

Accessing Statistics from the National Center for Education Statistics (NCES)
Focus: National Assessment of Educational Progress (NAEP)

1. Introduction

An assignment involves obtaining state data from web site, preparing the data for use in linked and conditioned micromaps and the production of graphs. Also redesign projects can use such data.

Take a quick glance at the box options 1-4 in Section 2 below. These indicate my selections for an example shown in class. Change one or more options to get different data for an assignment (as indicated in the assignment) and/or for a redesign project. Here are some suggestions.

Due to data availability I suggest picking 4th or 8th Grade and Mathematics or Reading.

Population comparisons based on the level of three factors: Gender, Race/Ethnicity and National School Lunch Eligibility are of interest to many people. Choosing any of these factors is fine.

Note that lunch program eligibility is surrogate variable for poverty. An initial conjecture might be distribution differences based on poverty are larger than those based gender and race/ethnicity. This part of the NCES web site primary emphasizes the difference between two levels of one factor. It would be of interest to see the statistics for populations based on cross product of all levels for the three factors.

Other comparisons of interest are comparisons across grades or across years. We calculate grade differences if we start by obtaining separate files and merging them in Excel or R. In Box 4 below, the cross-year option allows selection of two years for comparison. This yields a file with columns for both years and their differences for the populations being compared. For example we can see how difference between state Male and Female scores changed from 2011 to 2013.

2. Obtaining data: Example Steps

Go to the web site <http://nces.ed.gov/nationsreportcard/statecomparisons>

In the light blue box there are five boxes with a number and topic at the top.

For box 1, select Grade 8

For box 2, select Mathematics

For box 3, select Gender

For box 4, select Single Year and 2013 accommodations permitted

For box 5, select 2 decimal places and Confidence Interval

Click on Next Steps on the lower right of the light blue box. Sometimes the web response is slow.

When the new web page appears, scan boxes 6 and 7. Clicking on your choice of the Scale Score Button near the top of the table below. The populates empty column of the table. By default comparison are made National Public. (If you are interested you can select a state such as Virginia) The click on the Export to Excel Option below Box 7. A small window will appear on your computer. Download and save the file.

For a redesign project the presentation and paper should show a view of the table, provide the web link above and cite the source. For example

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Asses

3. Comment on Confident Class maps

Click on your choice of a map button at the top of the table. The resulting map shows cross jurisdiction comparisons. Sometime during the class I present a talk on redesigns for maps (and corresponding part of tables) that showing the results for three variables at a time. There are status and trend variations.