The Future of Libraries

Six perspectives on how libraries, librarians, and library patrons will adapt to changing times

After 150 years as public institutions in the U.S.—at a time when technology has transformed our ability to access information—libraries could easily be associated with the past rather than the future of our communities and schools. Yet as we look to the future of libraries, we see that they have touched the lives of so many people, in so many different ways, that everyone has an opinion on their value. Academics, authors, researchers, businesspeople, policymakers, teachers, library media specialists, parents, and especially students—each has a unique perspective on the qualities that will make libraries essential to education and community for another 150 years.

And so we asked a half dozen people with different perspectives to respond to the following quote as it relates to the future of libraries:

“Education has long been confined by a sense of place—the school, the classroom, the library. In speaking of the 21st Century Learner, the Institute of Museum and Library Services (IMLS) describes a very different scenario: “Learning in the future will increasingly take place within networks—of people, of information and of ideas.” Their answers will not provide the definitive prescription for success in the future of libraries. But together, they paint a picture of a future filled with excitement, challenges, tradition, and exploration. And it’s a future in which libraries continue to be central to our lives.”

— Al Race

The New Dimensions of Learning Communities

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Libraries have always been places for learning. Today, libraries as learning places are changing, diversifying, taking on new dimensions. They are moving from passive collections of knowledge to incorporate or engage active learning spaces.

On the Internet, libraries are becoming both hosts and service providers to new forms of learning communities. Software technologies as varied as discussion lists and collaborative filtering or recommender systems are reinventing place-based social forums for learning in cyberspace. In the humanities, library collections have always been in a real sense a laboratory; now, digitized collections make that laboratory much more accessible and available, while libraries simultaneously offer expanded architectural spaces for classes to interact with the collections. In the sciences, libraries project the scholarly literature into the laboratory, and also into the new virtual collaboratories, which provide places for scientists worldwide to join together to manipulate experimental apparatus, analyze data, conduct simulations, and author new scholarship. The new ideas of cyberinfrastructure to support science envision a tapestry of data, literature, scientific instrumentation, computational capability, and collaboration tools. And as the tools for learning and products of scholarship change and become digital, libraries are also becoming repositories for materials that go far beyond the traditional published print literature.

The engagement of libraries with learning extends beyond established educational institutions and frameworks to lifelong learning, both formal and informal. Pursuits such as genealogy, local history, consumer health, or financial planning are represented alongside more traditional academic inquiry in the new learning communities. Public libraries are recognizing that their community-service roles increasingly encompass support of such lifelong learning activities.

As a constellation of cooperating organizations
sharing the treasures that have been locked up in the special collections of our great libraries are now being opened up on the Internet in digital form, allowing students and the public to directly explore essential source materials that have historically been the privileged preserve of a few advanced scholars who could travel to the places where the rarities were held. One vision that I find particularly compelling is that of the gifted high-school student no longer bound by the limitations of the resources offered by his or her local school and public libraries, but able to explore materials of interest worldwide.

But there's still a place for place. Colleges and universities are building new libraries, or renovating existing libraries, to construct revitalized intellectual commons for their campuses—new architectural spaces, rich with facilities for collaborative group study and social interaction as well as the more traditional individual engagement with collections; places populated with librarians, information technologists, instructional technologists, media specialists, and faculty that will work together to advance learning.

The evidence is that place still matters—though we must be honest and recognize that it matters more or less to different people and different purposes. Libraries are becoming an integral part of a great diversity of alternatives—virtual, physical, and blendings of the two—for learning places that can meet a great variety of individual and group preferences and needs, from the solitary individual learner reveling in the availability of massive networked-based information resources to active communities of people who seek opportunities to work together in collaborative learning communities.

Libraries are beloved places because of the artifacts that lie at the end of the trail, the information contained in the books. The promise of digital technology is that it will maximize that thrill: It will make valuable information available to more people with less effort.

The Exhilaration of Access

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At the beginning of the 21st century in the post-industrial world, there is very little information that does not pass through a digital form of representation at some point, whether it is composed of text, image, or sound. As information moves from the analog world of paper, film, and vinyl phonograph records, to the digital world of computer archives, screen displays, and DVDs, the library is morphing from a physical place with shelves of books to an online portal for screenfuls of information. This change is both exhilarating and frightening.

It is exhilarating because it holds the promise of greater accessibility, and greater accessibility can make us smarter. For example, it is faster for me to use my university’s copy of the Oxford English Dictionary than my own two-volume set, even when I am at home. To use my own copy, I need a magnifying glass and someplace to sit where I can cope with the heavy volume. To use my library’s copy, I just open up a browser window, making it much more available to me, and also to my students. The information in the OED, the rich history of English words and their use, was always too cumbersome to fit comfortably into printed form. Now that it has been liberated from its bindings it is literally at the fingertips of everyone in our learning community. Not only doesn’t it matter if the University owns a printed copy—it is actually better to have the digital, updatable version.

At the same time, the change is unsettling. We associate the practices that we value with the formats in which we learned to value them; we associate learning with books on shelves. Furthermore, libraries are not mere repositories. They are physical and social institutions with their own cultural resonance. They are shrines to our collective culture, with elaborate rituals of admission that reflect the high value we place on the information they preserve for us. I remember the particular dusty smell of the storefront library in the Bronx where I first went to get a library card and how humiliated I felt when I failed the test (signing one’s own name in ink)—a defeat I still blame on the faulty information technology of the time (fountain pens which smudged too easily). One of my most cherished professional memories is the thrill of being admitted to the inner sanctum of the Folger Library, the below-ground vault of rare books, where Shakespeare Folios and Caxton’s first editions are peacefully resting in temperature-controlled stasis. I loved the weeks I spent handing in “chits” with my book requests under the serene blue dome of the British Museum Reading Room, where the card catalog consisted of hand-pasted scrapbooks. I remember the thrill of flashing my graduate student pass and entering the forbidden domain of closed stacks in Harvard’s Widener Library, where I roamed the narrow aisles armed with scraps of cryptic call numbers like clues in a treasure hunt.

We all hold similar sentimental attachments to the clumsy technologies that have made libraries as much hiding places as showcases for information. But it is not the vault that makes a Shakespeare Folio thrilling to behold: it’s the plays. Libraries are beloved places because of the artifacts that lie at the end of the trail, the information contained in the books. The promise of digital technology is that it will maximize that thrill: It will make valuable information available to more people with less effort. If we can figure out how to do that we will not have obliterated the library; we will have expanded it into an even more welcoming and accessible space.
The Future of Education Is Now

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When we think of education, we generally think of desks, chalkboards, and a stuffy teacher who drones on about something we’re not really paying attention to. But that isn’t the whole picture. Education can be found in many places, including the neighborhood library. It is here that learning comes alive through books, computers, and the common interaction between people—interaction being the most important.

At the Kalamazoo Public Library, you’ll find a bunch of teenagers who band together to do more than just study. They form a group, which the library lovingly refers to as TAB (Teen Advisory Board). While they may seem to be regular kids on the surface, it is actually they who do, and encourage, the most learning at the library. It is they who sit down and create ways for other teenagers to learn about things they may not be exposed to in the classroom.

Through a program called “Awesome Anime,” for example, teens can not only watch Japanese cartoons, but also get insight into Japanese culture they might not otherwise get. And they get it all while having a good time with their peers.

By having teenagers come up with the events, the library ensures that teens will get an education away from pencils and teachers by finding an inside way into the minds of teens. Only those in the same peer group can readily identify the needs of teens and how to cater to them. So, by way of everyday communication, everyone benefits and, more importantly, learns.

An episode of Sci Fi Channel’s The Outer Limits gives a prime-time example of what is commonly thought of as the future of education by portraying a world where all people learn from cyber implants that receive information much the same way as the Internet. The implant then integrates the information into the host brain, like downloading icons onto a computer hard drive. However, as explained in this episode, if the server, which supplied the information to the implants, were to crash, how would people learn? If we ceased to communicate through word of mouth, would we remember how to communicate at all?

The problem with growing technology, which we have now integrated into everyday life, is becoming too dependent on it. If we forget to take the time to talk to each other, it’ll just be a matter of time before we find ourselves back in the Dark Ages. Communication and simple human interaction will always be important to the learning process. Since TAB and the Kalamazoo Public Library recognize this, they are a good example of what the future of education should be like.

Education will continue to change as technology evolves. We’ve already come so far, as evident from the change from the simple abacus to the computer. While we may not communicate the same way as we do now, communication and interaction will always be the best way to learn.

Information Networks, Information Literacy

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The Internet, digital books, and now wireless laptops for every student! What about the school library? Digital media and wireless laptops are changing the current state of affairs in school libraries, but the extent and nature of these changes depend upon factors other than the technology. The dynamics of the school, the administrative leadership, and the personality and philosophy of the librarian will all help determine whether the school library of the 21st century becomes a repository of information—a global, technology-based version of its 19th century bricks-and-stacks predecessor—or a service environment, a knowledge space that makes a lifelong difference in student learning.

School libraries started in the 1800s more as warehouses for books than as an integral part of education. Over the next century, these book repositories evolved into today’s library media centers. Along the way, librarians began to participate in curriculum planning and implementation. Initiatives such as the AASL’s Information Power: Building Partnerships for Learning (1988, 1998) urged collaboration among librarians, students, teachers and the community, and aimed to change the library “from a resource center to a center of instruction, exploration, and learning.” With the introduction of computers and the Internet, the school library again experienced modifications. Most school libraries automated their catalogs in the 1990s. Now school librarians build Web pages as gateways to remotely accessible local catalogs, subscription databases, and global resources.

How has digital technology affected the work of school librarians? To compare with my own experiences, I asked other school librarians. Postings to several listservs brought a flood of responses from as far away as Australia and as close to me as the Bay Area. Several trends noted by the respondents echo my experience at the Urban School of San Fran-

Resources


www.ciconline.org
cisco, an independent 9–12 school of 250 students.
• School librarians regard access to networked and global resources as a positive change.
• Digital resources enrich traditional print materials providing simultaneous access by multiple users to any online resource and changing the school library from one place to many, from local to global.
• School librarians assist students not only in person but also through e-mail.

Students relish the seductive ease of finding information through Yahoo or Google, so book use and purchase are in decline, right? Not so, report school librarians from Maine to California. After an initial slide, book circulation rebounds. Teachers still require students to include print materials and authoritative digitized reference material as part of their research. Further, students and teachers confuse methods of searching the “open Internet” with strategies required for successful database use. School librarians must explain these distinctions to both students and teachers and demonstrate multiple methods of accessing information.

In response to these challenges, many school librarians have switched to one-on-one teaching—and to teaching the teachers, who will then (we hope) teach the students. When students have wireless laptops and the school library provides remote access to electronic databases and other digital resources, students and teachers appear less often in the physical library. School librarians must devise proactive and flexible instructional strategies to counter this trend, especially since those surveyed underline the essential critical-thinking skills that are needed to do research in this environment. Accessing information has become easier; now the challenge is to teach intelligent selection, evaluation, and use of information.

**The Learning Laboratory**

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Inquiry is the driving force for authentic educational experiences in the Information Age. Inquiry is not at its most powerful and engaging level when it is boiled down to a few steps to meet simplistic information retrieval exercises in response to a teacher-generated assignment. Inquiry demands more from the student. Across all grade levels, preschool to college, and across all disciplines, inquiry is most effective when it is student-driven through exploration to a conclusion is determined. It may involve either deductive- or inductive-thinking patterns, but should not be guided by the selection of only that information which may match one’s initial opinion.

The school library of the future is based on the instructional strategies and best practices that place teachers and students in the role of being a critical selector and user of information. School library media specialists are experienced teachers who have mastered effective methods for information access and application. They serve full-time as information mentors to fellow teachers as well as students, administrators, and parents in the broader educational community. They are instructional leaders who manage technical and resource assistants.

In the emerging library learning laboratory, students practice their arguments before small peer groups and receive constructive feedback. The facility is composed of many pods for small group work, each with access to online information terminals, video-editing stations and telecommunications for interviews with content experts. Each facility also houses ready-access print volumes that provide in-depth information for the age group of the students in the school. Students ask for three key services from their school library:

• Guidance in examination and evaluation of information, especially that located on the Internet and from live content experts.
• Access to up-to-date print volumes of nonfiction reference resources; information content students can’t afford, while most have access to electronic documentation through computer terminals at home.
• Access to guidance and resources during and beyond school hours (24–7)—virtual reference services and online chat areas for information consultation must be part of the future school library learning laboratory.

The library as a learning laboratory can be a setting for experimentation with information selection, critical review of information applications, and critical review of presentations intended to ad-

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**Resources**


*eSchoolNews.* “Libraries & Technology: Look it up: high-quality school library programs lead to achievement.” www.eschoolnews.com/resources/reports/librariesandtechnology/


www.ciconline.org
dress student-raised community issues. Those educators who are most likely to match the characteristics of the successful instructional media specialist and information mentor are those who have proven team-teaching skills as well as knowledge and appreciation of literature, information technologies, and instructional strategies.

To accelerate the acceptance and practice of full-time instructional leadership and information mentoring, actions must be taken in several key circles:

- Assocations which accredit public schools must adopt a demanding model for quality school media centers staffed by qualified professionals with supporting technical and resource assistants in each school, regardless of grade level and size.
- Universities that provide education programs must adopt elements in their training and practice experiences which allow future teachers to fully understand and appreciate the potential of instructional technology, multiple resources, inquiry, critical thinking, and information literacy through collaboration with the school library media program.
- Universities that provide education for future school library media specialists must demand demonstration of high-quality teaching abilities and information-analysis abilities, as well as efficient use of technology for information management, by those who seek a degree as a school library information and instructional specialist.
- School boards, superintendents, and principals should expect high-quality performance by school library media professionals. The new library media specialist is to be held accountable as a leader in instructional design and document access, which will lead to effective and efficient use of information by a greater number of students and teachers. Such abilities should be demonstrated at the time of potential hiring and results presented annually so that board members and the greater educational community understand the impact these new information mentors can have on learning in the Information Age.

Coming to Our Senses

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Founders and General Partners,
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Imagine a world in which we never meet face to face. The library is online. We never leave our room. Shopping means letting your fingers do the walking. Having a little visit and a cup of coffee just means don’t spill it on the keyboard. The office? Oh, you mean the extra bedroom where the company put the telecommuting gear. All this may seem familiar—if not out of touch—because these were the predictions of 10 years ago.

The applications and implications of digital ubiquity didn’t materialize the way we expected. That’s always the way with new technology; the engineer proposes, then the consumer disposes. Instead, our human need for interaction, our imperative to engage all our senses—to smell, to taste, to touch, and to hear—led us to ignore how things were supposed to work and, instead, made them serve our needs. Several years ago, it was easy to believe that the physical library might go the way of other quaint relics. Instead, librarians all over the world discovered the value of interaction. Readings, plays, study sessions—or just plain talking about knowledge—have come back to the neighborhood near you.

What is the role of place in our life? Is a library just the terminus of a wire or is implicit community created when we do similar things in a common space? The new technology has shifted the focus from the inanimate object (the book) to the librarian. Information is not knowledge, but the overwhelming amount of information now available through all of the wizardry of computers and connections can either drown us or lead us into new paths of learning. It’s the librarian who is the path breaker. The more information we can access, the more we need intermediaries who can help us turn it into knowledge.

The library (in both its physical and digital form), with its infinite connectivity to information, is now one of the critical primary and supplemental sources of knowledge. But where the Dewey Decimal System allowed librarians to categorize and us to find, the new “stacks” are in the ether—we need people to help us explore, sift, and mine knowledge. There are new businesses being created that recognize these needs. Mining software, databases of esoterica, and a myriad of knowledge tools are all important supplements of the new library. They are changing the way we work and the way libraries work.

Some of these changes affect physical space, as thousands of journals (including archives) become available online, but they also affect the economics of libraries and businesses. The separation of corporate libraries and public libraries is disappearing as users become more sophisticated about finding information anywhere and providers choose not to build duplicative systems. Publishers’ revenues are shifting from hard copy to databases, and libraries’ expenses are shifting from subscriptions for individual journals to compendiums.

With the “business” of the library and the business models of publishers in flux, the challenge for both is to assure that technology is transparent; that users understand and can access the world of information—and that the costs don’t overwhelm us.

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