

Background

- Across the nation, states and school districts face a critical need to improve the mathematics learning and performance of students with disabilities (SWDs).
- The population of special education students has increased greatly in recent decades, and accountability for this group of students has increased due to changes in the reauthorization of the Individuals with Disabilities Education Act (2004) and the No Child Left Behind Act (2001).
- NCLB requirements have cast light on the generally low mathematics performance of many SWDs and on the large achievement gaps between this subgroup and general education students (GenEds). Performance trends in the Northeast region mirror those of the nation.

Research Questions

- What is the mathematics performance of public school grade 4 students with disabilities in New York and Massachusetts?
- How has the performance of grade 4 students with disabilities and grade 4 general education students changed over time in New York and Massachusetts?
- What is the gap in proficiency rates between grade 4 general education students and grade 4 students with disabilities in New York and Massachusetts?

Methods

- Used cross-sectional, school-level data from publicly available datasets
- Performed descriptive examination of student performance, for students with disabilities and for general education students
- Performed descriptive examination of the performance gap over time

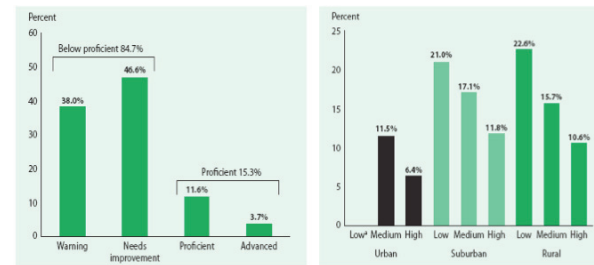
Definitions:

- Performance was defined as the percent of students reaching proficiency and above (proficient + advanced performance)
- Performance patterns were broken down by school locale and need in MA and by need-to-resource classification (N/RC) in NY¹
- The performance gap was defined as the difference between the percentage of proficient and advanced students with disabilities and proficient and advanced general education students (GenEd-SWD gap)

Results

MASSACHUSETTS

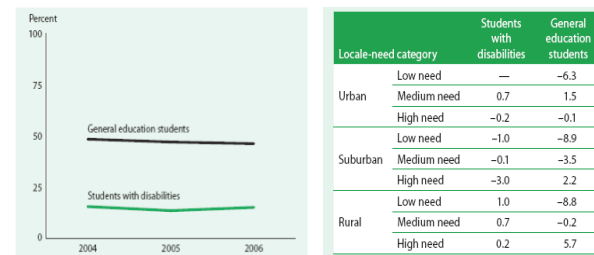
SWD Performance in 2006: Students



SWD Performance in 2006: Top Performing Schools

47.0% of SWDs reached proficiency in schools that had the highest percentage of SWDs scoring proficient (those within the top 10% of the distribution of all schools).

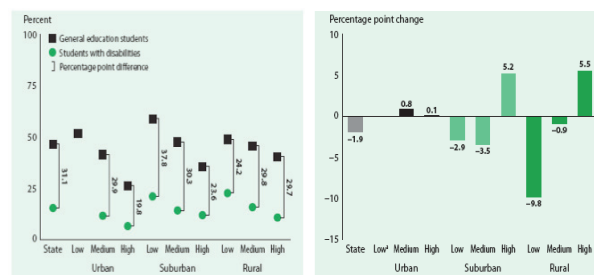
SWD and GenEd Performance from 2004-2006: Students



SWD and GenEd Performance from 2004-2006: Schools

43.7% (169 out of 387 schools) increased SWD proficiency rates from 2004 to 2006, by an average of 11.80 percentage points.

SWD-GenEd Achievement Gap: Students

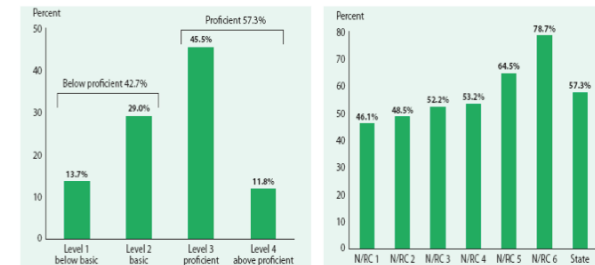


SWD-GenEd Achievement Gap: Schools

49 schools (12.7%) reduced the proficiency gap from 2004 - 2006, with no decrease in the performance of GenEds.

NEW YORK

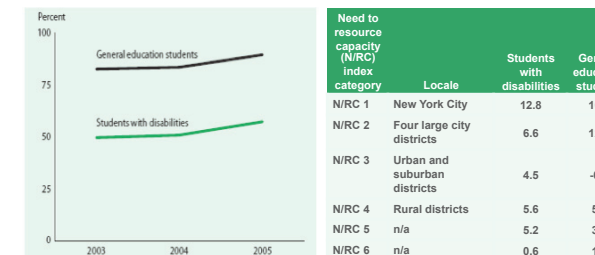
SWD Performance in 2005: Students



SWD Performance in 2005: Top Performing Schools

100.0% of SWDs reached proficiency in schools that had the highest percentage of SWDs scoring proficient (those within the top 10% of the distribution of all schools).

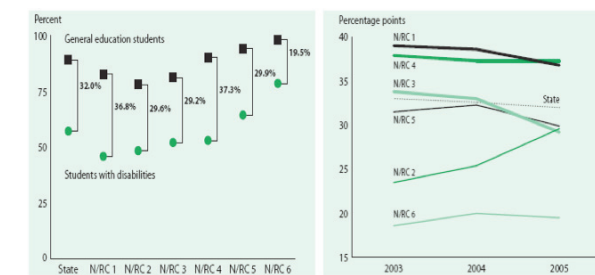
SWD and GenEd Performance from 2003-2005: Students



SWD and GenEd Performance from 2003-2005: Schools

58.67% (925 out of 1,577 schools) increased SWD proficiency rates, by an average of 23.19 percentage points.

SWD-GenEd Achievement Gap: Students



SWD-GenEd Achievement Gap: Schools

626 schools (44.0%) reduced the proficiency gap from 2003 - 2005, with no decrease in the performance of GenEds.

Similarities Across NY and MA

Although we can not compare student performance across the two states because they use different assessments, the following similarities were found in overall performance patterns:

- The difference in performance between SWDs and general education students (the GenEd-SWD gap) was similar for both states (approximately 30 percentage points).
- The change in percent proficiency over time for both general education students and students with disabilities was similar *within* each state.
- The two states exhibited improvement in overall SWD performance in approximately half of their schools, and both had a slight decrease in the gap over time.
- For Massachusetts and New York, examining performance within similar school groups of need/locale provided a much more varied and nuanced picture than when looking at overall state performance.

Limitations

- Use of cross sectional data
- Data on disability types and severity not available
- Alternative assessment information not available
- Lack of information on which students were categorized in more than one student subgroup
- Exclusion of scaled scores (limiting analyses to percentage of students in each performance level)
- Unreported data for n < 10 (MA) or n < 5 (NY) students within a subgroup category

Considerations and Discussion

- It is important to compare student performance within similar groups of schools so that differences in student achievement are not masked by, for example, schools with more resources. Moreover, this allows one to attain a realistic picture of the level of achievement for schools with particular characteristics (i.e., high level of need).
- There are differences in the proficiency requirements and difficulty levels for the MA and NY state assessments, as indicated by a report that compared state tests with the National Assessment of Educational Progress (NAEP).² This may, at least partially, account for the varying levels of proficiency between Massachusetts and New York.
- Differences in performance between the two states, or within each state, may be affected by varying practices and policies administered to students with disabilities at the state, district, and local level.
- For MA, given that not all schools at the top of the school-level distribution had 100% proficiency for SWDs, we must ask how realistic it is that NCLB's goal aims for 100% proficiency for all subgroups by 2014.
- Alternative ways of looking at student performance, such as examining growth of the same cohorts of students over time, may provide different and in some cases, more accurate depictions of changes in student performance over the years.

Notes:

¹ For full definitions of "need" and "need-to-resource classification," please see full reports available at <http://ies.ed.gov/ncee/gillabs/projects/index.asp>.
² U.S. Department of Education, National Center for Education Statistics. (2007). *Mapping 2005 state proficiency standards onto the NAEP scales* (NCES 2007-482). Washington, DC: U.S. Government Printing Office.