Librarians:

Sorting data, finding answers, understanding what we need to know—these professionals are on the cutting edge. They use technology to manage knowledge.

Information experts in the information age

by Olivia Crosby

Marie Tirados searches for competitive intelligence every day. She scans databases and online journals for news affecting the firm where she works. Fresh information in hand, she organizes what she's found and gives it to employees who dash in with questions.

In a Midwestern school, Roberta Sibley helps a student use the Internet to visit a museum 800 miles away. Then, she helps him extend his research with books and magazines.

Both workers are librarians. Equally comfortable with databases or picture books, they belong to the original information profession. And their jobs have been forever altered by technological advances.

Most librarians—whether they work for public libraries, schools, law firms, hospitals, or other organizations—use new technology and have new roles. "Now that we have more information to deal with and more ways to deal with it, librarians are becoming even more useful," says Linda Smith, Associate Dean of the Graduate School of Library and Information Science at the University of Illinois at Urbana-Champaign.

Despite its changing shape, the core of librarianship remains the same. Librarians still develop ways to make information useful. They still teach patrons how to evaluate sources and introduce children to reading and research. But now, they use new tools, handle more varied responsibilities, and have more opportunities to see their work reach beyond library walls.

Keep reading to learn how technology has changed the work, earnings, job prospects, and education of librarians. In the accompanying boxes, a few librarians tell why they chose

their careers and how technology affects their work. On page 12, a children's librarian describes her unique and changing role. And on page 15, you'll find out how librarians apply their training to other jobs.

Library work gone digital

The work of librarians is increasingly varied as it expands to keep up with the flow of information. Librarians answer reference questions, and now they do it more efficiently and completely. Librarians organize books, but they rarely do that with card catalogs. Now, they use databases and digital metadata tags. What's more, they are just as likely to organize websites and CD's as they are books and magazines. They host book chats and storytimes and can still help readers find a good novel.

The institution where a librarian works affects the tasks he or she does. There are four main library settings:
- Public libraries, where librarians work with a diverse population. Some public librarians specialize in one age group, such as young adults.
- School libraries, where librarians work with elementary or high school students and teachers; these librarians specialize in teaching literacy and research skills.
- Academic libraries, where librarians work with students and professors at universities and colleges; these librarians often concentrate on one subject area, such as art, biology, or world history.
- Special libraries, where librarians work for other organizations. For example, hospital librarians help doctors research

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treatments, and corporate librarians gather and present information to help businesses make decisions.

Librarians also vary by the kind of work in which they specialize. Librarians work in reader services, technical services, or library management. School librarians and librarians in other small organizations usually do all three.

Reader services

Librarians who like working with people often specialize in reader services. These librarians help patrons conduct research, and they decide what kinds of books and materials the library needs.

The information age has changed the definition of the "reader" in reader services. Modern communication devices let librarians help people from around the block and around the globe. At the U.S. National Library of Medicine, for example, reader services librarians, like Doug Kiker, might use telephone calls and video conferencing to help doctors in Senegal find the best way to fight a malaria outbreak. Later, they might write instructions for the library's database and e-mail them to a medical researcher in Maryland. University librarians find online resources to help distance learners who call from home, and corporate librarians fax reports to branch offices.

In every type of library, the reader services department performs the same types of work: reference, reader advisory, teaching, and collection development. Each has changed dramatically in the last decade.

Reference. This is probably the most well known librarian task. Reference librarians help patrons decide what information they need—and then help them find it. They conduct reference interviews, assist with research, and, in many corporate libraries, give presentations summarizing their findings.

The reference interview is a librarian specialty. "Some people really don't know what they want or the kinds of resources they need," says Fred Fishel, a public services librarian at the public library in Queens, New York. Librarians help patrons sharpen their questions and pinpoint their needs. This service is vital in the Internet era, when searches can bury people under mountains of unfiltered data.

Reference librarians are also expert searchers. "We love the thrill of the hunt," says Carmen Blankinship, a former reference librarian at Cornell University. "The joy of discovering something new or attacking a question I've never heard before is one of the best parts of the job."

Technological tools have made the hunt for information more interesting. Librarians still scour materials in their own

Librarians still find ways to make information useful, but now technology gives them more options.

Photo courtesy of University of North Carolina-Chapel Hill

collections, but now they also search private, online databases, the texts of hundreds of magazines and journals, the World Wide Web, and the online catalogs of other libraries.

The Internet is not the only new tool in reference librarians' arsenals. Learning about other innovations and finding ways to make them useful is one of the constant challenges of reference work. For example, many libraries are now using the Geographic Information System (GIS), which combines digital satellite maps with data about population, demographics, natural resources, and other factors that vary from place to place. Librarians might use GIS to help businesses choose new locations or families choose new neighborhoods.

The timeliness of online and digital information has prompted corporations to hire reference librarians to ferret out competitive intelligence. Competitive intelligence is any information that helps a company make good decisions, including information about competitors, scientific discoveries, stock trends, and customer preferences.

Many corporate librarians use electronic information sources almost exclusively. "When I get a research request," says Marie Tirados, Manager of the Business Information Center at Arthur Andersen Consulting in New York, "I usually search online databases, proprietary sources, newswires, journals, and associations' websites. Then, I call other libraries. To find all the information, you can't rely on an in-house collection."

In addition to providing new tools and better access, technology has made reference questions more complex. Many people find simple information independently using websites and databases piped into desktop computers. "The kinds of research assignments we get now are more complicated than those of the past," says Tirados. "People can find basic facts themselves, like the price of a stock or the address of a company overseas. We step in when they can't find what they want quickly."

At the same time, because of a new respect for information's usefulness, more corporate reference librarians are involved in the early stages of research. They meet with teams of employees to decide how to attack unanswered questions.

Reader advisory. Reader advising is reference work with a more personal touch. Reader advising traditionally involves helping patrons decide which books to read. It might include creating summer reading lists for people of different ages and tastes. Advising readers is a long-standing role for librarians, especially in public and school libraries. But even this task takes on new dimensions as librarians create webpages to advise from afar.

Now, most public libraries have webpages that link to a vast array of librarian recommended sites. Librarians update these

Why be a librarian?

From lab to library

For Linda Smith, becoming a librarian was unexpected. After studying math and physics in college, Smith decided she didn't want to be a scientist. "I didn't want to work in a lab," she says. "I wanted more variety."

What she enjoyed most was researching term paper topics in the university library. She loved combing through diverse information sources. This realization—and some experience working in the library as a student assistant—led her to library school and a job as a medical librarian.

Today, Smith works as a professor of library science. She studies ways to make online catalogs more helpful, either by improving their design or the instructions that come with them. Her goal is to make research faster and more effective.

pages, choosing and organizing links by subject and intended use. Many librarians develop pages for specific audiences, such as a children's page, teen page, book club page, or jobseekers' page.

School librarian Roberta Sibley of Birmingham, Michigan, maintains an extensive website for her school's media center. She meets with teachers to find out what subjects they will be covering in class and either works with teachers to choose appropriate websites and databases or chooses resources herself.

Teaching. Librarians are bringing the information revolution to the public. Often, a person's first exposure to the Internet is at a library—either a public library or a school media center. "One of the jobs that comes with technology," says Fishel, "is training people to use it." This may mean teaching computer basics, such as how to use a mouse, or teaching more complex subjects, such as how to test a website's veracity.

School and academic librarians, whose focus is instruction, also teach students to synthesize information. The Internet has added new challenges to this task. "Some first-year students are overwhelmed by the volume of the information," says Blankinship. "It's so easy to copy and paste that now some students have difficulty creating original work." Academic librarians help students learn research skills by conducting group

classes and holding impromptu tutoring sessions around the reference desk.

Teaching in school libraries has undergone significant changes. "We teach a lot of information literacy classes now," says Sibley. "We used to be book driven, but now we are driven by technology. The complexity of my job has more than doubled in the past 10 years." Keeping students current means learning about the latest technological developments and devising ways to explain them.

Not all teaching has a research component. In school and public libraries, patrons learn about novels and stories, too. Librarians still host storytimes and other book-related activities to encourage reading for pleasure.

Collection development. Reader services librarians decide what types of materials a library should buy. Consider Norma Copes, a reference librarian who maintains the art and career sections of the public library in La Porte, Indiana. When she expands the collections, she first analyzes the needs of library patrons. Then, she studies publishers' journals and book reviews to find the best materials.

Technology has given reference librarians more choices. They not only consider print materials but also buy audiovisuals, CD-ROM's, and the right to use professionally maintained databases. Librarians decide which formats are most useful. Should the library buy a printed copy of an art encyclopedia, for example, or one on CD-ROM? The CD-ROM might be easier to search, include more images, and be easier to update with modern works; however, the print version is better if it is more complete or if the library has few computer terminals.

In some libraries, especially those in businesses, databases and online information are the primary materials librarians buy. Just as they would when buying a book, librarians analyze the publishers to decide which are most trustworthy; they also decide which databases are sufficiently current and which will fit with the organization's existing computer systems and software.

Technical services

Technical services librarians organize and manage information. They form the backbone of the library. "If we don't do our job right, public services librarians can't do theirs," says Bill Jarvis, a technical services librarian at the public library in Harris County, Texas. "Everything we do is crucial for the readers trying to find information on the shelves."

Technical services workers identify and classify books and materials. The systems they design make it easier to zero in on relevant information. Technical services librarians also keep libraries running by overseeing book circulation, finding and buying materials, and refurbishing damaged books.

The Internet has carried technical work out of the shadows and into the limelight. "Suddenly, technical services is glitzy," says Vivian Bliss, a Knowledge Management Analyst at

"One of the tasks that comes with technology is training people to use it."

–Reference Librarian Fred Fishel

Photo courtesy of University of Wisconsin-Madison Libraries

Microsoft Corporation in Redmond, Washington. Information management is more visible as people search digital databases and online collections.

The technical services most affected by new technology are cataloging and information architecture.

Cataloging. Catalogers classify books, videos, CD-ROMs, and other materials so people can find what they're looking for. These librarians supervise technicians who describe materials by subject discussed, date published, format, author, title, and thousands of other characteristics, creating a complete record for each item. People find the record when they search for one of its characteristics.

Most people search for information by subject, and the work of catalogers is to make sure they find it. For example, catalogers at the U.S. National Library of Medicine analyze new medical books and studies and decide what subjects to place them under—which keywords will bring them forward in the medical database.

Cataloging has grown more important as searchers log-on to online catalogs from home. Corporate librarian Lee Stocker of Dow Chemical Company in Midland, Michigan, explains, "Now that employees have access to the catalog from their desks, the catalog might be the only contact librarians have with patrons."

Because of online access, making catalogs easy to use is more critical—and more possible. Using computers, librarians are starting to create different catalogs for different kinds of readers. A catalog designed for casual browsers, for instance, might display summaries of each book. One designed for preschoolers might use more graphics or might not rely as heavily on putting things in alphabetical order.

Technology has also made cataloging more efficient. Catalogers add the records they create to a shared international database. When a library acquires new material, technicians search for it in the shared catalog. If a record exists, technicians and cataloging librarians verify and customize the data without having to create a record from scratch.

Shared catalogs are nothing new; the change is one of degree. "Librarians have been sharing cataloging for a long time, but electronics and the Internet have made it easier," says Jane Jacobs, a cataloger in the Queens Borough Public Library. Now only about 10 percent of the materials in most public libraries needs original cataloging, according to Jarvis. The percentage is higher in academic and special libraries.

Even when an online record is available, transferring the record to a local library is more than a cut-and-paste job. Catalogers customize records to make them more useful to searchers. "Catalogers in different types of libraries modify the rules

Why be a librarian?

From reader to advisor
Some librarians are drawn to their jobs by a love of books and libraries. Bessie Tichauer is one of those. She has fond memories of visiting libraries as a child and wants to give other children experiences like hers. Tichauer attended library school and now works as the children and youth services consultant for the California State Library. She helps librarians introduce children to computers as well as to books.

to provide the best access possible for the public," says Jarvis. For example, some public librarians bend the rules by putting motel directories and other how-to vacation books with travel guides, instead of in their formal Dewey decimal category.

When they aren't working with books, catalogers are setting their sights on digital information. Some are helping to organize the Internet. Many pieces of material on the Internet have digital tags that describe them so that search engines can find them more easily. These tags—called metadata tags—might say who wrote the material or what it's about. To make searches better, catalogers are helping to establish rules and guidelines for tag writing.

Other catalogers are using digital technology to preserve information, as well as to organize it. Librarians from the University of Michigan do this every summer. They work with members of the Navajo Nation to photograph, scan, and record community artifacts; pair them with written and oral descriptions; and organize them in an easy-to-use database.

Information architecture. Some technical services librarians work with computer experts to create websites and intranets. This type of work is often called information architecture.

Bliss helps design her company's intranet. In assuming this role, she is like many other librarians. According to a 1999 study by the Special Libraries Association, 42 percent of association members help manage the content of their organizations' intranets, up from 37 percent in 1998. Some of these members are reference workers who update intranets with new content, but librarians like Bliss help to organize the intranets as well.

If workers in the company want to share material with other

employees, Bliss helps them divide it into categories and sub-categories. She also decides which search terms will retrieve which data. Her job is not to build or program the intranet, but instead to offer advice on how to organize it.

This type of work involves more than just analyzing and de-scribing materials; it requires a practical understanding of how users search for information. Bliss sends out user-surveys and sometimes observes users as they traverse the intranet.

Academic and public librarians do information architecture, too. They organize digital material—such as scanned photos and documents and digitized videotapes—and then decide how people will move from one piece of material to the next. For in-stance, they might link a videotaped news story with a map that shows where the story took place.

Library management

Librarians don't just staff libraries—they manage them, too. Like most other library jobs, supervisory roles have been changed by technology.

Managing resources. Librarians protect the books and materi-als in their care, making sure patrons return them. Years ago, paper cards and ink stamps were the primary way books were tracked. Now, most librarians use automated circulation sys-tems to simplify book management.

Librarians also set policies about lending time and renewals and, in libraries that offer computer access, establish rules gov-erning computer use.

The budget is another part of the librarians' domain. In most libraries, the head librarian decides how money will be spent after consulting the organization of which the library is part. Librarians, like all modern managers, use financial software to keep accounts current.

Managing people. Librarians' personnel management re-sponsibilities have grown over the last decade. Technology has allowed librarians to shift more routine tasks to technicians and assistants. It is typical for a cataloger in a large public library to supervise 1 or 2 beginning librarians and 8 to 10 technicians, for example. Likewise, many libraries now hire computer ex-perts to keep library technology functioning. Librarians super-vise all of these nonlibrarian workers.

The Bureau of Labor Statistics (BLS) projects the number of library technicians to grow faster than the number of librarians over the next decade. So, the number of people librarians super-vise will probably continue to increase.

Managing community relations. Because of librarians' experi-ence with information technology, some local governments have asked them to oversee government websites. Website ad-ministration adds another facet to library supervision.

Technical service librarians decide how to organize digital material.

Photo courtesy of University of Wisconsin-Madison Libraries

At the same time, more librarians are participating in community outreach, according to some industry experts. "When I look for a new librarian," says Jerry Thrasher, Director of the Cumberland County Public Library in Fayetteville, North Carolina, "I like to see someone who can communicate with the public and set up programs and events. Community outreach has become more sophisticated in the last decade." He and other librarians take the lead in educating the community about modern library services.
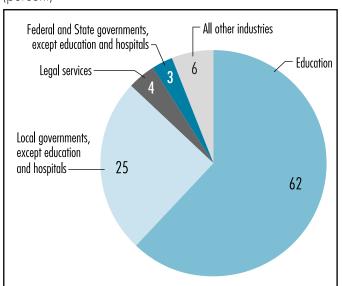
More jobs, more money

The number of librarian jobs is projected to grow about 5 percent between 1998 and 2008. This rate is slower than the average for all occupations. But a slower than average growth rate does not necessarily mean poor prospects. By 2008, librarians are expected to hold more than 159,000 jobs—7,000 more than they did in 1998.

Also, many experienced librarians are expected to retire, switch occupations, or leave the occupation permanently for other reasons. This will create about 39,000 job openings for new librarians between 1998 and 2008.

The effect of technology on job openings is mixed. In some ways, technology tempers the demand for librarians: automation allows each librarian to accomplish more, shared online cataloging shifts more tasks to technicians, and computerized

searches help some researchers to become self-sufficient. For these and other reasons, competition for many librarian jobs will remain keen.
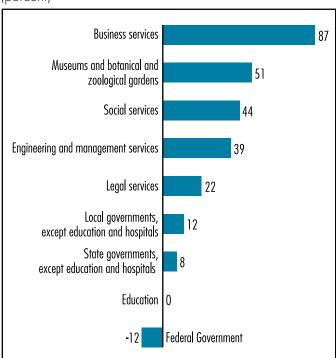
However, technology has increased the complexity of many reference questions and has expanded librarians' teaching roles. And it has added to the information librarians analyze and sort.

Technology has also made corporate libraries more effective, causing some employment growth. In 2008, BLS projects that most librarian jobs will continue to be in public libraries, schools, and colleges. (See chart 1.) However, librarian employment growth is expected to be faster in other settings, including businesses. (See chart 2.)

Librarians' technological skills have improved their employment prospects. Recently, libraries have had to compete with technology firms for jobseekers. "When you go to career fairs at library schools, there are more and more information technology firms there," says Thrasher. Librarians with sufficient programming skills sometimes change occupations and become database administrators or webmasters. This leaves more

Chart 1

Librarian employment, by industry, projected 2008
(percent)

- Federal and State governments, except education and hospitals — 3
- All other industries — 6
- Legal services — 4
- Education — 62
- Local governments, except education and hospitals — 25

Chart 2

Librarian employment growth in selected industries, projected 1998-2008
(percent)

Industry	Percent
Business services	87
Museums and botanical and zoological gardens	51
Social services	44
Engineering and management services	39
Legal services	22
Local governments, except education and hospitals	12
State governments, except education and hospitals	8
Education	0
Federal Government	-12

openings for librarians. (See the box on page 15 to learn about information jobs outside the library.)

In addition to more occupational choices, demand for technologically skilled workers has translated into higher salaries for librarians. In 1998, librarians earned an average of $40,020, about a 5-percent increase over 1997 earnings, according to BLS. Salaries for all technical, professional, paraprofessional, and managerial workers grew about 4 percent.

Earnings were not evenly distributed, however. According to a 1998 survey by the Special Libraries Association, workers in special libraries usually earned more than the average; those who spent more time working with technology also earned more.

Librarians' starting salaries followed similar trends. Starting salaries for library school graduates rose more than 5 percent in 1998, according to *Library Journal*'s Placements and Salaries Survey. Starting salaries for nontraditional information jobs, including those in corporate libraries and those outside libraries, were about 11 percent higher than those in traditional libraries. School, college, and government librarians were offered about

$32,000 on average, while database management specialists were offered an average of almost $37,000. (See chart 3.)

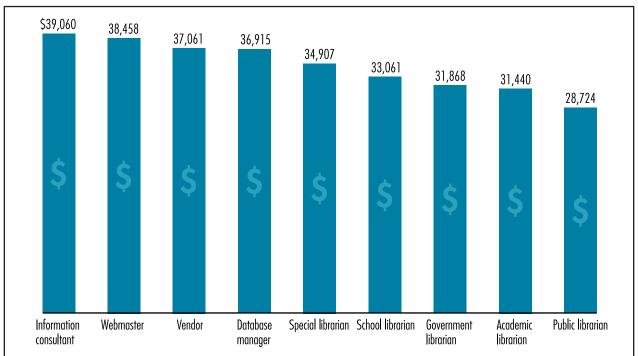## Ups and downs amid the stacks

For most librarians, the greatest benefits of the job are not financial or technological. And neither are many of its detriments. Librarians experience the unique perks and problems of information management along with the more common rewards and drawbacks that come with public service.

Rewards

For book lovers, the most obvious advantage to library work is the chance to be surrounded by books and reading. Librarians are often the first to see new books and the first to check out copies. For some, extra lending privileges come with the job.

Librarians also have the chance to satisfy their curiosity. "I learn every day," says corporate librarian Stocker. "I can keep up with the latest advances in so many different fields." Children's librarian Sheila Rider feels the same way. "The

Chart 3
Librarian average starting salaries, by type of worker, 1998

Information consultant	Webmaster	Vendor	Database manager	Special librarian	School librarian	Government librarian	Academic librarian	Public librarian
$39,060	38,458	37,061	36,915	34,907	33,061	31,868	31,440	28,724

Source: "Placements and Salaries Survey, 1998," *Library Journal*, October 15, 1999.

questions we're asked are so varied," she says. "This job is perfect for anyone interested in learning about the world."

For reference librarian Copes, one of the best parts of the job is the detective work she does. "I love getting a reference question and thinking, 'How will I even approach this?'" she says. "It's a little like going on a scavenger hunt." And a successful search can bring high praise from patrons, especially when it helps with homework. "If you help a child find a book for an assignment, parents think you're just wonderful," says Rider.

Variety also makes library work interesting. Cataloger Jarvis relishes the diversity of his job. "I see books about every possible subject," he says. It's common for a science book to cross his desk on the same day as a bestseller from the fiction rack.

The Internet has added to the mix. "People ask the most amazing questions now that the Internet is popular," says Copes. She explains that they expect more answers because so much information is available.

Many librarians thrive on the orderliness of their work. They like organizing a jumble of materials and seeing details fall into place. Cataloger Jacobs says that "creating order out of chaos" is a prime enjoyment.

Flexible schedules are another plus. Many librarians work part time—in fact, librarians have one of the highest rates of part-time work. Many public and academic libraries are open on weekends and evenings, giving librarians a chance to work nonstandard hours. School librarians often work only when school is open.

Flexibility extends to geography, too. There are libraries in cities, towns, and schools throughout the country, so librarian jobs are in nearly every urban, rural, and suburban setting imaginable.

Librarians also cite the chance to be of service as an important job benefit. "I like seeing the information I uncover make an impact," says corporate librarian Tirados. Reader services librarian Kiker agrees, "When people have an urgent need to know something, it gives you a good feeling to be able to help them."

And helping people extends beyond finding facts. "I have the opportunity to open up new worlds for people," says school librarian Sibley. As public services librarian Fishel puts it, "There's nothing like seeing the 'Aha!' moment. Helping someone discover something and achieve a new understanding is the most rewarding part of my work."

Drawbacks

Like all occupations, librarianship has drawbacks. Some librarians feel the stress of time pressure, especially when patrons

Why be a librarian?

From rock-and-roll to referral

Fred Fishel never thought he would be a librarian. After graduating from college with a degree in communications, he worked as a disc jockey for a radio station. Looking back, he sees a curious overlap between disc jockeys and librarians. Fishel explains, "When you work at a radio station, people call with questions about music and local events, and you do background research for news segments. You become like a community referral center. I really enjoyed that part of the job." Now, as a public services librarian, providing information is the focus of his work, not a sideline.

Fishel's career path mirrored the progression of technology. When videotapes were a new phenomenon, he presided over the library's first collection. When personal computers became common, he helped to set up the library's first terminals. And when he and other librarians decided to open a public computer lab, his interest and skill in technical equipment led him to become its director.

expect the speed of Internet searches. "People come in with large projects and a deadline only hours away," says Tirados. Usually, she enjoys the rush—especially when she's working with a team of librarians to get the job done—but sometimes, she feels harried.

Catalogers, too, face time-related stress. Often, materials come into the library faster than they can be cataloged, saddling librarians with a work queue. "Backlogs are a challenge," says Jacobs. "I want to get them done fast because if I'm working on a book, no one can read it until I finish cataloging it."

The fast pace means that many librarians can't find time to read the books they organize. At times, some miss the bookish emphasis of traditional library work. "In high schools, we can't have as many reading programs as we used to because information technology takes so much teaching time," says Sibley.

Another drawback is dealing with troublesome library patrons. The most unpleasant part of Fishel's job is handling

Children's librarians

Photo courtesy of the American Library Association

In many libraries, a few librarians do almost everything—from reader services to technical services to management. This is especially true of children's librarians. They use nearly every librarian skill to perform a unique task: welcoming children into reading and research—both traditionally and technologically.

Sheila Rider is a children's librarian, and she loves her job. She works as the Children's Services Manager at the Cumberland County Public Library and Information Center in Fayetteville, North Carolina. "I enjoy working with children," she says. "I like seeing them discover a favorite author or a favorite subject."

The children's department, like every other part of the library, has been transformed by technology. "Now, we make decisions about CD-ROMS, Internet access, and educational games," says Rider.

One of her goals is to ease her patrons into the information age. She is part of a team that designs the children's webpages. She helps to decide which links to include and how to make them easy for young web surfers to navigate. Rider also shows children how to use the computer, leading small classes and walking around the terminals to help patrons who run into trouble.

Despite technological changes, however, the storybook reigns supreme in the children's section. Rider manages her collection by learning about new books. She reads publishers' and librarians' journals and chooses new books to add to the collection. Because her books are short, she can preview many of them before they hit the shelves.

At the same time, she weeds the collection, removing outdated or worn books to make room for new ones. Rider, like most children's librarians, doesn't catalog materials herself, but she does have influence. For example, she asks catalogers to keep stories about popular topics, such as cartoon characters, near each other, so children don't have to search by author.

Rider encourages library visits by planning activities for children and their parents. She sets a schedule of events for every season. The schedule always includes storytimes where she reads to children herself or hires a professional storyteller. For younger patrons, she finds ways to add to the library's excitement. She puts on puppet shows, movie hours, and literature-based arts and crafts.

Rider works to make the library a fun and useful place for children. "Libraries used to have reputations as forbidding places where you had to keep quiet," she says. "We try to make the library very friendly, and we try to always keep smiling."

annoyed customers. "When you deal with the public, they will always complain," he says. Especially difficult is requesting fines for overdue books. Occasionally, patrons berate librarians at the circulation desk.

Sibley also has a few unruly patrons at school. Stereotypes to the contrary, she says, hers isn't a quiet job. Sibley likes the energy, but occasionally she has to enforce library etiquette.

Library work has physical demands, too. Although some library materials are digital, reference librarians still lift and carry books, and some librarians climb ladders to reach high stacks. Librarians in small organizations sometimes shelve books themselves.

Keeping up with change also can be hard work. Librarians undergo constant training as new tools emerge. For many librarians, technological innovation is both stimulating and tiring. "I think it's exciting to see all the new things we can do," says Copes, "but as a librarian, you can spend your whole life chasing technology."

Book learning for book experts

Librarians need specialized education. Most earn a Master of Library Science (MLS) degree, which is sometimes called a Master of Library and Information Science (MLIS) degree. Many schools offer these degrees, but opportunities are best for graduates of 1 of the 56 schools accredited by the American Library Association.

The courses required for an MLS degree have evolved with librarians' changing roles. Schools now require extensive computer training in addition to traditional coursework in information theory, collection development, reference techniques, and library management.

Students with any undergraduate major can study for an MLS degree, but most have a liberal arts degree. An undergraduate degree with a specific major can help shape a librarian's future career. For example, medical librarians often have training in biology or chemistry. School librarians might have a degree in education. And catalogers should have at least a rudimentary understanding of foreign languages.

Some librarians, especially in academic libraries, also have advanced degrees in another subject. For example, about 20 percent of law librarians have law and MLS degrees, according to the American Association of Law Libraries. And most history librarians have a master's or doctoral degree in history.

School librarians sometimes have a teaching certificate and library science courses instead of, or in addition to, an MLS.

People who want to work in libraries but do not want to earn

Why be a librarian?

From copyrights to the cutting edge
Before she was a librarian, Vivian Bliss was an attorney looking for a change. "My interests were broader than the law," she says. "I wanted to learn about more than court cases."

Bliss decided to attend library school because she wanted to work in an evolving field. "I had always been fascinated by information—how people get it, how people use it—and I had a feeling that information science was about to explode." She wanted to work on problems never seen before.

Bliss' hunch about the explosion of information science proved accurate. Today, she's a corporate librarian, helping to design intranets.

a graduate degree can become library technicians or assistants. The educational requirements for these workers range from high school coursework to a bachelor's degree.

Prologue to librarianship: First steps

In high school, nearly any classes help would-be librarians because librarians deal with every subject. English, foreign languages, and computer courses are particularly useful. And any class that requires research will build library expertise. Social science, history, and natural science classes often give students research opportunities.

Before committing to library school, you may want to gain hands-on experience to make sure you enjoy the work. Most libraries enlist volunteers to shelve books, do clerical work, or contribute in other ways. Some volunteers do technological tasks, such as helping visitors use the library's computers.

Any type of library work will help volunteers learn more about the profession, but some assignments are more informative than others. "The best way to learn what being a librarian is like is to work directly with the collection or the people using the library," explains Paul Signorelli, Director of Volunteer Services at the San Francisco Public Library. When volunteers are interested in library science, Signorelli recommends they either

shelve books or help in the children's computer room. "Even working at the adult computer sign-in desk helps volunteers to see the diverse groups of people we serve," he says.

Working for pay is another way to explore librarianship. As mentioned previously, technicians and assistants have varying levels of education. These workers shelve, check out, and organize books; teach patrons how to use computers; and maintain libraries' computer systems. They also create displays, help set up events, and assist in cataloging materials. Some supervise other technicians and assistants.

Paid library work helps many people decide if librarianship appeals to them. Tirados is one example. She says, "As a technician, I saw librarians making decisions about information. I wanted to do that kind of work."

Ready, set…research!

The best place to learn more about library jobs is, of course, a library. Many public, school, and academic libraries have books and magazines describing the profession and how it's changing. Librarians can help you find the best sources to answer your questions.

The Federal Government publishes some of the resources that are available at most libraries. For example, the BLS *Occupational Outlook Handbook* describes the duties, earnings, training, and employment outlook for librarians, library technicians, and library assistants and bookmobile drivers. The *Handbook* is available in print at libraries and career centers and online at **http://stats.bls.gov/ocohome.htm**. The U.S. Department of Labor's Career Infonet, available online at **http://www.acinet.org/acinet/resource**, offers additional information, including an occupational video. And the U.S. Department of Education publishes statistics on library employment and use.

Associations are another good source of information. Listed below are some of the organizations dedicated to the librarian profession. Each offers career and educational advice. Some organizations serve librarianship in general, without focusing on a particular type of library. These include the following:

American Library Association
50 E. Huron St.
Chicago, IL 60611
1 (800) 545-2433
http://www.ala.org

American Society for Information Science and Technology
1320 Fenwick Lane, Suite 510
Silver Spring, MD 20910
(301) 495-0900
http://www.asis.org

Hands-on library work—either paid or volunteer—can help you decide whether to become a librarian.

Photo courtesy of University of Wisconsin-Madison Libraries

What else can you do with a library degree?

A Master of Library Science (MLS) degree prepares students for library work, but some graduates use their education in nonlibrary settings. MLS graduates working outside the library include:

◆ Book publishing workers who use their knowledge of books to choose and edit manuscripts;

◆ Chief information officers who decide which information technology a business needs and how employees will share information;

◆ Content managers who find and organize material for online communities;

◆ Database administrators who organize, update, and store data using extensive programming skills;

◆ Information brokers who conduct research for people who contract for it;

◆ Salesworkers who sell software and other products to libraries;

◆ Taxonomists who work for data processing and e-commerce companies by classifying information and putting it in appropriate categories; and

◆ Webmasters who design, maintain, and program websites.

A library degree is not the only route of entry for these occupations, but MLS graduates apply library skills to the work.

Association for Library and Information Science Education
11250 Roger Bacon Dr., Suite 8
Reston, VA 20190
(703) 234-4146
http://www.alise.org

Other organizations are dedicated to one type of library or specialization. For information about a specific area of interest, contact one of the following:

American Association of Law Libraries
53 West Jackson Boulevard, Suite 940
Chicago, IL 60604
(312) 939-4764
http://www.aallnet.org

Art Libraries Society of North America
329 March Road, Suite 232, Box 11
Kanata, ON K2K 2E1
1 (800) 817-0621
http://www.arlisna.org/index.htm

Association of Independent Information Professionals
7044 S. 13th St.
Oak Creek, WI 53154
(414) 766-0421
http://www.aiip.org

Association of Research Libraries
21 Dupont Circle, Suite 800
Washington, DC 20036
(202) 296-2296
http://www.arl.org

Medical Library Association
65 East Wacker Pl., Suite 1900
Chicago, IL 60601–7298
(312) 419-9094
http://www.mlanet.org

Music Library Association
6707 Old Dominion Dr., Suite 315
McLean, VA 22101
(703) 556-8780
http://www.musiclibraryassoc.org

National Association of Government Archives and
  Records Administrators
48 Howard St.
Albany, NY 12207
(518) 463-8644
http://www.nagara.org

Special Libraries Association
1700 18th St., NW.
Washington, DC 20009
(202) 234-4700
http://www.sla.org

Finally, don't overlook the value of an informational interview. Consider asking local librarians about their jobs and the effect of technology on their work. Many librarians are happy to talk with people who want to join their ranks. ∞Q