

Chapter 10: SASS School Library Media Center Survey (SLS)

1. OVERVIEW

Federal surveys of school library media centers in elementary and secondary schools in the United States were conducted in 1958, 1962, 1974, 1978, and 1985. The National Center for Education Statistics (NCES) asks questions about libraries in public and Bureau of Indian Education (BIE) schools as part of the Schools and Staffing Survey (SASS) (see chapter 4 for details on SASS). The School Library Media Center Survey was introduced as a component of SASS in the 1993–94 school year. The survey was administered to both public and private schools in the 1993–94 and 1999–2000 SASS, but only to public schools (including BIE-funded schools) in the 2003–04 and 2007–08 SASS. It is sponsored by NCES and administered by the U.S. Bureau of the Census.

Purpose

The purpose of the School Library Media Center Survey is to provide a national picture of school library collections, expenditures, technology, and services. The survey furnishes national estimates for public school libraries (by school grade level and urbanicity) and for libraries operated by BIE schools; state estimates are also provided for public school libraries.

Components

The School Library Media Center Survey was introduced in the 1993–94 SASS.

The 1993–94 School Library Media Center Survey consisted of two components, one on the school's library media center and the other on the library media specialist. The 1999–2000, 2003–04, and 2007–08 SASS administrations included only the library media center component. The survey is sent to public schools, including BIE schools, in the 50 states and the District of Columbia. Until the 2003–04 SASS, the survey was also sent to private schools.

School Library Media Center Survey. The library survey is designed to provide a national picture of school library media center facilities, collections, equipment, technology, staffing, income, expenditure, and services. A section on information literacy was added to the 2003–04 and 2007–08 surveys. The respondents are school librarians or other school staff members familiar with the library.

The School Library Media Center survey was designed to profile the school library media specialist workforce, including demographic characteristics, academic background, workload, career histories and plans, compensation, and perceptions of the school library media specialist profession and workplace. The eligible respondent was the staff member whose main assignment at the school was to oversee the library.

Periodicity

The library survey was conducted in the 1993–94, 1999–2000, 2003–04, , 2007–08 SASS, and will be conducted again in 2011-12. The 1993 and 1999-2000

SAMPLE SURVEY OF ELEMENTARY AND SECONDARY SCHOOL LIBRARIES

The School Library Media Center Survey collects data on:

- Collections
- Expenditures
- Technology
- Services

collections covered public, private, and BIE schools; collections since then covered only public and BIE schools.

2. USES OF DATA

School libraries and library media centers are an important component of the educational process. Data from the library survey provide a national picture of school library collections, expenditures, technology, and services. The information can be used by federal, state, and local policymakers and practitioners to assess the status of school library media centers in the United States. It also contributes to the assessment of the federal role in supporting school libraries. The librarian survey provided, for the first time, a national profile of the school library media specialist/librarian workforce.

These data can also be used to address current issues related to school libraries. Recent interest has focused on the contribution that libraries could make to the current education reform movement. Education reform has prompted increased attention to the role that school libraries/media centers might play in applying new technology and developing new teaching methods. Some analysts argue that libraries have a crucial role in developing computer literacy and educating students in the use of modern information technologies. A number of observers also have argued that expanding the function of libraries is a key prerequisite to meeting the National Education Goals.

3. KEY CONCEPTS

Some of the key concepts and terms in the School Library Media Center Survey are defined below.

Librarian. A school staff member whose main responsibility is taking care of the library.

Library Media Center. An organized collection of printed, audiovisual, or computer resources that (a) is administered as a unit, (b) is located in a designated place or places, and (c) makes resources and services available to students, teachers, and administrators.

Library Media Specialist. A teacher who is state certified in the field of library media.

4. SURVEY DESIGN

Target Population

The universe of library media centers/ libraries in elementary and secondary schools with any of grades 1–12 in the 50 states and the District of Columbia.

Sample Design

In 1993–94, the library media center sample was a subsample of the SASS school sample. Drawn from the 13,000 schools in the SASS, the library sample consisted of 5,000 public schools, 2,500 private schools, and the 180 BIE schools in the United States.

The strata used for library sampling were the same as those used in the public school sampling of the Schools and Staffing Survey (SASS) (see chapter 4 for details) (state and grade level). All BIE schools were selected for the library survey, so no stratification or sorting was needed. Within strata, public schools in the 1993–94 sample were sorted on the following variables:

- local education agency (LEA) metro status: 1 = central city of a metropolitan statistical area (MSA), 2 = MSA (not central city), 3 = outside MSA;
- Common Core of Data (CCD) LEA ID;
- school enrollment; and
- CCD school ID.

The sample schools were then systematically subsampled using a probability proportionate to size algorithm, where the measure of size was the square root of the number of teachers in the school as reported in the CCD (the public school sampling frame for SASS) multiplied by the inverse of the school's probability of selection from the public school sample file. Any school with a measure of size larger than the sampling interval was excluded from the library sampling operation and included in the sample with certainty.

The private school library frame for 1993–94 was identical to the frame used for the SASS private school survey, except that it excluded schools with special program emphasis (special education, vocational, or alternative curriculum schools). Private schools were stratified by recoded affiliation (Catholic, other religious, nonsectarian); grade level (elementary, secondary, combined); and urbanicity (urban, suburban, rural). Within each stratum, sorting occurred

on the following variables: (1) frame (list frame and area frame); and (2) school enrollment.

Within each stratum, private schools were systematically selected using a probability proportionate to size algorithm. The measure of size used the school's measure of size (i.e., the square root of the number of teachers in the school as reported in the CCD) multiplied by the inverse of the school's probability of selection. Any library with a measure of size larger than the sampling interval was excluded from the probability sampling process and included in the sample with certainty. In all, 2,500 private schools were selected for the library sample in the 1993–94 SASS. In 1999–2000, the Library Media Center questionnaire was administered to all school within the SASS sample.

In 2003–04 and 2007–08, the Library Media Center questionnaire was administered to public and BIE SASS school samples, excluding private schools. Each sampled school received a library media center questionnaire. The sampling design for Library Media Center Survey follows that of the public school sample and BIE school sample of SASS. The BIE schools were selected for the sample with certainty. A number of changes were made in the sample design (i.e., stratification, sample sizes, sample sort, and school definition) from the 1999–2000 SASS to the 2003–04 SASS to the 2007–08 SASS. See more information on the 2007–08 public and BIE school sampling in Schools and Staffing Survey (SASS) (chapter 4).

Data Collection and Processing

The U.S. Bureau of the Census is the collection agent for the School Library Media Center Survey. Data collection and processing procedures are discussed below.

Reference dates. Most data items refer to the most recent full week in the current school year. Questions on collections and expenditures refer to the previous school year.

Data collection. The School Library Media Center Survey is delivered with other SASS components beginning in October of the survey year. The survey is delivered to the school librarian or another staff member familiar with the library. (The follow-up procedures are described in chapter 4.)

Editing. Once data collection is complete, data records are processed through a clerical edit, preliminary interview status recode (ISR) classification, computer pre-edit, range check, consistency edit, and blanking edit. (See chapter 4 for details.) After the completion of

these edits, records are processed through an edit to make a final determination of whether the case is eligible for the survey and, if so, whether sufficient data have been collected for the case to be classified as an interview. A final ISR value is assigned to each case as a result of the edit.

Estimation Methods

Weighting. In the SASS School Library Media Center component, data are used to estimate the characteristics of schools with library media centers as well as schools without library media centers. Whenever possible, sampled schools with library media centers and sampled schools without library media centers are adjusted separately. Thus, interviewed library media centers are weighted up to the weighted estimate of sampled schools known to have library media centers, as determined at the time school library media center questionnaires were distributed. Likewise, the number of interviewed schools without library media centers is weighted up to the weighted number of all schools without library media centers as determined from the questionnaire distribution. This is done to study the characteristics of each type of school.

When it is not possible to adjust the library weights by the type of school, all sampled school library media centers and schools without library media centers are adjusted as a whole. This is necessary to handle instances in which the existence of the library media center cannot be established during data collection. Due to reporting inconsistencies between the school library media center questionnaire and the school questionnaire, school library media center survey data are not adjusted directly to schools reporting to have library media centers on the school questionnaire.

Imputation. Items from the SASS School Library Media Center questionnaire that still had items that were “not answered” went through a first stage of imputation in which unanswered items were imputed from other items on the same library media center record or items on the corresponding school record. The library media center data then went through the second stage of imputation in which some of the remaining “not answered” items were filled using either the data record from a similar record, regression imputation, or random ratio imputation. The third stage of imputation filled in the remaining “not answered” items that were not resolved during the first two stages of imputation (i.e., imputed clerically). After all stages of imputation were completed and no more “not answered” items remained, the library media center data from BIE-funded schools were separated into a single dataset.

Recent Changes

The School Library Media Center Survey has not been administered to private schools since the 1999-2000 school year.

5. DATA QUALITY AND COMPARABILITY

Although data are imputed for nonrespondents, caution should be exercised when analyzing data by state, sector, or affiliation. Since nonresponse varies by state, the reliability of state estimates and comparisons are affected. Users should be especially cautious about using data at a level of detail where the nonresponse rate is 30 percent or greater. See below for more information on the types of errors affecting data quality and comparability.

Sampling Error

The estimators of sampling variances for SASS statistics take the SASS complex sample design into account. (See chapter 4.)

Nonsampling Error

Nonresponse error.

Unit nonresponse. The weighted unit response rates for the 2007–08 School Library Media Center Survey were 76.9 percent for public schools and 82.1 percent for BIE schools.

Item nonresponse. Some 95 percent of the items in the public school version of the 2007–08 School Library Media Center Survey had response rates above 85 percent and 93 percent of the items in the BIE version had response rates above 85 percent. All items in both versions had response rates above 70 percent, and there was no substantial evidence of bias in either case.

Measurement error. A reinterview was conducted for the 2003–04 SASS, but it did not include questions from the School Library Media Center Survey.

6. CONTACT INFORMATION

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7. METHODOLOGY AND EVALUATION REPORTS

General

Gruber, K., Rohr, C.L., and Fondelier, S.E. (1996). *1993–94 Schools and Staffing Survey: Data File User's Manual, Volume I: Survey Documentation* (NCES 96-142). National Center for Education Statistics, U.S. Department of Education. Washington, DC.

Tourkin, S.C., Pugh, K.W., Fondelier, S.E., Parmer, R.J., Cole, C., Jackson, B., Warner, T., Weant, G., and Walter, E. (2004). *1999–2000 Schools and Staffing Survey (SASS) Data File User's Manual* (NCES 2004-303). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Tourkin, S.C., Warner, T., Parmer, R., Cole, C., Jackson, B., Zukerberg, A., Cox, S., and Soderborg, A. (2007). *Documentation for the 2003–04 Schools and Staffing Survey* (NCES 2007-337). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Tourkin, S., Thomas, T., Swaim, N., Cox, S., Parmer, R., Jackson, B., Cole, C., and Zhang, B. (2010). *Documentation for the 2007–08 Schools and Staffing Survey* (NCES 2010-332). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Uses of Data

Dickson, G. (1998). *Evaluation of Definitions and Analysis of Comparative Data for the School Library Statistics Program* (NCES 98-267). National Center for Education Statistics, U.S. Department of Education. Washington, DC.

Survey Design

Abramson, R., Cole, C., Fondelier, S., Jackson, B., Parmer, R., and Kaufman, S. (1996). *1993–94 Schools and Staffing Survey: Sample Design and Estimation* (NCES 96-089). National Center for

Education Statistics, U.S. Department of
Education. Washington, DC.

Data Quality and Comparability

Feindt, P.J. (1996). *Reinterview Report: Response
Variance in the 1993 Library Survey*. U.S.
Department of Commerce. Washington, DC: U.S.
Bureau of the Census.

Chapter 11: Academic Libraries Survey (ALS)

1. OVERVIEW

The Academic Libraries Survey (ALS) is designed to provide concise information on library resources, services, and expenditures for all academic libraries in the 50 states, the District of Columbia, and the outlying areas. The ALS was conducted by NCES on a 3-year cycle between 1966 and 1988. Between 1988 and 1998, the ALS was a component of the Integrated Postsecondary Education Data System (IPEDS) (see chapter 12 for more details on IPEDS) and was collected on a 2-year cycle. Since 2000, the Academic Libraries Survey has been conducted independently of IPEDS; however, it remains on a 2-year cycle.

ALS collects data biennially from approximately 3,800 degree-granting postsecondary institutions in order to provide an overview of academic libraries nationwide and by state. The 1996 ALS also surveyed libraries in nonaccredited institutions that had a program of 4 years or more. Because so few of these libraries responded to ALS, their data were not published. Beginning with the 1998 ALS, the major distinction has been whether or not the library is part of a postsecondary institution that is eligible for Title IV funds.

Although ALS was a component of IPEDS from 1988 through 1998, beginning in 2000, ALS began collecting data independently of the IPEDS data collection. However, data from ALS can still be linked to IPEDS data using the institution's UNITID number. IPEDS serves as the frame, or universe, of degree-granting postsecondary institutions from which eligible institutions are selected for the current ALS administration.

Purpose

To periodically collect and disseminate descriptive data on all postsecondary academic libraries in the United States, the District of Columbia, and the outlying areas, for use in planning, evaluation, and policymaking.

Components

There is a single component to the Academic Libraries Survey. The survey is completed by a designated respondent at the library. While ALS was a part of IPEDS, an appointed state IPEDS Data coordinator collected the information from academic librarians and submitted it to NCES.

Academic Libraries Survey. An academic library is the library associated with a degree-granting institution of higher education. Academic libraries are identified by the postsecondary institution of which they are a part of (see *Key Concepts* below for further detail). Through 1996, ALS distinguished between libraries in postsecondary institutions accredited by agencies recognized by the Secretary of the U.S. Department of Education and libraries in nonaccredited institutions that had

BIENNIAL SURVEY OF THE UNIVERSE OF LIBRARIES IN POSTSECONDARY EDUCATION INSTITUTIONS

ALS collects data on:

- Library staffing
- Operating expenditures
- Total volumes
- Circulation, loan, and reference transactions
- Electronic services
- Gate count

programs of 4 or more years. Starting with the 1998 collection, the major distinction has been whether or not the library is part of a postsecondary institution that is eligible for Title IV funds.

Data are collected on the number of libraries, branches, and service outlets; full-time-equivalent (FTE) library staff by position; operating expenditures by purpose, including salaries and fringe benefits; total volumes held at the end of the fiscal year; circulation transactions, interlibrary loan transactions, and information services for the fiscal year; hours open, gate count, and reference transactions per typical week; and, as of 1996, the availability of electronic services, such as electronic catalogs of the library's holdings, electronic full-text periodicals, internet access and instruction on use, library reference services by e-mail, electronic document delivery to patrons' account address, computers and software for patron use, scanning equipment for patron use, and services to the institution's distance education students. In 2004, a new set of questions on "information literacy" was added to the questionnaire. In 2010, reference transactions was broken out into "in-person" and "virtual" and "over 20 minutes" and "under 20 minutes." Also, a new set of yes/no questions about "virtual reference" was added to the questionnaire.

Periodicity

Biennial in even-numbered years since 1990; triennial from 1966 through 1988.

2. USES OF DATA

Effective planning for the development and use of library resources demands the availability of valid and reliable statistics on academic libraries. ALS provides a wealth of information on academic libraries. These data are used by federal program staff to address various policy issues, by state policymakers for planning and comparative analysis, and by institutional staff for planning and peer analysis. Specific uses are listed below:

- Congress uses ALS data to assess the impact of library grants programs, the need for revisions to existing legislation, and the allocation of funds.
- Federal agencies that administer library grants for collections development, resource sharing, and networking activities require ALS data for their evaluation of the condition of academic libraries.

- State education agencies use ALS data to make comparisons at the national, regional, and state levels.
- Accreditation review programs for academic institutions require current library statistical data in order to evaluate postsecondary education institutions, establish standards, and modify comparative norms for assessing the quality of programs.
- Library administrators, academic managers, and national postsecondary education policy planners need current data on new electronic technologies to assess the impact of rapid technological change on the collections, budgets, and staffs of academic libraries. College librarians and administrators need these data to develop plans for the most effective use of local, state, and federal funds. Staff data are input to supply/demand models for professional and paraprofessional librarians.
- Library associations—such as the American Library Association, the Association of Research Libraries, and the Association of College and Research Libraries—use ALS data to determine the general status of the profession. Other research organizations use the data for studies of libraries.
- Program staff in the Institute of Education Sciences of the U.S. Department of Education use ALS data for administering their library grants program, evaluating existing programs, and preparing documentation for congressional budget hearings and inquiries.

3. KEY CONCEPTS

Some of the key concepts and terms in ALS are defined below. For additional terms, refer to *Documentation for the Academic Library Survey (ALS) Public Use Data File: 2008* (Phan, Hardesty, and Sheckells, 2009).

Academic Library. An entity in a postsecondary education institution that provides all of the following: (1) an organized collection of printed or other materials, or a combination thereof; (2) a paid, trained library staff to provide and interpret library materials to meet the informational, cultural, recreational, or educational needs of clientele; (3) an established hours

of operation during which paid, trained staff are available to meet the informational service needs of clientele; and (4) the physical facilities necessary to support such a collection, staff, and schedule. This definition includes libraries that are part of learning resource centers.

Branch Library. An auxiliary library service outlet with quarters separate from the central library of an institution. A branch library has a basic collection of books and other materials, a regular staffing level, and an established schedule. Branch libraries are administered either by the central library, as in the case of some libraries (such as law or medical libraries), or through the administrative structure of other units within the university. Departmental study/reading rooms are not included. Libraries on branch campuses that have separate NCES identification numbers are reported as separate libraries.

Child Institution. A “child” institution does not respond directly to the ALS or IPEDS data collections. The data for such an institution are aggregated with and reported by its “parent” institution.

Volume. Any printed, mimeographed, or processed work, contained in one binding or portfolio, hardbound or paperbound, that has been cataloged, classified, or otherwise made ready for use.

Title. A publication that forms a separate bibliographic whole (whether issued in one or several volumes, reels, disks, slides, or parts). The term applies equally to printed materials (e.g., books and periodicals), sound recordings, film and video materials, microforms, and computer files.

Circulation Transaction. Includes all items lent from the general collection and from the reserve collection for use generally (although not always) outside the library. Includes both activities with initial charges (either manual or electronic) and renewals, each of which is reported as a circulation transaction.

Interlibrary Loan. A transaction in which library materials, or copies of the materials, are made available by one library to another upon request. Loans include providing materials and receiving materials. Libraries involved in these interlibrary loans cannot be under the same administration or on the same campus.

Reference Transaction. These are information contacts that involve the knowledge, use, recommendation, interpretation, or instruction in the use of one or more information sources by a member of the library staff. Information sources may include printed (e.g., book

volumes) and nonprinted (e.g., microforms) materials and machine-readable databases (e.g., those on CD-ROM). The transaction may include providing direction to services outside the library.

Online Public Access Catalog (OPAC). A library’s catalog of its collections in electronic form, accessible by computer or other online workstation.

Gate Count. The total number of persons physically entering the library in a typical week. A single person can be counted more than once.

4. SURVEY DESIGN

Target Population

The libraries of all institutions in the 50 states, the District of Columbia, and the outlying areas that have as their primary purpose the provision of postsecondary education. Branch campuses of U.S. institutions located in foreign countries are excluded. Through 1996, ALS distinguished between libraries in postsecondary institutions accredited by agencies recognized by the Secretary of the U.S. Department of Education and libraries in nonaccredited institutions that had programs of 4 or more years. In 1996, there were approximately 3,600 accredited institutions and 400 nonaccredited institutions in the IPEDS universe. About 3,400 of the accredited institutions had academic libraries. Starting with the 1998 collection, the major distinction has been whether or not the library is part of a postsecondary institution that is eligible for Title IV funds. In 2004, there were 3,700 Title IV eligible, degree-granting postsecondary institutions in the 50 states and the District of Columbia that had academic libraries. In 2006, the reported number of the nation’s Title IV eligible institutions with academic libraries was 3,600. In 2008, the reported number of the nation’s Title IV eligible institutions with academic libraries was 3,800.

Sample Design

ALS surveys the universe of postsecondary institutions.

Data Collection and Processing

For the 1990, 1992, 1994, 1996, and 1998 data collections, state IPEDS Data coordinators collected, edited, and submitted ALS data to the U.S. Census Bureau, using the software package Input and Data Editing for Academic Library Statistics (IDEALS). An academic librarian in the state assisted with the collection and submission of the data.

Since 2000, ALS has not been a component of the IPEDS survey system. The 2000, 2002, 2004, 2006, and 2008 ALS surveys were web collections. The U.S. Census Bureau is the collection agent. State-level library representatives are available to promote responses from librarians and to assist in problem resolution when anomalies are discovered in responses.

Reference dates. Most ALS data are reported for the most recently completed fiscal year, which generally ends before October 1 of the survey year. Information on staff and services per typical week are collected for a single point in time during the fall of the survey year, usually the institution's official fall reporting date or October 15.

Data collection. In the 2000, 2002, 2004, 2006, and 2008 ALS data collections, library respondents submitted data directly to the Census Bureau through the Web. For the 2008 web-based data collection, state-level library representatives were available to promote prompt responses from librarians. A web-based survey is the latest in a number of steps to improve ALS collection.

In July 1990, NCES initiated an ALS improvement project with the assistance of the National Commission on Libraries and Information Science (NCLIS) and the American Library Association's Office of Research and Statistics (ALA-ORS). The project identified an academic librarian in each state to work with the IPEDS coordinators in submitting their library data. During the 1990s, many of these library representatives took the major responsibility for collecting data in their state. Others were available to assist in problem resolution when anomalies were discovered in completed questionnaires.

The ALS improvement project also led to the development of the microcomputer software package IDEALS, which was used by states in reporting their academic library data from 1990 through 1998. Along with the software, NCES provided state IPEDS Data coordinators with a list of instructions explaining precisely how responses were to be developed for each ALS item. Academic librarians within each state completed hard-copy forms, as they had previously, and returned them to the state's library representative or IPEDS coordinator. States were given the option of submitting the paper forms, but were encouraged to enter the data into IDEALS and submit the data on diskette to the Census Bureau. Nearly all states elected the diskette option.

ALS was mailed to postsecondary institutions during the summer of the survey year, with returns requested

during the fall. Any survey returns from institutions that did not have an academic library were declared to be out of scope, as were institutions that did not have their own library but shared one with other institutions. In recent years, less than half of the nonaccredited institutions responded to the survey; NCES does not include data on this group in publications.

Editing. The web-based data collection application features internal edit checks. An edit check tool alerts the respondent to questionable data via interactive "edit check warnings" during the data entry process and through edit check reports that can be viewed on screen or printed. The edit check program enables the respondent to submit an edited data to NCES which usually required little or no follow-up for data problems. The edit check tool includes seven types of edits: Summations, Relational edit checks, Range checks, Current year/prior year comparisons, ratios, item comparison, and missing or blank items.

After responses are received, the U.S. Census Bureau reviews the data and contacts respondents with questionable data to request verification or correction of that data. Data records are then aggregated into preliminary draft tables, which are reviewed by NCES and the U.S. Census Bureau for data quality issues. Once all edits have been performed and all corrections have been made, the data undergo imputation to compensate for nonresponse (see below). (For more information on the edit check, please see appendix A in Phan, Hardesty, Sheckells, and Davis [2009])

Estimation Methods

Imputation is used in ALS to compensate for nonresponse. In 1994, the procedures were changed to use data from the previous survey, if available, and to only use imputation group means (see below) if prior-year data were not available. Before 1994, only imputation group medians were used.

Imputation. ALS imputation is based on the response in each part of the survey. Most parts go through either total or partial imputation procedures, except for the following items: (1) Number of branch and independent libraries; (2) Library staff information – contributed services staff; and (3) Library operating expenditures – employee fringe benefits. These items are imputed only if reported prior-year data are available (contributed services staff and employee fringe benefits apply to only a few institutions). Items (1) Electronic Services, and (2) Information Literacy do not go through imputation.

The imputation methods use either prior-year data or current-year imputation group means. The procedures

are slightly different depending on whether an institution is totally nonresponding or partially nonresponding in the current year. If prior-year data are available, the imputation procedure either carries forward the prior-year data or carries forward the prior-year data multiplied by a growth factor. If prior-year data are not available, the imputation procedure uses the current-year imputation group medians (in the 2002, 2004, 2006, and 2008 ALS) or means (in previous survey cycles) as the imputed value.

Medians/means and ratios are calculated for each of the imputation groups (27 imputation groups in the 2008, 2006, 2004, and 2002 ALS and 8 imputation groups in the 2000 and 1998 ALS). In 2008, 2006, 2004 and 2002, the imputation cells were determined based on sector and FTE enrollment. The sector categories used were (1) public, 4-year or above; (2) private nonprofit, 4-year or above; (3) private for-profit, 4-year or above; (4) public, 2-year; (5) private nonprofit, 2-year; and (6) private for-profit, 2-year. The use of FTE to determine imputation cells was not employed until 2002. In 1998 and 2000, the strata were based upon the highest level of degree (doctor's, master's, bachelor's, and associate's) and control and size of institution. The four control/size imputation categories were (1) public, less than median number of degrees for institutions in that category; (2) public, equal to or greater than the median; (3) private, less than the median; and (4) private, equal to or greater than the median. Note that computation of the imputation base excludes institutions that merged, split, submitted combined forms, changed sectors from the prior year, or did not submit a full report for either the current or prior year.

After imputation, if a total was missing or known to need adjustment, then the total was readjusted to equal the sum of its detail items.

Using a ratio adjustment to prior-year data represented a change from the imputation procedures followed in cycles prior to 1996, and may have resulted in some small differences in estimates. While checks indicate that the effect of the change was not large, caution should be exercised in making comparisons with pre-1996 or earlier reports (see Cahalan, Mansfield, and Justh 2001). Using FTE to determine imputation cells and using medians instead of means for imputation also represents a change from the procedures followed in cycles prior to 2002. While research indicates that the effect of the change in imputation procedure was not large, caution should be exercised in making comparisons with reports from 2000 or earlier (see Phan, Hardesty, and Shekells 2009).

Recent Changes

Before 2000, ALS was a component of IPEDS; the state IPEDS Data coordinators collected, edited, and submitted ALS data to the Census Bureau, using the software package IDEALS. Since 2000, ALS data have been collected over the Internet via a web-based reporting system. The Census Bureau is the collection agent.

Several changes were made to the survey instrument in 1996, 1998, 2000, 2002, 2004, 2006, 2008, and 2010. These are summarized below.

In the 1996 instrument, the data items in part E (Library Services) were expanded to request separate reporting for returnable and nonreturnable, as well as totals. In addition, a new section, part G, was added to collect information about access to the following electronic services, both on and off campus:

- electronic catalog that includes the library's holdings;
- electronic indexes and reference tools;
- electronic full-text periodicals;
- electronic full-text course reserves;
- electronic files other than the catalog (e.g., finding aids, indices, manuscripts) created by library staff;
- Internet access;
- library reference service by e-mail;
- capacity to place interlibrary loan/document delivery requests electronically;
- electronic document delivery by the library to patrons' account/address;
- computers not dedicated to library functions for patron use inside the library;
- computer software for patron use inside the library (word processing, spreadsheet, custom applications, etc.);
- technology in the library to assist patrons with disabilities (TDD, specially equipped workstations, etc.); and
- instruction by library staff on the use of internet resources.

The 1998 ALS survey instrument modifications included the following.

The definition of a library was moved to the cover page and reformatted as a checklist. The other cover page change was that the possibilities of reporting data for another library or having data reported by another library were clarified. The data items in part B (Library Staff) were expanded to request a total FTE count for librarians and other professionals as well as separate counts of these two categories of staff. Part C was renamed “Library Expenditures” and the word “operating” was used only in reference to expenditures for items other than staff and materials. The two major lines for reporting expenditures on information resources were subdivided as follows: books, serial backfiles, and other materials (paper and microform; electronic); and current serial subscriptions and search services (paper and microform; electronic). In addition, expenditures on search services were to be reported with those for current serial subscriptions, in recognition of the fact that it is often impossible to separate the two.

Part D (Collections) was changed the most, being reduced from 18 to 7 lines. It collected data on only three types of materials: books, serial backfiles, and other materials (paper; microform; electronic); current serial subscriptions (paper and microform; electronic); and audiovisual materials. The following lines were deleted: manuscripts and archives, cartographic materials, graphic materials, sound recordings, film and video materials, and computer files. Except for paper materials, there was no longer separate reporting of physical counts and title counts. In part F (Library Services, Typical Week), “public service hours” was changed to “hours open” since some libraries keep two separate counts and are unsure of what to report. “Typical week” was added to the heading above the space for reporting figures to reinforce that only typical week figures should be reported.

In part G (Electronic Services), the following items were added to the yes/no checklist about access to electronic services:

- computers not dedicated to library functions for patron use inside the library;
- computer software for patron use in the library (word processing, spreadsheet, custom applications, etc.);
- scanning equipment for patron use in the library; and

- services to your institution’s distance education students.

The changes to the 2000 ALS form were as follows:

Cover sheet (Library Definition): The format of the question regarding providing financial support to another library was clarified.

Part C (Library Expenditures): The text for library expenditures was modified to clarify what is wanted.

Part D (Library Collections): The items “Electronic - Titles” and “Number of electronic subscriptions” were dropped and the item covering other forms of subscriptions was revised.

Part E (Library Services): A new item was added for “documents delivered from commercial services,” and the words “document delivery” were dropped from the items for “interlibrary loans provided” and “interlibrary loans received.” The item on “reserve collections” was dropped and the preceding line was revised to read “Circulation Transactions (including reserves).”

Part G (Electronic Services): Five items were added under the heading “Consortial Services.”

The 2002 ALS survey instrument underwent the following changes:

Part B (Library Staff): A new column 2 was added, “Salaries and Wages – library expenditures for staff” (previously in part C); number of full-time equivalents (FTE) became column 1; contributed services staff was dropped; and fringe benefits were added.

Part C (Library Expenditures):

- Change in wording for the note at the top of page: “Do not report the same expenditures more than once” was removed. New wording: “See instructions for exclusions and definitions.”
- Breakout of staff salaries and wage expenditures moved to part B.
- Total salaries and wages line added to library expenditures.
- Line 10—books, serial backfiles, and other materials (one-time purchases)—became a total line.

- Electronic and audiovisual lines became subsets of the line 10 total.
- Line 13—current serial subscriptions (ongoing commitments)—became a total line.
- Electronic serials line became a subset of the line 13 total.
- “Other materials” changed to “Other expenditures for information resources.”
- Furniture and equipment line was dropped and was included in “all other operating expenditures,” line 20.
- Fringe benefits lines moved to part B.

Part D (Collections): “Paper – volumes” changed to “Books, serial backfiles, and other paper materials (including government documents)”; dropped line for paper titles; added line for E-books; reversed the sequence of the next two lines: “Current serial subscriptions” and “Audiovisual materials.”

Part E (Library Services): Divided circulation into general and reserve by having two lines as follows: line 34a – “General circulation transactions”; and line 34b – “Reserve circulation transactions.”

Part G (Electronic Services): Parts G1 and G2 were combined to make one part G, which was simplified by asking for only a yes/no response to the following question: “Does your library provide the following?” All but three items from part G1 were dropped and one item was added, as follows:

Dropped items

- documents digitized by the library staff;
- library reference service by e-mail or on the Web; and
- technology to assist patrons with disabilities (e.g., TDD, specially equipped workstations).

New item

- electronic theses and dissertations.

The 2004 ALS added a set of questions on “information literacy” to the survey instrument, including the following:

- Is the library collection entirely electronic?

- Were electronic reference sources and aggregation services added?
- Were electronic reference sources and aggregation services held?
- Does your library have a definition of information literacy or of an information-literate student?
- Has your library incorporated information literacy into the institution’s mission?
- Has your library incorporated information literacy into the institution’s strategic plan?
- Does your library have an institution-wide committee to implement the strategic plan for information literacy?

The 2006 ALS added another question on information literacy to the survey instrument:

- Does the strategic plan formally recognize the library’s role in information literacy instruction?

In 2008, the eligibility questions were revised as follows:

- The financial support question was deleted.
- The first sentence was updated.
- Questions b and c were revised to add “paid, trained staff”

The 2010 survey instrument underwent the following changes:

Eligibility Questions: A new question was added – Does your total library expenditures exceed \$10,000?

Library Services, FY 2010 section:

- Change in instructions for general circulation transactions from “Report the number of items lent from the general collection. Include both initial transactions and renewals.” to “Report the number of items lent from the general collection (all formats). Include both initial transactions and renewals.”
- New section was added – Information services to individuals. The new questions were as follows: In person reference, virtual reference,

total reference, in person consultations, virtual consultations and total consultations.

Library Services, Typical week, FY 2010 section:

- Reference transaction in a typical week was changed to total information service to individuals (a yearly figure now reported in Library services, FY 2010 sections).

Virtual Reference section: A new set of questions was added:

- Does your library support virtual reference services? If no, select “N” and skip 901 thru 904.
- If yes, does your library utilize any of the following and does it collect usage statistics from any of the virtual reference utilities?
 - E-mail reference
 - Chat reference, commercial service
 - Chat reference, instant messaging application
 - Short message service (SMS) or text messaging

Future Plans

At this time, NCES plans to continue conducting ALS biennially.

5. DATA QUALITY AND COMPARABILITY

NCES makes every effort to achieve high data quality. Through a web collection that includes built-in edit checks, it hopes to improve the quality of ALS data. Users are cautioned about limitations in the analysis of ALS data by state or by level and control of institution. Since nonresponse varies by state, the reliability of state estimates and comparisons is affected. Special caution should be exercised when using data where the nonresponse rate is 30 percent or greater. See below for more information on the types of errors that affect data quality and comparability.

Sampling Error

Because ALS is a universe survey, there is no sampling error.

Nonsampling Error

Coverage error. A comprehensive evaluation of the coverage of ALS found that the quality of institutional coverage was excellent (a coverage gap of only 1 to 3 percent) when compared to other institutional listings directly related to the academic libraries industry; however, questions remain as to whether the data collected by ALS fully account for branch data associated with parent institution resources. (See *Coverage Evaluation of the Academic Library Survey* [Marston 1999]) A second problem is that the ALS data for some parent colleges or universities may not contain statistics for their professional schools.

Nonresponse error.

Unit nonresponse. The overall unit response rate for the 2000 ALS was 87.4 percent. Four-year institutions had a response rate of 88.5 percent (from a low of 85.5 percent at the bachelor’s level to a high of 91.0 percent at the doctor’s level), while less-than-4-year institutions had a response rate of 85.8 percent. The response rate was 93.3 percent for public institutions and 82.8 percent for private institutions.

For the 2002 ALS, the overall unit response rate was 88.6 percent. The response rate for all 4-year institutions was 89.8 percent (85.9 percent at the bachelor’s level, 89.6 percent at the master’s level, and 91.0 percent at the doctor’s level). Less-than-4-year institutions had a response rate of 86.6. Public institutions had a response rate of 93.4 percent, while private institutions had a response rate of 84.6 percent.

The overall unit response rate for the 2004 ALS was 87.0 percent. The aggregate response rate for 4-year institutions was 88.8 percent (ranging from 86.5 percent at the bachelor’s level to 91.3 percent at the doctor’s level). Less-than-4-year institutions had a slightly lower response rate (84.3 percent). The response rate was 92.2 percent for public institutions and 83.0 percent for private institutions.

The overall unit response rate for the 2006 ALS was 88.8 percent. The response rate for all 4-year institutions was 90.0 percent (89.2 percent at the bachelor’s level, 89.6 percent at the master’s level, and 91.7 percent at the doctor’s level). The overall response rate for less-than-4-year institutions was 86.7 percent (93.0 percent for public institutions and 85.6 percent for private institutions).

The overall unit response rate for the 2008 ALS was 86.7 percent. The response rate for all 4-year institutions was 87.1 percent (80.0 percent at the bachelor’s level, 91.0 percent at the master’s level, and 89.3 percent at the doctor’s level). The overall response

rate for less-than-4-year institutions was 86.1 percent (95.4 percent for public institutions and 80.6 percent for private institutions).

Item nonresponse. For the 2000 ALS, overall item response rates ranged from 68.6 to 86.9 percent. Out of 102 questions, 86 had response rates at or above 80 percent. Five items had response rates below 75 percent: one in the area of library staff (74.1 percent), two in the area of library operating expenditures (74.7 percent and 73.4 percent), and two in the area of library collections (73.2 percent and 73.8 percent).

Overall item response rates in the 2002 ALS ranged from 57.4 to 100.0 percent. Of the 57 questions, 52 had response rates at or above 80 percent. Three items had response rates below 75 percent: two in the area of library services (73.2 percent and 72.7 percent) and one in the area of library collections (57.4 percent).

In the 2004 ALS, overall item response rates ranged from 73.4 to 86.7 percent. Of the 63 questions, 58 had response rates at or above 80 percent. Only two items had response rates below 75 percent, both in the area of library collections (73.4 percent and 74.3 percent).

Overall item response rates in 2006 ranged from 78.9 to 88.8 percent. Of the 60 questions, 59 had a response rate at or above 80 percent. No item had a response rate below 75 percent.

Overall item response rates in 2008 ranged from 71.8 to 86.3 percent. Three items had a response rate below 75 percent.

Measurement error. No information is available.

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7. METHODOLOGY AND EVALUATION REPORTS

General

Cahalan, M.W., and Justh, N.M. (2000). *Academic Libraries: 1996* (NCES 2000-326). National Center for Education Statistics, U.S. Department of Education. Washington, DC.

Cahalan, M.W., and Justh, N.M. (2001). *Academic Libraries: 1998* (NCES 2001-341). National Center for Education Statistics, U.S. Department of Education. Washington, DC.

Carey, N., and Justh, N.M. (2003). *Academic Libraries: 2000* (NCES 2004-317). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Holton, B., and George, A. (2007). *Data File and Documentation for the Academic Libraries Survey (ALS): 1996 (Public Use)* (NCES 2008-318). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Holton, B., Hardesty, L., and O'Shea, P. (2008). *Academic Libraries: 2006* (NCES 2008-337). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Holton, B., Hardesty, L., and O'Shea, P. (2008). *Documentation for the 2006 Academic Libraries Survey Restricted-Use Data File* (NCES 2008-350). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Holton, B., Hardesty, L., and O'Shea, P. (2008). *Documentation for the Academic Library Survey (ALS) Public Use Data File: 2006* (NCES 2008-348). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Holton, B., Vaden, K., and O'Shea, P. (2001). *Academic Libraries: 2004* (NCES 2007-301). National Center for Education Statistics, U.S. Department of Education. Washington, DC.

Phan, T., Hardesty, L., Sheckells, C., and Davis, D. (2009). *Academic Libraries: 2008* (NCES 2010-348). National Center for Education Statistics,

Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Phan, T., Hardesty, L., and Sheckells, C. (2009). *Documentation for the Academic Library Survey (ALS) Data File: Fiscal Year 2008 (Public Use)* (NCES 2010-311). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Schmitt, C.M. (2005). *Documentation for the Academic Library Survey (ALS) Data File: Fiscal Year 2002 (Public Use)* (NCES 2006-308). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Schmitt, C.M. (2006). *Documentation for the Academic Library Survey (ALS) Data File: Fiscal Year 2000 (Public Use)* (NCES 2006-342). National Center for Education Statistics, Institute of

Education Sciences, U.S. Department of Education. Washington, DC.

Schmitt, C.M., O'Shea, P., and Vaden, K. (2007). *Documentation for the Academic Library Survey (ALS) Data File: Fiscal Year 2004 (Public Use)* (NCES 2007-343). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Data Quality and Comparability

Cahalan, M., Mansfield, W., and Justh, N. (2001). *Status of Academic Libraries in the United States: Results From the 1996 Academic Library Survey With Historical Comparisons* (NCES 2001-301). National Center for Education Statistics, U.S. Department of Education. Washington, DC.

Marston, C.C. (1999). *Coverage Evaluation of the Academic Library Survey* (NCES 1999-330). National Center for Education Statistics, U.S. Department of Education. Washington, DC.