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## Measuring How Benchmark Assessments Affect Student Achievement

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Schools and districts are increasingly implementing benchmark and other regular assessments aligned to state content standards. However, to date there has been little research to determine if, and to what extent, student outcomes are affected. This project examined whether districts in Massachusetts using quarterly benchmark exams aligned with state standards in middle school mathematics show greater gains in student achievement than those not employing this practice.

— SARAH GUCKENBURG, STEPHEN HAMILTON, SUSAN HENDERSON, ANTHONY PETROSINO,  
LEARNING INNOVATIONS AT WESTED. PROJECT TEAM

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### PROJECT OBJECTIVES

- Explore whether middle schools using quarterly benchmark exams in mathematics showed greater gains in student achievement than those not employing this practice. No difference was found in either the first study or the follow-up Technical Brief.

### AUDIENCE & APPLICATION

- Project findings directly inform policy at the Massachusetts Department of Elementary and Secondary Education.
- Other states and local education authorities, and technical assistance centers, may also benefit from the project and its results.
- Others interested in improving low-performing schools and districts.

### METHODOLOGY

- A quasi-experimental design, using covariate matching and comparative interrupted time-series techniques, was used to assess program/comparison school differences in changes in mathematics performance from a baseline year in 2001 to the implementation year in 2006 (see Bloom, 2003; Cook and Campbell, 1979). The follow-up study looked at two years post-implementation, 2006 and 2007.
- Massachusetts Comprehensive Assessment System (MCAS) data on student achievement in mathematics was used in outcome analyses.

### FINAL PRODUCTS

- Issues & Answers Report published by the Institute of Education Sciences, which may be found at: [http://ies.ed.gov/ncee/edlabs/regions/northeast/pdf/REL\\_2007039.pdf](http://ies.ed.gov/ncee/edlabs/regions/northeast/pdf/REL_2007039.pdf)
- Technical Brief follow-up with an additional year of data published by the Institute of Education Sciences for the Massachusetts Department of Elementary and Secondary Education, which may be found at: [http://ies.ed.gov/ncee/edlabs/regions/northeast/pdf/techbrief/tr\\_00208.pdf](http://ies.ed.gov/ncee/edlabs/regions/northeast/pdf/techbrief/tr_00208.pdf)
- Presentations at state and national conferences.

### What Are Fast-Response Projects?

Fast-Response Projects are short-term projects that respond to regional and national needs and priorities and provide research-based knowledge to inform policy and practice. They use methods such as research syntheses, mining of existing data sets, and descriptive studies.



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After analyzing data from the first year of implementation, the project found no immediate differences between districts implementing benchmark assessments and those not involved in this practice. A follow-up analysis was conducted in the second year of implementation using the same design and produced similar findings. This follow-up analysis was published as a Technical Brief, “A second follow-up year for *Measuring How Benchmark Assessments Affect Student Achievement*,” in April 2008.

### Contact Information

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