Health sciences library building projects: 1994 survey

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Designing and building new or renovated space is time consuming and requires politically sensitive discussions concerning a number of both long-term and immediate planning issues. The Medical Library Association’s fourth annual survey of library building projects identified ten health sciences libraries that are planning, expanding, or constructing new facilities. Two projects are in predesign stages, four represent new construction, and four involve renovations to existing libraries. The Texas Medical Association Library, the King Faisal Specialist Hospital and Research Centre Library, and the Northwestern University Galter Health Sciences Library illustrate how these libraries are being designed for the future and take into account areas of change produced by new information technologies, curricular trends, and new ways to deliver library services.

INTRODUCTION

Frequently, today’s libraries must cope with situations in which the space available fails to match the space needed in either form or function. Older library buildings designed at the turn of the century and the sealed buildings of the 1960s do not meet basic criteria for energy efficiency, are not able to handle automated systems, or do not have room for materials of varying formats. The information explosion, automation, and financial and space constraints combine to place considerable pressure on already stretched library facilities.

Developing technologies and automated applications represent perhaps the most significant forces changing the use of traditional library space. For example, an online catalog or CD-ROM catalog frees some of the area formerly committed to a card catalog and may provide a net gain in square footage; however, the use of such systems frequently changes user traffic patterns. Online acquisitions systems reduce the amount of space required for extensive paper files but may require redesigned work space. The “scholar workstation” or “knowledge workstation” allows researchers to access regional and national libraries and to arrange interlibrary loan requests from their offices. Researchers can download from online resources and search specialized databases, processing and manipulating a variety of information resources at a local workstation [1]. The space implications are astounding for a library or institutional environment where workstations contain enhanced pointing devices to Internet, applications such as hypertext, and window capabilities to deal with multiple work functions on the same screen.

However, technology for the sake of technology is rarely affordable or desirable. Although it can be an effective tool for accomplishing the goals of serving library clientele and managing operations more efficiently, the demands on existing structures, arrangements, and furnishings are constantly changing [2]. Norton and Evans believe that the use of the personal computer and our ability to keep pace with technology involves distinct phases [3]. Phase 1 is the “transformation of tasks,” changing the way people work and making individuals more productive; phase 2 is the “transformation of the process,” making organizations more productive, changing the economics of organizations, and changing the organization; phase 3 is the “transformation of business,” changing the way the organization works and creating breakthrough business. At which phase a library or its parent institution is depends to a great extent on the degree to which it has embraced technological ap-
Applications. Most libraries are still in phase 2 with a few moving rapidly toward phase 3, but all phases have a significant impact on the ways libraries access, allocate, and utilize space.

New information technologies and the extent to which they affect traditional book and periodical collecting are also causing libraries to reexamine the presumptions upon which the current collection and services are built. Curricular trends, expressed student needs for study space, and access to electronic resources foster fresh perspectives and encourage us to take advantage of the expertise and perspectives of others in our health sciences community. Potential development of new ways to deliver knowledge resources and library services affect design decisions. Library staffing changes needed to accomplish all of the above must be identified and their implications fully understood by library planners. Essential to all these issues is the question of whether libraries will survive as physical space [4].

Because arguments by librarians for additional space can be perceived by administrators as self-serving, librarians must clarify their thinking and be able to express the specific functions of the health sciences library of the future to those outside the profession. For example, the need for agreement on issues of centralization versus decentralization is a critical precondition to planning library space. This issue is often expressed in terms of departmental libraries, intracampus networking, and multiplicity of information formats. Little persuasive evidence supports the position that the development of new access points to information will decrease traffic to a centralized facility. Until electronic networks fill all the needs served by a library facility, both intellectual and sociological, it is probably more accurate to consider networking as a supplement to rather than a substitute for a central physical library. Accessing computer networks is a solitary activity that does not fulfill the needs of those who desire a place with other people engaged in the same activities or who need a place to meet actively with groups, tutors, or classmates.

SELECTED HEALTH SCIENCES LIBRARY PROJECTS

The prospect of designing and building new or renovated library space means that the library staff and the community served by the library must be engaged in discussion of a number of both long-term and immediate planning issues. This year's Medical Library Association annual survey of health sciences library building projects identified ten libraries planning, expanding, or constructing new facilities (Table 1). Two libraries are in predesign phases and were not able to provide requested information. The following building projects by a medical association library, an academic medical library, and a specialist hospital and research center library illustrate how health sciences libraries designed for the future take into account areas of change produced by new information technologies, curricular trends, and new ways to deliver library services.

Texas Medical Association Library

The Texas Medical Association (TMA) of Austin, a private, professional organization dedicated to ensuring that "physicians care for Texans," was established in 1853. Since 1922, TMA has supported the concept of a library as a membership benefit. TMA has been housed in eight different buildings; however, in 1953, the TMA Board approved construction of a building dedicated for primary use as a library.

When originally built, the building was designed to "last for 100 years"; however, it fell more than sixty years short of the plan as TMA added new programs and services to meet the expanding needs of its growing membership. Over the years, library space in the main building was rededicated to other departments or functions until TMA was forced to find additional space for a staff that had grown to more than 170 by 1990.

Today, the TMA Library includes more than 46,000 volumes in book, journal, and media collections. Services include a variety of options for busy practicing physicians, including free database searches and reference searches as a benefit of their membership in the association. The library occupies a position of prominence in the new building, with more than 13,000 square feet on the fifth floor of a ten-story, multipurpose building (Figure 1). Large windows surround three sides of the library, providing ample light and a view of Austin's capital building. Visitors to the library are also provided with a panoramic view of the surrounding Hill Country landscape.

The library includes a beautifully appointed reading room that offers physicians a peaceful retreat from their busy offices. Furnishings in the new library are a combination of old and new, with the addition of modular office areas for reference staff. New metal shelving with light oak end panels are provided by Library Interiors (Figure 2). SpaceSaver compact shelving houses older materials.

An elegant gallery area for history-of-medicine exhibits is also located on the same floor as the library. The development and installation of these exhibits is the responsibility of the library. Most of the artifacts, photos, and printed materials come from the TMA archives and historical collection, with some items on loan from area museums.

Additionally, the first floor also includes a 300-seat auditorium for association meetings and meetings of
Table 1
Recent health sciences library building projects—1994 survey

<table>
<thead>
<tr>
<th>Name of Institution</th>
<th>Name of library</th>
<th>Architect</th>
<th>Square feet</th>
<th>Type of construction</th>
<th>Cost of project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baystate Medical Center</td>
<td>Health Sciences Library</td>
<td>Clifford Reznik, AIA</td>
<td>9,350</td>
<td>Renovation</td>
<td>$375,000</td>
</tr>
<tr>
<td>Springfield, MA</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>King Faisal Specialist Hospital and Research Centre</td>
<td>Health Sciences Library</td>
<td>Adel el-Hammady</td>
<td>195,000, building</td>
<td>New</td>
<td>n.a.</td>
</tr>
<tr>
<td>Riyadh, Kingdom of Saudi Arabia</td>
<td></td>
<td></td>
<td>16,000, library</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northwestern University</td>
<td>Galtier Health Sciences Library</td>
<td>Holabird &amp; Root</td>
<td>45,000</td>
<td>Renovation</td>
<td>$10 million</td>
</tr>
<tr>
<td>Chicago, IL</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Ohio State University</td>
<td>Prior Health Sciences Library</td>
<td>Acocck Associates</td>
<td>116,000</td>
<td>Renovation</td>
<td>$7.7 million</td>
</tr>
<tr>
<td>Columbus, OH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Joseph Hospital and Health Care Center</td>
<td>St. Joseph Hospital Library</td>
<td>Heery International Buffalo Design</td>
<td>750</td>
<td>New/addition</td>
<td>n.a.</td>
</tr>
<tr>
<td>St. Thomas Hospital</td>
<td>Julius Jacobs Health Sciences Library</td>
<td>HDR (Henningson, Durham &amp; Richardson, Inc.)</td>
<td>5,100</td>
<td>New</td>
<td>n.a.</td>
</tr>
<tr>
<td>Nashville, TN</td>
<td></td>
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<td></td>
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<tr>
<td>Texas Medical Association</td>
<td>Texas Medical Association Library</td>
<td>Library Interior: RTG Partners, Inc.</td>
<td>123,665, building</td>
<td>New</td>
<td>$16 million, building</td>
</tr>
<tr>
<td>Austin, TX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$1,796,269, library</td>
</tr>
<tr>
<td>Building: Harwook K. Smith</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of South Dakota</td>
<td>Lommen Health Sciences Library</td>
<td>Rysavy Hartman Leither Architects</td>
<td>12,600</td>
<td>Renovation</td>
<td>$6.8 million, project</td>
</tr>
<tr>
<td>Vermillion, SD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$502,664, library</td>
</tr>
</tbody>
</table>

health-related groups. The auditorium is named in memory of Dr. and Mrs. Sam Thompson of Kerrville, Texas, who, in the early 1950s, made a major bequest in an irrevocable trust for building and operating the association’s library. Nearby, a computer training room is available for teaching TMA members and other health professionals how to search a variety of health-related databases.

The library has also established a new Continuing Medical Education (CME) Resource Center to provide programs and materials for CME required by physicians for relicensing in Texas. Installation of library-system software began in early 1994 and includes the automation of circulation, serials, and cataloging functions. Future plans include a dial-up option for members to access the library or any service, includ-
ing database searches, photocopy requests, class information, and interlibrary loans.

**Health Sciences Library, King Faisal Specialist Hospital and Research Centre**

The new Health Sciences Library at the King Faisal Specialist Hospital and Research Centre located in Riyadh, Saudi Arabia, has been long awaited by library staff and clientele alike (Figure 3). Originally designed in 1986, the building was not completed until November 1992. Construction was delayed by several factors, including the gulf crisis and war. Fortunately, the delays enabled library management to make numerous modifications to take advantage of emerging technologies and to accommodate new li-
Ludwig

Figure 1
Texas Medical Association Library, floorplan

For example, when the library was planned in 1986, a local area network; an integrated library system for acquisitions, circulation, cataloging, and serials; and end-user searching were not envisioned. To accommodate these changes and to house the four CD-ROM network towers, a library assistant's work area was modified.

Directing the work of ten day laborers (two workers loading, four workers transporting, and four workers unloading), two teams of two library staffers each worked three ten-hour shifts alternating with four days off to relocate the library. The three-week project was completed in April 1993.

Located on the top floor of the research center and a great distance from the clinical areas, the old medical library with its mismatched cast-off furniture and seating for fifteen library patrons has been replaced by a new facility with twice the floor space. Attached to the main hospital, the expansion building features several academic-affairs and postgraduate-education departments, including the library and photographic and conference rooms of the Postgraduate Center. With a combination of fifteen oak study tables and twenty-five oak-and-laminate study carrels, the new Health Sciences Library seats approximately one hundred people.

The honey-oak carved shelving end panels, study tables, catalog "star" (a star-shaped cluster for the online catalog terminals), circulation desk, reference desk, and reference shelving units are custom made. Interesting features include solid wood "modesty panels" for the study tables and slanted consultation surfaces for the reference shelving. Most of the office furniture is SteelCase, including handsome wrap-
around workstations in shades of pixilated coral and grey, and a coordinated palette of multi-colored tweed, burgundy, periwinkle blue, and coral swivel chairs. Smoke-glass-and-brass entrance doors were a last-minute change from homely brown laminate doors with tiny fire-glass inserts.

Future challenges include designing effective signage and moving the electronic book catalog terminals onto the catalog star. A problem currently exists with the network connection cemented in a concrete floor. Until relocation can be accomplished, the electronic catalog terminals are located next to end-user MEDLINE terminals.

Galter Health Sciences Library, Northwestern University

The Galter Health Sciences Library, Northwestern University, Chicago, Illinois, is embarking on a $10 million renovation-and-expansion project to prepare for information management for the beginning of the twenty-first century. Beginning in the fall of 1990, the Library Planning Committee defined its vision of the library’s role within the McGaw Medical Center:

The vision of the library and information center is for it to be with the user. The sources of information may be anywhere. The user may be anywhere. The library is anywhere the user wants it to be.

The building project does not include new construction, but rather renovation of existing space (Figure 4). This presents several problems, because the Galter Library is assigned 44,000 square feet, and library standards for existing collection size and projected user standards suggest that 80,000 square feet is appropriate. Emphasis is not placed on reinventing technology but on using it in new ways. For example, both network and dial-up access to the library’s MEDLINE service will be verified by the network server rather than by librarians. Using networks to link users in carrels or dormitory rooms with instructional software will also create a sophisticated learning environment for students and will establish a mutual dependency between the Barnes Learning Resources Center (LRC) and the teaching faculty. The LRC will house fifty computer workstations configured for digital media such as video and slides.

Some special aspects of this building project include implementing the use of technology for better information management as the library’s first priority. The library staff is concentrating on building an information infrastructure that will satisfy current and future demands for electronic information. Conduit for wiring and cables is being extended throughout the new library. Internally, the library is being networked for better staff communications, and, externally, the library is being linked to the university’s backbone as well as various hospital networks. Wireless technology is also being explored.
Traditionally, the card catalog was considered the heart of the library, because it informed users of the library's holdings. The Galter Library plans to build a new information system that encompasses the current Northwestern University Totally Integrated System and knowledge databases such as MEDLINE, PSYClit, and Current Contents; links users to Internet resources with such navigation tools as Gopher and WAIS; provides guides to electronic health sciences information resources; and provides library resources to the users' desktops.

The Galter Library renovation-and-expansion project places more emphasis on the library as the user's workplace and less emphasis on the storage function associated with traditional libraries. Technology will be hidden in the building's infrastructure, allowing more space to be committed to user and staff workspace. The library's entire lower level will be devoted to compact shelving for retrospective materials and archival materials for the medical and dental schools. Reserve, LRC, and special collections will also use compact shelves in order to preserve space for users and staff. In addition to smart miniclassrooms in the LRC and on stack floors, carrels will be linked to the university backbone for users who bring their own information tools into the library. Staff offices and work areas will also rely heavily on network connections.

Both the original library that was dedicated in 1927 and the 1965 expansion reflected the growth of Northwestern's medical education and research programs. The current renovation project will build on the strengths of earlier architectural work by restoring the original library's decorative ceiling beams, adding stained-glass windows salvaged from a former hall on the Chicago campus, retaining the current stack tower but redirecting shelving to provide natural light, and building a new grand staircase to link all four library levels. Construction will start in the winter of 1994, with project completion estimated for early 1996. Construction will take place in phases so that the library may remain functional throughout actual renovation and construction. Phase 1 will concentrate on renovating the library's new second floor, adding a new elevator, and renovating the library's lower-level stack floor. Phase 2 will concentrate on the library's main floor, including the public service functions, the reference room, and the LRC.

SUMMARY OF WORKS IN PROGRESS OR RECENTLY COMPLETED

The author wishes to acknowledge his indebtedness to library directors, project managers, and consultants who generously provided information about their library buildings and their layout and interior design as well as construction data for this article. The data obtained from eight health sciences library projects are reported in Table 1. Where library construction is part of a larger project, cost per square foot is generally—although not always—based on the library's actual portion of the project, rather than averaged for the entire project. Unless otherwise indicated, square footage is presented as gross rather than net assignable. Project costs include furnishings, equipment, and mechanical services and, in renovation or addition projects, may include tenant moving costs.

REFERENCES


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