Massachusetts Data Policy Landscape

Massachusetts has a limited amount of teacher data; however, the state has ambitious plans to build an education data warehouse that links student assessment data with information on teachers and teacher qualifications. The goal of this system is to give teachers feedback information on their students through an online system. A byproduct of this system will be the ability to analyze teacher and preparation program effectiveness.

Although the state has not linked student assessment data with teachers, the plan is to follow the lead of Boston Public Schools (BPS) and soon create such a link. BPS has created a system that links teachers to student test scores; teachers can go online and see the scores for all of their students. The data system is updated as students move within the district. Principals have access to all students in school and can give access to school planning teams. Individual test scores can be compared to aggregate district and state scores. BPS can also post student work to see how students perform on tests. The school system created this system for internal use; the database uses an Employee ID for teachers, rather than a Social Security Number (SSN), and a BPS ID for students (e.g., BPS created its own student ID system that must be mapped back to the state system to use state test scores). The system uses a detailed course code system (building, course, section) that assigns a different number to every period of every course. The system knows all courses taught by a teacher and all courses taken by students and allows a match between students and teachers. The system is 4–5 years old. The student assessment database is not linked with the human resources database on teacher qualifications. The goal of BPS system is to encourage teachers to use data on their students. Even though BPS has organized data for teacher use, they have not organized it in terms of programs. Regional superintendents have expressed interest in using data to learn more about high-performing schools and teachers, but BPS has not moved ahead on that effort.

Teacher Databases

Two state databases contain information on teachers. First, the licensure database has information about preparation and certification, including teachers' Praxis scores. The second database, the teacher retirement system, ascertains whether or not a teacher is working, and includes SSNs. The data systems are not linked; however, the state has passed a bond that includes funds for building a state education database. The state hopes to have this system up and running within the next 2 years. This database will be built using the licensure and retirement database. This system would combine a student data system with a teacher data system (to be developed). A data warehouse would include student, teacher, and assessment data.

Based on lessons learned developing the student ID system, a unique identifier for all teachers will be necessary to create the teacher data system. The state is not certain if the licensure database has teacher SSNs, but SSNs will not be used as an identifier. The goal of the system is to link teachers to students so that teachers can obtain background data on their students. The state would like to have a roster of students associated with all

teachers and then use that information to provide data to teachers on their students. This system would give teachers and principals online access to their student data, using unique student identifiers. The state has 4–5 years of data, including assessment data, with 50 variables per student.

Use of Data and Limitations

A number of agency staff interviewed expressed concerns regarding the development of the education data system. The main concern is a potential rush to pay teachers strictly for student achievement scores. Although the primary goal of the data system is to help individual teachers, it also will be used to look at systemic issues such as teacher effectiveness, teacher retention, and the relationships between where a teacher was prepared and teacher placement. The state may also look at professional development (PD).

Barriers to Implementation

There are two barriers to creating the education warehouse: lack of funds and political controversy. Funding necessary to set up the system as designed is estimated at $2–4 million. State education leaders also need funding to convince the legislature of the value, importance, and use of information management. Although legislators may understand the value of PD or a student remediation program, the potential use of data/information may not be as clear.

The second barrier is potential political/union opposition: some may view this warehouse as "Big Brother," with the potential for misuse. A good bit of work is needed to inform a number of stakeholders and constituents on how the data will be used and also protected.

Future Uses

The education data system has huge potential to greatly increase access to data. The Office of the Deputy Commissioner, experienced with assessment data, expects assistant superintendents and principals to be the first users of the data. Teachers will need to be taught how to use the data. At the state level, a number of good statewide questions will be raised by the board of education, the commissioner, and the planning department. Understanding teacher quality is the most burning issue for the Office of the Deputy Commissioner, which currently has very limited information on the quality of the teaching workforce. The office has done some limited work on math and science teachers, but still needs to understand the relationship of preparation to teaching. So far the data have been difficult hard to compile and validate.

The Office of the Deputy Commissioner is also trying to link K-12 with higher education to create a P-16 data system. Initially, they wanted to understand where people go after graduation. They have received an NGA grant to create higher education information on graduates.