

# MEASURING *What* MATTERS



Creating Longitudinal Data Systems  
To Improve Student Achievement

Phase 1 Three-Year Report  
2008

## More states collect the data to answer these key questions:

- ▶ Which schools produce the strongest academic growth for their students? *(39 states collect the data needed to answer this question, up from 21 in 2005)*
- ▶ What achievement levels in middle school indicate that a student is on track to succeed in rigorous courses in high school? *(12 states, up from 3 in 2005)*
- ▶ What is the state's graduation rate, according to the calculation agreed to in the 2005 National Governors Association compact? *(42 states, up from 14 in 2005)*
- ▶ What high school performance indicators (e.g., enrollment in rigorous courses or performance on state tests) are the best predictors of students' success in college or the workplace? *(10 states, up from 2 in 2005)*
- ▶ What percentage of high school graduates take remedial courses in college? *(27 states, up from 8 in 2005)*
- ▶ Which teacher preparation programs produce the graduates whose students have the strongest academic growth? *(16 states, up from 5 in 2005)*

# Longitudinal Data: The Information You Need To Improve Your Schools

A rapidly changing global economy and concerns about our ability to create a competitive workforce have focused national attention on the quality of America's public education system. As a result, many states have embraced an aggressive policy agenda to strengthen the rigor and relevance of high school, improve the quality of curriculum and teaching, and increase the percentage of students graduating with the skills needed for success.

The Data Quality Campaign (DQC) launched in 2005 to help states develop high-quality data systems that collect information about how individual students are doing over time, from prekindergarten through 12th grade and into postsecondary education. These data — known as longitudinal data — give policymakers and educators the information they need to assess the effects of their efforts and adjust policies and practices to improve student achievement.

## STATES MAKE REMARKABLE PROGRESS

Each year, the DQC surveys all 50 states and the District of Columbia to assess states' progress toward implementing the 10 essential elements of a longitudinal data system. States have made impressive gains. In 2005, no state reported having all 10 elements. This year, six states (AL, AR, DE, FL, LA and UT) have all 10. Other signs of progress:

- ▶ 48 states have five or more of the elements in place.
- ▶ 47 states plan to have eight or more elements in place within three years.
- ▶ 42 states now report that they have the necessary elements to calculate the National Governors Association longitudinal graduation rate once they have collected at least five years of student-level data. All states except one will report the rate by 2010–11.
- ▶ In the last year alone, the number of states that collect student-level college readiness test scores (element 7) almost doubled, rising from 15 states in 2007 to 29 in 2008.

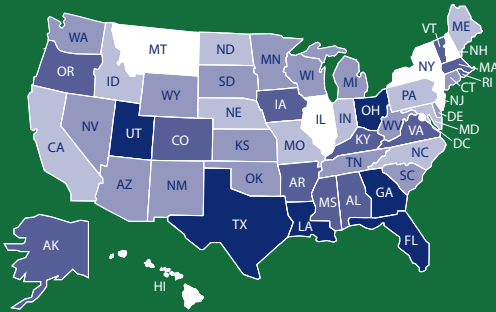
In addition to the 10 elements, states also are making significant progress with putting in place the vital tools that they need to be able to *use* the data now being collected:

- ▶ 47 states have built or are planning to build data warehouses that make it easier to link data.
- ▶ 39 states have deployed Web-based analysis and reporting tools to make these data accessible and user friendly.
- ▶ 44 states have the capacity to identify students in public prekindergarten programs (21 in private prekindergarten) and link this information with K–12 education data, and 28 are able to follow K–12 students into postsecondary education. This information gives states the *capacity* to improve alignment throughout the P–20 education pipeline, but it is unclear how states are actually *using* this information to improve performance.

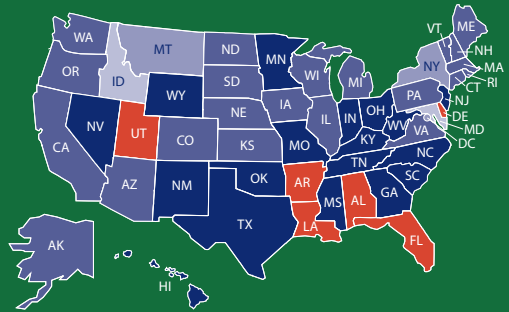
## PROGRESS OVER THREE YEARS

■ 0 elements/not part of 2005 survey ■ 4–5 elements ■ 8–9 elements  
■ 1–3 elements ■ 6–7 elements ■ 10 elements

2005



2008



These improvements have been driven by significant and sustained commitments by states. We applaud their efforts and encourage them to continue to focus time, attention and resources on this vital work.

There is still much to be done:

- ▶ Only 21 states have a teacher identifier system with the ability to match teachers to students (element 5).
- ▶ Only 17 states collect student-level course completion information (element 6), and at least nine have no plans to do so. Twenty-nine states have the ability to collect college readiness test scores (element 7), but at least 12 states have no plans to implement this element.
- ▶ Very few states can link their education data systems with other critical data systems that serve students, such as foster care (five states), health (seven states), labor (four states), juvenile justice (nine states) and human services (24 states).

To ensure all students leave high school ready for college, states need to collect and use these valuable longitudinal data. Data on course-taking and grades (element 6), college readiness test scores (element 7), and other feedback from postsecondary institutions (element 9) can help determine whether high school courses and graduation standards are aligned with college and workplace expectations. Used proactively, the information can serve as an early warning system to ensure that students stay on track for success.

**To see state-by-state results and find out more about what it takes to create a longitudinal data system, go to [www.DataQualityCampaign.org](http://www.DataQualityCampaign.org).**

# 10 Essential Elements of a

To build a robust longitudinal data system, states must include the following **10 essential elements**:

1

**A unique statewide student identifier.** As students move from grade to grade and from district to district, this ID number will allow states to accurately measure the progress of every student over time, from prekindergarten through grade 12.

36 ▶ 48  
states reported having this element in 2005      states report having this element in 2008

2

**Student-level enrollment, demographic and program participation information.** This information will help identify which programs are helping students succeed. It also will help account for students who transfer from school to school and will ensure that test data are disaggregated correctly.

38 ▶ 49  
states reported having this element in 2005      states report having this element in 2008

3

**The ability to match individual students' test records from year to year to measure academic growth.** Being able to match test records for individual students from last year to this year will provide valuable diagnostic information to teachers and principals and will help educators monitor each student's academic growth.

32 ▶ 48  
states reported having this element in 2005      states report having this element in 2008

4

**Information on untested students.** With this information, states can ensure that students from all groups are participating in state tests and can account for students who were exempted from the tests.

25 ▶ 41  
states reported having this element in 2005      states report having this element in 2008

5

**A teacher identifier system with the ability to match teachers to students.** Many states collect data on teacher education and certification, but matching teachers to students by classroom and subject is critical to understanding the connection between teacher training and qualifications and student academic growth.

13 ▶ 21  
states reported having this element in 2005      states report having this element in 2008

# Longitudinal Data System

6

**Student-level transcript information, including information on courses completed and grades earned.** States will be able to track course-taking patterns and analyze their relationship to success on state assessments and readiness for college and work.

7 ► 17

states reported having this element in 2005

states report having this element in 2008

7

**Student-level college readiness test scores.** Student performance on the SAT, SAT II, ACT, Advanced Placement, International Baccalaureate and other college readiness exams is a good indicator of whether students are prepared to succeed in postsecondary education and work; however, currently only 29 states maintain this information from year to year at the student level. But some states are going a step further by building college readiness tests into their statewide assessment systems.

7 ► 29

states reported having this element in 2005

states report having this element in 2008

8

**Student-level graduation and dropout data.** A majority of states currently collect annual records on individual graduates and dropouts. But the National Governors Association (NGA) compact signed by all states aims to create a more valid, reliable and consistent graduation rate that tracks students from 9th to 12th grade. Based on National Center for Educational Achievement analyses, only 42 states currently have the necessary elements (1, 2, 8, 10) in place to calculate the graduation rate defined in the NGA compact.

34 ► 50

states reported having this element in 2005

states report having this element in 2008

9

**The ability to match student records between the P-12 and postsecondary systems.** Opening the lines of communication between P-12 and higher education is critical to ensuring that students succeed at the postsecondary level. Connecting student performance in college to what happens in high school will give high schools the information they need to align curriculum and instruction to ensure that graduates are better prepared for college and work.

12 ► 28

states reported having this element in 2005

states report having this element in 2008

10

**A state data audit system assessing data quality, validity and reliability.** The decisions made in education are only as good as the information on which they are based.

19 ► 45

states reported having this element in 2005

states report having this element in 2008

## THE NEXT STEP: USING LONGITUDINAL DATA FOR CONTINUOUS IMPROVEMENT

The DQC partners applaud the state leadership that has made the remarkable progress in implementing state longitudinal data systems possible. This is a vital first step, but collecting data alone will not improve the outcomes of students.

Policymakers, educators and other stakeholders need to have access to, understand and be able to use the data proactively to drive continuous improvement throughout the education system. Even states that have not finished implementing all 10 essential elements have a wealth of new information that they can use right away. However, states also must continue to grow and sustain this infrastructure while building demand and capacity to use the information.

The data in these systems must be easy to use, timely and tailored to the user's needs so that educators, administrators, policymakers, parents and students can act on the information and answer questions such as:

- ▶ Are students ready for key transitions throughout P–12 and into higher education and the workforce? Are more students graduating on time ready for college and careers?
- ▶ Are there early warning signs that show whether an individual student is off track for success in 3rd, 5th or 8th grade? What are they? Which interventions or changes in instruction and curricula will help that student get back on track as quickly as possible?

To do this, states will need to make significant changes:

- ▶ *Culturally*, all stakeholders need to shift from reporting data for compliance purposes to using data to guide all education decisions, especially those focused on improving teaching and learning.
- ▶ *Politically*, policymakers need to ensure that educational institutions and other critical systems, such as child welfare, juvenile justice and health care, share student-level data — while protecting student confidentiality — to improve student achievement.
- ▶ *Organizationally*, states need to create governance structures to ensure the effective and appropriate collection and use of high-quality longitudinal data, especially as data are shared across agencies, districts and other traditional boundaries.
- ▶ *Financially*, states need to continue to invest in the development, maintenance and growth of their education data systems, including helping educators, parents and other stakeholders learn how to use the information produced by the systems.

## AN ATTAINABLE GOAL

Using valid, reliable and consistent information to drive all decisions across the education sector — a transformation that was not even conceivable a mere three years ago — is now an attainable goal. Thanks to the hard work and leadership of states and the growing national momentum behind this agenda, all of us increasingly have the information at our fingertips to ensure every child has the knowledge and skills they need to succeed.

Over the next three years, the DQC will continue to assist states in developing data systems based on the 10 essential elements. To help ensure that states benefit from their infrastructure investments, the DQC will highlight the need to build demand for the newly available information and the need to build the capacity of state agencies to assist all stakeholders in understanding how to harness this powerful source of information.

## DATA QUALITY CAMPAIGN

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

- ▶ 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

## ENDORSORING PARTNERS OF THE DATA QUALITY CAMPAIGN

- ▶ 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
- ▶ 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
- ▶ National Student Clearinghouse
- ▶ New England Board of Higher Education
- ▶ Pathways to College Network
- ▶ Postsecondary Electronic Standards Council
- ▶ Pre-K Now
- ▶ Roads to Success
- ▶ Southern Regional Education Board
- ▶ Western Interstate Commission for Higher Education

*The campaign is managed by the National Center for Educational Achievement. The Bill & Melinda Gates Foundation is the founding funder; additional support has been provided by the Casey Family Programs and the Lumina Foundation for Education.*

## Visit the Data Quality Campaign Web site ([www.DataQualityCampaign.org](http://www.DataQualityCampaign.org)) for more about the:

- ▶ **10 essential elements** and the state policy actions required to establish, maintain and use a quality longitudinal data system;
- ▶ results of National Center for Educational Achievement's **2008 update of its annual survey** that show where your state stands on the 10 essential elements;
- ▶ **tools, materials, meetings and information** that can aid states and interested organizations seeking to ensure increased quality, accessibility and use of data; and
- ▶ information on how your organization can **partner with the DQC** to generate the understanding and will to build and use state longitudinal data systems.

Visit [www.SchoolDataDirect.org](http://www.SchoolDataDirect.org) for information about public schools nationwide.