

A R T I C L E S

THE STATISTICAL INFORMATION FUNCTION IN THE NATIONAL LIBRARY OF EDUCATION

by
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Abstract

This article describes both the historical and current roles that educational statistics play in the National Center for Education Statistics and the more recently established National Library of Education. Discussed are several sources and publications that Dr. Grant has found to be the most helpful in his long career of responding to diverse and far-reaching queries on American education. He draws on population, economic and education surveys; census results; directories of U.S. school districts; reports on enrollment, staff and revenues of elementary, secondary and post-secondary institutions; and state assessments of educational progress in the U.S. In particular are cited 3 annual publications from the National Center for Education Statistics which provide inquirers with the most wide-ranging and indispensable information on American education.

Until 1994, the Education Information Branch was the body responsible for providing information on the research and statistics coming out of the U.S. Department of Education Office of Educational Research and Improvement. In that year came Public Law 103-227, the Goals 2000: Educate America Act. This legislation established the National Library of Education and transferred the functions of the Education Information Branch into the Library. Shortly thereafter, my colleague and friend Rod Pelton and I found ourselves as resident statisticians in the National Library of Education. Dr. Pelton now has other interests, but I continue to spend much of my time on the telephone, responding to people's requests for facts and figures on American education. The calls keep coming in on the 800 line in large numbers from all over the United States, and sometimes from other countries such as England, Ireland, France, Germany and especially Canada. The kinds of inquiries received range from the sublime to the ridiculous, and there is almost never a dull moment. The workdays are busy, and some days can be described as frenetic. But all in all, this is the best and most interesting job in the U.S. Department of Education.

I still identify with the National Center for Education Statistics (NCES) and certainly emphasize the data from the Center in my work, but I actually use statistical information from numerous sources. If, for example, I were going to an international conference and could bring with me only three publications to provide statistics on this country to foreign audiences, I would choose *The World Almanac*, *The Statistical Abstract of the United States* and the department's own *Digest of Education Statistics*. These are general publications, of course, which provide useful

information on many different subjects. If I were not to bring along these publications (assuming that most of the audience is familiar with them), I would select a number of publications from NCES and other agencies that I find especially useful in my day-to-day work.

First and foremost among the publications from other agencies are two based on the current population surveys of the Bureau of the Census. Data for the report on *Social and Economic Characteristics of Students* are collected in the October Current Population Survey, while the statistics for *Educational Attainment in the United States* are collected in March. The data on *Social and Economic Characteristics* have been collected annually since 1947, and the report on *Educational Attainment* has been done for each year since 1964. When combined with the data from the decennial censuses of population, these publications provide a good picture of trends in enrollment by age, race, and sex, as well as the levels of education completed by the adult population over a long period of years.

Another useful statistical publication is from the Bureau of Labor Statistics, dealing with the employment status and college attendance of recent high school graduates. This release enables one to respond to the frequently asked question "How many high school graduates go on to college in the fall following graduation?" In the recent past, the answer has been that about 40 percent go on to a four-year college or university, and 22 percent enroll in a two-year college program. *Economic Indicators*, a monthly report from the President's Council of Economic Advisers, is a very useful source of current information on the gross domestic product, personal income, the Consumer Price Index, unemployment rates,

and federal government finances, all of which relate in one way or another to our data on school finance, college enrollment, and college costs.

Finally, a report from the National Center for Health Statistics shows the number of live births in the United States in the years ending in November 1995 and 1996. If these reports are consulted regularly, it will be found that 1990 was the peak year for births in the past 35 years and that there have been small decreases since 1990. For the education statistician these figures, along with the population projections from the Bureau of the Census, indicate that enrollment in public and private elementary and secondary schools should peak at about 54 million in 2006, and that small decreases should follow. The peak year for high school graduates in this cycle should be 2008, when the number of graduates will approach, but not surpass, the all-time record established in 1977. That was the year when 3,152,000 baby boomers completed their high school education.

I would like to mention here the U.S. Department of Education and the National Center for Education Statistics. There was no organization with the title National Center for Education Statistics until 1965, but the statistical surveys of what is now the U.S. Department of Education go back almost 100 years earlier. It all began in 1867 when President Andrew Johnson signed legislation passed by Congress creating a Department of Education, "for the purpose of collecting such statistics and facts as shall show the condition and progress of education in the several States and Territories, and of diffusing such information respecting the organization and management of schools and school systems and methods of teaching as shall aid the people of the United States in the establishment and maintenance of efficient school systems, and otherwise promote the cause of education throughout the country."

This newly created Department of Education did not have cabinet status, with a Secretary of Education. Rather, a Commissioner of Education headed it, and it soon became a bureau within the Department of the Interior. It remained there for 70 years, from 1869 to 1939. From 1939 to 1953 it was part of the Federal Security Agency, and from 1953 to 1980 it was one of the components that made up the Department of Health, Education and Welfare. Finally, in 1980, the Department of Education became a separate agency with its own Secretary of Education, whose role as a member of the President's Cabinet is to be a spokesperson for education.

The statistical surveys of what is now the National Center for Education Statistics (NCES) date from 1870. The earliest surveys of public elementary and secondary schools collected statistics on basic items such as enrollment, attendance, teachers and their salaries, high school graduates and expenditures. The early surveys of higher education requested data on the number of colleges and universities, enrollment, faculty, and bachelor and higher degrees conferred. We now have 125 years of data on some of the key statistics that were asked for in 1870.

It may also be useful to discuss how the surveys of NCES differ from those conducted by the Bureau of the Census. The Census Bureau does house-to-house or population surveys in which a member of the household describes the school enrollment or educational attainment of the persons within the household. Census data are particularly useful if one is interested in the demographic characteristics of the population being sampled. A minor drawback is that they are sample surveys that provide good approximations rather than precise numbers of the population being surveyed.

NCES, on the other hand, conducts mainly what can be described as "institutional" surveys, i.e. the respondents in most of their surveys traditionally have been schools, colleges and universities, and state departments of education. When a 100 percent response is received from the state department of education, there is no sampling error involved. There could be a non-sampling error, if a state fails to give the correct information, or if the information provided is not strictly comparable from one state to another. The one drawback to this type of survey is that it is not possible to obtain information from the states on what is collected from the local school districts within their states.

Today, NCES conducts ~~too~~ many surveys for all of them to be mentioned within this article. However, I would like to mention briefly the three surveys that I find most useful in my work. The survey of public elementary and secondary schools, known in the office as the Common Core Data, is conducted through the state departments of education. The statistics for each state are summarized in three reports: one provides information on schools and school districts, the second on enrollment, staff, and high school graduates, and the third on the revenues and expenditures of public schools. The office has also prepared the *Directory of Public Elementary and Secondary Education Agencies*, which gives the names, addresses, telephone numbers and a limited amount of statistical information about each local school district in the country.

In our survey of institutions of higher education, known in the office as the Integrated Post Secondary Education Data System, or IPEDS, data on institutional characteristics, enrollment, faculty, degrees conferred, revenues and expenditures is collected directly from individual colleges and universities. Much of the information from the IPEDS survey is summarized in the following report: *Enrollment in Higher Education; Staff in Post Secondary Institutions; Degrees and Other Awards Conferred; and Current Funds Revenues and Expenditures*. Another publication, *Directory of Post Secondary Institutions*, contains a limited amount of information about each recognized college and university in the country.

A third survey worthy of special mention is the National Assessment of Educational Progress, or NAEP survey. The National Assessment measures the achievements of a nationwide sample of students in grades 4, 8, and 12 in a variety of fields. The earliest testing was done in the late 1960s and early 1970s, so we now have a quarter of a century of national data on the achievements of students in reading, mathematics, and science. Tests in other fields,

such as writing, history, geography, and civics have been given over a more limited time span. More recently, each state has been invited to participate in these tests, and about 40 states have chosen to do so. Tests scores are not available for the participating states on 4th grade reading, 4th and 8th grade mathematics, and 8th grade science. The state comparisons can be found in the *NAEP 1994 Reading Report Card*, the *NAEP 1996 Mathematics Report Card*, and the *NAEP 1996 Science Report Card*.

This has been only a cursory look at what the National Center for Education Statistics and the National Library of Education have to offer. However, I would like to mention what is sometimes referred to as the "Big 3" among the National Center's publications: *Digest of Education Statistics*; *Projections of Education Statistics*; and *The Condition of Education*. Each of these annual publications covers a wide range of areas within the

broad field of education statistics. The *Digest*, in particular, is an indispensable source of information for anyone whose job it is to respond to questions about American education.

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