Accessing and Exploring NCES and Census Data
Abstract
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The National Center for Education Statistics (NCES) has several state-of-the-art data tools that allow users to easily access and analyze data. This workshop provides participants with a comprehensive overview of those tools to access data sets. Participants will learn how to access public-use and restricted-use data sets, create reports and data tables, find published reports and conduct analyses in selected statistical tools. NCES offers a large variety of national, state, local, school and student data sets including assessment data, cross sectional data, survey data and administrative records, and participants will better understand which data sets cover their educational topic of interest. The workshop is designed for graduate students, faculty members, researchers and other users with interest in using NCES and/or Census data for their research studies, evaluations, and data projects. Participants are not required to have any pre-requisite skills to attend, and should bring their personal laptops for interactive, in-class activities. Each participant will receive an Accessing and Exploring NCES/Census Data "cookbook," that provides comprehensive instruction and screen shots explaining how to navigate a myriad of NCES data tools and the DLDT. The workshop will introduce NCES' Distance Learning Dataset Training System (DLDT). The workshop will also offer an in-depth instruction on four NCES data tools, including the Elementary/Secondary Information System (ELSI); the National Assessment of Educational Progress (NAEP) Data Explorer; Educational Demographic and Geographic Estimates (EDGE) data tools to explore ACS and GIS data; and the new Integrated Postsecondary Education Data System (IPEDS). Participants will also be given an overview of the NCES website, including information on school district data available through the NCES Common Core of Data (CCD) from the National Public Education Financial Survey (NPEFS) and the School District Finance Survey (F-33). Staff from the U.S. Census Bureau will also conduct an overview of F-33 data files and documentation available on the Census Bureau website (https://www.census.gov/programs-surveys/school-finances.html). The overview will cover the types of data files and tables available on both websites, the locations of file documentation and record layouts, and a summary of historical data available for researchers.

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Pre-Conference Workshop (in-depth description)

This seminar will provide guidance on using NCES tools and data in research and data projects. Each section of the seminar is more comprehensively described below in conjunction with the name of the proposed instructor.

First, the session will introduce NCES' Distance Learning Dataset Training System (DLDT), which provides information about all NCES datasets and the tools that users need in order to find published reports, explore and acquire data, create data files, and conduct analyses in selected statistical software packages. The DLDT provides instruction in how to properly use NCES public-use and restricted-use datasets. Second, the session will also offer an in-depth instruction on five NCES data tools, including the Elementary/Secondary Information System (ELSI); the National Assessment of Educational Progress (NAEP) Data Explorer; the Educational Data Analysis Tool (EDAT); the Educational Demographic and Geographic Estimates (EDGE) table viewer; and the new Integrated Postsecondary Education Data System (IPEDS).

1. **Distance Learning Dataset Training System (DLDT)**

The Distance Learning Dataset Training (DLDT) system is an online, interactive tool that allows you to learn about the National Center for Education Statistics (NCES) data products across the education spectrum and evaluate them for your particular purposes. The DLDT modules are designed to introduce you to many NCES datasets, their design, and special considerations for analysis to facilitate effective use. The DLDT can be found at
https://nces.ed.gov/training/datauser

The DLDT modules provide information about NCES and specific NCES datasets. They can help users find published reports; acquire, access, and explore data; and create data files for analysis. The modules also explain how to conduct analyses using selected statistical software packages and/or by using data tools provided on the NCES website. Additionally, they provide instruction on how to obtain and successfully use NCES Public-use and Restricted-use datasets. The DLDT allows users to access this information at no cost and is a self-paced system.

There are two types of DLDT modules:

Common Modules that provide information to help users understand NCES data across the education spectrum. They provide general information about the NCES, its research methods, the Center's surveys, published data products and reports, how to access public- and restricted-use

datasets and provide an overview of the many tools that are available on the NCES website to help users locate and make effective use of NCES data.

Dataset-Specific Modules that below provide more detailed information about specific studies conducted by NCES, and how to use and analyze the particular datasets appropriately. There are Dataset-Specific Modules covering NCES datasets in the following categories

- Longitudinal survey datasets categorized as early childhood and elementary, secondary, and postsecondary studies.

- Cross-Sectional survey datasets targeting households, teachers and principals, schools and staffing, crime and safety, fast response survey datasets on many topics, and ancillary postsecondary surveys focused on topics of national interest.

- National Assessments of Educational Progress and international assessments of reading literacy, mathematics and science, student assessment, and assessments of adult competencies.

- Universe data collections on public and private schools, postsecondary institutions, and selected data submitted by State Education Agencies and Local Education Agencies through the NCES ED*Facts* data portal.

2. Elementary/Secondary Information System (ELSI)

This interactive on-line session by Stephen Cornman provides guidance and advice on using the ELSI data tool to navigate five NCES data sets, including the National Public Education Financial Survey (NPEFS); the School District Finance Survey (F-33); the School Universe Survey; the Local Education Agency Universe Survey; and the State non-fiscal Survey from the Common Core of Data (CCD). The CCD is the primary database on public elementary and secondary education in the United States. The data tool can be found at http://nces.ed.gov/ccd/elsi/.

This section offers interactive training on the ELSI data tool that allows the data user to create user-specific tables of public school data by selecting data elements from over 400 variables at the state, district, or school level. For example, researchers can choose from a myriad of data elements including school or district demographics, urbanicity, enrollment information, students in special programs, revenue by source, finance per pupil ratios, teacher and staff characteristics, among other variables. Stephen will run sample tables by district for one particular state by illustrating the amount of education funding that actually makes it into the classroom by running instructional expenditures per pupil in conjunction with total expenditures per pupil, current expenditures per pupil, support services expenditures per pupil, and locale codes; while

simultaneously showing these steps in the Acessing and Exploring NCES Data "cookbook." Advice on downloading or printing tables in various formats will be also offered.

ELSI facilitates longitudinal data analysis as five CCD data sets with information from 1986-2013 have been included in the tool. One of the prime advantages of ELSI is that it allows the data user to obtain necessary information without having to work with the complete CCD dataset. Data can also be accessed across years without having to re-merge data sets.

Stephen will also conduct training on how to match the CCD fiscal and non-fiscal data files. For example, fiscal records at the district level in the F-33Survey can be matched to the Local Education Agency Universe (nonfiscal) Survey and/or the School Universe Survey, enabling data users to match information about students, staff, and institution characteristics with finance data.[1] Mr. Cornman will also provide advice as to how to match the F-33 file to outside data sets, such as the Small Area Income and Poverty Estimates (SAIPE) from the US Census Bureau.

Finally, Stephen will discuss the value of becoming conversant with detailed file documentation, definitions, and survey methodologies from the five CCD data files. The participants should bring their laptops to access data from the NCES website and perform practice exercises.

3. NAEP Data Explorer

Emmanuel Sikali will present an introduction and broad overview of the National Assessment of Educational Progress (NAEP) and the NAEP Data Explorer. The NAEP Data Explorer is a rich and dynamic database of all NAEP data.

In stark contrast to all other training sessions on NAEP data offered at AERA, this session will exclusively present an overview of the NAEP Data Explorer (NDE), State Profiles, State Comparisons, Explore NAEP Questions, and District Profiles, which can be accessed at http://nces.ed.gov/nationsreportcard/naepdata/. The NAEP portion of the Accessing and Exploring NCES Data session is complementary rather than duplicative of the other NAEP professional development sessions in that it is intended to reach a broader audience of policy-makers, researchers, students, and members of the public who are less familiar with NAEP data. This session will expand the dissemination of NAEP data to persons beyond data users who already have comprehensive knowledge the assessment program and are deeply steeped in the nuances of NAEP data.

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[1] The NPEFS data can also be matched to the State non-fiscal Survey.

4. Integrated Postsecondary Education Data System (IPEDS)

Aida Ali-Akreyi will present the new Integrated Postsecondary Education Data System (IPEDS) data tools through the new IPEDS website. http://nces.ed.gov/ipeds/. An administrative data collection, the IPEDS data collection is a compliance data collection, resulting in a 99.9% response rate from over 7,000 U.S. postsecondary institutions. IPEDS collects information about the institution and the students and staff at those institutions. This session will be of special interest to researchers interested in postsecondary data.

Researchers will learn how to use the IPEDS data through three tools: Data Trends also known as Trend Generator, Comparing Schools, and Downloadable Data Set (tools will be presented in order from easiest to hardest level of user difficulty). Data Trends tool provides a quick and easy way to access IPEDS on limited but frequently asked postsecondary topic areas (e.g., student enrollment, student graduation rates, and financial aid). Tables and reports can be generated from the Data Trends tool. Comparing Schools tool gives researchers more freedom to use the entire IPEDS dataset by selecting the desired variables and institution characteristics for a group of institutions. Finally, Downloadable Data Set allows researchers to access the raw data files; however, researchers will need to learn the unique nuances of the data files and tips in setting up their datasets, which will be covered in this training. For each data tool, an NCES staff member will demonstrate and provide tips on conducting postsecondary data analyses.