

APPENDIX E
STUDY SUMMARY

Measuring the Distribution of Teacher Effectiveness

The Issue: Uneven Distribution of Teacher Effectiveness

Research shows that high-quality teachers are critical to raising student achievement. While in the past teacher quality has been measured based on *qualifications*, recent federal initiatives have shifted the focus to measures based on *effectiveness*. Existing research provides little guidance on how teachers are distributed within districts and whether students at the most disadvantaged schools are equally likely to be taught by the most effective teachers. States and districts also lack an evidence base on which strategies might promote a more equitable distribution of teacher effectiveness.

The Study

The U.S. Department of Education (ED) selected Mathematica Policy Research and its partner, the Urban Institute, to conduct a study to examine the distribution of teacher effectiveness in a select group of districts. *At present, ED is seeking to identify 30 districts to participate in the study.* The key research questions are

- 1) What is the distribution of teacher effectiveness across schools within each district?
- 2) What policies are districts using to address the inequitable distribution of teacher effectiveness?
- 3) What is the relationship between district policies and the distribution of teacher effectiveness?

How The Study Works

Measure teacher effectiveness: The study team will conduct a value-added analysis in each district to measure the effectiveness of teachers of math and reading in grades four through eight. By accounting for factors outside the teacher's control, a value-added model isolates how much a teacher contributes to student test score improvements. We will conduct a value-added analysis for multiple school years, from 2008-09 through 2012-13.

Analyze distribution of effective teachers: The value-added measures will be used to examine the distribution of elementary and middle school teachers within each district. The study team will analyze how teachers at different effectiveness levels are distributed across schools with high and low levels of student poverty. We will examine changes in the distribution over time by measuring the distribution in each school year from 2008-09 through the 2012-13 school year.

Examine role of district policies. The study will examine the relationship between the policies districts implement and the distribution of teacher effectiveness, as well as how this distribution changes over time. In addition, analyzing the distribution of teacher effectiveness over multiple years will provide a rich source of data for potentially studying how teacher mobility—the movement of teachers across schools and out of the district—relates to the distribution of teacher effectiveness.

Benefits of Participating in the Study

Participating districts will obtain valuable information on how teacher effectiveness is distributed across schools in their district and how the distribution changes over time. The study provides districts an opportunity to see how their distribution compares to other districts across the country. Districts can also receive information about the value added model used to measure teacher effectiveness. By participating in the study, districts will make an important contribution to our understanding the distribution of teacher effectiveness and its relation to district policies. Participation in the study is voluntary.

**Study
Participation
Requirements**

In spring/summer of the 2010-11 school year, participating districts will provide the study team with data on (1) student test scores for the 2007-08 through 2009-10 school years, and (2) student demographic characteristics and teacher-student-course assignments for the 2008-09 and 2009-10 school years, which will be used to conduct a value-added analysis. We will also collect teacher personnel data with teacher school assignments and teacher mobility information for the last two school years. In winter of the 2011-12, 2012-13, and 2013-14 school years, participating districts will provide these same data for the subsequent school years.

The study team will conduct telephone interviews with district staff to gather information on district policies related to the distribution of teacher effectiveness. Follow-up district interviews to learn about changes in district policies will be conducted each spring in the same school years.

The Study Team

Mathematica Policy Research, Inc., a nonpartisan policy research firm, conducts research and surveys for federal and state governments, foundations, and private sector clients. Mathematica's studies of education initiatives and other programs have been used to inform national policymakers for more than 35 years. Mathematica strives to improve public well-being by bringing the highest standards of quality, objectivity, and excellence to bear on the provision of information collection and analysis to its clients. Mathematica has offices in New Jersey, California, Illinois, Massachusetts, Michigan, and Washington, DC. See www.mathematica-mpr.com.

The Urban Institute is a nonprofit, nonpartisan policy research and educational organization that investigates the social, economic, and governance problems confronting the nation and evaluates the public and private means to alleviate them. Through work that ranges from broad conceptual studies to administrative and technical assistance, Institute researchers contribute to the stock of knowledge available to guide decision-making in the public interest. The Urban Institute operates the National Center for Analysis of Longitudinal Data in Education Research (CALDER) that informs education policy development through analyses of data on individual students and teachers over time. See www.urban.org and www.caldercenter.org.

**To Find Out
More**

Contact Mathematica's project director, Philip Gleason, by phone at (315) 781-8495 or by email at pgleason@mathematica-mpr.com.

**Data
Confidentiality**

Responses to the data collection activities will be used for research purposes only. The reports prepared for the study will summarize findings across the sample and will not associate responses with a specific district, school, or individual. We will not provide information that identifies you or your district to anyone outside the study team, except as required by law.

Mathematica and the Urban Institute follow the confidentiality and data protection requirements of the Institute of Education Sciences (The Education Sciences Reform Act of 2002, Title I, Part E, Section 183). We will protect the confidentiality of all information collected for the study and will use it for research purposes only. No information that identifies any study participant will be released. Information on respondents will be linked to their institution but not to any individually identifiable information. No individually identifiable information will be maintained by the study team. All institution-level identifiable information will be kept in secured locations and identifiers will be destroyed as soon as they are no longer required.

