

Chapter Twenty-two

Education Statistics on the World Wide Web: A Core Collection of Resources

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Statistics are a vital part of the education research milieu. The World Wide Web has become an important source of current and historical education statistics. This chapter presents a group of Web sites that are valuable enough to be viewed as a core collection of education statistics resources. A review of the primary Web source for education statistics (the National Center for Education Statistics) is followed by an evaluation of meta-sites for education statistics. The final section includes reviews of specialized, topical Web sites.

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Selecting Web Sites for a Core Collection

Statistics are an essential part of education research at all levels. Statistical information is used regularly by educational practitioners and policy makers, as well as by members of the general public hoping to engage intelligently in public discourse on the current state of the American educational system. However, finding, evaluating, and making use of statistical information is problematic for many educational practitioners, a difficulty that has been exacerbated by the rapid rise of end-user information technologies such as the Web. This chapter attempts to provide guidance in this area by suggesting a core collection of Web sites covering educational statistics.

A number of issues that are specifically related to the selection of Web sites for a core collection must be considered. Combine, for example, the potential for anonymous rhetoric with the use of statistics to “prove” an argument, and the authority and credibility of statistical sites become a primary concern for the would-be user of information. In selecting the statistical sites included here and evaluating their content, the authors have relied on the criteria outlined below. These criteria address the more traditional concerns of content description and scope as well as how to assess Web-based information resources for their authority and objectivity:

- *Source:* The source of the statistics provided should be clearly identified.
- *Description:* Statistical Web sites should adequately describe the available statistics and the means by which they have been gathered.
- *Timeliness:* Statistical information must be current. If the purpose of the site is to provide historical statistics, this must be clearly noted.
- *Site structure and usability:* Web sites containing statistical information (especially those including raw data) must provide assistance to would-be users of that information in terms of navigation, terminology, and technical issues.
- *Technical issues:* The manipulation and use of statistical data may require a variety of technical skills in terms of familiarity with specialized software applications.

The first component of the collection comprises a general description of the site for the National Center for Education Statistics (NCES), which is a primary resource with which every would-be user of education statistics information must be familiar. The second component of the collection comprises the Webliographies and classified directories (also called “meta-sites”) that point interested users to more specialized resources for finding education statistics on the Web. The final component of the collection comprises an annotated listing of specialized resources that may be of interest to a user, depending on the scope of his or her information need and the target audience identified by the site or by the field of study it considers within the broader discipline of education.

Primary Resource

The National Center for Education Statistics (NCES)

URL: <http://nces.ed.gov/>

NCES is the central repository for education statistics information in the United States. First and foremost, the NCES Web site provides access to the wealth of statistical information collected and published by the U. S. Department of Education. Access is available from the Web to the data sets generated by national surveys and longitudinal studies of American education such as the *National Education Longitudinal Study of 1988* (NELS-88). Also available online is the *Encyclopedia of ED Stats*, a unique resource that brings together the statistical information found in core statistical print publications. In addition to providing electronic access to its print publications and data sets, NCES has designed specific areas of its Web site to meet the education information needs of audiences other than the researcher. For example, the NCES “Student Classroom” provides access to instructional activities that teachers can use with students as well as statistical information that might be of interest to children and young adults (such as “College Search” and “Find Your School”).

Meta-sites for Education Statistics

If you are unable to find the specific statistics you need at the NCES site, you might want to use a meta-site to find a relevant Web resource. Meta-sites typically are edited topical lists of relevant Web sites.

Webliographies

Webliographies may be found on a variety of Web sites, but scholarly Webliographies are maintained most commonly by academic libraries for the purpose of guiding students to relevant resources. These resources may be particularly helpful in finding links to state or regional information if the parent institution has a strong mission to serve the local community.

Statistics for Education

URL: <http://www.library.umass.edu/subject/education/statist.html>

This site, maintained by Lori Mestre, coordinator for instructional and curriculum support services, University of Massachusetts, Amherst, is a good source of much of the statistical data available online in the field of education. It contains links to such standard sources for education statistics as the NCES, National Assessment of Educational Progress, National Education Association, U. S. Census Bureau, and UNESCO, as well as to the enormous collection of links to education statistics information housed at the University of Michigan.

The site is divided into five main categories: "General Statistics," "International Statistics," "Journals," "Organizations," and "School Statistics." Each category has a list of links with statistical information related to that heading. "General Statistics" provides access to commonly needed demographic information with statistics for K-12 and higher education on school enrollment, numbers of schools, diversity, expenditures, dropout rates, government funding, salaries, and so on. The "International" category supplies statistics for such areas as literacy, enrollment, and funding for various countries. The "Journal" section consists of a link to the *Journal of Statistics Education*, a peer-reviewed e-journal that is intended to improve statistics education at all levels. The "Organization" category simply provides links to NCES and National Council on Measurement in Education. Finally, "School Statistics," provides links to those Web sites particularly concerned with elementary- and secondary-level educational statistics.

Classified Directories

Classified directories are similar to Webliographies in that they include lists of Web sites. However, directories tend to be much more extensive and are arranged hierarchically by subject. They often include a search engine to facilitate the identification of links to specific types of information.

Statistical Resources on the Web, Education

URL: <http://www.lib.umich.edu/govdocs/steduc.html>

This site is part of the University of Michigan Documents Center, a well-known and authoritative site for links to government information. It is maintained by Grace York, coordinator, University of Michigan Documents Center. This comprehensive page is divided into eleven sections: "All Education Levels," "Book Publishing," "Computers," "Directories," "Educational Attainment," "Elementary/Secondary," "Higher Education," "Libraries," "Literacy," "School Violence," and "Technical Education." It provides approximately eighty links to many of the sites included in other sections of this article, such as NCES and UNESCO. Often the links are to specific areas of the larger sites. Each link is annotated with bullets providing information such as coverage (topical, geographical, chronological), format of data (HTML, PDF), and tips for accessing data.

Specialized Resources for Education Statistics: Resources by Scope of Need *Information in Small Bytes: Fast Facts and Frequently Asked Questions*

In many cases, information needs related to education statistics are relatively simple. For example, "How many African American students graduated from four-year colleges in 1998?" Questions such as this require brief answers, and those who ask such questions are usually uninterested in navigating complicated Web sites or manipulating raw statistical data. In many cases, answers to these questions can be found in

one of the frequently asked questions (FAQ) sections made available by various organizations.

NCES Fast Facts

URL: <http://nces.ed.gov/fastfacts/>

As has already been noted, NCES is the primary repository for education statistics information in the United States. The “Fast Facts” site is a relative newcomer to the NCES Web site, debuting in summer 2000 as a way to repackage and spark interest in NCES and the statistics it collects. The format and purpose of “Fast Facts” make it an unusually lighthearted addition to the NCES Web presence.

“Fast Facts” serves as a kind of billboard for NCES data, with three main features. First, a selected “Highlighted Fast Fact” focuses on a question of current interest. Second, “Did You Know” includes a two-sentence statement about an interesting educational statistic. Finally, “Inside the Stats” provides users with a small infographic on a given topic with links to the NCES source of the information.

The Raw and the Cooked: Statistical Data Sets on the World Wide Web

The resources listed below are some of the richest available online for the serious researcher with a facility for interpreting and manipulating raw data, but they may not be the best option for an unprepared user.

Primary Resource for Data Sets

Common Core of Data: Information on Public Schools and School Districts in the United States

URL: <http://nces.ed.gov/ccd/ccddata.asp>

The site has database on public elementary and secondary education in the United States. CCD is a comprehensive, annual, national statistical database of all public elementary and secondary schools (approximately 89,000) and school districts (approximately 16,000), containing data that are designed to be comparable across all states. There are three categories of information: general descriptive data on schools and school districts; data on students and staff; and financial data.

The CCD is made up of a set of five surveys sent to state education departments. The components of the surveys include the following: The “Public School Universe” provides a listing of all schools currently in operation during the school year. The “Local Education Agency (School District) Universe” lists current number of students, number of high school graduates, and so on. The “State Aggregate Nonfiscal Report” provides information on all students and staff at the state level. The “State Aggregate Fiscal Report” offers detailed data including such items as average daily attendance. And the “School District Fiscal Data” posts detailed data by school district.

Meta-Sites for Data Sets

Murray Research Center Data Archive [Now part of the Harvard MIT Data Center]

URL: <http://www.hmdc.harvard.edu/jsp/index.jsp>

The Murray Research Center at Radcliffe College has been incorporated into the Harvard MIT Data Center and provides access to more than 250 data sets from this Web site. There is an alphabetical list of data sets by title, along with profiles about each study, its author, and the data that were collected. Data sets are available in various formats such as print, CD-ROM, and computer files. Areas of concentration include: Informatics, Information Technology, and Statistical Computing. The Virtual Data Center provides the user with ways to examine collected data, for instance, qualitative studies from Murray (*Studies of Lives*-Unique qualitative and quantitative data.)

Data Sets for Higher Education Research

College Student and Faculty Survey Data Sets

URL: <http://www.gseis.ucla.edu/heri/heri.html>

The Higher Education Research Institute (HERI), housed at UCLA, has sponsored research on higher education since 1966 and has some of the most comprehensive studies of higher education data, reporting on about 1,800 institutions, more than 10 million students, and more than 250,000 faculty. Data sets are not available for download on the Web. To obtain them, fees must be paid to HERI for the information. However, you will find codebooks and instruments for downloading for the College Student Surveys.

All Information Needs Are Local: Resources for State and Regional Statistics

Some of the most complicated requests for education statistics involve information specific to a city, state, or region. The resource below is representative of some of the Web sites providing access to local, state, and regional education statistics information. In addition, however, the reader is advised to always check the Web site of the local school district or state department of education for statistical information that might otherwise go unnoticed.

Regional Educational Laboratories (REL)

URL: <http://www.relnetwork.org/index.html>

The Regional Educational Laboratories (REL) Network web site was developed and maintained with funding from the U.S. Department of Education. That funding expired on December 31, 2005. It is being kept online for reference and archival

purposes. This is an archived site and is no longer maintained or updated. The REL Web site linked to the ten regional research and development laboratories sponsored by the Department of Education's Office of Educational Research and Improvement (OERI). Each laboratory had distinctive features tailored to meet the special needs of the geographic region it serves, but the labs also shared common characteristics, such as working with state and local educators, community members, and policy makers in using research to tackle issues of education reform and improvement. The laboratories conducted applied research resulting in models for implementing systemic reform and for achieving educational improvement on a broad scale. They also cooperate with other organizations to deliver services that support the efforts of educators and policy makers to improve education.

Education Statistics around the World: International and Comparative Statistics

Like the resources described above for the location of state and local statistical information about education, the resources available for the location of international and comparative statistics may be unfamiliar to many librarians and their users. The resource listed below will provide statistical information about education around the world and may provide comparative information between other educational systems and our own.

UNESCO Institute for Statistics

URL: http://www.uis.unesco.org/ev.php?URL_ID=2867&URL_DO=DO_TOPIC&URL_SECTION=201

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics (UIS) Web site provides researchers free access to data and statistics that UIS has collected about education and literacy from UNESCO member states. Data in the site's "Database of Education and Literacy" section are available in raw form whereas the data in the "Statistical Yearbook" and "World Education Indicators" sections are presented in a more interpretive manner.

Data presented on the UIS Web site were derived from UIS questionnaires sent to appropriate national bodies of more than two hundred countries, surveys conducted with other international agencies, UN population data, and data from national statistical and educational publications. The main body of information is derived from the UIS questionnaires, and the other sources of data are used to support and/or confirm UIS data.

The UIS provides educational statistics for single countries or groups of countries in world regions by year. Statistical categories include demographics for teaching staff related to preparation level, sex, and grades taught; demographics for students

related to enrollment, age, sex, and graduation rates; educational finance outlays and spending rates; and literacy rates by age, educational level, and sex. Finally, in addition to providing international educational statistics not easily obtainable elsewhere, UIS's time series data are particularly valuable, as are its cohort and gender disparity analyses.

Practice Made Perfect: Education Statistics Sites Aimed at K–12 Practitioners

One of the user groups most traditionally difficult to serve in the academic library is the educational practitioner. The information needs of practitioners are significantly different from those of students and scholars.

American Federation of Teachers (AFT)

URL: <http://www.aft.org/salary/index.htm>

AFT was founded in 1916, and has grown into a trade union representing more than a million workers in education, health care, and public service. Statistics provided on the AFT site are derived from their annual Teacher Salary Survey. This site covers four salary related categories: "State Comparisons," "Trends in Teacher Salaries Compared to Other Workers and Professions," "Beginning Teacher Salaries and the Hot College Job Market," and "Teacher Salaries in School Districts Serving the Nation's 100 Largest Cities."

IPEDS: Higher Education Statistics

Questions about higher education statistics can be among the most interesting for the academic librarian because they deal with the level of education in which we ourselves work. Campus offices of institutional research also can be a valuable resource for higher education statistics because it is the employees of these offices who are typically charged with collecting statistical data on our own (and our peer) institutions.

IPEDS (Integrated Postsecondary Education Data System)

URL: <http://nces.ed.gov/ipeds/>

IPEDS is maintained by the NCES and provides comparative data about colleges and universities in the United States and outlying territories. Data regarding enrollments, programs, degrees conferred, faculty, staff, and finances can be accessed.

Data are collected annually or biannually from approximately 10,000 institutions via a survey form. It often takes several years for the current data to become accessible. The following data sets are available for analysis: Institutional Characteris-

tics; Fall Enrollment; Completions, Salaries, Tenure and Fringe Benefits of Full-time Instructional Faculty; Financial Statistics; College and University Libraries; and Full Staff.

Conclusion

The resources listed throughout this chapter represent only a part of the education statistics resources available on the Web, but they are some of the best of those resources. With this collection of education statistics sites on the Web, the reader should be able to either locate the answer to many of the most common statistical questions in education or find a resource that will point him or her to additional materials.

All URLs are current as of April 13, 2006.