Teacher Preparation Data Systems

State Policy and Recommendations

SREB

More than the Numbers

Building strong data systems on the education and early careers of teachers may be the single best way to improve teacher preparation. And such data systems are about much more than numbers. Well-designed systems that inform conversations among a state's department of education, teacher preparation programs and school districts can promote substantial improvement in teacher education — and thus in student achievement.

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SREB Teacher Preparation Commission

This report, the first from SREB's Teacher Preparation Commission, outlines common features of effective data systems and provides examples of three promising pioneers. It also offers the Commission's recommendations for states to take the lead in developing data systems with the potential to improve how we prepare today's teachers for tomorrow's students. This report covers one of several areas of focus. The final report, in late 2018, will include these and recommendations in additional areas.

Inside

State Policy on Data to Inform Teacher Preparation

Teacher preparation holds great promise to improve teacher effectiveness, which in turn can dramatically elevate student performance, producing a cascading effect. To achieve effective teacher preparation programs, states need data systems that are specific, practical and accessible enough to help states create truly transformative programs. A few states have developed such systems, and the policies and practices they have adopted are excellent models for even broader improvements.

Data's potential to improve teacher preparation goes unrealized in most states today. For example, few programs track where their graduates accept teaching positions, what they teach, how their students perform, or how long they remain in the profession. What data do exist are typically collected for compliance only, housed in disparate places, and not readily accessible.

"Data not only measures progress, it inspires it."

— Cassandra Herring, CEO,
Branch Alliance for Educator Diversity and former Dean,
School of Education, Hampton University

As a result, state policymakers lack evidence on which to base teacher licensure, program approval and accountability, and researchers are unable to explore best practices.

Without a robust and accessible data system, educators and policymakers must rely on anecdotes rather than evidence and have little to work with in discussions among preparation programs, school districts, and accreditation and regulatory agencies.

The lack of relevant, systematic, broadly accessible data to inform improvements in teacher preparation is frustrating to teacher educators, aspiring teachers, and school districts alike. Yet it is students who ultimately pay the price: there is strong evidence that inadequately prepared teachers lower long-term outcomes for children. Fortunately, there is also recent evidence of states developing data systems that address precisely these concerns.

Promising Data System Practices

A few states are pioneering teacher preparation data systems — and while we still have much to learn about how to design and use such systems, their progress offers promising models for other states to build on. The efforts have four features in common.
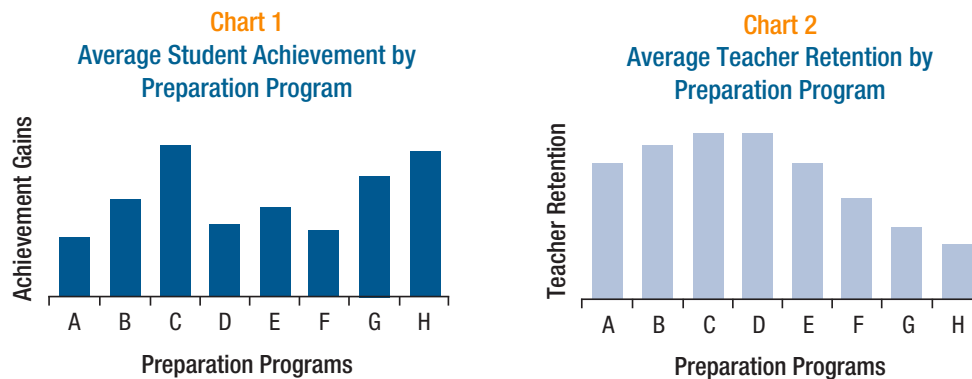
First, the data **track teachers** as they graduate from preparation programs to the schools in which they teach. This may seem simple, but it has profound effects. Understanding the characteristics of the schools where graduates accept positions may have important implications for the design of teacher preparation. For example, there is evidence that preservice clinical experiences are more effective when they mirror the environments in which graduates teach.

1 Follow teachers through their careers

2 Focus on outcome measures

3 Break down data silos

4 Make data more accessible

The data suggest that when preparation programs partner with the school districts in which most of their graduates teach, they forge a strong connection between teacher preparation, new teacher mentoring and ongoing professional development.

Second, the best data systems **focus on outcome measures**. Teachers should be prepared to help all students reach challenging learning goals, so state data systems should be able to link student outcomes (such as achievement test scores) with both the teachers who taught them and the programs from which those teachers graduated.

These hypothetical graphs illustrate the types of comparisons that can inform truly productive conversations. In Chart 1, for instance, how might programs A and D learn from program C so that their graduates can foster greater gains in student achievement? In Chart 2, how might programs G and H learn from programs C or D about how to train teachers to persist and succeed in the classroom? Without such data these conversations, and the improvements they could bring about, are unlikely.

Chart 1
Average Student Achievement by Preparation Program

Achievement Gains

A B C D E F G H

Preparation Programs

Chart 2
Average Teacher Retention by Preparation Program

Teacher Retention

A B C D E F G H

Preparation Programs

As part of this focus on outcomes, data systems should track the retention of teachers over at least the first five years of their careers. Teacher preparation should, of course, play an important role in getting teachers ready for the challenges of their very first day. But ample research shows the meaningful improvements teachers make in their skills while on the job — while also documenting the high rate of teacher attrition during those first few critical years. Well-designed teacher preparation data systems will help us understand not only how to hire the best teachers, but how to keep them.

Third, pioneering state data systems have developed ways to **break down data silos**. It's not uncommon for different elements of data about a program's graduates — their first jobs, their persistence in teaching, and the achievement of their students, for example — to come from different databases, controlled by different state or local agencies. Connecting these data at the level of the individual teacher can be challenging; it requires some resources and political will. But states like Delaware, Louisiana, Massachusetts, North Carolina and Rhode Island are now doing it.

Finally, these systems **make data accessible and transparent**. Data, however voluminous, are only useful if organized in intuitive ways that will answer essential questions about improving teacher preparation. For example, knowing the achievement test scores of one teacher's students is not very illuminating by itself since many factors, in and out of school, influence those scores. But knowing the yearly gains in student achievement among programs whose teachers teach comparable students could be very enlightening. Accessible and visually compelling analytics promote transparency, informed choice, and real improvement.

"Data from the dashboard form the basis for conversations among faculty and partners that improve our programs."

— Diana Lys,
Assistant Dean of Educator Preparation
and Accreditation, University of North Carolina

Prospective teachers have a right to data about the performance of different teacher preparation programs. State agencies can also use that information in accreditation and regulation decisions, and, perhaps most important, making performance data public might motivate programs to improve.

Building strong data systems on teacher education and careers may be the single best way to improve teacher preparation. This sounds straightforward but is far from simple. One difficulty is that programs, departments of education and school districts frequently use data for compliance only, rather than as a source of ideas for improvement. Data privacy is another concern: teachers, schools and the public all need data to be gathered, stored and used properly. These are among the issues state leaders will have to address in developing thoughtful approaches that support both our teachers' desire to improve and the educational outcomes of our nation's children.

"The dashboard provided the impetus for us to better understand how we could improve our mathematics teacher education programs. We are building a culture that uses data for improvement."

— Ellen McIntyre, Dean,
UNC Charlotte College of Education

State Data System Examples

Louisiana

Louisiana has been a pioneer in making data on teacher preparation programs publicly available. Beginning in 2007, the state published value-added measures of teacher preparation programs. These measures estimate the gains in student learning attributable to the teachers of each preparation program. The data show whether the graduates of some programs are achieving better student gains than those of other programs.

Since 2014, the Louisiana Board of Regents has published an even more detailed summary of each of its preparation programs. The reports include number and characteristics of teacher candidates, their performance on licensure exams, their placement as teachers in Louisiana schools, and their performance on the Louisiana teacher evaluation system following their first and second years as teachers. Reports cover both traditional teacher preparation programs and alternative teacher preparation programs.

This information is detailed in the *Louisiana Teacher Preparation Program Fact Book* and summarized in teacher preparation dashboards for each program. The data form the basis for program accreditation and accountability and have informed conversations about how to improve teacher education in Louisiana's preparation programs.

Explore the Louisiana Teacher Preparation Data Dashboard: regents.la.gov/page/teacher-preparation-data-dashboards-fact-book

North Carolina

The University of North Carolina has created a well-designed dashboard that includes information for each of the 15 University of North Carolina teacher preparation institutions on:

- Admissions criteria for teacher preparation programs
- Comparisons of typical academic performance of candidates
- Licensure exam results
- Enrollment trends
- Teacher productivity
- Time to degree
- Preparation pathways
- Retention rates
- Recent graduate survey results
- Program effectiveness (as measured by student achievement and formal observations of teachers in their classrooms)
- Employment distribution
- Job placement rates
- Average attributes of a school's students, teachers and principal
- University-school partnerships

The UNC Educator Quality Dashboard forms the basis of program improvement discussions within teacher education programs and among deans of the UNC schools of education. There is no similar data system for the 32 schools of education at private colleges and universities in North Carolina.

Visit the UNC Educator Quality Dashboard: eqdashboard.northcarolina.edu

Tennessee

Tennessee has provided data on the effectiveness of educator preparation providers since 2009. In late 2016, the Tennessee State Board of Education, in partnership with the Tennessee Department of Education and Tennessee Higher Education Commission, launched an interactive Teacher Preparation Report Card for school districts, teacher preparation providers and aspiring teachers.

The online Teacher Preparation Report Card profiles educator prep programs in the state and categorizes their effectiveness. Aggregate data, based on teacher candidates who complete each program, cover ACT scores, racial and ethnic diversity, high-demand endorsements, placement, retention, observation scores and Tennessee Value-Added Assessment System scores. Explore the Report Card at TeacherPrepReportCard.tn.gov.

Recommendations for States on Data Systems

The SREB Teacher Preparation Commission offers the following recommendations with the goal of meaningfully improving teacher preparation, the skills of the nation's teachers and the learning outcomes of students.

The Commission recommends that states assume responsibility for the development and use of data systems to inform teacher preparation.

Recommendation 1
States should synthesize data for teacher education from various state and local agencies

Data should be based on common definitions and formats, preferably shared across states. The data should include:

- Program data on admissions requirements, course requirements, qualifications of graduates (licensure field or certification exam scores, for example) and demographic attributes of graduates

- Teacher placement data on assignments and student socio-demographic attributes of first position

- Teacher outcomes data on teaching effectiveness and teacher retention during the first five years

Recommendation 2
States should disseminate data widely, tailored to the needs of specific audiences

Policymakers, programs and the public will all value and make use of data in different ways. To use data effectively, create separate web portals targeted to different audiences.

- Provide the public with general information: a description of the performance of teacher preparation programs on basic performance measures, the number and characteristics of graduates of teacher preparation programs, their job placements and their retention rates in education over five years.

- Provide preparation programs with data and information that will help them manage and improve teacher preparation.

- Provide state policymakers with information on teacher preparation programs based on the performance of the program's graduates.

Recommendation 3
States should use data to empower change

To ensure meaningful discussions of program improvement, states should pursue ways to help programs and school districts analyze, discuss and use data to improve teacher preparation and meet state performance benchmarks. For example, states might appoint an advisory board (drawing from programs, districts and departments of education) or work with nonprofits and professional accrediting organizations.

The Commission recognizes that data systems will also need to reflect the measures states choose to monitor performance of preparation programs. The Commission's final report will return to this broader issue of accountability and performance benchmarks for teacher preparation programs.

SREB Teacher Preparation Commission

The charge of the SREB Teacher Preparation Commission is to develop practical and effective statewide recommendations to improve teacher preparation programs.

John Bel Edwards, Governor of Louisiana, *Chair*

Merita A. Allison, State Representative, South Carolina

Wayne D. Andrews, former President, Morehead State University, Kentucky

Alan Baker, State Representative, Alabama

Melanie Barton, Executive Director, Education Oversight Committee, South Carolina

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Tom Dickson, former State Representative, Georgia

Bill Ferguson, State Senator, Maryland

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