	•	•	•		•		•	•	•	•	•	•	•	•	•	•	•
Wyoming	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•

LIST OF DATA ELEMENTS COLLECTED, BY AGENCY:
2-YEAR PUBLIC CONTINUED

State	Student metrics										Financial aid										
	Admissions scores	Placement scores	Prior college(s) attended	Transfer credit(s)	Retention by term or year	Enrollment status (first-time, transfer, continuing)	Degree-seeking status	Full-time / part-time status	Term student first enrolled (fall, spring, summer)	Program / major	Dependency status	Family income	Federal financial aid	State financial aid	Institutional financial aid	Merit-based financial aid	Need-based financial aid	Other financial aid	FAFSA fields	Cost of postsecondary education (what student actually pays)	Student tuition and fees
New Mexico						•	•		•	•	•	•	•	•	•	•	•	•			
New York - CUNY	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
New York - SUNY	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
North Carolina - CC	•		•		•	•	•	•	•			•	•	•	•	•	•	•			
North Dakota	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•			•	•
Ohio			•	•	•	•	•	•	•		•	•	•					•			
Oklahoma	•		•	•	•	•	•	•	•			•	•	•	•	•	•				
Oregon			•		•	•		•	•			•									
Rhode Island	•	•	•	•		•	•		•	•		•	•	•	•	•	•			•	•
South Carolina	•		•	•	•	•	•	•			•	•	•	•	•	•					•
Tennessee	•		•	•	•	•	•	•	•	•	•	•	•		•	•		•			
Texas	•		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•			
Utah				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
Vermont	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•					•
Virginia - CC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•
Virginia - SCHEV	•		•			•	•	•	•	•	•	•	•	•	•	•	•	•			•
Washington - SBCTC			•		•	•	•	•	•	•	•	•	•	•	•	•	•				
West Virginia	•	•	•	•	•	•	•	•	•			•	•	•	•	•	•	•			
Wyoming	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•			•

LIST OF DATA ELEMENTS COLLECTED, BY AGENCY: 4-YEAR PUBLIC

State	Demographic							Identifiers						Course information				Degree information				
	Student name	Date of birth	Gender	Race / ethnicity	Age	Military status	Pell status	Social Security number	K-12 unique identifier	Institution of higher education identifier	Postsecondary student unique identifier	Citizenship status	State residency status	Course mode of instruction	Course grade	Student credit hours attempted	Student credit hours earned	Academic term	Degree awarded	Degree date	Cumulative credit hours earned	Cumulative GPA
Alabama	•	•	•	•					•		•	•			•	•	•	•	•	•	•	•
Alaska	•	•	•	•		•	•	•			•	•	•	•	•	•	•	•	•	•	•	•
Arizona	•	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•	•	•	•
Arkansas	•	•	•	•	•		•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
California - CSU	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
California - UCOP	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
Colorado		•	•	•	•		•	•	•	•		•	•	•	•	•	•	•	•	•	•	•
Connecticut	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Florida	•	•	•	•	•	•	•	•		•	•	•	•	•	•				•	•		
Georgia	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Hawaii	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
Idaho		•	•	•	•		•		•	•	•		•	•	•	•	•	•	•	•	•	•
Illinois	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•	•	•	•	•
Indiana	•	•	•	•	•	•	•	•		•	•	•	•			•	•	•	•	•	•	•
Iowa - BOR			•	•	•				•	•	•	•	•	•	•	•	•	•	•	•	•	•
Kansas	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•
Kentucky	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Louisiana	•	•	•	•	•		•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
Maine	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
Maryland	•	•	•	•	•	•	•	•	•	•		•			•	•	•	•	•	•	•	•
Massachusetts	•	•	•	•	•	•	•	•	•	•		•	•		•	•	•	•	•	•	•	•
Minnesota - MNST	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Minnesota - MOHE	•	•	•	•	•	•		•	•	•	•	•			•	•	•	•	•	•	•	•
Mississippi		•	•	•	•		•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
Missouri	•	•	•	•	•	•	•	•		•	•	•	•			•	•	•	•	•	•	•
Montana	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•
Nebraska	•	•	•	•	•			•	•	•					•	•	•	•	•	•	•	•
Nevada	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•

LIST OF DATA ELEMENTS COLLECTED, BY AGENCY: 4-YEAR PUBLIC CONTINUED

State	Student metrics										Financial aid										
	Admissions scores	Placement scores	Prior college(s) attended	Transfer credit(s)	Retention by term or year	Enrollment status (first-time, transfer, continuing)	Degree-seeking status	Full-time / part-time status	Term student first enrolled (fall, spring, summer)	Program / major	Dependency status	Family income	Federal financial aid	State financial aid	Institutional financial aid	Merit-based financial aid	Need-based financial aid	Other financial aid	FAFSA fields	Cost of postsecondary education (what student actually pays)	Student tuition and fees
Alabama			•	•	•	•	•	•	•	•											•
Alaska	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•
Arizona		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•				
Arkansas		•	•		•	•	•	•	•			•	•	•	•	•	•	•			•
California - CSU	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•		
California - UCOP	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Colorado	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Connecticut	•		•	•	•	•	•	•	•			•	•	•	•	•	•				•
Florida	•	•	•	•		•	•	•	•	•		•	•	•	•	•	•	•			
Georgia	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
Hawaii	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Idaho			•	•	•	•	•	•	•			•	•	•	•	•	•				
Illinois	•		•		•	•	•	•	•			•	•	•	•	•					
Indiana			•	•		•	•	•		•	•	•	•	•	•	•					•
Iowa - BOR	•	•	•	•	•	•	•	•	•												•
Kansas	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•			•	•
Kentucky	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Louisiana	•	•				•	•	•	•			•	•	•	•	•	•				
Maine	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Maryland	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
Massachusetts	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•				•
Minnesota - MNST	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Minnesota - MOHE	•		•	•	•	•	•	•	•												
Mississippi	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•		•
Missouri	•		•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•		
Montana		•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•			
Nebraska						•	•	•	•												
Nevada		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			

LIST OF DATA ELEMENTS COLLECTED, BY AGENCY: 4-YEAR PUBLIC CONTINUED

State	Demographic						Identifiers						Course information					Degree information				
	Student name	Date of birth	Gender	Race / ethnicity	Age	Military status	Pell status	Social Security number	K-12 unique identifier	Institution of higher education identifier	Postsecondary student unique identifier	Citizenship status	State residency status	Course mode of instruction	Course grade	Student credit hours attempted	Student credit hours earned	Academic term	Degree awarded	Degree date	Cumulative credit hours earned	Cumulative GPA
New Hampshire - DOE		•	•	•				•	•	•		•				•	•	•		•	•	
New Jersey			•	•	•			•	•	•	•	•			•	•	•	•	•	•	•	•
New Mexico	•	•	•	•	•		•		•			•	•	•	•	•	•	•	•			
New York - CUNY	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
New York - SUNY	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•
North Carolina - UNC	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•
North Dakota	•	•	•	•		•	•			•	•	•	•	•	•	•	•	•	•	•	•	•
Ohio	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•
Oklahoma	•	•	•	•	•		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•
Oregon	•	•	•	•	•		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•
Rhode Island	•	•	•	•	•		•		•		•	•	•	•	•	•	•	•	•	•	•	•
South Carolina		•	•	•	•			•	•		•	•		•	•	•	•	•	•	•	•	•
South Dakota	•	•	•	•	•	•	•	•			•	•	•	•	•	•	•	•	•	•	•	•
Tennessee	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•	•	•	•	•
Texas	•	•	•	•			•		•	•			•	•	•	•	•	•	•	•	•	•
Utah	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Vermont	•	•	•	•	•	•	•		•		•	•	•	•	•	•	•	•	•	•	•	•
Virginia - SCHEV	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Washington - OFM	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Washington - WSAC	•	•	•	•	•			•	•			•										
West Virginia	•	•	•	•	•	•	•		•		•	•	•	•	•	•	•	•	•	•	•	•
Wisconsin	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

LIST OF DATA ELEMENTS COLLECTED, BY AGENCY: 4-YEAR PUBLIC CONTINUED

State	Student metrics										Financial aid										
	Admissions scores	Placement scores	Prior college(s) attended	Transfer credit(s)	Retention by term or year	Enrollment status (first-time, transfer, continuing)	Degree-seeking status	Full-time / part-time status	Term student first enrolled (fall, spring, summer)	Program / major	Dependency status	Family income	Federal financial aid	State financial aid	Institutional financial aid	Merit-based financial aid	Need-based financial aid	Other financial aid	FAFSA fields	Cost of postsecondary education (what student actually pays)	Student tuition and fees
New Hampshire - DOE					•	•	•	•	•	•											
New Jersey	•		•	•	•	•	•	•	•	•											
New Mexico						•	•			•	•	•	•	•	•	•	•	•			
New York - CUNY	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
New York - SUNY	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
North Carolina - UNC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•
North Dakota	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•			•	•
Ohio			•	•	•	•	•	•	•		•	•	•					•			•
Oklahoma	•		•	•	•	•	•	•	•	•	•		•	•	•	•	•				
Oregon			•	•	•	•	•	•	•			•	•	•							
Rhode Island	•		•	•		•	•		•	•		•	•	•	•	•	•			•	•
South Carolina	•		•	•	•	•	•	•	•		•	•	•	•	•	•	•				•
South Dakota	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Tennessee	•		•	•	•	•	•	•	•	•	•	•	•		•	•		•			
Texas	•		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
Utah				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
Vermont	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•				•
Virginia - SCHEV	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			•
Washington - OFM	•		•	•	•	•	•	•	•												
Washington - WSAC							•	•		•	•	•	•	•	•	•	•	•			•
West Virginia	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•			
Wisconsin	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

LIST OF DATA ELEMENTS COLLECTED, BY AGENCY: INDEPENDENT

State	Demographic						Identifiers						Course information				Degree information						
	Student name	Date of birth	Gender	Race / ethnicity	Age	Military status	Pell status	Social Security number	K-12 unique identifier	Institution of higher education identifier	Postsecondary student unique identifier	Citizenship status	State residency status	Course mode of instruction	Course grade	Student credit hours attempted	Student credit hours earned	Academic term	Degree awarded	Degree date	Cumulative credit hours earned	Cumulative GPA	
Alabama	•	•	•	•					•		•	•			•	•	•				•	•	
Alaska	•	•	•	•	•		•	•		•	•	•	•			•	•	•	•	•	•	•	•
Arizona		•	•	•	•			•															
Arkansas			•	•	•		•		•	•		•	•		•		•	•	•	•			
California - CSU	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•	•	•	•	•	•
California - UCOP	•	•	•	•	•	•		•	•	•	•	•	•	•									
Colorado	•	•	•	•	•	•	•	•	•			•				•	•	•	•	•	•	•	•
Connecticut	•	•	•	•	•	•		•	•	•	•	•	•			•	•	•	•	•	•		
Florida	•	•	•	•	•	•	•	•		•	•	•	•			•	•	•	•	•	•	•	•
Georgia			•	•	•			•	•	•	•	•	•			•	•	•	•	•	•	•	•
Hawaii	•	•	•	•	•		•	•		•	•	•	•			•		•	•	•			
Idaho		•	•	•	•			•		•		•	•				•	•	•	•	•	•	•
Illinois																		•					
Indiana		•	•	•			•	•	•			•				•		•	•				
Iowa - BOR	•	•	•	•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

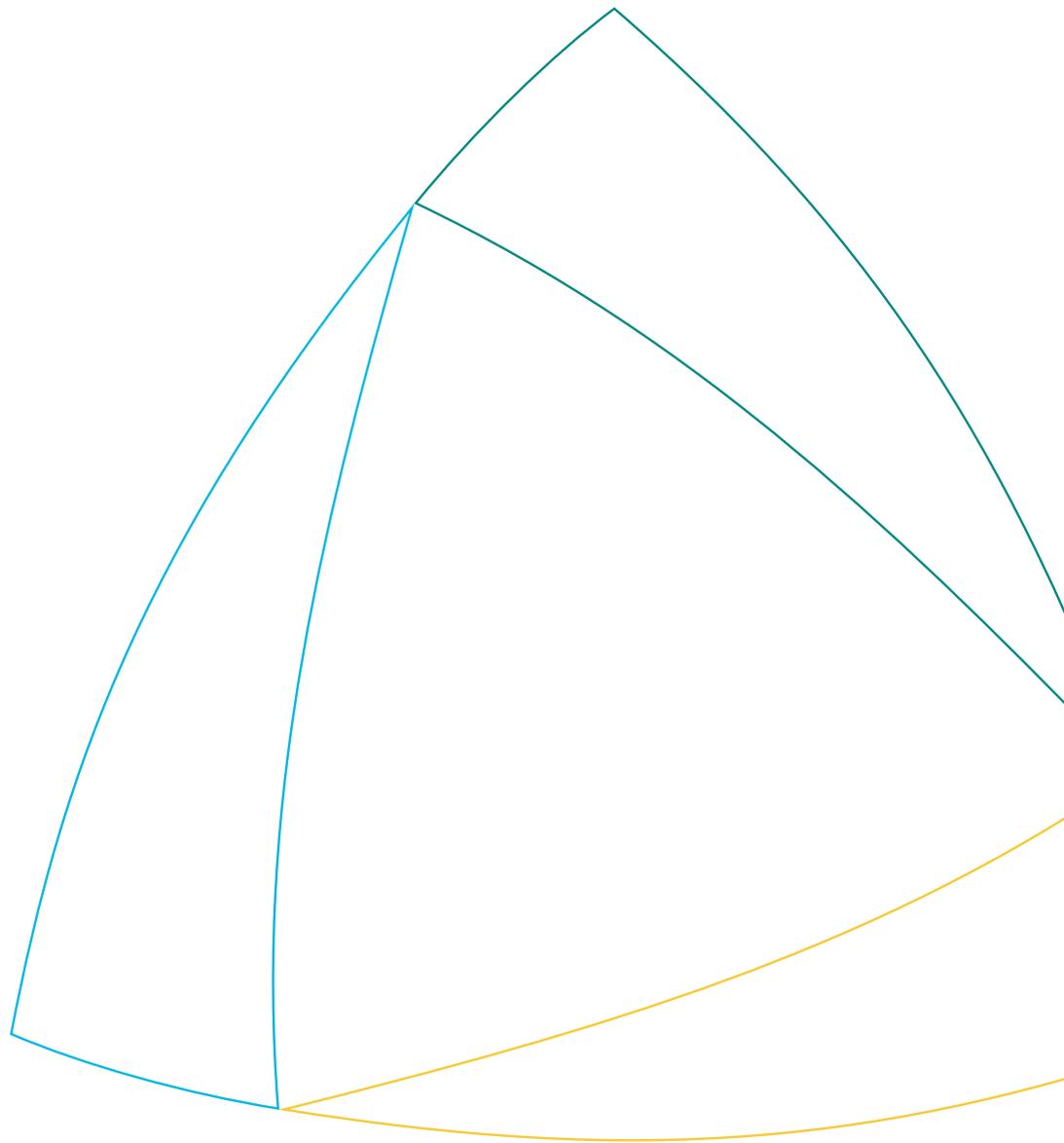
LIST OF DATA ELEMENTS COLLECTED, BY AGENCY:
INDEPENDENT CONTINUED

State	Student metrics									Financial aid												
	Admissions scores	Placement scores	Prior college(s) attended	Transfer credit(s)	Retention by term or year	Enrollment status (first-time, transfer, continuing)	Degree-seeking status	Full-time / part-time status	Term student first enrolled (fall, spring, summer)	Program / major	Dependency status	Family income	Federal financial aid	State financial aid	Institutional financial aid	Merit-based financial aid	Need-based financial aid	Other financial aid	FAFSA fields	Cost of postsecondary education (what student actually pays)	Student tuition and fees	
Alabama			•	•	•	•	•	•	•													
Alaska			•		•	•	•	•				•	•	•	•	•	•	•				
Arizona																						
Arkansas			•			•	•	•		•		•	•		•	•						
California - CSU	•		•		•	•	•	•	•	•				•	•	•						
California - UCOP			•	•	•	•	•	•	•													
Colorado	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
Connecticut	•		•	•	•	•	•	•		•												
Florida	•		•	•	•	•	•	•	•	•	•		•		•	•			•			
Georgia	•		•		•	•	•	•	•													
Hawaii					•	•	•	•	•													
Idaho	•		•	•	•	•	•	•			•	•	•	•	•	•						•
Illinois															•							
Indiana			•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
Iowa - BOR	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			•

LIST OF DATA ELEMENTS COLLECTED, BY AGENCY:
PROPRIETARY

State	Demographic						Identifiers						Course information				Degree information					
	Student name	Date of birth	Gender	Race / ethnicity	Age	Military status	Pell status	Social Security number	K-12 unique identifier	Institution of higher education identifier	Postsecondary student unique identifier	Citizenship status	State residency status	Course mode of instruction	Course grade	Student credit hours attempted	Student credit hours earned	Academic term	Degree awarded	Degree date	Cumulative credit hours earned	Cumulative GPA
Colorado		•	•	•	•																	
Illinois	•	•	•	•	•	•	•	•	•	•					•	•	•	•	•	•	•	•
Minnesota - MOHE	•	•	•	•	•	•		•	•	•	•	•			•	•	•	•	•	•	•	
Missouri		•	•	•	•		•		•		•	•						•	•			
New Jersey			•	•	•		•	•	•	•	•	•			•	•	•	•	•	•	•	•
Oregon	•	•	•	•	•		•		•	•							•	•	•			
South Carolina		•	•	•	•		•		•		•	•				•	•	•	•	•	•	•

State	Student metrics									Financial aid												
	Admissions scores	Placement scores	Prior college(s) attended	Transfer credits	Retention by term or year	Enrollment status (first-time, transfer, continuing)	Degree-seeking status	Full-time / part-time status	Term student first enrolled (fall, spring, summer)	Program / major	Dependency status	Family income	Federal financial aid	State financial aid	Institutional financial aid	Merit-based financial aid	Need-based financial aid	Other financial aid	FAFSA fields	Cost of postsecondary education (what student actually pays)	Student tuition and fees	
Colorado																						
Illinois	•		•		•	•	•	•	•						•	•	•					
Minnesota - MOHE	•		•	•	•	•	•	•	•													
Missouri					•				•	•	•		•		•	•		•				
New Jersey			•		•	•	•	•	•													
Oregon								•	•													
South Carolina	•		•	•	•	•	•	•	•		•	•	•	•	•	•	•					•



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