DATA QUALITY CAMPAIGN
Using Data To Improve Student Achievement
www.DataQualityCampaign.org

Element 5: Linking Teacher and Student Data

The Benefits of Linking Student and Teacher Data

As we begin 2009, just 21 states report the ability to link student and teacher data (element 5). Most states report that they struggle the most with this element perhaps because of the political challenges of overcoming the assumption that this linkage results immediately in teacher evaluations and sanctions. Having the ability to link and analyze teacher-student information is critical in states' efforts to inform a variety of state and local policies aimed at improving student achievement including resource allocation, tailored instruction, and targeted professional development. It is important that the conversation focus on all of the important uses of this new information rather than letting the conversation gets stymied by a focus on a single politically-charged use of the data.

As with students, teachers should be given a unique statewide identifier that follows them over time. That makes it possible to determine which students and which courses are being taught by teachers with different levels and types of preparation or certification and which forms of teacher training and certification have the greatest effect on students' academic growth in the classroom. Such a match makes it possible to evaluate the effectiveness of teacher preparation programs, including traditional and alternative certification programs, based on student academic progress. Combining this information with student demographic information also allows states to determine the experience level of the teachers teaching low-income or special needs students.

States currently collect a myriad of data on their teachers including certifications, degrees, training institution, demographics, professional development, and transcripts. By linking this information to student-level data (e.g., assessment scores, transcripts, program information, etc.), policymakers and educators will know:

- The teacher preparation programs that produce graduates whose students have the strongest academic growth;
- How the experience levels of the teachers in the district's and state's high poverty schools compare with those of teachers in the schools serving affluent students, and how these experience levels are related to the academic growth of the students in their classrooms; and
- The relationship between the performance of the district's low-income students on an assessment and teacher preparation in that specific subject.

State Approaches to Linking and Using Teacher and Student Information Systems

Louisiana has implemented the Louisiana Education Accountability System (LEADS) which incorporates a teacher-student data link. They use the link in a number of ways, but the most unique use has been their collaboration with the Louisiana Board of Regents. The Louisiana Department of Education is able to identify teachers whose students show the most academic growth and then use this information to provide meaningful analysis of teacher preparation programs in order to redesign and improve them based on the evaluations. The data is *NOT* used in Louisiana for any type of teacher evaluation; rather it is used to improve the level of preparedness for pre-service teachers. To learn more about this model visit the Louisiana Board of Regents at http://asa.regents.state.la.us/TE/accountability and http://asa.regents.state.la.us/TE/value_added_model

Tennessee links their teachers with students as part of their Tennessee Value-Added Assessment System (TVAAS). TVAAS is a value-added model that predicts student performance based on multiple years worth of student data. When a student performs differently than predicted, the difference (good or bad) can be attributed to the teacher. This model enables a principal to make a data-based decision regarding the extent to which a teacher has met or exceeded the statistical expectation for a student's achievement. This information is used by principals to better assign students to teachers and by teachers to tailor instruction based on the identified progress of the student. This data is *NOT* used in Tennessee for any type of formal teacher evaluation. To learn more about TVAAS visit http://tennessee.gov/education/assessment/doc/TVAAS_101.pdf.

Delaware uses the linked data to not only automate their Highly Qualified Teacher (HQT) identification and reporting but to quickly determine the overall state of their teachers' qualifications by looking at how many are teaching out of field both by subject and by student characteristics. Delaware has also developed a statewide educator evaluation system based on their linked data. This system enables teachers, specialists, and principals to use data to set goals for student achievement and includes indicators that will be used to measure how well the goals have been met. To learn more about how Delaware uses data to evaluate their teachers visit http://www.doe.k12.de.us/csa/dpasii/default.shtml.

Colorado recently passed legislation that created the Quality Teachers Commission to provide recommendations to the legislature on teacher and principal identifier systems and to examine the teacher gap in Colorado. Membership on the Commission includes principals, teachers and teacher organizations, teacher preparation and curriculum and instruction representatives from higher education, district administration, and representatives from the governor's office, state board of education and state education agency. http://www.dataqualitycampaign.org/files/publications-quality_teachers_commission-060108.pdf.

Recommendations Based on State Experiences

The states that have successfully implemented this element and are actually using the link to produce results in their states have learned some key lessons that should be taken into consideration by states just beginning to navigate this issue.

1. *Take advantage of mandates to get the link established* -- NCLB requires states to report on Highly Qualified Teachers; a teacher/student link enables a more reliable state HQT picture because teacher qualifications are associated directly with classroom rosters and can be calculated consistently across districts.
2. *Involve stakeholders in every phase of design and use* – When designing the linked system, build trust and a shared vision for the use of the linked data from the very beginning. Work very closely and listen to the needs and concerns of districts and unions to create support for the system at the outset.
3. *Demonstrate the need* – Stakeholders must understand exactly why this linked data system is necessary to improving student achievement. If they don't buy into the need, they won't buy into the development.
4. *Ensure confidentiality and security of records* – States must take care to ensure teachers that their data will be kept confidential and that strict security policies will be in place to protect them.
5. *Provide adequate and ongoing training* – States must ensure that all stakeholders are formally trained to use the system to meet their particular needs.

Resources

The Data Quality Campaign's website (www.dataqualitycampaign.org) has a variety of resources to guide states in their efforts to implement this critical element. Several of them are listed below but new resources are frequently added and we encourage you to visit the Resources section and browse by element 5.

The Data Quality Campaign, Benefits of and Lessons Learned from Linking Teacher and Student Data, December 2007 http://www.dataqualitycampaign.org/files/publications-benefits_of_and_lessons_learned_from_linking_teacher_and_student_data-120607.pdf

The Data Quality Campaign, Linking Teacher and Student Data To Improve Teacher and Teaching Quality, March 2007http://www.dataqualitycampaign.org/activities/

The Alliance for Quality Teaching, Addressing the Need for Better Data on Teaching in Colorado, 2007 http://www.tqsource.org/issueforums/hqplans/resources/AddressingtheNeed.pdf

The National Comprehensive Center for Teacher Quality, Revising the Equitable Distribution Component in Your State's Plan for Highly Qualified Teachers, September 2006 http://www.tqsource.org/TeacherDistributionPlanningTool.pdf