

# Strategic Positioning and the Building Project: Penn State Harrisburg's "Library of the Future"

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The academic library has historically been viewed as an institution's repository of knowledge and gateway to recorded human knowledge. This perception, which placed the library at the center of the academic enterprise, was a valuable positioning asset during the print era. Although studies of scholarly communication have demonstrated the presence of parallel, informal communication systems within academic disciplines,<sup>1</sup> the library has remained the preeminent point of access to accepted knowledge for students, faculty and many community users. However, in a period of decentralized, networked access to electronic databases, expanding use of the World Wide Web, and distance education, some administrators and commercial information providers have questioned the future importance of print collections and the need for additional physical space for libraries.

Early challenges to the library's primacy emerged in the mid-1980s, as online database vendors began targeting the end-user as a customer.<sup>2</sup> A much more serious challenge has been provided by the exponential growth of the Internet, particularly the World Wide Web, during the 1990s. With a growing body of information

readily available from classrooms, faculty offices, dormitories and off-campus locations, a widely used, parallel system of information access has developed in less than five years.

Academic libraries have responded to this trend by adopting Web-based automated library systems, offering a proliferating array of subscription databases through their online public access catalogs (OPACs), and incorporating both Web and online database search training into their bibliographic instruction programs. They have also scanned unique resources, particularly materials usually kept in special collections, to provide remote access from their Web pages. The terms "library without walls," "virtual library," and "digital library" have been used to convey the library's growth from a site-based resource provider into a networked access point to a fast-growing body of information available, without regard to physical location, in electronic formats.<sup>3</sup>

While these initiatives have expanded the range of resources available to the academic community and demonstrated the library's ability to use technology creatively, they have not assured its continued primacy as an information and knowledge provider in the academic com-

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munity. Indeed, spurred on by Internet “hype” and their own positive experiences, administrators, faculty and students have increasingly embraced the Web as a primary source of information.

This growing acceptance of the Web has already had important implications for the future of the physical library. Brian Hawkins has demonstrated the libraries are acquiring an increasingly smaller proportion of the world’s information in their print collections.<sup>4</sup> A California State University-Monterey Bay administrator announced in early 1995 that his new campus would open without a physical library, relying instead on document delivery; although a library has indeed been built at CSU-MB, the idea of reliance on a virtual library was introduced into the higher education dialogue.<sup>5</sup> Database vendors have approached university administrators, bypassing library directors, with the idea that full-text journal subscriptions could eliminate the need for future expansion of library facilities by containing the physical growth of library collections. The University of Phoenix has developed an extensive collection of databases to provide remote access to research materials for students in its far-flung programs. In some cases, academic departments and computer centers are initiating their own subscriptions to electronic resources without consulting the library.

While administrators have discussed the need for expansion of library facilities in the Information Age, students have increasingly incorporated Web materials into their research strategies. John Lubans has found that middle and high school students in a summer program are more likely than current Duke University freshmen to rely heavily on Web sources for their research and feel more confident in performing Web searches without librarian assistance.<sup>6</sup> As new generations of students reach college age with growing experience and skill in using Internet resources, print resources may seem increasingly staid and uninteresting, their intellectual value notwithstanding.

The library facility has been generally perceived by the academic community as a place for research, study and the storage of collections. While automated systems, databases and bibliographic instruction have been seen as welcome enhancements, they have largely been viewed as initiatives requiring, at most, rewiring of facilities. In an information environment characterized by increasing use of electronic databases and the World Wide Web, the case for expansion of library facilities can be diffi-

cult to make. In many instances, administrators may see investment in technology-enhanced classrooms and wired dormitories as a better investment for bringing electronic resources closer to the student end-user.

It is the position of this paper that library facilities, as well as electronic resources, new services and expert staff, are crucial to the future of academic libraries. Indeed, if technology-enhanced library facilities are not developed through new building projects, additions, and renovations of existing buildings, the library’s historic function of providing systematic access to validated knowledge will slowly be undermined. In addition, the library will become increasingly marginalized as information users access Web resources from other locations through Internet service providers. At the same time, librarians must not overlook the importance of the traditional library to many of our stakeholders. Although humanities and social sciences faculty are becoming increasingly comfortable with electronic resources, they are the core constituency supporting the intellectual function of the library in the college or university. In short, it is important to provide the platform necessary for future information services without alienating the library’s traditional constituency.

Librarians face three challenges in making the case for new, expanded or renovated buildings. First, they must demonstrate the need for improved facilities in terms of larger institutional objectives, such as expanded enrollment. In this context, they must demonstrate that emerging librarian roles and competencies are essential for institutional and academic success. Second, they must demonstrate the “value-added” contribution of improved library facilities to institutional objectives. Third, they must develop a new model for the academic library building in the 21<sup>st</sup> century, one, which redefines “the library as place,” rather than arguing for a larger and newer facility doing the same things.

This position paper describes the experience of a medium-sized academic library in advancing the “Library of the Future” concept as a strategy for creating a state-of-the-art, transformational library. It identifies the library’s efforts to align the building project with broader institutional objectives, such as economic development and expanded enrollment. It addresses the political issues encountered in persuading administration, faculty, physical plant and technical experts to “buy into” the library’s vision. It will analyze both successes and failures encountered in the use of that strategy.

### **Penn State Harrisburg Case Study**

Efforts to secure funding for a new library building at Penn State Harrisburg were initiated in 1978, when a metal "Butler building" annex was connected to the existing facility to accommodate collection expansion for an anticipated five years. Following prolonged efforts to secure State funding, design of a new library was begun in early 1996, with construction starting August 31, 1998. Occupancy is anticipated in January 2000. The evolution of this project from a simple expansion of library space into a "Library of the Future" offers an informative case study, one in which a new building model has been utilized to mobilize institutional support and to align the library with broader institutional objectives while providing a technology-enhanced environment for 21<sup>st</sup> century students.

Founded in 1966, Penn State Harrisburg is an upper-division and graduate college located on the site of a decommissioned Air Force base site in Middletown, PA, nine miles from the State Capitol in downtown Harrisburg. It offers 25 baccalaureate, 17 master's degree, and 2 doctoral programs to its 3600 students, 55 percent of whom hold full-time jobs and 24 percent of whom work part-time. Its undergraduate students are primarily graduates of Harrisburg Area Community College and various two-year Penn State campuses. Its programs are focused in five schools: Behavioral Sciences and Education; Business Administration; Humanities; Public Affairs; and Science, Engineering and Technology.

The college has a strong commitment to community outreach and economic development as important components of its mission and as one college in a land-grant institution. It is actively engaged in a number of economic development organizations, and its faculty members have developed a strong network of relationships with state government, school districts, corporations and businesses, and non-profit organizations.

Although its enrollment has increased steadily in the 1990s, the College faces significant local competition for students from a number of distant institutions offering center-based programs in high-demand areas, such as business administration, information systems and education. The College also faces a challenge from the long-time mayor of Harrisburg, who has repeatedly campaigned for a four-year institution within the city limits of Harrisburg.

The Penn State Harrisburg library holds the third largest collection among Penn State's 27 libraries. Its

251,000 volumes, 1557 periodical subscriptions and 1.1 million microforms are surpassed only by the Paterno/Pattee Library at the University Park campus and the Dickinson School of Law Library. In addition, the library offers its students access to more than 160 databases, most of them funded centrally by University Libraries. As a member of the Associated College Libraries of Central Pennsylvania (ACLCP), the library is able to offer PSH students reciprocal borrowing privileges at 21 other academic libraries in the region. Ironically, the current Heindel Library receives significant use by students from Penn State Harrisburg's distant, non-ACLCP competitors, many of whom have launched academic programs in the Harrisburg area without providing significant library collections or services.

A draft program statement for a library/classroom building was completed in 1986, the first year that a library for Penn State Harrisburg was included in Penn State's request for capital funding from state government. This document envisioned the new library as the centerpiece of a campus mall. In addition to library facilities, the building would include classrooms and might include an auditorium or an art gallery, depending on size. However, the project suffered successive line-item vetoes from the governor in 1986, 1988 and 1990, while moving gradually upward on Penn State's capital projects priority list. It was clear that both political support and a more compelling vision were needed to secure funding.

The initial step toward development of that vision was a concept paper, entitled "Toward a Library of the Future," drafted in early 1992 by the library director. Recognizing the building project as an opportunity for transformational enhancement of collections and services in a medium-sized library, the concept paper argued that the new library should anticipate and accommodate new technologies and formats as paralleling print collection growth in importance. In short, it took the position that the academic "clout" of the new library could be increased profoundly through creative use of technology, rather than incremental improvement and enhancement of space.

This paper was shared with the Task Force on the New Library, an ad hoc committee appointed by the Provost to generate support for passage of funding for the new building. The committee endorsed this document, which recognized that development of a more extensive, in-depth print collection was unlikely within the library's acquisitions budget, while viewing sharply

increased use of the Internet and electronic databases as an appropriate strategy for expanded access to information. Copies of the paper were sent to all state legislators that year as part of an informational packet encouraging funding for the new library.

The "Library of the Future" vision was given a significant boost in Summer 1992, when a capital campaign feasibility study recommended that the College establish a "unique niche" in order to raise funds. The report noted that there were numerous academic libraries in Central Pennsylvania and that major donors had already given to many of them. In order to raise the funds needed for an expected "match" of state construction money, a different focus would be needed. The Library viewed this assessment as legitimizing the technology-focused vision developed earlier that year, and the "Library of the Future" concept was used consistently thereafter as a focal construct.

Following a shift in party control of the state Senate in November 1992, a capital budget bill including the new library was passed, with a funding level set at \$17.33 million. The library project survived the Governor's line-item veto and received funding authorization in late December 1992. That action placed the project in a queue of approved projects awaiting the release of funding. Design and construction funds were finally released on January 13, 1995, Democratic Governor Robert P. Casey's last full day in office.

While the College awaited the release of project funds, the library director was asked in February 1993 to prepare a program statement in two weeks. With substantial input from library faculty and staff, a 44-page program statement had been completed by late 1993. This program statement retained the campus enhancement focus of the 1986 document, but expanded upon it to propose a facility in which print and electronic resources would have parallel importance. The document included several new features, such as: data access from all seats in the building; a state-of-the-art library instruction lab; a document delivery/ copying center; and a 24-hour reading room.

In addition, the new program statement included the Pennsylvania State Data Center (PSDC) Operations Unit as the only non-library unit to be housed in the facility. The State Data Center is the major unit providing analysis of demographic and economic Census data for businesses, state government agencies and non-profit

organizations in Pennsylvania, responding to 12,000+ data requests annually. The Library sought the inclusion of the State Data Center, rather than the Computer Center, Audio-Visual Services or an auditorium, in the building to provide a unique partnership which would advance the College's economic development mission. So far as the College is aware, this is the only collocation of an academic library and state data center under the same roof in the United States. The addition of the State Data Center should promote a unique, symbiotic partnership between two major information utilities. It also underscores the Library's commitment to the College's economic development mission.

The appropriateness of the "Library of the Future" vision was further reinforced in September 1994, when the library director visited the new Indiana University-Purdue University at Indianapolis (IUPUI) Library. Opened in fall 1993, the IUPUI library was the first large academic library in the United States to offer data access (CAT-3 and fiber optic cable) at every seat to students. The IUPUI director, Barbara Fischler, described the development of the vision for that library and offered ongoing encouragement over the next few years for implementation of the PSH vision. Photos taken during the IUPUI visit were used to demonstrate the possibilities for ubiquitous access to electronic databases and the Internet at PSH.

A formal Program Committee, appointed by the University Provost and including Penn State Physical Plant and Telecommunications officials, was appointed to develop and refine the existing program statement. This committee, chaired by a retired colonel serving as Special Assistant to the Penn State Harrisburg Provost, completed its work between January and June 1995. The Library Director, the Head of Public Services and the Associate Dean of University Libraries for Planning and Administration represented the library on a twelve-person team. Most of the facilities included in the library draft were retained, but an Art Gallery/Reception Hall was added to address the College's need for art displays and an elegant setting for receptions. The 24-hour reading room was eliminated due to low projected demand from commuter students, while the document delivery/ copying center was eliminated for staffing and copyright reasons. Ubiquitous access to power and data from all seats was retained, as was the State Data Center. Telecommunication officials, who maintained that unshielded twisted pair category 5 (UTP CAT-5) wiring was the in-

dustry standard, were persuaded to allow the inclusion of fiber optic wiring to the desktop as a bid alternate.

Selection of an architect could not proceed until the newly elected administration of Governor Thomas P. Ridge, a Republican, had appointed an Architectural Selection Board in July 1995. The Board announced the project in the *Pennsylvania Bulletin* in October, and 80 bids from architectural firms were submitted. The unusually large interest in the project was significantly attributable to the Library of the Future focus, providing an early indication that the project would receive substantial visibility in the library community. Following interviews with the top five bidders, the joint venture team of Shepley Bulfinch Richardson Abbott (SBRA) of Boston and Hayes Large (HL) of Altoona and Harrisburg received the design award. The design process was completed between February 1996 and April 1997.

The architectural team successfully delivered the facility design anticipated in the Library of the Future vision. One creative enhancement during the design phase was the upgrading of the snack bar to an "Internet Café" or CyberCafe. Data and power access were provided at 92% of all general user seats, a raised floor was planned to permit easy rearrangement of the library instruction lab and two technology-enhanced classrooms, and video ports were added for the Art Gallery/Reception Hall, two seminar rooms, the library instruction lab and two technology-enhanced classrooms. A 115,000 square foot building with more than 700 seats, extensive seating in natural light areas, and an aesthetically pleasing curve was created.

### Consensus Building

The advancement of the Library of the Future vision over a multi-year period required attention to political issues, as well as technological advances occurring while the funding campaign, program statement development, and building design were taking place. Three distinctive political phases in the mobilization of academic community support for this vision can be distinguished during 1992-97 period.

First, it was important to build as much community consensus as possible during the early, pre-Web years of this period. The academic community did not universally accept the Library of the Future concept during this period. Humanities faculty, among the strongest supporters of the existing library and the need for a new facility, were not initially enthusiastic about a project giving substantial focus to Internet and electronic resources.

Numerous articles articulating the vision were published in the library's newsletter during this period to increase understanding and build support for a different type of library.

Nevertheless, some faculty continued to express concern about the direction in which the project was proceeding. As a result, the Penn State Harrisburg Provost appointed an ad hoc committee, excluding the library director and chaired by a European History professor, in spring 1994 to review the library draft of the program statement. After receiving consulting input from the University Libraries' Associate Dean for Planning and Administration, the committee concluded that the focus was generally appropriate. This endorsement substantially legitimized the Library of the Future concept. However, faculty input in the library director's fifth-year review, in fall 1995, still indicated that the vision did not enjoy universal support.

Ironically, the 1995-96 flowering of the World Wide Web, a technological advance that threatens libraries in some ways, served to quietly vindicate the library's vision. Although one faculty complaint about the need to focus on "the library of the present" appeared in the student newspaper, criticism of the futuristic vision largely evaporated as students and faculty made increasing use of the Web and new electronic databases, such as Lexis-Nexis and ProQuest, offered by the library. The library also recognized the need to make the facility welcoming to users at all levels of comfort with technology. Library Faculty offered approximately 250 Electronic Resources workshops in the 1995-96 year.

The library also began referring to the new building as a "hybrid print/electronic facility," reassuring traditional supporters that the printed book and journal would not be relegated to marginal status. Regional visibility was secured for the first time in August 1996, when a three-page article on "The Library of the Future" was included as one of four projects impacting the area's future in a "Harrisburg—A City on the Move" section of a widely read public television magazine.<sup>7</sup> The Library continued to use its own newsletter as a vehicle for communicating the concept within the academic environment and to interested community members, such as the College's Board of Advisers.

Finally, as the April 1998 groundbreaking and the August 31, 1998 construction start approached, a few faculty and students began questioning the need for a new library since "everything's on the Internet." At this

point, it became essential for library personnel to draw distinctions between the higher-quality subscription material offered in library databases and the unfiltered information available on the Internet. Although the library's bibliographic instruction program was already emphasizing critical thinking about electronic resources, the quality distinctions needed to be explained often to Internet enthusiasts inside and outside the library. The library director also tailored his groundbreaking ceremony remarks to clarify and reinforce the vision of a hybrid print/electronic library.

The phrase "visible signs of progress" has been used to emphasize the positive visual impact made upon individuals by physical change. The importance of the facility for the College's future became dramatically evident in December 1998, when the erection of the building's structural steel framework began. Project supporters and doubters alike were amazed by the building's massive scale, which makes it slightly taller than the old, three-story Air Force classroom building in which the majority of College classes are held. A unique uplifting of morale College-wide was observable, as administrators, faculty, students and staff recognized that the building would both provide a first-rate research environment and make an impressive statement to potential students, the community and the Mayor of Harrisburg. Plans were initiated to level a low hill partially obscuring views of the library from the main entrance road, thereby making it visible from all parts of the campus as a landmark building. Central University funding for five new positions was made the College's top budgetary priority in its 1998-99 strategic plan update.

### **In The Meantime...Advancing Library Services**

A bold vision cannot be implemented readily if the library is not already showing itself to be an innovative organization. The Penn State Harrisburg library undertook a number of initiatives in the 1990s to permit the delivery of strong, technology-enhanced services even as plans for the new library were being developed.

Four innovative librarians comfortable with technology were recruited between 1992 and 1995. Two of these librarians assumed positions, Electronic Services Reference Librarian and Public Affairs/Government Information Librarian, restructured when existing reference positions became vacant. The Electronic Services Reference Librarian: 1) upgraded equipment, replacing dumb terminals with PCs with printers; 2) Implemented

a Novell LAN providing access from one menu to the OPAC, online databases, CD-ROM databases, and the Internet; and 3) created a Web page focused around subject linkages to high-quality Web sites. The Public Affairs/Government Information Librarian developed a strategy for systematic access to government information in a non-depository library in 1995 and 1996.<sup>8</sup>

A new Head of Public Services was appointed chair of the Electronic Services Task Force, which embarked upon a major print index cancellation project in Fall 1994 and replaced those indexes with online databases. This project was so successful that the cancellation of 24 print indexes was accomplished without a recorded complaint. The Head of Public Services also launched a broad, continually-evolving series of Electronic Resources workshops to familiarize users with new databases and the Internet, while also increasing their comfort levels with these resources. A new Business Reference Librarian assumed leadership for the library portion of the American Association of Collegiate Schools of Business Administration (AACSB) accreditation effort, resulting in full accreditation of the College's master's and baccalaureate programs in Spring 1998.

The library's strategy of complementing print resources with access to relevant Web sites and electronic databases drew favorable review from the accreditation team.

The contributions of these four librarians helped to create a climate conducive to the implementation of the Library of the Future vision. Had the implementation of innovative programs been deferred, it is likely that fewer positions would have been requested from the University budget and other units would have placed claims on vacant spaces in the new facility, such as group study rooms.

### **Advancing Institutional Objectives**

Penn State Harrisburg's Library of the Future was planned to address a broad array of institutional needs. As library personnel repeatedly advanced the vision, the College leadership gradually came to view the new facility as an academic enhancement, a recruiting tool, an economic development resource and a political asset in the regional higher education context.

The academic benefits of the new library will become evident shortly after it is opened in early 2000. Students will have ample, comfortable spaces for individual and collaborative study, and the facility will seat

20% of the student body at any one time. Faculty and graduate carrels will be available for the first time. A state-of-the-art instruction lab on raised flooring will provide workstations for 35 students and flexibility for easy room reconfiguration. Laptop users will have access to data and power at 92% of all seats.

Despite the rapid increase in Web use among prospective students, recruitment officials still report that students expect a strong library. While collections and services remain important, a state-of-the-art facility makes a bold statement about the institution's commitment to embrace new technologies and to support technologically sophisticated students with rising expectations. Meetings with recruitment personnel are being planned to familiarize them with the new library and to alert library staff to the recruitment opportunities provided by the new building. Librarian selectors will continue to give brief candidate tours as part of the faculty recruitment process. Both printed brochures and visitor tours are being developed. The Library will be featured on the cover of the 1999-2000 catalog and on the College's Web page. Increasingly, the library facility is being recognized as a major asset for both student and faculty recruitment, and College officials are giving it prominent attention in their presentations.

Regional visibility is a third College need. As an upper-division and graduate college that has discontinued inter-collegiate sports, Penn State Harrisburg is at an inherent disadvantage in contacting high school seniors and gaining attention in the local media. However, the library project has received periodic attention from the Harrisburg *Patriot-News* newspaper, and relevant articles have been scanned onto the Library's Web page. A January 1994 ice-damming incident, which caused moisture damage to 400 bound periodicals, was covered by two area television stations. The *Central Pennsylvania APPRISE* article provided welcome publicity in 1996. Extensive television coverage was received for the April 30, 1998 groundbreaking.

The building opening and dedication ceremonies will provide excellent opportunities for media coverage in spring 2000. A major symposium celebrating the Library's opening is tentatively planned for that year. Since the library will be open to the community, it is expected to receive significant use from high school students and adult learners. These students, in turn, may boost the College's enrollment by transferring to Penn State Harrisburg for upper-division or graduate programs or share favorable word-of-mouth reactions with their friends.

The Pennsylvania State Data Center (PSDC) was the only non-library unit actively sought by the Library as a building occupant. Its presence was considered desirable to support the College's economic development and academic missions. Substantial referrals between the Data Center and the Library already occur even though they are in separate buildings. Their physical presence in the same building is expected to promote a unique symbiosis, which will increase business, government, non-profit and general public use of both facilities. This use, in turn, should promote greater outside funding support for both organizations.

By introducing a wired Art Gallery and Reception Hall, the Library sought to address a variety of cultural, educational and social needs. The Gallery will present a much-needed, elegant location for receptions and art exhibits. With data and video ports installed, the Gallery can also be converted into site for videoconferences or on-site programs. By making it multifunctional, the Library has both aligned itself with College needs and made itself the delivery site for them.

The only facility "imposed" on the Library is the art slide library, now housed in the School of Humanities. The College Provost asked that it be relocated into the new library to provide longer hours of service and College-wide access. The slide library will be housed in a room originally designated for seminars, while the seminar room will displace a planned general reading area.

Finally, as the second largest (behind the State Library) and most technologically advanced library within a 20-mile radius of the State Capitol, the new facility will be a major political asset for College's initiatives to discourage creation of a University of Harrisburg. The presence of a substantial, state-of-the-art library can demonstrate that the College is much more than a "commuter college" which cannot address broad educational needs in the Capital Region. If it is successful in enhancing the College's visibility and reputation, the Library will help confirm that, in combination, Harrisburg Area Community College and Penn State Harrisburg really do constitute a four-year institution serving regional needs.

### **Building Features**

When completed, the Library of the Future will seat more than 20 percent of the College's 3600 students and provide 26.6 years of growth space for print collec-

tions. It will provide data and power at 92 percent of its 700+ seats, enabling students to access both print and electronic information at nearly every seat. Raised flooring in the library instruction lab and technology-enhanced classroom permits flexible reconfiguration of seating arrangements, thereby facilitating both formal and collaborative learning.

The building also offers a CyberCafe where students can relax with a snack while continuing their research. Twelve video ports will permit the delivery of videoconference programs in six different locations. In addition, the building walls are modular, allowing for redesign of many areas to address future use requirements. This facility will be 3-1/2 times the size of the current library and will have approximately five times as much seating, most of it wired for data and power.

The only real disappointment in the experience has been the State's rejection of a request that unactivated fiber optic cabling be run to all data ports alongside CAT-5 wiring. However, the State did agree to run parallel pathways for a later installation of fiber optic cable, and that is being done in construction. While it would have made a later fiber installation unnecessary, this partial setback is not devastating, since the campus backbone currently supports transmission of only 4.5 mbps of data, with an expected increase to 30 mbps in several years. Since the necessary pathways are being installed, a later fiber installation can be accomplished without excessive inconvenience.

While the facility will be a major academic asset for the College, its larger significance for the library community is twofold. First, its unique combination of multifunctional and technology-enhanced spaces should permit it to be a center of excellence supporting academic programs well into the 21<sup>st</sup> century. Second, its careful inclusion of facilities which address broader College goals is an instance of strategic positioning to enable the library to be a central player in future college planning. This combination of technological enhancement and strategic alignment can both demonstrate the library's continued relevance in the Information Age and enable it to remain a vital center of the academic community, even as information access becomes increasingly decentralized.

The "library as place" in the 21<sup>st</sup> century can continue to be a physical place for access to selected print materials. It can provide a safe, non-threatening environment for individual and collaborative learning, user

training, reference assistance, and preservation. It can be a gateway to the Web and electronic databases, providing a place where print and electronic research can be conducted side-by-side. It can retain its symbolic value as the centerpiece of learning on a campus while evolving to accommodate new technologies, new formats, Web-savvy students and new learning strategies. By strategically positioning itself to utilize technology and to creatively address broad institutional needs, the library can remain a robust academic entity while also establishing its importance as an asset for the pursuit of institutional goals. The building project offers an important opportunity to create a hybrid print/electronic learning environment serving future instructional and research needs. It is also an opportunity to make the library an essential resource for the attainment of institutional goals.

The "Library of the Future" focus has served Penn State Harrisburg well by defining a new, relevant model for 21<sup>st</sup> century library service and by enhancing the institution's stature in the region. Other libraries may be able to attain similar prominence in their institutions' planning through the infusion of information technology into their buildings and by careful alignment with institutional strategies. This approach will preserve the best of past library experience while alerting administrators to new, supportive institutional roles.

## Notes

1. See, for example, Derek J. de Solla Price, *Little Science, Big Science* (New York: Columbia Univ. Pr., 1963); Diana Crane, *Invisible Colleges: Diffusion of Knowledge in Scientific Communities* (Chicago: Univ. of Chicago Pr., 1972); and William D. Garvey, *Communication, the Essence of Science: Facilitating Information Exchange among Librarians, Scientists, Engineers, and Students* (New York: Pergamon Pr., 1979).

2. For an early assessment of the challenge from alternative media, see Judith Axler Turner, "Campus Libraries Seen Threatened by Other Sources of Information," *The Chronicle of Higher Education*, vol. 31 (December 4, 1985), 30.

3. See John R. Sack, "Open Systems for Open Minds: Building the Library Without Walls," *College & Research Libraries*, vol. 47, no. 6 (November 1986), 535-44; see also Laverna M. Saunders, "The Virtual Library Today," *Library Administration & Management*, vol. 6, no. 2 (spring 1992), 66-70.



4. Brian Hawkins, "The Unsustainability of Traditional Libraries," *Executive Strategies*, vol. 2, no. 3 (1996), 1–15.

5. David L. Wilson. "New California State Campus Has Ambitious Plans for Technology," *The Chronicle of Higher Education*, vol. 43 (October 18, 1996), A23–24.

6. John Lubans Jr., "Key Findings on Internet Use among Students" (1998) [online]. Available: <http://www.lib.duke.edu/staff/orgnzt/n/lubans/key.html>. Ac-

cessed: February 26, 1999.

7. Philip K. Eberly, "Library of the Future," *Central Pennsylvania's APPRISE*, vol. 16, no. 2 (August 1996), 53–55.

8. Harold B. Shill and Lisa R. Stimatz, "Government Information in Academic Libraries: New Options for the Electronic Age," *Journal of Academic Librarianship*, vol. 25, no. 2 (1999), forthcoming.