

State Data Systems: What Is Needed for Next-Generation Assessment and Accountability Systems

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If the next generations of assessment and accountability systems are to include much broader information about students' academic and performance histories, then the corresponding data systems also will need to expand to include more student information. Currently, most state education agencies (SEAs) and local education agencies (LEAs)/school districts maintain separate student-level data systems that are designed to meet their own reporting requirements. If a future-generation data system will involve one large system at the state level, states need to evaluate how the current systems are set up and what needs to change.

The Data Quality Campaign (DQC), a strong advocate for statewide student-level longitudinal data systems,¹ recommends that state P-12 data systems include 10 essential elements (see box, p. 2). With these essential elements, the state's data system becomes a powerful tool for tracking individual student progress, serving as an early warning system, conducting program evaluation activities and answering

Highlights

In this brief, find out more about:

- ▶ Assessing college and career readiness;
- ▶ One view of a future data system;
- ▶ Features of current student-level data systems:
 - Delaware
 - West Virginia
 - Massachusetts
 - Other States
- ▶ Differences between next-generation and current data systems.

important policy questions. For example, the ability to assess individual students' college and career readiness or to evaluate schoolwide or districtwide college and career readiness trends depends on having a robust data system.

Assessing College and Career Readiness

Beyond the first four essential elements, three others provide critical data for assessing college and career readiness:

- ▶ *Element 6 (student-level P-12 transcript information, including information on courses completed and grades earned)* provides the information necessary to determine whether or not students have completed the requisite rigorous courses toward a diploma that signifies college and career readiness. By collecting and analyzing course grades in

addition to test scores, administrators can evaluate the relationship between grades earned, end-of-course exam scores and ACT/SAT scores. With these data, educators and others can identify possible grade inflation, pinpoint particular courses or sections of courses that are not living up to rigorous standards, or discover schools or districts that generate higher than average numbers of students requiring college remediation.

¹Data Quality Campaign/National Center for Educational Accountability, 2007 *Survey of State P-12 Data Collection Issues Related to Longitudinal Analysis*.

- ▶ *Element 7 (student-level college readiness test scores)* addresses the need to collect student-level scores on the ACT, SAT and AP exams. Matching these scores with other student-level performance, course and program participation data can provide valuable information not only for educators to use when assessing individual students' progress toward college readiness, but also for policymakers, schools and districts to use when evaluating their policies on preparing students for postsecondary education.
- ▶ *Element 9 (the ability to match student records between the P-12 and higher education systems)* is critical for evaluating whether students truly do perform at college-ready levels once they arrive in a postsecondary system. The student-level connection between the two systems allows educators to investigate the P-12 academic history and performance levels of students who enroll in college remediation. It also allows administrators to identify possible contradictions between P-12 and postsecondary indicators of success — either within or across schools — that need to be addressed to ensure that college and career readiness standards are being met in P-12 institutions.

Current Status of Data Systems

According to the DQC's 2007 survey about P-12 state data systems and the 10 essential elements:³

- ▶ Four states (Arkansas, Delaware, Florida and Utah) report having all 10 elements.
- ▶ 16 states and the District of Columbia report having element 6 (course transcripts and grades).⁴
- ▶ 15 report having element 7 (college readiness test scores).⁵ To get full credit for element 7, SEAs must receive AP scores and either ACT or SAT scores. The DQC feels strongly that AP courses and exams are an important way to ensure the availability of rigorous high school courses and provide an opportunity to assess whether students are college ready.

10 Essential Elements of a Comprehensive Longitudinal Data System²

Although each state's P-12 education system is unique, 10 essential elements are critical to a longitudinal data system:

1. A unique statewide student identifier that connects student data across key databases across years
2. Student-level enrollment, demographic and program participation information
3. The ability to match individual students' test records from year to year to measure academic growth
4. Information on untested students and the reasons they were not tested
5. A teacher identifier system with the ability to match teachers to students
6. Student-level transcript information, including information on courses completed and grades earned
7. Student-level college readiness test scores
8. Student-level graduation and dropout data
9. The ability to match student records between the P-12 and higher education systems
10. A state data audit system assessing data quality, validity and reliability

²Data Quality Campaign, *Creating a Longitudinal Data System: Using Data To Improve Student Achievement*, 2006, www.DataQualityCampaign.org/files/Publications-Creating_Longitudinal_Data_System.pdf.

³Results of 2007 NCEA Survey of State P-12 Data Collection Issues Related to Longitudinal Analysis.

⁴Sixteen states with element 6: Alabama, Arkansas, Delaware, Florida, Georgia, Hawaii, Kentucky, Louisiana, Mississippi, Nevada, North Carolina, South Carolina, Texas, Utah, Washington and West Virginia.

⁵Fifteen states with element 7: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Indiana, Massachusetts, Ohio, Texas, Utah, Virginia, West Virginia and Wisconsin.

- ▶ 21 states and the District of Columbia report having element 9 (the ability to connect P–12 and postsecondary data systems at the student level).⁶
- ▶ Only seven states (Alabama, Arkansas, Delaware, Florida, Georgia, Texas and Utah) and the District of Columbia report having elements 6, 7 *and* 9.

These findings indicate that only 16 percent of our states (50 states, plus the District of Columbia) *might* have the ability

to drill down to the student level to explore the intricate relationship between students' course-taking patterns and test scores in P–12 and their postsecondary experiences. The word “*might*” is italicized because the DQC survey asks about the capacity of the data system and not the actual use of data. For example, only 11 states indicate that they have collected student-level course completion data long enough to have four years worth of data on 2008 graduates.

One View of a Future Data System

The primary purposes of aligned and linked data systems are to:

- ▶ **Improve teaching and learning.** During the school year, formative and benchmark assessments are used at the classroom, school and even district levels to provide immediate feedback to staff on how to tailor teaching and learning for current students. Across years, data are used at the school, district and state levels to analyze and review the effectiveness of specific programs, policies and curricula. With enough detailed data tracking students across years, teacher effectiveness and the effectiveness of professional development programs can be evaluated as well.
- ▶ **Serve as early warning indicators.** During a given school year, scores from formative assessments and other types of student data can signal that particular students are not on track to successfully complete their current coursework or future rigorous courses. With this information, teachers can begin necessary interventions. Student-level data from previous years also can be used to predict the likelihood of success in future years. Indicators such as assessment scores, absenteeism, language delay and retention can help define and fine-tune the warning systems and interventions that teachers and administrators use to support students.
- ▶ **Facilitate accountability and reporting.** SEAs use data from district and state data systems to evaluate the effectiveness of schools and districts in meeting statewide accountability standards. They also use these data

to meet state and federal reporting requirements about student demographics, student performance, teacher preparation and program participation.

An ideal data system would meet these three purposes through an efficient and aligned collaboration between the state's longitudinal data system and district data systems. This collaboration requires the technical capacity to link and share data across systems, as well as the political will to work together to ensure effectiveness and efficiency. What would this ideal look like?

The SEA data system would collect detailed student-level data directly from schools and districts on a daily or weekly basis and make those data available almost immediately to teachers, counselors, principals, and other school and district administrators. This system also would include detailed teacher data, such as information about each teacher's preparation and professional development experiences. In this system, teacher and student data would be connected so that teachers could see detailed histories for each of their current students. Longitudinal student data would include course history and grades, statewide and formative assessment data for each grade level, historical information about the programs

⁶ Twenty-one states with element 9: Alabama, Alaska, Arkansas, Delaware, Florida, Georgia, Hawaii, Kentucky, Louisiana, Massachusetts, Mississippi, Missouri, Nevada, North Carolina, Oregon, Tennessee, Texas, Utah, Vermont, Washington and Wyoming.

from which students received services, and outside college readiness scores (e.g., ACT, SAT and AP exam scores).

With this one data system:

- ▶ Teachers would have daily access to the information they need to inform instruction;
- ▶ Principals and district administrators would have the

information they need to evaluate current policies and practices; and

- ▶ SEA staff would have the information to meet state and federal reporting requirements and to help schools and districts determine if they are at risk of not meeting accountability standards and where changes are needed.

Features of Current Student-Level Data Systems at the SEA and LEA Levels

Student Information Systems

Many states have developed student information systems that they make available to LEAs. These systems provide the data architecture for LEAs to collect, store and submit student-level data required by the state. The state system typically is set up to pull data from the LEAs on a regular basis without requiring any extra programming from district staff. In most states, LEAs can use this state system or purchase a system from a third-party vendor. When districts choose to purchase their own student information systems, they are responsible for ensuring that all necessary data are collected and reported to the state data system in the correct format and on the correct submission cycles.

Student Identifier (ID)

Most states have implemented statewide unique student IDs within the past three years, although six states have yet to do so, according to the 2007 DQC survey. These student IDs allow states to track students as they move across schools and districts within the state and as they move from one grade to another. Typically, these IDs are generated by the state and may be shared with the district. Ohio, however, has a state law that says that the SEA cannot maintain students' identifiable information (i.e., names, dates of birth). The SEA does have access to student IDs, but without other personally identifiable information, sharing data with other entities is difficult.

Students do not typically know their state IDs. SEAs and LEAs are working together to determine if and how to include statewide student IDs on student transcripts because there is much discussion between P–12 and postsecondary staff about including P–12 student IDs in the postsecondary data system as a way to link student-level data across the two systems. School districts also typically assign local student IDs, which students probably do know and use. The SEAs allow districts to submit local IDs to the state system, but SEAs rarely, if ever, actually use or reference local IDs.

Program Participation Data

LEAs that receive money directly from the federal government and all SEAs are required to report the number of students participating in programs such as special education, Title I, bilingual and English language learner. Historically, LEAs and SEAs have reported aggregate counts of students who received special services by program area, but as SEAs build robust student-level data systems, states are collecting participation information on an individual basis annually. With these data, they can not only meet federal reporting requirements, but also analyze student performance information by program participation to more thoroughly evaluate program effectiveness. At the end of a school year, many — if not most — LEAs roll certain data forward to the new school year and then archive their student data for the current year. When the next school year begins, they update student demographics and program participation data as necessary,

but other data are entered fresh into the system. Consequently, the LEA data systems often do not have historical student data available during the year.

LEAs that have built data warehouses with longitudinal data are the exceptions. Typically, only larger districts with the necessary financial and staff resources have built their own data warehouses. Some large districts around the country have more research and evaluation and/or information technology staff than their SEA counterparts and, consequently, have preceded the SEAs in developing more sophisticated data systems and reporting tools. Most districts, however, do not have this capacity.

Assessment Data

SEA systems typically collect data on the statewide assessments. In the past, some states collected only summary performance statistics rather than individual student scores. As states are building more robust student-level data systems, though, SEAs are beginning to collect student-level scores and, in some cases, even item-level responses from the testing contractors. States enter into contracts with testing vendors and specify what types of reports are to be sent directly to the districts versus the SEA. SEAs then typically analyze these data in various ways for both state accountability ratings and federal reporting requirements. LEAs also use these data to provide reports to parents and students.

SEAs across the country generally have policies in place to collect from a district only those data the SEA is required to have by state or federal law. Most SEAs rely on the statewide assessment as an indicator in the accountability system because then they can hold all districts to the same standard on the same test. Formative assessments generally are not standardized across districts within a state, and formative assessment data are not typically used by SEAs for either state accountability or federal reporting; consequently, many states do not feel that collecting these data is within their purview. Likewise, SEA systems are not set up to collect, report or use information on classroom tests.

Nebraska, which does not have a single statewide assessment, must use data from each district's formative assessment to calculate No Child Left Behind (NCLB) statistics. The Nebraska SEA does not get the actual scores on the formative assessments, however; the LEAs categorize their students' performance into the NCLB proficiency groups and send their performance status to the SEA.

Course Completion Data

Until recently, few states collected student-level course completion data; 17 states reported having this information at the middle and high school levels on the 2007 DQC survey. Many states believe that because course data are not typically required by state or federal mandates, it is not the purview of the state to collect and use the information. Only a few states have developed a standardized statewide course numbering system, although more states have begun this endeavor. The National Center for Education Statistics recently published guidelines about course numbering systems that some states are considering.

Aside from a standardized course numbering system, states acknowledge that no procedures are in place to ensure that the course content matches the course title. With the dearth of course completion data, few states are able to report on the numbers of students or identify which students complete specific course sequences, such as those for Academic Competitiveness Grant programs or the State Scholars Program. This type of information must come from LEAs in most states, although providing it may be difficult if the LEA data system is not set up to maintain historical data.

Ability To Connect Student and Teacher Data

Only 18 states reported the ability to connect student and teacher data on the 2007 DQC survey. One state education commissioner has stated publicly that he would not create this connection because he did not want teachers evaluated on student performance data. While the debate about whether or not to develop pay-for-performance systems (and how best to implement them) rages, pay-for-performance

activities are not the only reason to connect teacher and student data. Other reasons include the ability to evaluate the effectiveness of teacher preparation programs and the ability to determine which teachers serve which students best. Connecting student performance data to teachers also allows administrators to evaluate assessment scores (both formative and statewide) to determine whether specific classroom teachers need to change to help improve student achievement.

Historically, these data have been available at the school and district levels and not at the state level. This type of classroom and school evaluation has not been the purview of SEAs because the state accountability systems typically have focused on school and district performance and not classroom performance.

Graduation and Dropout Data

Almost all states (49 per the 2007 DQC survey) have taken steps the past few years to collect student-level graduation and dropout data, rather than rely on summary statistics provided by LEAs. As more years of student-level enrollment and exit data become available, more states will be able to track individual students across four, five and six school years and determine which ones actually graduated, transferred or dropped out. They also will be able to calculate graduation and dropout rates at the state and district levels with a greater degree of accuracy.

Data Warehouses versus Reporting and Analysis Tools

Robust data warehouses are vital for providing large amounts of complex data to policymakers and educators in a useable format, and many states and school districts are investing in building them. The educational data warehouse can feed a comprehensive system of both standardized and customized reports and analytical tools that answer questions posed by policymakers, district administrators, local educators and parents.

Discussions about data warehouses and reporting and analysis tools so often occur at the same time that many people think that they are one and the same. Although these

two components of a robust data system go hand in hand, they require separate types of technology and staff expertise. A data warehouse is, in essence, a storage facility for many datasets culled from a variety of source files, such as student enrollment, program participation, graduation, state-level assessment, teacher and financial data. Reporting and analysis tools, however, are the software programs written to calculate the statistics that stakeholders need to evaluate the performance of a student, school, district or state and to produce reports (electronic or print) that answer stakeholder questions.

An example of information that teachers can benefit from includes item-level analyses of performance on statewide and formative assessments. By reviewing how students responded to each item and analyzing which types of students gave incorrect responses (for example, relating the responses to English language learner status, their primary teacher, or last year's teacher or school), both teachers and administrators can identify the appropriate interventions for these students as well as possible interventions with prior grade-level teachers.

As highlighted in the March 2007 DQC quarterly issue brief, a teacher from Ohio showed how her school used academic growth data — comparing students' test scores from one year to another — to determine that she excelled at teaching 5th grade mathematics to high-performing students and getting them to continue to increase in proficiency, while another teacher was better at teaching previously low-performing students and helping them increase their proficiency levels. With this knowledge, administrators and teachers in this school can better serve all students.

Other Types of Data Maintained at LEAs

LEAs also are responsible for maintaining student data that are not a part of a state's assessment or accountability system, such as library, nursing/health, transportation and cafeteria services. SEAs do not typically collect these data because they do not use the information. Often, these data systems are developed by a different set of vendors than the student information systems. LEAs and SEAs, however, are working with the Schools Interoperability Framework

Association (SIFA) and other organizations to make sharing data within and across districts easier so that any piece of student-level data can be entered only once and then used by other systems. This process will reduce the amount of resources necessary for data entry, reduce data entry errors and increase efficiencies across data systems.

National Data Resources

As states expand their data systems and ability to create more informative subsets of data, the U.S. Department of Education is enhancing and fine-tuning its data system at the national level. In 2003, the Education Department started working with states to reduce the data collection burden on SEAs and districts by creating standard data element defini-

tions, reporting requirements across program areas, and data collection cycles and processes. The department is building a data warehouse and its own reporting and analysis tools (*EdFacts*) that different divisions within the Education Department will access and use. More recently, the Council of Chief State School Officers, with support from the Bill & Melinda Gates Foundation, launched the State Education Data Center — accessible via www.SchoolDataDirect.org — which collects annual aggregate datasets from states, and in the near future from *EdFacts*, and makes these datasets available to researchers and other organizations that analyze school and district data. These national repositories do not include student-level data, but they do serve as a model for how to collect and share data for widespread use.

The Future Is Here — Sort of ...

Delaware

19 districts, 17 charter schools, approximately 160,000 students

The Delaware Department of Education makes a state-developed and state-funded student information system available to all LEAs, but each can choose to purchase its own system from third-party vendors. Districts also can choose to have the SEA host their student-level data on state-provided servers.

The SEA maintains student-level data for all districts and charter schools in a central repository but does not have access to all of the districts' student-level data. This central repository is divided into 37 separate databases: one for every district and charter school and one for the SEA's data. Within each district's database, the district stores student-level data that the state needs and data that the district alone uses. For example, districts can collect formative assessment, health, discipline, course and transportation data, among other things, and store them on the SEA servers. The SEA then goes into the district's database on a nightly basis to extract the data needed to complete state and federally

mandated reports. The SEA does not ever extract, cleanse, update or use district-defined data outside of those elements that it is required to collect.

The SEA also supports various reporting and analysis tools that can be used by LEA staff. Each district is responsible for having well-trained staff to run analyses of its own data. The SEA produces some standard reports — for example, school and district demographics; student performance on the statewide assessment by student group; and attendance, graduation and dropout statistics — and can help with some special reporting requests, but it does not run analyses using any data that the SEA is not required to collect.

In Delaware, teachers in districts that use the state data system enter their data, such as attendance and grades, directly into the system, and they can pull down information and reports about their own students daily. Each LEA defines what data it collects outside of state-mandated information.

Delaware also is working with vendors to establish a balanced score card that will show districts and schools where they

stand on a set of common indicators — for example, percentage of students who score proficient on reading and math tests, graduation and dropout rates, and percentage of classes taught by highly qualified teachers. Districts and schools also will be able to develop other custom indicators that they wish to measure. Each measure will have a target value and a target date established, and the report card will show schools and districts where they are in meeting those targets.

West Virginia

55 county districts, approximately 282,000 students

West Virginia also has a data system that receives data directly from LEAs daily. This system was built and is maintained with state funds under legislative mandate. Because most districts use the same grade book data system, the SEA is exploring the possibility of connecting it to the statewide data system. The state's system already collects daily transactions such as attendance, transfers, end-of-period grades and discipline data. Teachers can see student transcripts and parent contact information. The state system also allows teachers to see historical data on assessments (including the statewide accountability test, writing assessments, and ACT's PLAN and EXPLORE). To date, the state system does not collect formative assessment data.

Massachusetts

403 districts, approximately 975,000 students

Massachusetts recently launched its data warehouse and has included room to store district-specific variables and formative assessment data. Like other states, though, the SEA does not run any analyses, reports, cleansing or data quality checks on the district-specific variables and formative assessments. It provides the option for districts to store the data, but at first, districts expressed *many* reservations about storing their data in an SEA facility. Districts were concerned that the SEA would use the data inappropriately and take a snapshot on incomplete or “not the most up-to-date” data, which would represent the district inappropriately. To resolve the issues, SEA and LEA representatives

had many conversations, and they eventually documented procedures on what the state could and would do with district formative assessment and other data variables.

Other States

Although the technology exists for other states to provide the same type of data collection and storage systems to their districts, the issues of state funding, state mandates and local control would likely make this enterprise much more difficult in most states. The relatively small numbers of districts and students in Delaware and West Virginia make the implementation and maintenance costs of a single centralized system much more palatable than they would be in larger states.

For example, Texas has more than 1,100 districts and charter schools and more than 4.5 million students. If each — or even many — of those districts used a different formative assessment and maintained data on a different set of student and teacher data elements, all of which had different coding formats, and all wanted a different set of reports available to their teachers and administrators, the Texas SEA would face quite a communication, governance and programming burden. In addition, the state would need increased staff and money to support all of the hardware and software requirements for storing everything at the SEA. The technology exists to do so, and the communication and governance skills can be obtained and managed. Whether or not the state could or would take on the financial burden to support this type of enterprise is another story.

The DQC has conducted site visits to seven states since 2006, and in most states, district staffs report that they receive very little, if any, funding from the state to support required changes in their data systems. They usually absorb all costs related to staff time, as well as many of the technical costs. If the state were to build a centralized data system to include district-specific variables, thus obviating the need for stand-alone district data systems, the state would have to absorb substantial costs that districts now absorb.

Differences between Next-Generation and Current Data Systems

States that currently have all or most of the 10 essential elements can do a tremendous amount of research and evaluation into what makes effective teachers, schools and districts — even without maintaining district-specific formative assessment data. With a robust student-level data system that is able to connect teacher data to student data, track course completion information, associate college readiness test scores, and connect school- and/or district-level financial data, states can identify the strongest predictors of student success. For instance, more district funding might not be as important as how the district spends its funds.

Some states have the data systems in place to conduct this research already, but it usually is based on data collected annually and cannot be “turned around” in short order to inform local educators. However, in next-generation data systems, formative assessment and accountability systems will provide an even richer amount of information that can be used to understand how to improve student and teacher achievement and can be analyzed more often.

Collecting Formative Assessment Data

The biggest difference between the next-generation data system and current systems appears to be a philosophical, if not political, one. Currently, many states have a philosophy, if not a stated policy, that the SEA cannot and will not collect any data from an LEA that the SEA does not actually use. Therefore, most SEAs, even as they are building data warehouses with the goal of helping both state and local educators, will not collect district-specific formative assessment data, and some are still considering whether or not to collect course completion data.

Ohio has provided funding to build a data warehouse that is housed at a regional technology center and includes student-level data from the state’s assessment system. Teachers can access this data warehouse to see how their students are

performing on an item-by-item basis. The goal of this system is to allow educators to share with each other lesson plans and resources that are aligned with the Ohio content standards, as well as to serve as a database for formative assessments. To date, formative assessments have not been included in the data warehouse, and long-term funding and sustainability have not been established. This data warehouse is maintained separately from the SEA data warehouse, which is used to complete state and federally mandated reports. The regional data warehouse is managed by a steering committee, of which the SEA is a member, and currently includes only statewide assessment data and content standard resources, not the additional student-level data needed for an accountability system.

Changing Role of the SEA

If the goal of future state data, assessment and accountability systems requires the SEA to collect and use more district-specific information, how SEAs use the data may change over time. Few SEAs maintain a research and evaluation division or similar unit with staff that have the necessary analytical skills and responsibility to evaluate the plethora of data the SEA collects every year. SEAs historically have collected the data and then turned the information into school report cards, state graduation and dropout reports, and federally mandated reports. They have not historically conducted regular analyses to identify ways to help schools and districts develop improvement plans, ensure college and career readiness or evaluate program effectiveness. Schools and districts often are left to their own devices to do these things.

With the next-generation assessment and accountability systems and robust student-level data systems to match, the SEAs’ role with regard to data systems likely will change. That change will not happen without significant changes in the culture of data use and funding of data systems throughout the state and LEAs. The vision for future

data systems will require a conversation about the role of the SEA and how it relates to the LEA, in terms of both what data are collected and shared and how the data are used. The SEAs do not typically have the capacity to conduct much analysis beyond what is required by state or federal mandate, yet increasingly more teachers, administrators

and policymakers are asking for the data to be analyzed to inform decisionmaking. Policy discussions are needed to address this contradiction between resources and data requests. Where best should the capacity to address policy questions reside — at the state or local level? Who should have control of the data for analytical purposes?

Policymaker Considerations

- ▶ **Local control.** Every state claims to be a strong local control state. That is, decisions about textbooks, assessments, block scheduling, spending, teacher hiring, student information systems and so on are made at the local level; some are made at the district level, some at the school level. For example, some states and even districts have not always had standard student transfer forms or policies. Practices such as this affect statewide data systems and data quality. Even in Delaware, where the state collects and stores district-specific data, the state is clear that it will not touch or use those data without permission from the district. To what degree is the state willing to tackle the issue of local control with regard to assessment, accountability and data systems and standardize these issues across districts and/or centralize control at the state level?
- ▶ **Financial resources.** Over the past five years, many states have struggled with budgetary crises, and many SEAs have experienced significant reductions in staff. Today, discussions of budget shortfalls and reductions in education spending are becoming more frequent. While next-generation assessment and accountability systems may not require more state involvement, corresponding next-generation data systems will require more involvement and management at the state level. This involvement means that SEAs will need significantly more funding for hardware, software, staff, communication and professional development activities. Do states have the necessary funds to support larger, more sophisticated data systems, analytical capacity and staff at the state level? The U.S. Department of Education's Institute of Education Sciences currently provides three-year competitive grants for statewide longitudinal data systems. If this program does not continue, will the states be able to pick up the burden?
- ▶ **Role of the SEA versus LEA.** Historically, most SEAs have served more as conduits between LEAs and the U.S. Department of Education in terms of data reporting, monitoring and compliance. The new visions for assessment, accountability and data systems would require a significant culture shift both for SEAs and for state legislatures and local districts. How will that culture shift be conveyed and supported by state policymakers? How will that affect the roles of and relationships among state boards of education, teacher certification boards and local school boards?
- ▶ **Ownership and use of data.** Will the perceived ownership of district-specific data change to allow SEAs more access to and use of the data? If the data are stored in state-supported systems, will SEAs be free or required to access and analyze these data under the new accountability and assessment systems? Who provides that change in authority and governs it?
- ▶ **Connection of P–12 and postsecondary data systems.** How will states ensure that student-level data on college and career readiness can and will be shared between P–12 and postsecondary, if there is not a single P–20 data system in the state? What role do state policymakers

(e.g., the governor, state legislators and agency chiefs) have in ensuring the connections and appropriate uses of the data occur? Where will the data reside? Who is responsible for maintaining the information?

- ▶ **State legislation.** In some states, legislation that prevents the SEA from maintaining identifiable student data or that prevents sharing student-level data between districts and the SEA or the SEA and postsecondary needs to be eliminated. In most states, the expansion

of the SEA's data system — no matter how small or large — must be mandated in state or federal law; SEAs generally will not change their data systems (and subsequently require LEAs to change theirs) without a specific mandate. Will state legislatures be willing to mandate a centralized data system? Will SEAs and LEAs work together to change the data system structure without state mandates?

Conclusion

Presently, the difficulty in building and implementing robust student-level longitudinal data systems is not one of technology. The state-of-the-art technology exists to build a student-level data collection system that readily shares data across districts, between districts and the SEA, and even between the SEA and the postsecondary environment. SEAs can have the ability to collect data on a daily basis from classroom teachers or analyze data and provide weekly reports to teachers or principals.

No technological barriers prevent the building of the next generation of assessment, accountability and data systems. The obstacles are cultural, political and financial.

- ▶ Culturally, educators and administrators need to learn to embrace the use of data, instead of fearing the information.
- ▶ Politically, policymakers need to make the sharing of student-level data — while protecting student confidentiality — not only acceptable, but also mandatory across educational institutions. State laws, such as those in Ohio, that prevent the SEA from maintaining identifiable

student information create a burden on the state, both from a financial and a data perspective. Interpretations of the Family Educational Rights and Privacy Act that prevent P-12 and postsecondary systems from sharing student-level data hinder the ability to improve student achievement.

- ▶ Financially, without significant state investment in the development and maintenance of the education data system, the next-generation data system will not be functional. LEAs will continue to bear much of the financial burden for maintaining their own separate data systems and likely then will claim ownership of the data.

The next-generation data system likely will come to fruition when both local educators and state policymakers call for access to more data in easy-to-use formats more frequently. The convergence of demands from the “bottom up” and the “top down” will create the perfect storm to create a new breed of data system, but that demand can be met only if financial commitments are made to ensure that the systems are built and sustained.

DATAQUALITY CAMPAIGN

Using Data To Improve Student Achievement

www.DataQualityCampaign.org

The Data Quality Campaign is a national, collaborative effort to encourage and support state policymakers to improve the collection, availability and use of high-quality education data and to implement state longitudinal data systems to improve student achievement. The campaign aims to provide tools and resources that will assist state development of quality longitudinal data systems, while providing a national forum for reducing duplication of effort and promoting greater coordination and consensus among the organizations focusing on improving data quality, access and use.

Managing partners of the Data Quality Campaign include:

- ▶ Achieve, Inc.
- ▶ Alliance for Excellent Education
- ▶ Council of Chief State School Officers
- ▶ Education Commission of the States
- ▶ The Education Trust
- ▶ National Association of State Boards of Education
- ▶ National Association of System Heads
- ▶ National Center for Educational Achievement
- ▶ National Center for Higher Education Management Systems
- ▶ National Governors Association Center for Best Practices
- ▶ Schools Interoperability Framework Association
- ▶ Standard & Poor's School Evaluation Services
- ▶ State Educational Technology Directors Association
- ▶ State Higher Education Executive Officers

Endorsing partners of the Data Quality Campaign include:

- ▶ ACT
- ▶ Alliance for Quality Teaching
- ▶ American Association of Colleges for Teacher Education
- ▶ American Association of State Colleges and Universities
- ▶ American Board for Certification of Teacher Excellence

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- ▶ American Youth Policy Forum
- ▶ APQC
- ▶ Business-Higher Education Forum
- ▶ Center for Teaching Quality
- ▶ College Summit
- ▶ Consortium for School Networking
- ▶ Educational Policy Institute
- ▶ ETS
- ▶ GreatSchools
- ▶ Institute for a Competitive Workforce
- ▶ Institute for Educational Leadership
- ▶ James B. Hunt, Jr. Institute for Educational Leadership and Policy
- ▶ Jobs for the Future
- ▶ Knowledge Alliance
- ▶ League of Education Voters Foundation
- ▶ Learning Point Associates
- ▶ Midwestern Higher Education Compact
- ▶ National Alliance for Public Charter Schools
- ▶ National Association of Secondary School Principals
- ▶ The National Center for Public Policy and Higher Education
- ▶ National Council for Accreditation of Teacher Education
- ▶ Pathways to College Network
- ▶ Postsecondary Electronic Standards Council
- ▶ Roads to Success
- ▶ Southern Regional Education Board
- ▶ Western Interstate Commission for Higher Education

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