

Annual Mandatory Collection of Elementary and Secondary Education Data for the Education Data Exchange Network

B. Collections of Information Employing Statistical Methods

The agency should be prepared to justify its decision not to use statistical methods in any case where such methods might reduce burden or improve accuracy of results.

Under the No Child Left Behind Act, every school and school district must meet the education standards in the law. Sample data are inadequate to measure compliance with the law at that level.

This is a collection of elementary and secondary education information from the universe of schools, school districts, and states. It includes the basic demographic and assessment data that is needed to evaluate the status and progress of education in this nation. As a primary agency source of universal education information it may be used to efficiently draw samples from which statistical studies may be conducted in the future. When these studies are being considered, ED will return to OMB for discussions and approval.

Civil Rights Data Collection

The ED Civil Rights Data Collection, using the EDEN survey tool, does employ statistical methods as described below.

Potential Respondent Universe

The design is a multi-state rolling stratified sample of public school districts in the nation, including charter schools. The sample was drawn, for each state, to include strata divided by size of district, and, within each stratum, high or low number of minority students, in order to ensure the necessary coverage for the preparation of state (and national) estimates, and to meet the need for data on specific districts.

In the sampling design for the survey, OCR merged the Common Core of Data (CCD) universe maintained by the National Center for Education Statistics (NCES) with the Time Series Database from the E&S Survey to form a universe for the sample. The sample was drawn using a stratified random sampling methodology with district size as

the determinant for the six strata. In order to meet its data needs, OCR determined that a sample of 5,155 districts would be drawn through the rolling stratified sampling process that OCR continues to use for the ED Civil Rights Data Collection. In addition, to meet the need for the inclusion of specific districts in the sample, OCR will be sampling 750 districts with certainty, including: school districts with 25,000 or more students; school districts under Federal Court Order with the U.S. Justice Department; school districts recently released from Federal Court Order; and school districts in states with 25 or fewer school districts. OCR will survey as a separate sample, approximately 160 of an estimated 1,155 cooperative, BOCES-type regional education centers functioning as school districts and their individual educational facility programs.

The total sample is approximately 6,000 public school districts and BOCES-type regional education centers providing full day educational services to children, and the approximately 64,000 schools corresponding to these districts.

Procedures for the Collection of Information

The ED Civil Rights Data Collection sample was the first cycle of a planned three-cycle rolling stratified sampling process—which is the sampling process used for the 1998 and 2002 Elementary and Secondary Surveys and the 2004 EDEN Civil Rights Data Collection. The rolling stratified sampling process includes a disproportionate, random sample of districts within states. The basic sampling proportion is approximately 33%. States that have fewer districts had a proportionately larger sampling proportion and states with large numbers of districts had a small sampling proportion.

OCR first ranked states, in ascending order, by a vector, which is the product of the total number of districts in a state times the number of students in that state. In order to treat states with a smaller number of districts equitably with states with a larger number of districts, a descending proportion value was applied to each state, in rank order. This proportion value, or “sampling fraction” varied from 33.5% of all districts to 53.8% of all districts. States that occupy middle ranks received the general sampling proportion. The sampling proportion was increased progressively for the states with progressively fewer districts, and decreased progressively for states with larger numbers of districts. The proportion steps was .45 percent, so that no state had a sample, for districts not with certainty, of less than 33.5% of its districts selected.

The sampling proportion for each state was then additionally adjusted through a proportional adjustment so that the results of the original multiplication yield 5,155, the number desired for the sample of regular school districts. OCR will then stratify the districts by total enrollment in five ranges, as follows:

- 1 to 300 students;
- 301 to 3,000 students;
- 3,001 to 5,000 students;
- 5,001 to 25,000 students; and
- Districts to be surveyed with certainty.

OCR then calculated a total number of districts in each stratum, by state, and total number of schools in each stratum, by state. OCR also calculated the percentage of districts in each stratum, by state, based on the total number of districts in the state. To determine how the sample would be drawn for that stratum, the proportion in each stratum was multiplied by the number of districts sampled for the state. For example, a state that had 25% of its districts with total enrollment of 300 students or less would have 25% of its sample size drawn from the 300 or less stratum of districts in that state.

Calculations were performed to determine the percentage minority enrollment in each district within each stratum. Based on a median split of districts within each stratum, the districts were divided into two halves – high minority enrollment districts and low minority enrollment districts – with each set of districts receiving a proportionate distribution to the number of districts in each minority substratum. Procedures were then executed to minimize overlap with previous years of the rolling stratified sample, by dividing the sampling frame into four categories depending on selection probabilities and whether or not the district was selected in prior years. The sample was then selected with probabilities proportionate to the conditional probabilities.

The formula for drawing the sample was used in the majority of cases. However, there are two exceptions, based on the size of the district and the number of districts in each state:

- The first is that states with 25 districts or less, such as Hawaii, Delaware, Nevada, Maryland, and the District of Columbia, had all their districts selected;
- The second exception is for districts with an enrollment of over 25,000 students. These districts were placed in a separate stratum and selected with certainty.

The random sample will be drawn, by stratum, within each state.

Methods to Maximize Response Rate and to Deal with Non-Respondents

Historically OCR has had a very high response for the Civil Rights Survey. The 2000 E&S Survey was sent to a universe of all school districts and schools in the United States. The overall response rates were 97% of all school districts and 99 % of all schools. The overall response rates for the 2002 E&S Survey were 98% for school districts and 98% for schools. For the 2004 Civil Rights Data Collection, the response rates, including partial respondents to the data collection, were approximately 97% of all districts (95% of all districts responded completely with clean data-which is consistent with the 2002 Elementary and Secondary Survey), and 97% of all schools. If school districts fail to respond in a timely manner, the contractor for the data collection, with assistance from OCR as necessary, contacts the district until either the district responds, or it is designated as a non-respondent.

Tests to be Undertaken

In the past, OCR has used respondent comments and the results of edit checks of the most recent survey data to revise data items in future surveys. For the ED Civil Rights Data Collection, OCR is participating with *EDFacts*/EDEN in a process for “usability testing” and pilot testing to further revise the data items.

Individuals Consulted on Statistical Aspects of the Design

Dr. Jerome Kravitz, Statistician, Office for Civil Rights, U.S. Department of Education, Washington, DC: (202) 205-9506

Dr. Adam Chu, Statistician, Westat, Inc., Rockville, Maryland: (301) 251-4326