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## Gender Gaps in Assessment Outcomes in Vermont and the United States

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In response to a request from the Vermont Department of Education, this project examines whether gender gaps in reading, writing, and math assessment outcomes among Vermont students differ from gender gaps nationwide on the National Assessment of Educational Progress (NAEP). This project also compares gender gaps in reading and math among Vermont students as measured by the state assessment, the New England Common Assessment Program (NECAP), and the NAEP in Vermont. Gender gaps are examined for fourth and eighth graders in the aggregate and by student poverty and disability subgroups over time.

— STACY EHRLICH AND JOSEPHINE LOUIE, EDC, PROJECT TEAM

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### PROJECT OBJECTIVES

- Determine if gender gaps in Vermont NAEP scores differ significantly from gender gaps in national NAEP scores.
- Compare gender gaps in test scores from two different assessments: the Vermont NECAP and the Vermont NAEP.
- Compare gender gaps in test scores both before and after controlling for student poverty and disability status.

### METHODOLOGY

- Using publicly available NAEP data downloaded from the National Center for Education Statistics' NAEP Data Explorer, calculate Vermont and U.S. gender gaps in fourth- and eighth-grade NAEP reading, writing, and math scores from 2000 to 2007, and test for significant differences in gender gaps between Vermont and the nation.
- Using student-level Vermont NECAP data from 2006 and publicly available Vermont NAEP data from 2007, calculate and compare gender gaps in reading and math scores.

### AUDIENCE & APPLICATION

- Vermont Department of Education.
- NAEP and NECAP administrators and analysts within the three NECAP states (New Hampshire, Rhode Island, Vermont).
- Groups and individuals interested in gender and education.

### FINAL PRODUCTS

- Issues and Answers Report published by the Institute of Education Sciences, which may be found at: [http://ies.ed.gov/ncee/edlabs/regions/northeast/pdf/REL\\_2008062.pdf](http://ies.ed.gov/ncee/edlabs/regions/northeast/pdf/REL_2008062.pdf)
- Report, webinar, podcast.
- Live presentations and discussions of results.

### 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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Using data from the National Assessment of Educational Progress (NAEP) and the New England Common Assessment Program (NECAP), this project examines how gender gaps differ between Vermont NAEP scores and U.S. NAEP scores and between Vermont NAEP and NECAP scores in grades 4 and 8. Overall and disaggregated by poverty and disability status, gender achievement gaps in Vermont resembled those in the country as a whole except in a few cases.

Specifically, the study found that:

- In reading, gender gaps in Vermont and U.S. NAEP scores have typically not differed at a statistically significant level. From 2002 to 2007, grade 4 girls outscored boys by 5–8 points (or 7–10 percentiles) on average, and grade 8 girls outscored boys by 9–13 points (or 11–16 percentiles) on average, in both Vermont and nationwide.
- In writing, gender gaps in 2002 Vermont and U.S. NAEP scores did not differ at a statistically significant level. The grade 4 gender gap was 21 points (or 23 percentiles) in Vermont and 18 points (or 19 percentiles) nationwide. And the grade 8 gap was 24 points in Vermont and 21 points (or 25 and 22 percentiles) nationwide.
- In math, gender gaps in Vermont and U.S. NAEP scores did not differ at a statistically significant level. Boys outscored girls by 5 points (8 percentiles) or less on average in 2000–07.
- In all but a few cases, the gender gaps in reading and math scores on the Vermont NECAP differed from those of the Vermont NAEP by 5 percentile points or less. Gender gaps in 2006 NECAP scores were larger in reading and smaller in math than gender gaps in 2007 NAEP scores by 5 percentile points or less. Accounting for disability and poverty subgroups, however, revealed several exceptions. The average NECAP and NAEP gender gaps in math scores differed by 12 percentile points among grade 8 students in poverty and by 7 percentile points among grade 8 students with disabilities.

Analysis of NAEP and NECAP data suggests areas for further research. For example, gender gaps in all three content areas changed after controlling for student disability status. Among students with disabilities in both grades and jurisdictions the gender gap was larger in math and smaller in reading and writing. These shifts raise questions about how boys and girls are grouped in disability categories. This project outlines a variety of issues and presents data to augment current knowledge about gender gaps in achievement in Vermont and the United States.

### Contact Information

For more information about this project, e-mail Rebecca Carey ([rcarey@edc.org](mailto:rcarey@edc.org)) or visit REL-NEI online ([www.relnei.org](http://www.relnei.org)).

