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The Academic Library in a 2.0 World

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What is the role of the academic library in the digital age? This question has generated a great deal of discussion in the library and information technology (IT) disciplines, as well as in higher education in general. Paul N. Courant, the well-known University of Michigan scholar and professor, maintains that ubiquitous digitization will not change the fundamental relationships between academic libraries, scholarship, and publication.¹ On the other hand, it is clear that the digitization and “Googlization” of scholarly work and communications have, in fact, shaken the academy to its core.

This ECAR research bulletin provides a context for the current state of academic libraries and the issues they face in a Web 2.0 world. The literature suggests that library services in higher education will continue to be crucial to the core processes of learning, teaching, and research as long as key library structures, processes, services, and staff roles evolve to accommodate the epochal changes occurring in publishing and communications. The bulletin discusses how disintermediation is affecting the academic library in higher education and the toll it is taking on traditional library collections, operations, and librarians themselves.

Libraries must actively embrace the changes in the information environment to stay relevant in the 2.0 world. In general, library services and staff must transition from their inherited position as the mediators of a print-focused, highly controlled environment to become collaborators in a multimedia-rich, user-empowered, disintermediated free-for-all where their value will be proven only by demonstrably improving outcomes in learning, teaching, and research.

If they have not done so already, academic libraries must engage their communities in a meaningful conversation about what learning, teaching, and research are and will become and the role libraries can play in support of these activities. Libraries must be integral to these activities in order to assert their continuing value to the institution.

Highlights of the Academic Library in a 2.0 World

The traditional mission of academic libraries has been to select, collect, and preserve information and to facilitate access to and use of this information. This mission has largely applied in a print-centric world, where the book is the primary container of data and information. In a print world, local collections are vitally important: books and journals on the shelf provide the most efficient access to information; print materials located on the campus are discovered and obtained much more quickly than are materials held by other institutions; and the number of print resources owned becomes a measure of institutional status and library value. Only in a print world can one measure the value of the library by the number of items in its collection.

In this local and print-based context, libraries are revered, specialized, stable organizations with unquestioned importance on campus. Often, the library is the center of the campus—both figuratively and literally. The librarian acts as a mediator to the

collection of information. Library and librarian value derive from the amount of information stored locally, the mediation processes (classification, reference services, access services) that allow people to use the information collections, and the instruction given in locating information within the collections held (library research and citation skills).

Library Staffing Structure

In general, the library profession can be characterized as both a guild and a calling. People entering the profession are advised not to expect large salaries. Library work has, by and large, been secure, consistent, and unchanging—an attraction to those who value stability and tradition. Librarians take pride in acting as the guardians and stewards of information, occasionally defying those who threaten to compromise it (witness libraries' mobilization against provisions of the USA PATRIOT Act).

Processes and staff roles within libraries have been refined over centuries. The library field is well organized, specialized, and ideally suited to a hierarchy of staff roles. In the local and print-based context, the lowest tier of staff is responsible for providing physical access to library materials by overseeing circulation services and staffing the library during operating hours. In academic libraries, these roles are often filled by student assistants. A middle tier of staff handles backroom processes such as purchasing, processing, and cataloging materials to be housed within the library. These staff are also responsible for maintaining the catalog—the inventory of resources available on site. The highest-level library staff select the information resources to be added to the collection and provide reference services (instructing people on how to find information within the acquired resources). Library unions have often helped to solidify this stratification by helping to organize staff into groupings categorized as professional (staff with the master of library science degree) and non-professional (staff without the degree).

Struggling for Identity in an Era of Disruptive Change

Into this orderly and ordered world came digitized art, music, and movies; online newspapers and journals; websites and weblogs—all of which have dramatically changed our expectations and culture. The formats, creators, publishers, and archivists of information are rapidly proliferating. Today there is a nearly overwhelming amount of information available. While in the print world no single library was the ultimate repository of information and knowledge, digital information challenges the very idea of a physical library. Information is now ubiquitous and global, not specialized and local. Information consumers have been empowered to search for information on their own, and the role of the librarian as mediator to information has dissolved. The library's role in the preservation and stewardship of information has become less clear.

Technology and digital resources enable users to quickly compare services and products across a variety of contexts, allowing them to select those that work most quickly, simply, and reliably. Users demand tools that are both sophisticated and simple. Students expect to work when they want, and they expect to participate in information creation, evaluation, discovery, and selection. Users are impatient with delay and with disaggregated services that disrupt a smooth flow of activities.

How do the traditional library mission, structure, processes, and staffing transfer to this new environment? Not well. Traditional evaluating, selecting, classifying, and warehousing systems are incapable of keeping up with the amount and variety of information being generated. Many librarians are not comfortable with the world we find ourselves in—one that does not automatically ascribe value to their traditional role of mediator of information. The new world requires librarians to work with users as peers in the information environment and to collaborate with others to present services and resources. Professionals in the information environment must now be particularly adept at technologies used to present, analyze, and create multimedia information. Many librarians are not willing to give up the role of information steward, and they struggle with how to be stewards of both print and digital information. Nevertheless we must adapt: failure to embrace new priorities and new roles within the academy will result in traditional librarians and libraries becoming sacred cows—culturally prized but of little practical value, and ultimately expendable.

Implementing New Strategies to Become Integral to the Academy

According to its 2007 *Environmental Scan*, the Association of College and Research Libraries (ACRL) found that “Students and faculty will continue to demand increasing access to library resources and services, and to expect to find a rich digital library presence both in enterprise academic systems and as a feature of social computing.”²

Defining a role in the new information environment will require libraries to examine existing practices and priorities and determine how their activities add value to the mission of the institution. The actions libraries need to take in this new environment are certainly not unique to either higher education institutions or commercial enterprises. Still, they are difficult for libraries to embrace, since the actions essentially signal that libraries can no longer count on uncritical support of their operations—that in fact the very idea of an academic library as it has existed for centuries is being questioned. Today libraries must systematically review their organizations and adopt strategic planning and assessment activities that clearly justify their value to their institutions. According to James G. Neal, vice president for information services and university librarian at Columbia University, “[T]here will need to be heightened attention to innovation, to rethinking the physical, expertise, and intellectual infrastructure of the library, to adopting the culture of enterprise, including business plans, competition, scalability, and venture capital.”³

Aligning with the Institution

Libraries must define a vision that is aligned with the institutional vision. Increasingly, this means libraries must prove their value by supporting the teaching, learning, and research programs of the institution in ways that inform the learning outcomes of these programs.⁴ Libraries must actively promote their services and resources to their community, and they must not assume that the value of those services and resources is self-evident.

Libraries need to recognize the many demands on an institutional budget and understand that they need to compete for funding. Libraries and IT departments are frequently seen

as the black holes of budgeting: more money is always needed, although the outcomes resulting from increased funding are not always clear to the community. Libraries must think like businesses in linking funding to strategic goals that support the goals of the institution. In this environment, fundraising and development activities become even more important in meeting the challenges of information provision.

Reviewing Priorities

Librarians should review traditional processes and priorities for relevancy and efficiency. By prioritizing integration with the academic community, librarians can develop new services and processes that actively support the institution. According to David W. Lewis, dean of the University Library at Indiana University-Purdue University Indianapolis, librarians must “reposition library and information tools, resources, and expertise so that they are embedded into the teaching, learning, and research enterprises. This includes both human and, increasingly, computer-mediated systems. Emphasis should be placed on external, not library-centered, structures and systems.”⁵

New kinds of organizational models and management models are needed to support staff initiatives in curricular engagement, outreach, and instructional support. New strategies are needed to make collection development, reference services, and research/bibliographic instruction relevant to the digital environment. The most difficult decisions will involve stopping or changing entrenched processes that no longer effectively support the strategic vision.

Few libraries will be able to sustain the model of ever-growing print collections. Increasingly, investment in digital resources, or in access to information resources that are not housed or hosted locally, will be the primary means of providing information to an academic community. The library’s role will be managing access to information as well as managing the information itself, rather than collecting, or what Lewis calls a shift from “purchasing” toward “curation.”⁶ The trade-off will be stability in collections: the digital information environment is volatile, and preservation of digital information has yet to be standardized. It should be understood that costs related to digital resources are not likely to be lower than acquiring and housing print resources. But few institutions will be able to fund dual-format collections, leaving libraries to balance the benefits of easy access and minimal investment in physical storage offered by digital resources against the challenges of digital information software and questions of digital preservation.

The cost of information will lead libraries to promote interinstitutional collaboration. All academic libraries are facing the same challenges.⁷ There are excellent opportunities for real and meaningful collaboration between schools in information access, publication, evaluation, shaping teaching and learning for the future, cyberinfrastructure, and so on. The collective buying power of all libraries is still significant and influential, and it should be leveraged. High-level institutional leadership is needed to make these collaborations even more effective.

Libraries will increasingly focus on selective local richness in information resources. No longer can libraries hope to be all things to all students and faculty. Researchers have long understood the need to consult different repositories of information in order to

conduct a thorough investigation. Deep research collections will be limited to topics prioritized for the local institution. Digitization projects will help libraries share these special materials with the world.

Becoming a Part of Learning, Teaching, and Research

Libraries must prioritize their users and their environments and make services, resources, tools, and operational decisions consistent with those priorities.⁸ This demands a renewed awareness of pedagogical practices in general as well as an understanding of how teaching, learning, and research are changing. Librarians also need to be aware of how the student population in particular is changing and how this affects student learning.⁹

We see a growing emphasis on information creation, including collective intelligence, tagging, and individual empowerment. Group study, social learning, experiential learning, online learning, and multimedia learning are transforming higher education and student expectations.¹⁰ Students expect digital delivery of resources and services, with 24 x 7 access. Research and scholarly communication are changing: e-research, text mining, data mining, and research computing are part of the academic research process today and all deeply affect libraries.¹¹ Scholarly information is moving beyond the traditional publishing and dissemination processes to include open access initiatives and freely accessible resources. Academic libraries must become a part of the cyberinfrastructure that is developing to support teaching, learning, and research. If they are not already represented on the institutional bodies that oversee curriculum, libraries will need to work their way in.¹²

Guiding in Literacy Instruction

What the 2008 *Horizon Report* cites as a critical challenge to higher education—the “need to provide formal instruction in information, visual, and technological literacy as well as in how to create meaningful content with today’s tools”¹³—is an area in which libraries can reassert their relevance. Librarians must leverage their information navigation skills in the new digital information environment. Library instruction must move beyond simple instruction on locating information within local collections to embrace all of the literacy skills needed by students and scholars to be successful in the digital information environment.

Developing Staff

Institutions must invest in hiring and training staff to meet the challenges of today’s academy. Moving forward, staff development becomes a critical strategic concern, crucial to meeting new expectations and priorities¹⁴; required skills are not necessarily taught in traditional librarian training programs.

The new information professional must combine the traditional strengths of a librarian with the skills of an instructional technologist, add a dose of project management savvy, and top it off with the time management and organizing skills of a political campaign manager. Staff will need multimedia, technology, and online social networking skills but also the discipline and intellectual curiosity to keep abreast of trends and gain fluency in

various academic disciplines. Staff must be flexible about work schedules, comfortable with multitasking, collaborative, energetic, and enthusiastic. Staff working in this changing environment must also be comfortable with ongoing experimentation, and they must be sufficiently self-confident to apply their skills to new challenges.

Defining a New Value Proposition

The value of the academic library within the institution is morphing. Rather than being defined by the size and diversity of collections, library value is now being measured in terms that are more difficult to quantify:

- How integral it is to the academy
- How well it supports learning and teaching
- How well it supports research

Some might argue that libraries have always had a role in supporting learning, teaching, and research. While true, that role too often has been subsumed in the competition for the largest and most comprehensive library collection. With the advent of readily accessible digital information and the empowerment of the user via technology, it is easy to dismiss the traditional library as a luxury. The value of the trained information professional as a mediator to information is not readily apparent to people who are increasingly empowered to search for their own information 24 x 7. The value of professionally selected information resources in a variety of formats is not readily apparent when the library does not promote its role in the provision of information to a community. The value of stewardship of information and knowledge is not readily apparent to those who have not been taught information literacy skills.

Librarians, and all information professionals, must become partners with faculty in the learning, teaching, and research processes in order to best support their institutions and assert their value to the academic community. The traditional value of large print collections and unquestioned expertise in managing those collections will not hold in this new information environment. Librarians must proactively define their value to their institution.

What It Means to Higher Education

There remains a place of incredible value for academic libraries in higher education, but libraries will need to reinvent themselves to occupy this place. As discussed above, academic libraries will continue to facilitate the discovery, access, evaluation, creation, use, and preservation of the information critical to learning, teaching, and research; but they will do this in ways that are more integrated with and responsive to the academic community. The success of the academic library in the 2.0 world will, to a large extent, depend on higher education's response to the changing environment:

- Institutions must prepare for and support changes in the expectations of library services and resources. Budget constraints will force most libraries to shift to an access model from a collection-development model, which will change the way

the campus community interacts with information resources. Libraries responsive to changes in user behavior will explore new ways of outreach and collaboration, expand hours and online services, seek to reinvigorate their facilities, but also reduce investment in some traditional support services.

- Interlibrary and interinstitutional collaborations and partnerships will accelerate because very few academic libraries will have the resources to independently meet the needs of their communities.¹⁵ Such partnerships will sustain existing initiatives in areas such as collaborative collection development, shared storage, and bulk licensing of information resources but will also engage new frontiers as well: shared development of critical literacy instruction, shared off-hours staffing, and shared exploration of new scholarly publishing ventures. Institutions must support these collaborations and partnerships for them to be most effective.
- Libraries need to participate in, if not lead, a conversation on their campus about how teaching, learning, and research are changing and how the institution will adjust to the changing world of information and communication. Key for the library in this conversation is helping people think about the role the library plays as the institution moves forward. To continue to be justified, services and facilities provided by libraries will need to be seen to be integral to teaching, learning, and research. Moving in this direction will require new investment in library facilities and in developing staff skills.
- The institution as a whole will need to embrace new critical literacies and core skills required for the teacher, learner, and researcher of the digital age. Among other things, these will encompass multimedia creation skills, conventions of behavior in new communication media, computer-aided searching and data analysis skills, new ways to develop scholarly communication, and new ways of assessing student learning. Most significantly, intensive new curricular support programs will be needed to train not only students but also faculty and staff in these skills, and the library should be a leader in this area.

What will happen if libraries and institutions do not embrace the changes we see in the world of information and higher education today?

The traditional library model—built on the strength of local collections and on-call assistance—is no longer sustainable or effective. Few institutional budgets can support the acquisition of all information in multiple formats needed by students, scholars, and researchers. On-call support is easily ignored by students and scholars empowered to do their own searching for information. Library book stacks are generally full, and additional storage facilities are difficult to justify in an age of digital information. Those libraries and institutions that do not seek to highlight their strengths will fall behind in the provision of critical services to their communities. Those libraries that do not seek to become an integral part of teaching, learning, and research will become increasingly sidelined and difficult to justify.

Beyond that, institutions will lose an opportunity to enhance their teaching, learning, and research environments with skilled professionals capable of navigating through the

complexities of the rich and challenging information environment in which we find ourselves. Conversations about what teaching, learning, and research are becoming, how they will be performed on our campuses, what skills and what resources are needed to allow them to excel, and what the library can contribute should be a part of every institution's planning.

Key Questions to Ask

- What measurements are we using to assess whether faculty and students have access to the resources they need to teach, learn, and do research?
- Which initiatives are in place to actively investigate how teaching, learning, and research are changing as a result of Web 2.0 technologies?
- In what ways is my library a part of the conversation of change? What role does the library play in these conversations?
- Where do we articulate the ways in which my library furthers the strategic vision of our institution?
- How does investment in my library improve learning? Improve research?

Where to Learn More

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Endnotes

1. Paul N. Courant, "Scholarship and Academic Libraries (and their kin) in the World of Google," *First Monday* 11, no. 8 (7 August 2006), <http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/1382/1300>.
2. Association of College and Research Libraries, Research Committee, *ACRL Environmental Scan 2007* (Chicago: ACRL, 2008), 4.
3. James G. Neal, "The Research and Development Imperative in the Academic Library: Path to the Future," *Portal: Libraries and the Academy* 6, no. 1 (January 2006): 1–3.
4. "Higher education will be increasingly viewed as a business, and calls for accountability and for quantitative measures of library contributions to the research, teaching, and service missions of the institution will shape library assessment programs and approaches to the allocation of institutional resources." ACRL, *Environmental Scan 2007*, 4.
5. David W. Lewis, "A Strategy for Academic Libraries in the First Quarter of the 21st Century," 4, <http://hdl.handle.net/1805/953>.
6. *Ibid.*, 5.
7. As Lewis notes, "The central truth for libraries and the campuses they support is that scholarly communication based on subscription journals is no longer affordable and that better and more economical alternatives are at hand. There will inevitably be very difficult campus conversations that will be required to sell and implement such a budget strategy, but there is no real alternative." David Lewis, "Library budgets, open access, and the future of scholarly communication: Transformations in academic publishing," *C&RL News*, May 2008.
8. "Library facilities and services will become increasingly integrated with research, teaching, and learning programs and student services programs." ACRL, *Environmental Scan 2007*, 5.

9. See Nancy Fried Foster and Susan Gibbons, eds., *Studying Students: The Undergraduate Research Project at the University of Rochester* (Chicago: ACRL, 2007).
10. The challenges and trends outlined in the 2008 version of the New Media Center's *Horizon Report* are a pithy representation of the world we are in, where "scholarship, research, creative expression, and learning" are all changing dramatically under the pressure of technology and "the growing use of Web 2.0 and social networking—combined with collective intelligence and mass amateurization." The New Media Consortium and the EDUCAUSE Learning Initiative, *The Horizon Report*, 2008 Edition, 5–6, <http://www.nmc.org/pdf/2008-Horizon-Report.pdf>.
11. "In many institutions, information professionals such as librarians and information technologists have no formal representation on bodies that oversee the curriculum, but they may find ways to be invited to participate on university, college, or departmental curriculum committees, or general education committees, and this would be a prime way to advocate for the inclusion of a variety of literacy skills in the curriculum." Joan Lippincott, "Student Content Creators: Convergence of Literacies," *EDUCAUSE Review* 42, no. 6 (November/December 2007), 16–17, <http://connect.educause.edu/Library/EDUCAUSE+Review/StudentContentCreatorsCon/45230>.
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15. "[Clifford] Lynch suggests that research librarians might profit from engaging in discussion with their international peers about collaboration and service delivery across international boundaries." Diane Goldenberg-Hart, "Enhancing Graduate Education: A Fresh Look at Library Engagement," *ALR* 256 (February 2008): 3.

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