HOUSE RESEARCH | Short Subjects

December 2003

States' Analysis of Student Performance Under No Child Left Behind Act

Law requires schools to focus on all students but leads to significant variations in states' progress reports

The goal of the federal 2001 No Child Left Behind Act to make all schools, school districts, and states accountable for meeting high standards for student performance has generated both accolades and controversy. While applauded as a means to increase achievement for all students including the most historically disadvantaged students, the law also is criticized because it leads to statistical differences that result in significant state variations in the proportion of schools demonstrating academic progress under the law.

States generally use longitudinal and cohort comparisons to measure students' academic growth

States currently compare school or student academic progress by:

- comparing the test scores of different students in the same grade over time using cohort comparisons (the 4th grade in 2000-2001, the 4th grade in 2001-2002, the 4th grade in 2002-2003, etc.);
- tracking grades using annual test scores from the same group of students over time to make quasi-longitudinal comparisons (the 4th grade in 2000-2001, the 5th grade in 2001-2002, the 6th grade in 2002-2003, etc.);
- tracking individual students using annual test scores over time to make longitudinal comparisons (for example, each student's academic growth over a school year may be compared to the state's average growth over that year).

Experts generally prefer longitudinal comparisons to cohort comparisons. Longitudinal data provide more accurate information about student growth over time, may account for student mobility by basing school performance on students continuously enrolled in the school, and, by following student progress statewide, match and verify district records about student transfers and dropouts, among other data. The No Child Left Behind Act obligates states to use schoolwide averages of student performance to measure progress. It does not obligate states to measure the progress of individual students over time.

Law requires states to demonstrate ongoing student progress toward state-defined reading and math proficiency or suffer increasingly severe consequences

The No Child Left Behind Act requires states to generate data from annual English and math tests administered to all students in grades 3 through 8 and high school. States must use the data to demonstrate that adequate yearly progress (AYP) is being made toward having 100 percent of all students by the 2013-2014 school year perform proficiently in English and math. States, schools, and school districts must disaggregate the data for students by racial and ethnic minority, economic disadvantage, limited English proficiency, disability, gender, and migrant status. The data must allow educators to compare the academic achievement of different student groups, identify academic achievement gaps between student groups, and examine schools that "beat the odds" in improving the achievement of particular

student groups. Unlike other accountability systems, AYP does not measure average student performance or the rate at which student performance improves. Schools suffer increasingly severe consequences, ranging from payment of bussing and tutoring costs to school closure and a state takeover, for each succeeding year they fail to make AYP.

Percent of schools failing to make adequate yearly progress varies significantly between states due to statistical differences

The proportion of schools that fail to make AYP varies significantly between states, from a low of 0.8 percent in Iowa to a high of 87 percent in Florida. These statistical variations arise in part because the law allows states to establish their own academic goals, use state-developed tests to assess students' mastery of those goals, and define what is proficient on those state tests. Statistical variations also arise because of the following factors:

- state standards vary in content and rigor
- the test scores students must earn to be "proficient" vary by state, causing differences in the percent of students categorized as proficient even if students have exactly the same skills
- some states' timelines for achieving proficiency based on increments of improvement demand less of students initially (at a minimum, student proficiency must increase within two years and subsequent increases must occur within three years, a structure that some compare to a balloon mortgage)
- some states use larger numbers of students to establish the statistical reliability of identified student subgroups whose scores are included in AYP calculations (fewer student subgroups identified and counted within a school mean fewer chances for the school to fail to make AYP)
- schools do not make AYP when fewer than 95 percent of all students and all students in each identified student subgroup are tested
- particular demographic clusters of students (e.g., students with disabilities, limited English proficiency) disproportionately fail to demonstrate adequate progress
- states' practices on reporting students' test scores vary depending on whether states measure average proficiency levels across student groups or the progress of individual students (states may monitor schoolwide student performance averages across grades or the performance averages for all student subgroups in each grade using "value-added" analytical methods that measure the impact of a school on individual student progress over time)
- states' use of confidence intervals—to establish student performance expectations, accommodate variability in state test results, and sanction only those schools unequivocally below standards— makes it difficult to predict what pass rates actually satisfy AYP requirements.

For more information: See the House Research publication *Adequate Yearly Progress Under the No Child Left Behind Act*, November 2003.