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Change and Transition in Public Services

David W. Lewis

Academic libraries and, more important, all of higher education have been in the midst of a fundamental transformation over the past decade. Changes in information technology, requirements for increased accountability from stakeholder groups, and pressures to accomplish more with fewer resources have combined to produce a period of organizational restructurings that will require librarians to reshape their professional identities and roles.¹

This combination of rapid technological advances, rising demands for improved services, and long-term economic constraints may have profound effects on the societal role of the university:

Instead of prospering with the new tools, many of the traditional functions of universities will be superseded,

their financial base eroded, their technology replaced, and their role in intellectual inquiry reduced. . . .

Accomplishing each of these functions is based on a set of technologies and economics. Together with history and politics, they give rise to a set of institutions. Change the technology and economics, and the institutions must change, eventually.²

Eli M. Noam, author of that dictum on organizational development as a function of technological and economic change, argues that a historic reversal of information flow has taken place. In the past, people went to information by attending universities and visiting libraries. Now and increasingly in the future, information goes to the people via computer networks. In the emerging electronic communications environment, organizations outside higher education may be better positioned than universities to provide information services to society at large.

Underlying the restructuring of the organizational and technological bases of information is the accelerating growth of the World Wide Web, which enables multimedia, hypertext information to flow without mediation to individuals who, with trial-and-error experience, can find a wealth of resources that were not easily available just a few years ago. No one with online access must visit a library, or be affiliated with higher education, to explore the networked electronic scholarly communication system. Although the Internet and its Web are still “under construction,” with a broad range of technical, informational, and economic problems to be resolved, the reversal of information flow posited by Noam has clearly begun.

Academic librarians generally acknowledge that their profession is undergoing fundamental change. Still, there is remarkably little consensus on specific future directions. Michael Buckland provides important insights for our coming to a consensus in *Redesigning Library Service: A Manifesto*, which sets forth three historical stages of library development: the paper library of old; then, the automated library, where bibliographic access became electronic but primary resources remained largely in paper format; and now, the electronic library, where both bibliographic structures and primary resources are increasingly digital.³ That is a useful taxonomy because it distinguishes among ways of providing library services with different sets of technologies. By looking at distinct stages of development, we are encouraged to go beyond the usual incrementalist mode of assessing the future and consider the prospect that ongoing change may accrue, over some years, into a fundamental transformation of the academic library enterprise.⁴

In recognizing the electronic stage of development, we need to reconsider academic library professional identities and roles. Such a reconsideration is hardly new for reference librarians. For example, in an article published nearly twenty years ago, Brian Nielsen caused quite a stir with his argument that online searching would soon be done by *all* library users, thereby causing a “deprofessionalization of librarianship.”⁵ Although difficult to imagine now, that was considered an alarming prospect; online searching had then given reference librarians the powerful role of gatekeeper to the world of electronic information, so the idea of giving up

such power was not generally welcomed. Beyond that, Nielsen made several points that bear on the contemporary scene:

- Reference librarians have a certain ambivalence about technology: Although it brings them increased professional status, it also promises to make a traditional role for them obsolete.
- An important distinction exists between librarians' enthusiasm for new technology and their enthusiasm for the new roles that are imposed on them.
- As unmediated technology develops, librarians are likely to be ambivalent to the extent that unmediated services scramble old and new workloads, identities, and statuses in ways that may not be to the advantage of individual librarians.

We are now in the midst of the transition from the automated to the electronic library. The earlier transition from the paper to the automated library was not really difficult because it did not seriously challenge the role of the librarian or the library. Even with the influx of online databases in the mid-1980s (and the subsequent alarm over a "deprofessionalization of librarianship"), things remained fundamentally unchanged. Computers had come into technical services earlier, but the buildings looked and operated much as they did in the 1970s. Terminals and then computers replaced index tables and card catalogs, but the basic role of the library and the librarian – what we did and how we did it – was much as it had been decades earlier. We should not, however, take comfort in the fact that we have managed this first transition. The transition we now face – to the electronic library – will not be so simple or easy. It is

more problematic, for at this juncture technology allows the information flow to begin its reverse course: to be wherever people are connected to a network.

It is hard to say with any confidence what public services in academic libraries will be like in ten years – but such services and our professional identities will certainly be different. Fundamental change will stamp all parts of the library, altering or obliterating the traditional boundaries between public and technical services. Although this chapter takes a public services perspective, one of the most likely results of the coming transition will be the vanishing of that boundary which has for so long defined the way library organizations and functions are viewed.

Fundamental Changes

Although there are many ways to frame prospects for the future, three particular frames seem to capture the predominant trends. The first two are driven by changes in technological capabilities, and the third is the resulting organizational adaptation to technological change. The combination of the three will surely have profound effects on academic libraries and their staffs.

In the first frame, information tools have, for most of recorded history, been place bound, mainly in library buildings. Now, however, information tools can be not only electronic but network based, and thus freed from their traditional spatial limitations. The library as a space on

campus will remain, but no longer as the only information place. As Noam suggests, information will flow to, and be available in, all places it is needed. Equally important, information resources are being combined with productivity tools – word processors, spreadsheets, and animation and video-editing packages – which are increasingly demanded by students and expected by faculty.

In the second frame, the nature and methods of instruction in higher education will be transformed by new information technologies. The one-hour lecture presented by a single faculty member using a chalkboard as the primary tool is as doomed as the paper-format card catalog. Librarians should play a significant role in integrating information resources into the networked instructional environment, but this role is not ensured because the political issues surrounding the whole area of instruction may prove difficult to resolve.⁶

In the third frame, such technological advances require a restructuring of organizational models. Libraries must become adept at boundary spanning. Traditional library organizations generally lack the flexibility and adaptability to respond to rapid environmental change, especially when players from outside libraries become central to what we do. Team-based structures will be required if we are to maintain effective collaborations with computing organizations and other campus units. And in working with faculty, librarians must carve out a new professional role in the development and delivery of networked curricular resources.

All three kinds of changes are sweeping, and their combination will transform academic libraries and

librarianship in some ways that are foreseeable and in other ways that are not yet known. Each of the three changes – in information tools, in instructional approaches, and in organizational structures – is reviewed in turn.

Information Tools

Networked information resources and services have come to dominate prospects for the academic library in recent years. OPACs and networked CD-ROMs set the stage a decade ago, but these are mainly bibliographic tools more representative of the automated library than the emerging electronic one. Lexis/Nexis made the first large-scale set of primary resources available in academic libraries in the early 1990s. Other sets of full-text general and business journals became available, first on CD-ROM and then over the Internet; but the real explosion has been World Wide Web, which in its first year (1993) proliferated at an astonishing 341,634 percent annual growth rate (based on service traffic).⁷

Although libraries generally provide access to the Web, in many cases (because of limited hardware or because of philosophical concerns about the appropriateness of “Net surfing” in libraries) this information is more easily available in computer labs, dorms, offices, or homes. Although much of the information available through the Web has been rightly ignored by academic libraries, there are many scholarly sites that offer more current or comprehensive materials than typically found in local collections. Another

important development is the use by commercial sites, such as Britannica Online, MUSE, Engineering Village, and MathSciNet, of IP (Internet protocol) address filtering as a mechanism for controlling access. That allows campuswide access to a given resource without having to maintain complex hardware or software, manage passwords, or be limited by simultaneous-use constraints.

In the near term, we can expect to confront a variety of changes in service patterns. Although such changes may be evolutionary in libraries that confront the issues forthrightly, the overwhelming need to restructure organizations could lead to crises in those libraries that do not accept change easily, raising the prospect of organizational decay.

Crisis #1: Redesigning services for a distributed and integrated computing environment. The influx of terminals, and then workstations, that accompanied the deployment of OPACs and CD-ROM networks in the 1980s required academic libraries to develop on-site support for computer hardware. As networked information becomes more important in the latter half of the 1990s, and as libraries respond by deploying large numbers of workstations, user-support issues will become increasingly demanding. Library sites that combine word processing and other productivity software will need to provide the kind of assistance offered in computer labs. At the same time, as library resources are networked across campus, reference questions about them (e.g., their content, source, reliability, timeliness) will need librarian expertise. Collaboration with computing organizations in both cases is the only sensible approach. Because it is not possible to spread librarians across all potential service points,

questions of where and how reference staff should be deployed, and when other levels of staffing would be an adequate substitute, will arise. This reconceptualization of reference work as being spatially distributed and involving technical troubleshooting may lead to the conclusion that current assumptions about the combination of expertises required to provide all-around service are unrealistic and that alternative strategies using less-credentialed staff with either technical skills or just an ability to answer directional questions will be more effective and less costly.⁸ In short, reference librarians may not be able, if only because of time constraints, to manage the constantly changing technical basics of the networked environment as well as the newly created reference questions.

Crisis #2: Integrating computer and information support services. As information resources spread over campus networks, and remote users require both technological and research assistance, there will be an inevitable blending of the reference and the computing help desks. Current service arrangements, based on assisting users in person on-site, will give way to strategies that support remote users at any location. Over the long run, tiered strategies that focus differently on giving immediate answers, on teaching research techniques, or on arranging consultations for large projects or complex questions will prove more effective. At the same time, when networked information comes to users through personal workstations, users might take responsibility for mastering important sources, just as they now do for books in their personal collections. Given such personal initiatives, there may be a "light at the end of the tunnel" in the sense of a gradual reduction of incessant

technical and/or reference queries directed at library-computing units. Still, significant short-term problems abound: Triage will be required, and some users will go unserved until support services are restructured.

Crisis #3: Reconceptualizing reference service to apply worldwide expertise locally. Another way to view the remote-support issue leads to a more challenging reorganizational prospect. Traditional reference service has been based on maximizing the effective use of local collections by developing local expertise. In a networked environment, this arrangement will give way to new strategies that provide access to worldwide resources and worldwide expertise.⁹ Although outsourcing has traditionally been a technical services option, it is not difficult to envision the outsourcing of certain reference services to remote-subject specialists or to commercial firms that have the resources to develop sophisticated support structures and economies of scale which are simply beyond the capabilities of individual libraries. There will be legitimate local concerns about the quality or relevance of reference services “out there,” but (as with similar concerns about outsourcing cataloging) they can be addressed in terms of staff efficiency and organizational effectiveness. An important part of considering this issue is to have a clear understanding of both the quality and the cost of current services, for the cost might be higher and the quality lower than generally assumed.

Crisis #4: Reassessing local cataloging costs. The local catalog, traditionally the core resource for reference service, has always commanded considerable resources for its maintenance. The proliferation of Internet resources now

drives libraries to either create parallel organizational tools or attempt an integration of networked resources into the catalog. Neither strategy, however, makes much sense in the long term because each one is extremely labor-intensive and therefore expensive. Commercial firms may come to provide products that organize the Web better, and at a lower cost, than individual libraries are able to do.¹⁰ Paying a few thousand dollars a year for dedicated access to an academic version of, say, Yahoo or AltaVista could turn out to be a better deal than doing this ever-growing job in-house. When the library's more important resources are on the network and good indexes with links exist, the local catalog's value may decline. At some point, important questions about continuing the expense of maintaining the Internet part of the local catalog seem inevitable.

Crisis #5: Rethinking bibliographic instruction. The training of library users requires new approaches, for the traditional approach no longer works.¹¹ The fifty-five-minute, one-shot session as part of a term paper preparation can rarely cover even the basic skills required to manipulate complex information tools. Moreover, the "shelf life" of some skills is so short that teaching them as part of a freshman composition course – and then hoping for relevance over the student's college career – may also be doomed to failure. In the long run, information literacy will have to be integrated into, and taught across, the curriculum. For now, a variety of strategies will need to be tried and retried to cover, as best we can, the skills needed to use increasingly sophisticated information tools effectively.

Each of these changes in service strategies entails difficult

choices. On the one hand, service patterns in most academic libraries target users who come into the building and provide roughly equal, though generally limited, help. On the other hand, specialized reference assistance may require a rerouting of basic or directional queries to less-credentialed staff. Empathy – an ability to hand hold the inexperienced – will be increasingly important as reference services become more technical. As contemporary patterns do not suffice, it will be necessary to conduct a series of careful, objective reevaluations of user needs. Attempts to restructure without such formal planning will inevitably run into entrenched staff habits and assumptions that are not likely to be compatible with restructuring public services. Overall, fundamental change in reference services is likely to be more important in the long run than the transition of cataloging operations in the mid-1970s, when the availability of national cataloging databases transformed those operations. The keys to success will be similar: a hard-nosed, cost-conscious approach to management, a shift of some responsibilities to less-credentialed staff, and a commitment to continuous retraining.

Instructional Approaches

On a broader level, there is much debate and marked controversy about the effectiveness of information technology in higher education. Stephen C. Ehrmann, manager of the Educational Strategies Program at the Annenberg/CPB Project, argues that confusion abounds because higher education has only a vague notion of what

methods of instruction work and even what instructional goals should be. “Unfortunately, this means one can’t ask, ‘How well is this technology-based approach working against the norm?’ since there isn’t any norm.”¹² As he points out, there is little way to state in rational economic terms what it ought to cost to educate a student properly because colleges simply spend all the money they manage to raise. Moreover, there are no salient relationships among patterns of spending, even for similar institutions. Kenneth C. Green and Steven W. Gilbert concluded from an extensive review of the literature that, although information technology has the potential to change the way instruction is delivered in the academy, there is much to be learned and that information technology will not likely increase instructional productivity:

Content, curriculum, and communications – rather than productivity – are the appropriate focus of – and rationale for – campus investments in information technology. But even if this argument is compelling, we must still be careful not to foster inappropriate expectations. . . . The academic enterprise can do great things with – and will experience significant benefits from – information technology. But it won’t be cheap, and it will not save money soon.¹³

When many knowledgeable commentators agree that the academy cannot reliably ascertain whether investments in technology (or, for that matter, in other teaching resources) make a real difference, there should be cause for concern. Clearly, students and parents (who pay higher and higher tuition bills) and funding agencies (especially state legislatures) no longer show much tolerance for this situation.

A way out of this untenable situation is, at least in theory, not terribly difficult to ascertain, though it will be hard to implement. Robert B. Barr and John Tagg distinguish between two approaches to the mission of the university: instruction versus learning.¹⁴ The *instructional* approach generally involves only rudimentary, stimulus-response interactions limited in meaning to a particular course. The method and the product are the same – a class taught or a lecture given. The assumption is that to get more learning you must do more teaching. In contrast, the *learning* approach embraces “education for understanding – a sufficient grasp of concepts, principles, or skills so that one can bring them to bear on new problems and situations.”

Barr and Tagg go on to argue:

Under the Instruction Paradigm, colleges suffer from a serious design flaw – they are structured in such a way that they cannot increase their productivity without diminishing the quality of their product. . . . Under the Learning Paradigm, productivity is redefined as the cost per unit of learning per student. . . . Under this new definition, however, it *is* possible to increase outcomes without increasing costs. An abundance of research shows that alternatives to the traditional semester-length, classroom-based lecture method produce more learning. Some of these alternatives are less expensive; many produce more learning for the same cost. Under the Learning Paradigm, producing more with less becomes possible because the more that is being produced is learning and not hours of instruction.¹⁵

Alan E. Guskin reaches the same basic conclusion regarding productivity in higher education – that faculty roles must be

restructured to enhance and facilitate student learning and, although this will help control the costs of higher education, it will be a “monumental undertaking” for faculty to acquire such new skills.¹⁶ In that vein, William Massy and Robert Zemsky focus on productivity enhancements arising from the substitution of new information technology for faculty and other labor; and Donald Langenberg cites a 1993 Pew Higher Education Research Program study which calls for cost savings by a reduction of full-time faculty *employment* by 25 percent.¹⁷⁻¹⁸ Lanenberg suggests, however, that a better way to resolve the problem is by increasing faculty *productivity* by 25 percent. Whatever happens, it is clear that faculty work needs to be restructured to become more effective.

If changes in instructional strategies are not based on this need to improve productivity, universities will not be competitive in the coming education marketplace.¹⁹ Langenberg suggests the analogy of industrial deregulation in describing the competitive environment that higher education has entered:

It is not written anywhere that the apex of American higher education will always be associated with brand names that once were the surnames of New England gentlemen or western railroad barons. It is not even written that the apex will continue to be occupied by colleges and universities.²⁰

William Plater suggests that we “Imagine what Steve Spielberg’s new company could produce for the education market within the decade or what Bell Atlantic might do if it actually could purchase the Public Broadcasting System.”²¹ He argues that it is only because universities and colleges

have a monopoly on credentials and certifications that more rapid development of media-based, private-sector competition in higher education has not been forthcoming.

The combination of rising costs and other competitive pressures will likely require most academic institutions to move from an instructional paradigm to a learning paradigm. As part of this shift, they will apply new information technology widely as a substitute for faculty or staff labor. Moreover, as universities and colleges migrate to the learning model, opportunities will be created for libraries and librarians to play new and potentially exciting roles. A broad area of new opportunity is in the design and implementation of computer-based teaching and learning environments. Such environments will rely on instructional teams comprising faculty, librarians, technologists, and experts in pedagogy. Another principal area of new opportunity will arise in the creation of both physical and electronic spaces where the learning paradigm will take place.

Instructional Teams

Restructuring the curriculum and creating alternative learning structures and environments will require that faculty members learn new skills and, in some cases, give up their exclusive role as proprietor of individual courses. An effective approach will be to create instructional teams that redesign and deliver new courses or, more generally, create the learning environment that will replace the course.²²

Faculty, as the content experts, will generally provide leadership for the team, which will include members with different skill sets – representing, in the main, technology, pedagogy, and the research library. Most teams will function intensely during the design and construction stages but may have differing memberships or activities later in the delivery and evaluation stages.

Integration of information resources into courses and the development of information competencies across the curriculum are the librarian's role on instructional teams. Such integration may be the only means of solving the library's current bibliographic instruction dilemma. Librarians have for some time been using the term *information literacy* as a way of adapting bibliographic or library instruction to the environment of the automated and now electronic library. That effort has been largely ineffectual because librarians have neither the means to influence curricula nor the resources to teach large numbers of students more than a cursory overview. With new instructional teams, however, a fundamental integration of all aspects of information literacy – from the mechanics of information tools to the societal impacts of networked technologies – may be possible.²³

New Learning Spaces

As instructional approaches change, the spaces in which these activities take place will also need restructuring. Universities and colleges have large inventories of classrooms designed for lecture presentations, and academic

libraries are designed to store books and to encourage individual study. In the classroom, technology is not universally deployed; in the library, it is not effectively utilized. Where technology is in place on most campuses – in computer clusters and labs – it is generally structured for individual, not group, work. The instructional approaches we can anticipate will require large-scale access to technology, through either the installation of many workstations or the creation of new space with network access for student laptops. In either case, an emphasis on facilitating group work will be required on a broad scale as group projects and peer or faculty coaching become common instructional strategies.

The library, as the central space for scholarly activity on campus and as the facility that has traditionally offered the longest hours of operation, should be the primary locus of these new spaces. Early examples of this kind of restructuring are the Leavey Library at the University of Southern California, and the Information Commons at the Estrella Mountain and Mesa Centers in the Maracopa Community College system.²⁴ Such pioneering spaces, however, are in conflict with certain traditional values of libraries. They are noisy places designed to encourage interaction, not quiet contemplative spaces. They also require heavy investments in technology and support. Designing and staffing of these spaces will involve librarians, computing center personnel, and student-tutoring or study-skills assistants. All this will require collaborations across existing administrative boundaries, which may prove especially difficult because physical space and pedagogical turf are at stake. Other spaces on campus will be designed to

accommodate activities with a library component but will not be library based. In those cases, the library will always need to be involved, sometimes as a consultant and sometimes as a full partner. Interesting examples of this can be found in the new undergraduate library at George Mason University, which shares a building with the student center, and in the Media Union at the University of Michigan, located with computer classrooms and laboratories.

In addition to physical spaces, electronic spaces to support the new styles of teaching and learning will be built. This will take place on dual – infrastructure and course – levels. On the infrastructure level, librarians will need to be involved as part of the campus team that plans and operates the networked scholarly environment. Historically, most efforts to network information began with dial-up access to OPACs and networked CD-ROMs, applications that were usually developed and controlled by the library. It might be tempting for the library to try to maintain control, but that would not be a good strategy. Unless networked information is closely tied to institutional and departmental programs and delivered in a way that matches ever-changing local needs, it will not be used effectively. At any rate, the enormous economic costs involved would prohibit total library control. Libraries will need to restructure public services in a campuswide collaboration that will require shared controls of information resources with departments and computing centers. On the course level, the required collaboration among faculty, librarians, and technologists will likely be accomplished with the aforementioned instructional teams which jointly develop ways to use information resources effectively.

Organizational Structures

In 1986, I proposed an organizational paradigm for academic libraries.²⁵ It was based on a professional bureaucratic model to provide individual librarians the authority and support structures necessary to operate independently within a certain organizational philosophy. That model became the basis for a 1994 article on the reorganization of reference services.²⁶ Both articles focused on library operations primarily from an internal perspective. However, what I have come to appreciate in recent years is the significant extent to which the library needs to be integrated with other university organizations. It is now clear that libraries will be restructured outwardly in new and radical ways and that *boundary spanning* will be central to all library activities. Two organizational changes can be expected: The first is the use of teams, the second is a truer user orientation.

Teams

As noted above, librarians will be involved in team-based collaborations with computing and telecommunications organizations to provide support for clusters of workstations both within the library and across campus. Additionally, collaborations with computing organizations will grow to design and construct the campus-networked information system. Neither kind of collaboration can be based on a division of traditional institutional turf. Rather, a mutual

commitment to ongoing programs and a willingness to share both resources and responsibilities will be necessary. Beyond the computing organization, collaborations with other information-support units can be expected. For example, it is likely that libraries, bookstores, and graphic-reproduction operations will collaborate on the production and sale of supplementary course materials. The library collaboration having the greatest potential will be with the faculty (or departments or entire schools) in instructional teams to redesign the curriculum.

Teams will be used not only as a boundary-spanning mechanism across campus but also to create more flexible library organizations internally, with all levels of staff more fully involved in decision making.²⁷ Teams will be increasingly required because existing hierarchical structures are not adequate to the tasks we now face—to be productive and more focused, to do more with less.

Adapting to team structures will require librarians to rethink their professional identities and roles. Librarians on most campuses have a status that is between faculty and other professional support staff. The importance, or even the appropriateness, of faculty status for librarians has been challenged, and this challenge will undoubtedly continue.²⁸ If academic librarians use faculty status to insulate themselves from accountability for organizational success or failure, or when it distracts them from core organizational functions, it will be counterproductive. As Plater points out, the use of all faculty time is likely to be subject to more institutional control.²⁹ Librarians should anticipate a similar reconsideration of their activities. It seems clear that an

inflexible adherence to faculty status will not be useful in a team-based organization. Teams that involve staff from a variety of job classifications and categories, as most library teams inevitably will, have a potential to cause stress because of differences in philosophies about public services, as well as differences in salary and benefits. The potential for this type of conflict increases when the teams include staff from units outside the library where different organizational cultures prevail.

Teams can, ideally, channel individual energies and creativity toward organizational goals. This ideal is more likely to be approached or achieved when teams have both clear, tangible objectives and outcomes by which their success can be gauged. The development of activity-based cost models for team activities (and other forms of strategic planning) will assist in the evaluation process. Administrative clarity on institutional goals is needed, along with a strong commitment to team building and, concomitantly, to decentralization of authority.

Richard N. Johnson argues that a political model of decision making will predominate in higher education. In that model, two keys to assessing the prospective role of the library are whether it is identified as an academic unit, rather than a support unit; and the extent to which librarians, particularly library leaders, are identified as campus academic leaders, rather than managers of academic support enterprises: The library must be recognized as a core element of the academic enterprise rather than peripheral to it, a focal point for the development of an advanced information-based university for the next century. Seeing the library solely as

an academic support makes it easy to give its function a secondary status, thus making it vulnerable to the budgetary knife.³⁰

Having a salient role in restructuring the information core of the academic enterprise, as members of either instructional teams or other boundary-spanning units, will position librarians to be, and to be perceived as being, central to the academic mission of the university. Actually, one could go further than Johnson and say that librarians will be either part of the team that restructures the academic enterprise or simply not relevant to that process of institutional development.

User Orientation

The other major element of restructuring academic libraries is a truer user focus which, despite a lot of rhetoric, is often low in our services. Industry initiatives in total quality management have much to teach libraries about focusing on product improvement and meeting the real needs of users.³¹ Michael H. Harris and Stan A. Hannah even argue that a service-based strategy is critical to the survival of libraries: It is now apparent that the linkage between access and ownership has been severed, and users now can 'access' information in a myriad of information markets. It also appears that most of the new entrepreneurial competition for traditional library service is intensely user-centered. And unless libraries are radically reengineered, they will be quickly supplanted by more sophisticated and accessible client-centered information services.³²

Explicit user-oriented approaches will require new research on the design of focus groups and survey instruments.³³ Even more important to meeting library user needs will be a commitment to flexibility – to adjusting services and redirecting resources in response to changing times and needs. A corollary is the ongoing need to reevaluate low-demand, high-cost-per-use services. As always, it will be difficult to agree on which users “count” and for “how much.” Traditionally, academic libraries have responded to faculty needs because of their political clout, even though the bulk of demand for library services comes from students. In the future, responsive information services may become a known point of competition between academic institutions. If so, student needs will be accorded greater weight.

The technology underlying a truly electronic library significantly improves access to information. Networked access to full-text periodical collections with printing from workstations across campus appears to be much more efficient for the user – and less costly for the organization broadly defined – than a print collection of periodicals, which must be individually retrieved and photocopied in the library (though a definitive cost-benefit study in this area has yet to be published). Networked electronic reserves may well provide for better and more economical service than a print *reserve* collection, which also requires a student to go to the library, stand in line, and then photocopy items (though here again cost-benefit analysis is needed, given the accrual of copyright fees every semester). However, it is alarmingly easy to design these services in ways that recreate the bureaucracy and staff frustrations of our current service models. As noted above, the keys to building a user-oriented

library depend on valuing the users' time and delivering what they ask for – not what librarians assume are compelling time or cost factors. Collaborations with other campus units to provide a holistic response to student needs may turn out to be more effective than the most well-constructed response solely from the library's point of view. Libraries that are able to provide truer user-oriented services will create a competitive advantage for their institutions which should, in turn, lead to success in the competition for students.

Managing the Transition

The overarching issue is, How is it possible to move a library organization from where it is today to where it needs to be tomorrow, and still have a functioning organization when you get there? In his book on managing transitions, William Bridges draws an important distinction between changes and transitions:

It isn't the changes that do you in, it's the transitions.

Change is not the same as transition. *Change* is situational: the new site, the new boss, the new team roles, the new policy. *Transition* is the psychological process people go through to come to terms with the new situation. Change is external, transition is internal.³⁴

Public service librarians will need to manage a number of significant personal transitions in response to a broad range of changes – in information technology, in the nature of instruction, and in the nature of organizations. They will

need to get out of the library and more about campus to manage the networked information system and assist in the restructuring of the curriculum. To do this, they will deemphasize traditional routines and activities, including some reference services. Academic librarians will be collaborating with a variety of groups from different backgrounds who will be making contributions in areas that were once thought to require a master's degree in librarianship. When successful in such collaborations, librarians themselves will acquire new skills to be campus players and to make the library a valued institutional resource. Otherwise, they face the real possibility of being displaced by computing specialists, paraprofessionals, or even some futuristic, smart technology.

To transform the library as an organization, library management will need to create and project a realistic vision of the future and to be frank about dangers as well as opportunities. Managers must figure out the actual costs of services in order to make good judgments about alternative uses of resources. Cost-benefit analysis of services will be necessary, on a broader level, to move forward in political debates on strategic plans for the academic institution. A primary strategy for all campus players will be carving out resources, including personnel, to undertake new initiatives that will be important, in turn, as professional development opportunities for staff. A commitment to retraining programs for existing staff will be necessary, as will a willingness to go outside traditional pools to bring new talent into the library. A trust of teams and their local authority will be critical to decentralizing the organization in favor of boundary spanning. Finally, library management

must forego turf battles and take a broad institutional view of information, even when that risks a loss of exclusive control of some resources.

When librarians make such personal transformations and library leadership has the required strategic perspectives and skills, there will be a successful transition to the electronic library. Restructuring will center on effective provision of networked information services and on boundary-spanning teamwork. However, if librarians and library leadership fail, the library organization will become a drain on the institution's resources and its ability to compete in the higher education system.

NOTES

- 1 A good review of the changes confronting higher education can be found in Donald N. Langenberg, "The University and Information Technology: Interpreting the Omens," in *Information Technology and the Remaking of the University Library*, New Directions in Higher Education, no. 90, ed. Beverly P. Lynch (San Francisco: Jossey-Bass, 1995), 5-17; see also William M. Plater, "Future Work: Faculty Time in the 21st Century," *Change* 27 (May/June 1995): 22-33.
- 2 Eli M. Noam, "Electronics and the Dim Future of the University," *Science* 270 (Oct. 1995): 247.
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- 20 Langenberg, "The University and Information Technology," 17.
- 21 Plater, "Future Work," 25.
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- 30 Richard M. Johnson, "New Technologies, Old Politics: Political Dimensions in the Management of Academic Support Services," in *Information Technology and the Remaking of the University Library*, 28.
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