

require certification of public librarians employed in municipal, county, or regional library systems.

Librarians participate in continuing training once they are on the job to keep abreast of new information systems brought about by changing technology.

Experienced librarians can advance to administrative positions, such as department head, library director, or chief information officer.

Job Outlook

Employment of librarians is expected to grow more slowly than the average for all occupations over the 2000-10 period. The increasing use of computerized information storage and retrieval systems continues to contribute to slow growth in the demand for librarians. Computerized systems make cataloguing easier, which library technicians now handle. In addition, many libraries are equipped for users to access library computers directly from their homes or offices. These systems allow users to bypass librarians and conduct research on their own. However, librarians are needed to manage staff, help users develop database searching techniques, address complicated reference requests, and define users' needs. Despite expectations of slower-than-average employment growth, the need to replace librarians as they retire will result in numerous additional job openings.

Applicants for librarian jobs in large metropolitan areas, where most graduates prefer to work, usually face competition; those willing to work in rural areas should have better job prospects. Opportunities will be best for librarians outside traditional settings. Nontraditional library settings include information brokers, private corporations, and consulting firms. Many companies are turning to librarians because of their research and organizational skills, and knowledge of computer databases and library automation systems. Librarians can review vast amounts of information and analyze, evaluate, and organize it according to a company's specific needs. Librarians also are hired by organizations to set up information on the Internet. Librarians working in these settings may be classified as systems analysts, database specialists and trainers, webmasters or web developers, or LAN (local area network) coordinators.

Earnings

Salaries of librarians vary according to the individual's qualifications and the type, size, and location of the library. Librarians with primarily administrative duties often have greater earnings. Median annual earnings of librarians in 2000 were \$41,700. The middle 50 percent earned between \$32,840 and \$52,110. The lowest 10 percent earned less than \$25,030, and the highest 10 percent earned more than \$62,990. Median annual earnings in the industries employing the largest numbers of librarians in 2000 were as follows:

Elementary and secondary schools	\$43,320
Colleges and universities	43,050
Local government, except education and hospitals	38,370

The average annual salary for all librarians in the Federal Government in nonsupervisory, supervisory, and managerial positions was \$63,651 in 2001.

Related Occupations

Librarians play an important role in the transfer of knowledge and ideas by providing people with access to the information they need and want. Jobs requiring similar analytical, organizational, and communicative skills include archivists, curators, and museum technicians; and computer and information scientists, research. The management aspect of a librarian's work is similar to the work of managers in a variety of business and government settings. School librarians have many duties similar to those of school teachers. Other jobs requiring the computer skills of some librarians include database administrators and computer systems analysts.

Sources of Additional Information

Information on librarianship, including information on scholarships or loans, is available from the American Library Association. For a listing of accredited library education programs, check their homepage.

► American Library Association, Office for Human Resource Development and Recruitment, 50 East Huron St., Chicago, IL 60611. Internet: <http://www.ala.org>

For information on a career as a special librarian, write to:
► Special Libraries Association, 1700 18th St. NW., Washington, DC 20009.

Information on graduate schools of library and information science can be obtained from:

► Association for Library and Information Science Education, P.O. Box 7640, Arlington, VA 22207. Internet: <http://www.alise.org>

For information on a career as a law librarian, scholarship information, and a list of ALA-accredited schools offering programs in law librarianship, contact:

► American Association of Law Libraries, 53 West Jackson Blvd., Suite 940, Chicago, IL 60604. Internet: <http://www.aallnet.org>

For information on employment opportunities as a health sciences librarian, scholarship information, credentialing information, and a list of MLA-accredited schools offering programs in health sciences librarianship, contact:

► Medical Library Association, 6 N. Michigan Ave., Suite 300, Chicago, IL 60602. Internet: <http://www.mlanet.org>

Information on acquiring a job as a librarian with the Federal Government may be obtained from the Office of Personnel Management through a telephone-based system. Consult your telephone directory under U.S. Government for a local number, or call (912) 757-3000; Federal Relay Service (800) 877-8339. The first number is not tollfree and charges may result. Information also is available on the Internet: <http://www.usajobs.opm.gov>.

Information concerning requirements and application procedures for positions in the Library of Congress can be obtained directly from:

► Human Resources Office, Library of Congress, 101 Independence Ave. SE., Washington, DC 20540-2231.

State library agencies can furnish information on scholarships available through their offices, requirements for certification, and general information about career prospects in the State. Several of these agencies maintain job hotlines reporting openings for librarians.

State departments of education can furnish information on certification requirements and job opportunities for school librarians.

Many library science schools offer career placement services to their alumni and current students. Some allow nonaffiliated students and jobseekers to use their services.

Library Technicians

(O*NET 25-4031.00)

Significant Points

- Training requirements range from a high school diploma to an associate or bachelor's degree, but computer skills are needed for many jobs.
- Increasing use of computerized circulation and information systems should spur job growth, but budget constraints of many libraries should moderate growth.
- Employment should grow rapidly in special libraries as growing numbers of professionals and other workers use those libraries.

Nature of the Work

Library technicians help librarians acquire, prepare, and organize material, and assist users in finding information. Library technicians usually work under the supervision of a librarian, although they work independently in certain situations. Technicians in small libraries handle a range of duties; those in large libraries usually specialize. As libraries increasingly use new technologies—such as CD-ROM, the Internet, virtual libraries, and automated databases—the duties of library technicians will expand and evolve accordingly. Library technicians are assuming greater responsibilities, in some cases taking on tasks previously performed by librarians. (See librarians elsewhere in the *Handbook*.)

Depending on the employer, library technicians can have other titles, such as library technical assistant or media aide. Library technicians direct library users to standard references, organize and maintain periodicals, prepare volumes for binding, handle interlibrary loan requests, prepare invoices, perform routine cataloging and coding of library materials, retrieve information from computer databases, and supervise support staff.

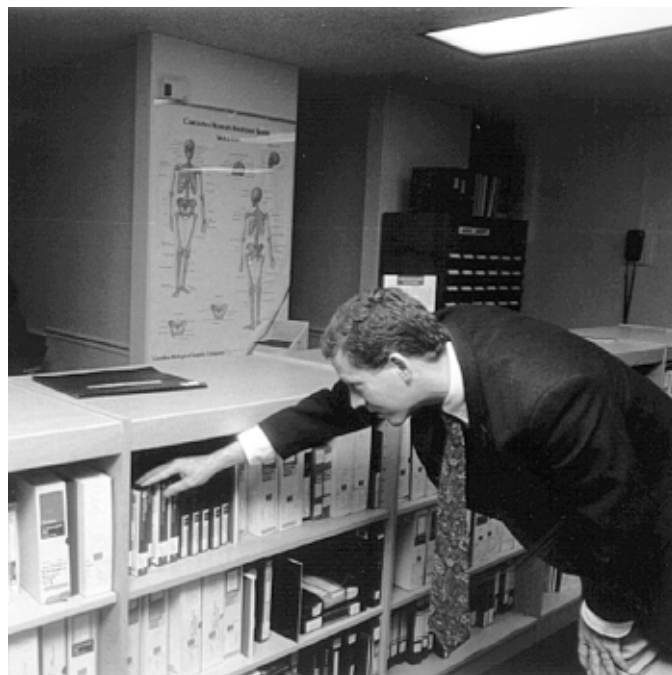
The widespread use of computerized information storage and retrieval systems has resulted in technicians handling more technical and user services—such as entering catalogue information into the library's computer—that were once performed by librarians. Technicians assist with customizing databases. In addition, technicians instruct patrons how to use computer systems to access data. The increased automation of recordkeeping has reduced the amount of clerical work performed by library technicians. Many libraries now offer self-service registration and circulations with computers, decreasing the time library technicians spend manually recording and inputting records.

Some library technicians operate and maintain audiovisual equipment, such as projectors, tape recorders, and videocassette recorders, and assist users with microfilm or microfiche readers. They also design posters, bulletin boards, or displays.

Library technicians in school libraries encourage and teach students to use the library and media center. They also help teachers obtain instructional materials and assist students with special assignments. Some work in special libraries maintained by government agencies, corporations, law firms, advertising agencies, museums, professional societies, medical centers, and research laboratories, where they conduct literature searches, compile bibliographies, and prepare abstracts, usually on subjects of particular interest to the organization.

To extend library services to more patrons, many libraries operate bookmobiles. Bookmobile drivers take trucks stocked with books to designated sites on a regular schedule. Bookmobiles serve community organizations such as shopping centers, apartment complexes, schools, and nursing homes. They also may be used to extend library service to patrons living in remote areas. Depending on local conditions, drivers may operate a bookmobile alone or may be accompanied by another library employee.

When working alone, the drivers answer patrons' questions, receive and check out books, collect fines, maintain the book collection, shelve materials, and occasionally operate audiovisual equipment to show slides or films. They participate and may assist in planning programs sponsored by the library such as reader advisory programs, used book sales, or outreach programs. Bookmobile drivers keep track of their mileage, the materials lent out, and the amount of fines collected. In some areas, they are responsible for maintenance of the vehicle and any photocopiers or other equipment in it. They record statistics on circulation and the number of people visiting the bookmobile. Drivers also may record requests for special items from the main library and arrange for the materials to be mailed or delivered to a patron during



Some library technicians operate and maintain audio-visual equipment, such as projectors, tape recorders, and videocassette recorders, and assist users with audio-visual materials.

the next scheduled visit. Many bookmobiles are equipped with personal computers and CD-ROM systems linked to the main library system; this allows bookmobile drivers to reserve or locate books immediately. Some bookmobiles now offer Internet access to users.

Working Conditions

Technicians answer questions and provide assistance to library users. Those who prepare library materials sit at desks or computer terminals for long periods and can develop headaches or eyestrain from working with video display terminals. Some duties, like calculating circulation statistics, can be repetitive and boring. Others, such as performing computer searches using local and regional library networks and cooperatives, can be interesting and challenging. Library technicians may lift and carry books, and climb ladders to reach high stacks.

Library technicians in school libraries work regular school hours. Those in public libraries and college and university (academic) libraries also work weekends, evenings and some holidays. Library technicians in special libraries usually work normal business hours, although they often work overtime as well.

The schedules of bookmobile drivers depend on the size of the area being served. Some of these workers go out on their routes every day, while others go only on certain days. On these other days, they work at the library. Some also work evenings and weekends to give patrons as much access to the library as possible. Because bookmobile drivers may be the only link some people have to the library, much of their work is helping the public. They may assist handicapped or elderly patrons to the bookmobile, or shovel snow to assure their safety. They may enter hospitals or nursing homes to deliver books to patrons who are bedridden.

Employment

Library technicians held about 109,000 jobs in 2000. Most worked in school, academic, or public libraries. Some worked in hospitals

and religious organizations. The Federal Government, primarily the U.S. Department of Defense and the U.S. Library of Congress, and State and local governments also employed library technicians.

Training, Other Qualifications, and Advancement

Training requirements for library technicians vary widely, ranging from a high school diploma to specialized postsecondary training. Some employers hire individuals with work experience or other training; others train inexperienced workers on the job. Other employers require that technicians have an associate or bachelor’s degree. Given the rapid spread of automation in libraries, computer skills are needed for many jobs. Knowledge of databases, library automation systems, online library systems, online public access systems, and circulation systems is valuable.

Some 2-year colleges offer an associate of arts degree in library technology. Programs include both liberal arts and library-related study. Students learn about library and media organization and operation, and how to order, process, catalogue, locate, and circulate library materials and work with library automation. Libraries and associations offer continuing education courses to keep technicians abreast of new developments in the field.

Library technicians usually advance by assuming added responsibilities. For example, technicians often start at the circulation desk, checking books in and out. After gaining experience, they may become responsible for storing and verifying information. As they advance, they may become involved in budget and personnel matters in their department. Some library technicians advance to supervisory positions and are in charge of the day-to-day operation of their department.

Many bookmobile drivers are required to have a commercial driver’s license.

Job Outlook

Employment of library technicians is expected to grow about as fast as the average for all occupations through 2010. In addition to employment growth, some job openings will result from the need to replace library technicians who transfer to other fields or leave the labor force.

The increasing use of library automation is expected to spur job growth among library technicians. Computerized information systems have simplified certain tasks, such as descriptive cataloguing, which can now be handled by technicians instead of librarians. For example, technicians can now easily retrieve information from a central database and store it in the library’s computer. Although efforts to contain costs could dampen employment growth of library technicians in school, public, and college and university libraries, cost containment efforts could also result in more hiring of library technicians than librarians. Growth in the number of professionals and other workers who use special libraries should result in good job opportunities for library technicians in those settings.

Earnings

Median annual earnings of library technicians in 2000 were \$23,170. The middle 50 percent earned between \$17,820 and \$29,840. The lowest 10 percent earned less than \$13,810, and the highest 10 percent earned more than \$35,660. Median annual earnings in the industries employing the largest numbers of library technicians in 2000 were as follows:

Colleges and universities	\$25,320
Local government	22,910
Elementary and secondary schools	21,120

Salaries of library technicians in the Federal Government averaged \$33,224 in 2001.

Related Occupations

Library technicians perform organizational and administrative duties. Workers in other occupations with similar duties include library assistants, clerical; information and record clerks; and medical records and health information technicians.

Sources of Additional Information

For information on training programs for library/media technical assistants, write to:

- ▶ American Library Association, Office for Human Resource Development and Recruitment, 50 East Huron St., Chicago, IL 60611. Internet: <http://www.ala.org>

Information on acquiring a job as a library technician with the Federal Government may be obtained from the Office of Personnel Management through a telephone-based system. Consult your telephone directory under U.S. Government for a local number, or call (912) 757-3000; Federal Relay Service (800) 877-8339. The first number is not tollfree and charges may result. Information also is available on the Internet: <http://www.usajobs.opm.gov>.

Information concerning requirements and application procedures for positions in the Library of Congress can be obtained directly from:

- ▶ Human Resources Office, Library of Congress, 101 Independence Ave. SE., Washington, DC 20540-2231.

State library agencies can furnish information on requirements for technicians, and general information about career prospects in the State. Several of these agencies maintain job hotlines reporting openings for library technicians.

State departments of education can furnish information on requirements and job opportunities for school library technicians.

Teacher Assistants

(O*NET 25-9041.00)

Significant Points

- Approximately 4 in 10 teacher assistants work part time.
- Educational requirements range from a high school diploma to some college training.
- A growing special education population, among other factors, is expected to cause faster than average employment growth.

Nature of the Work

Teacher assistants provide instructional and clerical support for classroom teachers, allowing teachers more time for lesson planning and teaching. Teacher assistants tutor and assist children in learning class material using the teacher’s lesson plans, providing students with individualized attention. Teacher assistants also supervise students in the cafeteria, schoolyard, school discipline center, or on field trips. They record grades, set up equipment, and help prepare materials for instruction. Teacher assistants are also called teacher aides or instructional aides. Some refer to themselves as paraprofessionals.

Some teacher assistants perform exclusively noninstructional or clerical tasks, such as monitoring nonacademic settings. Playground and lunchroom attendants are examples of such assistants. Most teacher assistants, however, perform a combination of instructional and clerical duties. They generally instruct children, under the direction and guidance of teachers. They work with students