



The Value of Longitudinal Data



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Why focus on better data?



- “We need everyone who cares about public education to take on the toughest assignment of all – and get in the business of turning around our lowest-performing schools: that includes states, districts, nonprofits, unions and charter organizations,” Duncan said in a speech to the National Charter School Conference in Washington, DC.
- The secretary has set a goal of turning around 5,000 low-performing schools.
- “I have no illusions about how hard this is. I understand that we won’t be successful every time,” Duncan said. “But if we don’t try – and if we continue to tinker around the edges – another generation of kids will graduate unprepared for the future.”

Source: <http://www.ed.gov/news/pressreleases/2009/06/06222009e.html>



Federal Contributions



INSTITUTE OF EDUCATION SCIENCES

Statewide data systems

(Educational Technical Assistance Act, Section 208)

FY 2010 Authorization (\$000s): 0¹

Budget Authority (\$000s):

	<u>2009</u>	<u>2010</u>	<u>Change</u>
Annual appropriation	\$65,000	\$65,000	0
Recovery Act appropriation	250,000	0	-\$250,000

¹ The GEPA extension applies through September 30, 2009. Continued funding is proposed for this program in FY 2010 through appropriations language.

Statewide data systems

Funding levels for the past 5 fiscal years were:

	(\$000s)
2005.....	\$24,800
2006.....	24,552
2007.....	24,552
2008.....	48,293
2009.....	65,000
Recovery Act.....	250,000

Source: <http://www.ed.gov/about/overview/budget/budget10/justifications/y-ies.pdf>



The Statewide Longitudinal Data Systems Grant Program



- Purpose of LDS:
 - These systems are intended to enhance the ability of States to efficiently and accurately manage, analyze, and use education data, including individual student records. The data systems developed with funds from these grants should help States, districts, schools, and teachers make data-driven decisions to improve student learning, as well as facilitate research to increase student achievement and close achievement gaps.



What has SLDS helped develop?



- [SLDS Features Matrix](#)



What's the role of the SLDS program?



- Funds under the Statewide data systems program are intended to supplement, not supplant, other State or local funds used for developing State data systems.
- The grants are expected to help SEAs develop comprehensive Statewide longitudinal data systems, but not to support the ongoing implementation and use of such systems.
- The Statewide longitudinal data systems developed with grant funds must be capable of meeting the reporting requirements of the Education Data Exchange Network (EDEN), the Common Core of Data, and reporting requirements under the ESEA.
- States are encouraged to develop systems that can be used by State and local administrators to improve the quality of education.



What does the Department look to gain?



- States must develop the linkages with other agencies and States that are needed to provide information on high school completion, college completion, and workforce participation.
- Systems developed with support from the Department must improve States' ability to report required data to the Department and in addition should include information needed to help assess the effectiveness of Federal education programs, including Federal education programs for which the State is not the grantee.
- A key feature of data systems must be to improve the ability to provide regular feedback to teachers to enable them to use educational data to improve instruction.
- The data systems also should allow State and local education agencies to devise methods for identifying effective teachers and teaching practices and to provide accurate information about student and school progress.



Why longitudinal data?



- “A key feature of these longitudinal data systems will be to enable States to have available accurate data on high school graduation rates. Increased emphasis on the importance of ensuring that all students graduate from high school prepared for higher education or the workplace has led to an examination of the numbers of students who do not graduate from high school, and it has revealed substantial differences in the manner in which States report high school graduation data.”



Why longitudinal data?



- “Another key issue facing educators today is ensuring that their students leave high school with the skills needed for success in college and the workplace. The Administration again is seeking appropriations language to allow States to expand their pre-kindergarten (P)–12 data collection systems to include postsecondary and workforce information that will allow them to better determine what courses and supports are most effective in helping students make successful transitions to college and the workplace. The postsecondary information collected is likely to include courses taken and grades received, including whether students took remedial coursework; college major; degree completion; and time to degree completion. In addition, in order to ensure that the data systems provide information needed to assess the effects of early childhood education programs and early interventions, the Administration is seeking language to allow States to include information on children of all ages.”



Why longitudinal data?



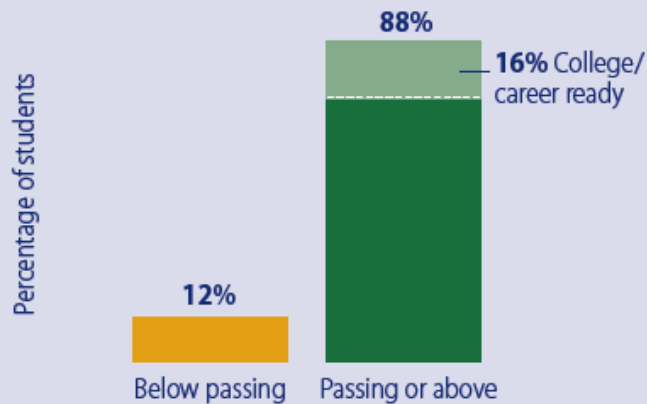
- **How snapshot data answer questions such as:**
 - Are my students meeting the state’s proficiency standard? Which ones are not?
 - What proportion of students are not tested, and why?
 - How do I find promising programs?
- **How longitudinal data answer questions such as:**
 - How are my students doing academically after they leave my classroom or school? Are they improving over time?
 - What is the average academic growth of my students over time? By subgroup?
 - Based on P–8 preparation, how can high schools better target supports and interventions to improve educational outcomes?

Source: http://www.dataqualitycampaign.org/files/publications-tapping_into_the_power_of_longitudinal_data-a_guide_for_school_leaders-010108.pdf



Examples of the Power of Longitudinal Data

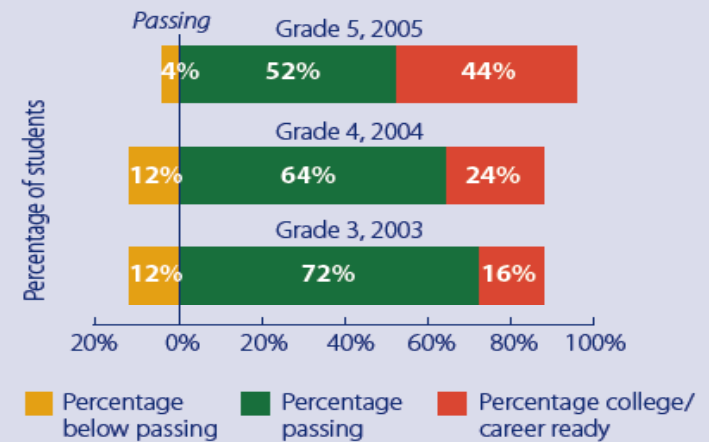
Figure 1. Snapshot Data on Grade 3 Mathematics Assessment Results (n=50)



Source: Simulated grade(s) based on actual 3rd grade snapshot data.

Snapshot Example

Figure 4. Longitudinal Data on Student Performance on Mathematics Assessment (n=50)



Source: Simulated grade(s) based on actual 3rd through 5th grade longitudinal data.

Longitudinal Example

Source: http://www.dataqualitycampaign.org/files/publications-tapping_into_the_power_of_longitudinal_data-a_guide_for_school_leaders-010108.pdf



Examples of the Power of Longitudinal Data



[National Center for Analysis of Longitudinal Data in Education Research \(CALDER\)](#)

CALDER is a federally funded National Research and Development Center that capitalizes upon longitudinal individual-level student and teacher data across a number of states to investigate how state and local policies, especially teacher policies, governance policies, and accountability policies affect teachers (e.g., who teaches what students) and students (e.g., academic achievement and attainment).



NATIONAL CENTER for ANALYSIS of LONGITUDINAL DATA in EDUCATION RESEARCH

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what we're learning

Teachers matter—but that basic fact had been difficult to measure until now. CALDER researcher Eric Hanushek and his collaborators discovered just how much teachers matter when they began working with data in Texas.

"By our estimates from Texas schools," Hanushek reports, "having an above average teacher for five years running can completely close the average gap between low-income students and others."

Research is beginning to uncover the qualities of an effective teacher, including experience level, academic ability, and subject matter expertise. We are also learning about the uneven distribution of teachers across districts, schools, and classrooms. At every level, students with the greatest needs, typically minority and low-income students, are much more likely to have the least effective teachers.



recent publications



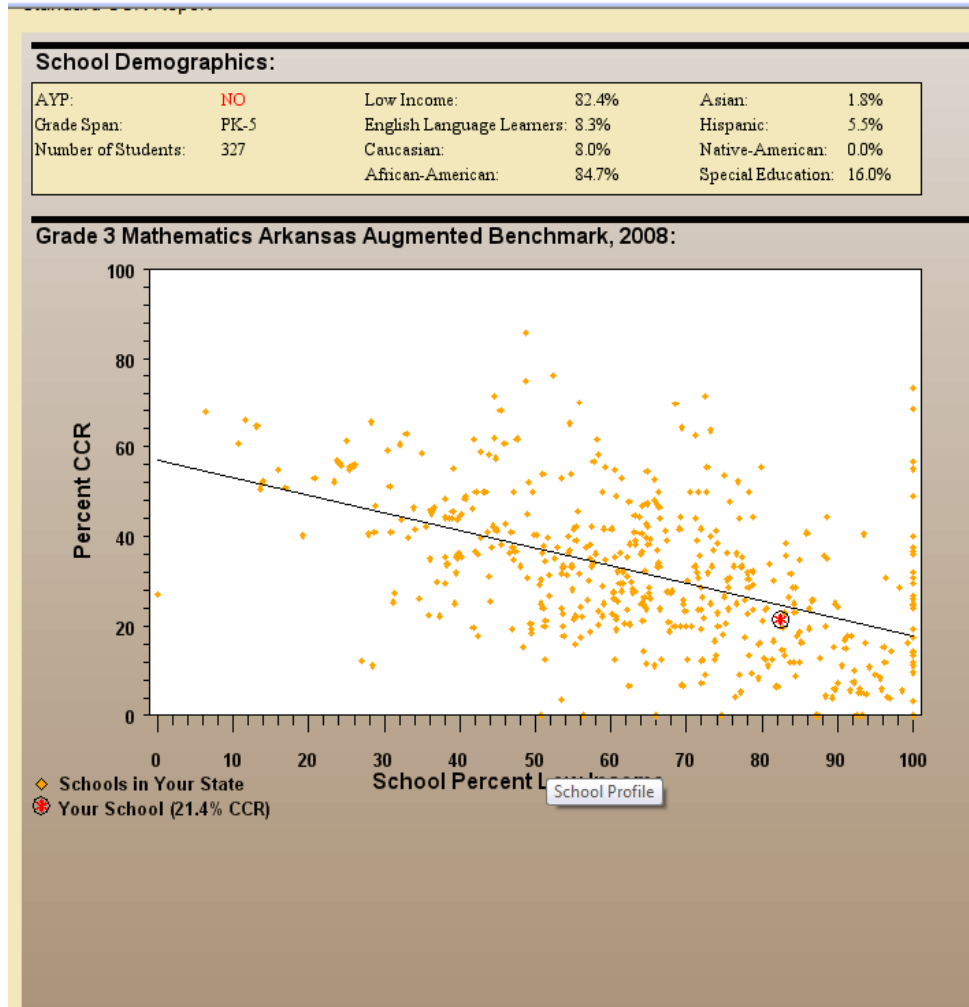
Who Leaves? Teacher Attrition and Student Achievement

by: Donald J. Boyd, Pamela L. Grossman, Hamilton Lankford, Susanna Loeb, James H. Wyckoff (March 2009)

Teacher attrition has attracted considerable attention as federal, state and local education policies increasingly focus on recruiting and retaining more qualified teachers. This paper analyzes attrition patterns New York City teachers and explores whether teachers who transfer among schools, or leave teaching entirely, are more or less effective than those who remain. First-year teachers who are less effective in improving student math scores have higher attrition rates than do more effective teachers.



Examples of the Power of Statewide Systems



Statewide data allows school and district leaders to understand where they are in relation to “peer schools” and in relation to the best in the state.

Source: <http://www.just4kids.org>



Examples of the Power of Statewide Systems

Just for the Kids
California

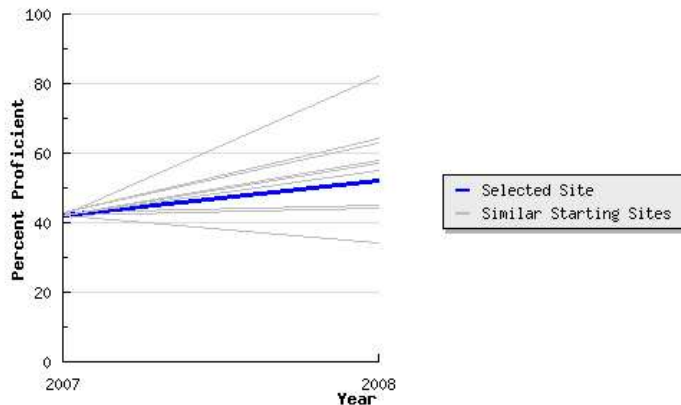


Home -> Search -> School Summary -> 4-bar Chart -> Starting Point

More Charts

Burbank Elementary, Long Beach Unified
Grade 3 Mathematics 2008 Starting Point Analysis Results

Percent Proficient: 42.0 - 52.0
Starting Point Analysis: +10.0
Number of Schools within 2 %: 30



Just for the Kids California - <http://www.jftk-ca.org>
CDS: 19-64725-6015184
June 22, 2009, 4:40 pm PDT

Explain Chart

Even when schools are improving, they may not realize that there are others doing more.

This type of model can also be applied to student level data, in appropriate settings.

Source: <http://www.jftk-ca.org>

