

Chapter 4

Recommendations—What Can Education Policymakers, State Data Managers, and Researchers Do to Increase the Use and Quality of Existing State Education Data?

State education databases are an important source of information that researchers and policy audiences should not overlook. Although state agency data-request procedures and the usability of some variables present challenges, the potential utility of applying these data to policy research questions is very high. Based on study findings, we recommend that policymakers, state data managers, and researchers work together to expand their use of state education data for resource allocation research. We also recommend that policymakers and state departments of education support and implement data improvements for greater applicability to informing state policy and find ways to make these data more available and accessible for research use.

Expand the Use of State Education Data

Our assessment of data use in the four study states clearly showed that data have not been used to their fullest potential to support policy decisions. Specifically, data use has been extremely limited to a few areas of interest such as school funding formulas, adequacy of education funding, and descriptive studies of finances and teachers. Policy studies that help decision makers understand the relationship between resources and student performance are rare in the four study states. Given what we learned from this study, policymakers and researchers need to work together to become more familiar with these data and to use them to inform decisions. Increased use of existing state education data not only would result in increased information for policymakers but also would fuel a feedback mechanism for states to better understand how data need to be improved or expanded to serve information needs.

Improve State Education Data for Policy Research

Applying state education data to policy research purposes is a relatively recent priority that is not fully recognized by states even today. In order for the data needs of policy research to move to the forefront, state policy audiences, data managers, and researchers must provide input on how existing data could be improved and changed for research purposes—in addition to more traditional reporting and monitoring purposes. Policy audiences need to expand their use of existing data to inform their decisions by learning about what data exist and requesting that these data be used to answer critical policy questions.⁶ Data managers can work to improve state data collection systems and increase the accessibility of data. Researchers can support policy audiences by conducting more research with existing state data and providing feedback to data managers regarding the quality and accessibility of these data. Although expanding the use of existing data for research purposes is an important goal, policymakers, data managers, and researchers also must be aware that state education data are collected for competing needs such as federal reporting, tracking state accountability goals, and supporting state funding formulas. When considering improvements and changes to state databases, we must balance the time and resource burdens that changes in state data systems create for schools, districts, and state agencies.

According to previous data assessment studies, policymakers, data managers, and researchers should consider several criteria to determine whether state data can be used to support their research and information needs regarding instructional resources, including the following:

⁶ Although this report highlights the usability of existing state education databases, policy researchers should continue to seek alternative sources of data and/or sponsor targeted collection of data if state sources are not sufficient.

1. Data must be available and accessible through a central source or through collaboration between agencies or departments that compile data related to instructional resource allocation. Data must be current and released to users in a timely manner.

2. Ideally, data systems would be automated, interconnected, and contain appropriate controls for confidentiality protection (Cohen, 1997). Privacy and confidentiality policies should be clear and consistent.

3. Data must be consistent, valid, and reliable, and reporting procedures should be enforced using such tools as standardized software programs.

4. Data systems must be user-friendly and supported by technicians who are well-trained and knowledgeable about data, hardware, and software. Users must have access to detailed data documentation.

5. Data systems must include data on all levels of the system (classroom, school, district, and state). Ideally, researchers should be able to disaggregate data to any level of organization.

6. Data systems must measure a wide range of instructional resources and costs, accurately gauge state performance expectations, and be able to relate instructional resource data to student performance and demographic information (Busch & Odden, 1997; Farland, 1997; Pane & Zwillinger, 2002).

It is clear from this study that education data across the four study states share similar structures and common variables. Federal reporting requirements linked to specific federal programs (Title I, Title II, special education programs, etc.) and national education data collection efforts (U.S. Census, National Center for Education Statistics, etc.) have helped to create similar data collection processes among states. As this study revealed, however, critical

differences in the variable definitions used by each state and the range of information they collect leave researchers with few avenues for pursuing cross-state or regional studies on education resources. Policymakers, data managers, and researchers should maintain a dialogue with national data centers such as the National Forum for Education Statistics that attempt to bridge the gap between the unique needs of state data systems and the research benefits of establishing national data standards.

We also recommend that policymakers and data managers consider the following targeted improvements to increase the usability of education data for resource allocation research:

1. Instructional expenditures at the school level are collected currently only in Texas; the other three study states collect this information at the district level. Adding school-level detail of how instructional resources are allocated would enable policy researchers to consider spending needs of schools in varying environments. This is especially important for those states with large or diverse school districts. If policy audiences are to understand how spending differences within districts affect the success of students in different schools, these data must be tracked and compiled in state education databases. However, when establishing new accounting mechanisms for schools and districts to use for reporting school-level expenditures, collection methods should be designed to avoid simple proration of district expenses across schools or inconsistency in coding expenditures across sites.

2. Teacher quality is quickly becoming one of the highest policy priorities due to the federal No Child Left Behind legislation and research results emphasizing the importance of good teachers as a predictor of student success. Policymakers and data managers need to ensure that data collected on teacher qualifications align with federal priorities. In all four study states,

state teacher databases lack information about a teacher's degree major. All four states also track teacher certification information on a cumulative basis, so snapshots in time of the existing teacher pool are difficult or impossible to obtain. We also recommend that data managers improve teacher certification data so that certifications can be aligned easily to teacher subject areas and grade levels. Teacher experience is a critical measure for policy decisions on teacher compensation, and data managers need to improve the accuracy of these data.

3. Class size limits are imposed by both federal and state policy, and the benefits of smaller class sizes have been the topic of intensive study over recent years. In order for state policy audiences to fully understand the influence of class size on student performance in diverse schools and districts, reliable data must be available. State education data in each of the four study states enable users to create different measures for class size. In three of the four states, students are not linked to their classroom teachers, so a true estimate of class size cannot be created. In New Mexico data do link students to teachers, but access to these data is restricted from outside users. If policymakers are to fully understand the relationship between class size and student success, accurate measures, including data that link individual teachers to specific students or classrooms, must be created for use in policy analysis.

4. Professional development is currently unaccounted for in state education databases in the four study states. Current research suggests that high-quality professional development for teachers affects the success of teachers (Charles A. Dana Center, 2002; Porter, Garet, Desimone, Yoon, & Birman, 2000). The No Child Left Behind legislation also has increased attention on the need for high-quality professional development for teachers, and states must account for the number of hours teachers spend in professional development. Additionally, without data on the amount and type of professional development for teachers and the cost of investments in

professional development to schools and districts, policymakers cannot consider the costs and benefits of statewide initiatives to provide professional development to educators.

Improve Accessibility of Data for Outside Users

A number of factors influence the accessibility of state education data for use in policy research. If data are to be shared with outside users such as policy audiences and researchers, accessibility and availability are the critical first steps. We recommend policymakers and state education agencies consider the following issues

1. Interpretations of federal Family Educational Rights and Privacy Act (FERPA) regulations vary from state to state and change over time, affecting the accessibility of individual-level data. Individual-level data are necessary to conduct in-depth analysis of student subgroups and relationships between different types of students, teachers, and resources. Policymakers and data managers should ensure that FERPA regulations are interpreted in a consistent manner and should find ways for education agencies to share data from state databases while ensuring confidentiality of individuals.

2. Agencies that house state education data should ensure that procedures and staff are in place to assist data users. States vary in their ability to respond to requests from outside data users. Three of the four study states have limited staff who can pull data, address confidentiality concerns and scramble unique identifiers, and merge databases as needed to respond to data requests. In Texas, a standard process for responding to outside data requests has been instituted. However, in order to support the work that these requests generate, that state also charges a significant fee for special data requests, restricting accessibility to those who can afford these fees. State education agency staff are a critical resource to data users for data requests, information about data structures and variables, and coordination with the multiple departments

or related agencies that collect and manage education data. Clear procedures for data requests should be established, and state data managers should communicate the time and cost needed to provide data.

3. Departments at state education agencies that collect data should work toward creating centralized data systems that combine the multiple education databases within each state. State education data related to instructional resources are divided among multiple databases and are managed by different departments within state education agencies or other related agencies. Data users must navigate different database structures and different levels of documentation and staff time and expertise. Fiscal data generally are collected and compiled separately from staff and student data. Teacher certification data are collected and managed by a different agency in Texas and by distinct departments within the department of education in the other three study states. Decentralized data systems create difficulties in answering policy questions that align fiscal and staff resources with student performance. Efforts in Louisiana to compile all education data into a central system provide a model for aligning disparate data sources. The Louisiana Educational Accountability Data System (LEADS) is an ongoing effort to implement an integrated data management system to support Louisiana's education information needs. The Louisiana Department of Education is phasing in the Louisiana Educational Accountability Data System over time and already has integrated multiple data collection and dissemination systems (e.g., School Transcript System, School and District Accountability, the Data Warehouse, and Minimum Foundation Program Accountability). The costs and technical expertise required to complete this type of data integration are not yet available, nor are assessments of the relative benefits or utility to potential users. Additionally, the Texas Public Education Information Resource (TPEIR) database is being developed as a cross-agency data management system that

combines primary, secondary, and higher education information. This database is jointly managed by the Texas Education Agency, the Texas Higher Education Coordinating Board, and the State Board for Educator Certification, and integrates data collected through several different systems. We recommend that state education agencies and policymakers in all states investigate similar initiatives in order to expand access to state education data.

4. Improvements could be made so that data documentation is consistently available and comprehensive for all state education data. If researchers are to use data accurately, they need detailed documentation on what data variables are collected and computed by state education agencies. Information on variable definition, type, ranges (if applicable), and year-to-year changes should be made available. Agencies that manage education data should post updated documentation to agency Web sites to increase accessibility to this information.