

FOCUS ON THE DATA QUALITY CAMPAIGN

In This Issue

...*Network News* provides an introduction to the Data Quality Campaign (DQC), a national, collaborative effort to encourage and support state policymakers interested in improving the collection, availability, and use of high-quality secondary education data. While the focus is on P-12 data and systems, the Campaign brings together secondary and postsecondary education leaders to work collaboratively in the interest of improving secondary education data. In fact, postsecondary policymakers' and analysts' interest in the DQC and in P-16 alignment is increasing as more attention is brought to this issue.

We start with an overview of the DQC followed by a summary of its recommended 10 essential elements for developing and implementing a state longitudinal data system. The DQC made a deliberate effort to include postsecondary education in their efforts and one recommendation (Number 9) calls for the ability to match student records between P-12 and postsecondary systems.

An extract of a policy brief written by Hans L'Orange and Peter Ewell on the status of P-16 systems and secondary/postsecondary data alignment is also included in this issue. Finally, some questions raised by the Data Quality Campaign are presented for consideration by those concerned with improving the longitudinal system(s) in their state.

SHEEO is a managing partner of the DQC; more information on the Data Quality Campaign is available at the SHEEO webpage (www.sheeo.org) or the DQC webpage at www.dataqualitycampaign.org.

About the Data Quality Campaign

The Data Quality Campaign (DQC) is a national, collaborative effort to encourage and support state policymakers to:

- Improve the collection, availability, and use of high-quality secondary education data, and
- Implement state P-12 longitudinal data systems to improve student achievement.

The mission of the DQC is to provide support and advocacy for the creation, collection, and use of education data to improve student achievement. The campaign's goals are to have P-12 longitudinal education data systems in all 50 states by 2009, increase policymakers and educators understanding of how to use longitudinal data in their efforts to improve student achievement, promote data standards and efficient data transfer and exchange, and to change the culture surrounding data use in education. Engaged policy conversations about increasing the rigor and relevance of high school, improving teacher quality, promoting higher graduation rates, and reducing achievement gaps among student populations are now under way among local, state, and national leaders.

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The Data Quality
Campaign has
identified 10 essential
elements for creating
effective K-12
longitudinal data
systems:

- 1) A unique
statewide student
identifier.
- 2) Student-level
enrollment,
demographic and
program
participation
information.
- 3) The ability to
match individual
students' test records
from year to year.
- 4) Information on
untested students.

Many believe these conversations cannot be successful unless they are informed by reliable longitudinal data.

The DQC was created in 2005, with support from The Bill & Melinda Gates Foundation, as a way for organizations who were working on separate but similar campaigns to ensure coordinated and unduplicated efforts. The campaign provides tools and resources for states to use as they develop longitudinal data systems and also serves as a national forum for like-minded organizations. The campaign is managed by the National Center for Educational Accountability (NCEA) from their Washington, DC office.

There are 13 other managing partners who, along with NCEA oversee the goals, direction, and activities of the DQC. The managing partners are Achieve, Inc., the Alliance for Excellent Education, the Council of Chief State School Officers (CCSSO), the Education Commission of the States (ECS), the Education Trust, the National Association of State Boards of Education (NASBE), the National Association of System Heads (NASH), the National Center for Higher Education Management Systems (NCHEMS), the National Governors Association Center for Best Practices (NGA Center), the Schools Interoperability Framework Association (SIFA), Standard & Poor's School Evaluation Services (SES), the State Educational Technology Directors Association (SETDA), and the State Higher Education Executive Officers (SHEEO). There are also over 20 endorsing partners who participate in the campaign. These are non-profit organizations that agree to promote greater coordination and consensus among those focusing on improving data quality, access, and use.

The 10 Essential Elements of a State K-12 Longitudinal Data System

Policymakers and others are becoming increasingly aware of the potential that longitudinal data have for improving educational systems. Many important public policy questions related to students can only be addressed through the use of longitudinal systems. These systems contain an individual electronic record for each student enrolled in a school for each term or year. Longitudinal systems collect a wide range of demographic and performance data at regular intervals, and these records can be merged with other longitudinal files to investigate student success and behavior over time and across settings and treatments.

Data alone cannot improve performance but good data systems have proven to be a valuable tool in many states. When policymakers have the data needed to understand what happens to students and schools, they are better able to make informed decisions. The DQC has identified 10 elements they believe are essential to creating effective longitudinal data systems to improve education while recognizing that each state's education system is unique and that the real challenge is to generate positive conversations around the issues.

1. A unique statewide student identifier. The creation of a single, non-duplicated number that is assigned to and remains with a student for their entire P-12 career allows a school, district, and state to follow a student's progress over time and across schools. It also makes it possible to evaluate the relationship between program participation and performance. *Forty-two states currently have this information.*

2. Student-level enrollment, demographic and program participation information. Accurate information on enrollment, demographics and participation is essential to evaluate the effects of schools and programs on student achievement. Demographic and participation information are also critical for the accurate disaggregation of test scores assuming a student identifier can be connected to these test results. *Forty-six states currently have this information.*

3. The ability to match individual students' test records from year to year to measure academic growth. A statewide database of individual results on state and local tests provides good diagnostic information to teachers. Having this information in a statewide database allows this information to follow students as they change grades, schools, or districts. *Forty-one states currently have this information.*

4. Information on untested students. The No Child Left Behind Act of 2001 requires states to record the number of students who do not take required state tests. States are also encouraged to find out why these students are not tested and match their records to enrollment and program participation databases. This makes it possible to identify patterns associated with specific student populations. *Thirty states currently have this information.*

5. A teacher identifier system with the ability to match teachers to students. Matching teachers to students by classroom and subject is critical to understanding the relationship between teacher training/qualifications and student academic growth. If teachers also have a unique identifier, it is possible to determine which types of preparation or certification have the greatest effect on students' academic growth. *Sixteen states currently have this information.*

6. Student-level transcript information, including information on courses completed and grades earned. Many states encourage students to take rigorous courses so that they are better prepared for postsecondary education and the workplace. Course-taking data should be gathered to fully evaluate the effect of these emerging state policies. Data can be aggregated to track state-wide course taking patterns and the relationship between those courses and student preparation for college and work. *Twelve states currently have this information.*

7. Student-level college readiness test scores. To ensure that students have a successful transition from high school to college, it is important for states to collect and report on performance data from college admissions, placement, and readiness tests. These are important indicators of student's preparation and readiness for college. Matching students' college readiness test scores from high school and test scores from middle school also provide some insight into the effectiveness of the high schools. *Nine states currently have this information.*

8. Student-level graduation and dropout data. The majority of states currently collect annual data on graduates and dropouts; however the National Governors Association (NGA) compact signed by all states aims to create a more reliable and consistent graduation rate. More accurate individual level graduation and dropout data will permit a more consistent graduation rate to be developed for the states allowing policymakers and educators to study student characteristics related to their leaving along with any early warning signals that might be present. *Forty states currently have this information; only 26 states have the more detailed graduation rate data defined in the NGA compact.*

9. The ability to match student records between the P-12 and postsecondary systems. Better data are needed to align high school requirements with the requirements of postsecondary education. Most states do not have data systems that encourage two-way communication; in fact, there are often two separate data systems that rarely share information. More integrated systems are needed to provide feedback to high schools on the rigor and effectiveness of their curricula and instruction. Policymakers and educators would know the percentage of each district's graduates who enroll in college, the percentage who require remediation, and how students' ability to succeed in college are related to their high school courses, grades, and test score. *Eighteen states currently have this information.*

5) A teacher identifier system with the ability to match teachers to students.

6) Student-level transcript information.

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 postsecondary systems.

10) A state data audit system assessing data quality, validity and reliability.

With electronic records for each student enrolled, states can answer questions about how students flow through the education pipeline, remediation, transitions, and student success, as well as be able to take accountability discussions to higher levels.

10. A state data audit system assessing data quality, validity and reliability.

Decisions made based on data are only as good as the data they use. Poorly organized systems, limited staff and unclear data rules can lead to less-than-valid information. Without a well-designed and well-implemented audit system, the public is unlikely to have confidence in the quality of the information being used for decision making. *Thirty-six states currently have this information.*

The DQC and NCEA 2006 *Survey of State Data Collection* was conducted to determine the number of states that have built the infrastructure necessary to tap into the power of longitudinal data. The findings from the NCEA survey are cited for each indicator above; a more detailed analysis of each states status and the policy implications of the state's data system are available at www.dataqualitycampaign.org/survey_results/index.cfm.

P-16 Data Systems: An Alignment Status Report

The following is a modified extract of a longer policy brief prepared for the Data Quality Campaign by Hans L'Orange (SHEEO) and Peter Ewell (NCHEMS). The full brief is available at www.dataqualitycampaign.org/files/Meetings-DQC_Quarterly_Issue_Brief_061306.pdf.

The need for high school graduates who are adequately prepared for postsecondary education is well documented. To address this issue, most states and districts already are implementing P-16 initiatives. In addition to aligning policies, states must align their P-12 and postsecondary data systems as part of the important structural changes needed to better prepare students for higher education and the changing global economy. With P-16 state longitudinal student unit record systems and an individual electronic record for each student enrolled in an institution or school for each term or year, states can answer questions such as:

- What does the overall flow of students through a state's education pipeline look like?
- What percentage required remediation, and how did this vary by ethnicity and student income?
- What curricular or environmental factors seem to affect student progress through the education pipeline?
- What factors may help students move successfully through key transition points in the education pipeline?
- How are these transitions different for different types of students?
- How is student success in college related to high school courses, grades and test scores?
- What role does geographic mobility (e.g., transfer) play in students' educational attainment?

P-16 state unit record systems also can be used to take accountability discussions to higher levels. For example, how effective are college-entry curricula, remediation or early collegiate programs in furthering P-16 objectives? What is the impact of particular state financial aid strategies on the postsecondary success rates of low-income students? What is the impact of particular kinds of educational programs on local labor markets?

Higher Education SUR Systems. According to a 2006 NCHEMS inventory, there are higher education SUR databases in 41 states. Most contain records only of students enrolled in public postsecondary institutions; however, some also include data on students enrolled in independent colleges, and more states are considering moving in

this direction. Collectively, such systems contain basic information on over 80 percent of the students enrolled nationwide in colleges and universities. However, the records are not consistent among states, and most do not contain sufficient transcript-level detail to answer questions about course-taking patterns or how well curricular requirements are being met.

Elementary and Secondary SUR Systems. According to the National Center for Educational Accountability's *2006 Survey of State Data Collection*, 44 states have compiled sufficient student information on public P-12 students to generate useful and informative analysis. Many of these states have invested in their P-12 information systems to meet the requirements of the No Child Left Behind Act, which mandates school-level reporting on student progress. Each state's database contains information on basic enrollment, and 43 states report having the data system in place to match student records from year to year to measure academic growth.

Linking State Systems. While state data systems for accountability and improvement are generally plentiful and increasing, the greatest shortcoming is their isolation — the systems for P-12 students and postsecondary students are rarely linked.

States such as Texas, Florida, California, and Virginia have promising systems that address this issue. Texas has established a cross-agency effort to build on the data and expertise of the Texas Higher Education Coordinating Board, the Texas Education Agency and the State Board for Educator Certification (texaseducationinfo.org). The goal is to provide "ready access to public primary, secondary and higher education information for purposes of research, planning, policy and decision-making."

Florida's education data warehouse provides another example of how a state is building the data infrastructure to facilitate the alignment of kindergarten through postsecondary education policies and practices (edwapp.doe.state.fl.us/doe). The warehouse provides "stakeholders in public education including, but not limited to, administrators, educators, parents, students, state leadership and professional organizations" with information on Florida's public school students from kindergarten through their graduate-level studies, as well as some workforce information.

Cal-PASS is a group of California consortia that collect, analyze and share data on students as they progress from elementary school through college (www.calpass.org). Cal-PASS started as a regional project in San Diego and Imperial counties and has expanded to include numerous community colleges, several high school districts, three public universities and two private universities. The system enables data sharing among P-12 schools, community colleges and universities. Cal-PASS also includes faculty interaction across levels.

Virginia is another example of a state that is putting the pieces in place to develop a high-quality longitudinal data system. The process is being led by Virginia's P-16 Education Council (www.education.virginia.gov/Initiatives/P-16Council/index.cfm), which has established two working groups; one is focused on comprehensive data systems and the other on readiness for postsecondary education or work. The working group on comprehensive data systems will:

- make recommendations to facilitate the integration of the Virginia Department of Education, the State Council of Higher Education for Virginia and the Virginia Community College System systems to create a longitudinal P-16 data system;
- identify available data, recommend ways to use those data to improve student achievement and recommend ways to monitor progress toward statewide goals; and
- identify remaining data gaps and recommend solutions.

While state data systems for accountability and improvement are generally plentiful and increasing, the greatest shortcoming is their isolation.

Several states, including Texas, Florida, California, and Virginia, have promising systems that link P-12 and postsecondary student data.

A shared data system requires shared responsibility. States must determine long term goals, including how to provide a means for the elementary, secondary and postsecondary sectors to work together.

Addressing the policy, funding and technical issues. A unified and deliberate approach with support across all levels of education is critical to developing a shared longitudinal data system. There is often a tendency to look for quick technical solutions, but addressing the policy environment and political issues must come first. To start, the state must determine its long term goals, including how to provide a means for the elementary, secondary and postsecondary sectors to work together, rather than at cross-purposes.

Other related issues revolve around the costs, financial and otherwise, of creating systems in states where sectors are funded separately. A shared data system requires shared responsibility; successful systems have either a separate funding mechanism or cost sharing is explicitly mandated. There also can be a tendency to provide one-time funds. However, these efforts require sustained support, which can be a challenge in difficult economic times and is just one of the reasons why addressing long-term state goals at the beginning of a project is so critical.

Although policy and funding issues must be addressed early, technical issues can be even more challenging. Postsecondary systems identify students through their Social Security numbers or another system-generated unique identification number. Most elementary/secondary systems use a different but still unique number. Reconciling these numbers as a student transitions between levels can be difficult without systematic planning. Privacy is another related and critical issue. All students have a legal and ethical right to privacy. Safeguards must be built into any P-16 system to ensure privacy is maintained while still allowing tracking of individual students' progress.

States can successfully create coordinated or linked systems to comprehensively assess the benefits of P-16 data systems, though challenges are prevalent. However, as the value of information continues to evolve and challenging issues are addressed, states can build on each other's efforts. Exemplary data and accountability systems will become more efficient. Techniques for sharing data and integrating policies will become more common. Both formal and informal systems will be designed and implemented in ways that truly increase the ability of policymakers and practitioners to focus on data that are useful for decisions — within an institution, within a particular educational level and, ultimately, across the entire spectrum of P-16 education.

Questions for the Future

Over the past 12 months, the Data Quality Campaign and others have increased attention on the benefits and challenges of longitudinal data for decision-making. The DQC in particular has been aggressive in supporting better, more “actionable” data among all constituencies, while also making the case for increased investments to build effective data systems. While all 50 states are at very different places in their efforts, the results of the now annual DQC/NCEA survey of state data collection issues highlight the fact that most states are focusing on building, growing and improving data systems. To inform and promote continuous strengthening of these state data systems, the DQC offers the following policy, design, implementation, and support questions for state and local leaders to consider:

- ◆ What data system do you want? Remember the 10 essential elements proposed by the DQC to create a robust data system.
- ◆ Given these elements, what policy and school improvement questions do you want your system to answer? How can you involve potential users in the design and use of the data system?
- ◆ What are the design specifications? How can you answer the data needs of state and local policymakers—as well as the public?
- ◆ What technology and data infrastructures do you already have in place that you can build on?
- ◆ What expert assistance do you need? How can you ensure these vendors are expert, are cost effective and will deliver what they promise? How do you hold them accountable?
- ◆ How should local educators be involved and trained in these new systems — since they both originate and use the data?
- ◆ How can states both create and be responsive to feedback about user needs?
- ◆ Given that the ultimate goal of these systems is to improve student achievement, what is the state role, what is the district role and what supports do they need to use these data to improve student achievement?
- ◆ What are new uses for the data system? How do you identify these new uses and ensure the system is flexible enough to include them easily?
- ◆ How does the state longitudinal data system work with/complement existing district data systems?
- ◆ How do you guarantee adequate ongoing resources to maintain and enhance the system?

The responsibility to improve student achievement is shared and multiple participants have a role to play in improving student achievement. The DQC notes it is impossible to know where to focus improvement efforts without a data system that identifies student needs as well as the policies, investments, and practices that have been shown to improve achievement.

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