Focus on NAEP
National Assessment of Educational Progress

Sampling

Focus on NAEP is a publication series developed to highlight findings and summarize information about the ongoing development and implementation of the National Assessment of Educational Progress (NAEP). This issue details how samples of schools and students are selected for the NAEP assessments.

NAEP Representative Samples

NAEP is designed to report results at the national and state level, as well as for selected urban districts, without requiring every student in every school to take the assessment. This is accomplished by creating a sampling frame using the Common Core of Data (CCD) and the Private School Survey (PSS). NAEP is then administered to a sample of students from this frame who represent the student population of the nation as a whole and of individual states and districts participating in the Trial Urban District Assessment (TUDA).

School Selection

1. Identify schools
   Schools are identified based on the U.S. Department of Education's public school system database. Because national-level data on schools can be up to three years old, school data is verified with state departments of education. A national sample of nonpublic (private) schools is also selected for grades 4, 8, and 12.

2. Classify schools
   Schools are classified into groups by type of location (city, suburb, town, or rural) and then by racial/ethnic composition. These groups are called strata.

3. Arrange schools
   Schools are sorted by a student achievement measure (e.g., school-level results on state achievement tests) to ensure NAEP represents all levels of school performance.

4. List schools
   The school groupings are then placed into a comprehensive ordered list. The specific schools that comprise the sample are ordered based on location type, race/ethnicity, and student achievement.

5. Select schools
   NCES draws a separate sample of schools from each stratum with probability proportional to school size. Small schools, high minority schools, and private schools are sampled to ensure that they are adequately represented. If the school participation rate in the sample is below 85 percent, the results cannot be reported.

6. Confirm schools
   A list of selected schools is sent to each state department of education to confirm eligibility. School closure or no eligible students would prevent a school from being selected.
Student Selection

Once a school has been selected for either a state or national assessment, students within the school are selected for each subject area based on grade (4, 8, or 12). From this list, a sample of students is randomly selected by NCES to participate in the assessment. Every student in a sampled school is eligible to be selected.

After the sample is drawn, students are assigned to a single subject area in which to answer questions. In general, 30 students are selected per grade per subject from each school. Typically, 95 percent of fourth- and eighth-grade students and 85 percent of twelfth-grade students selected agree to participate.

Students with disabilities and English language learners are eligible to receive accommodations offered by the NAEP program.

Subject Selection

This diagram shows the typical distribution of NAEP test booklets in a classroom of 30 students during an assessment of mathematics, reading, and science. Students sitting next to each other do not take the same subject. For each subject, there are several different versions of booklets.

Item Selection

Individual students only complete a subset of NAEP items. A technique called Balanced Incomplete Block (BIB) spiraling is used in which groups of items are systematically arranged with other groups of items within test booklets to assure that the entire content domain for the subject is covered. And all items are completed by a representative sample of students, though individual students only complete a fraction of the items.


The National Center for Education Statistics (NCES), located within the U.S. Department of Education and the Institute of Education Sciences, is the primary federal entity for collecting and analyzing data related to education.

The National Assessment of Educational Progress (NAEP) is a congressionally mandated project sponsored by the U.S. Department of Education and administered by NCES. The Commissioner of Education Statistics is responsible by law for carrying out the NAEP project. The National Assessment Governing Board is responsible for setting policy for NAEP, including the NAEP achievement levels.

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