The Impact of Merging Academic Libraries and Computer Centers on User Services

by

Steven J. Herro

An Alternate Plan Paper Submitted in Partial Fulfillment of the Requirements for the Degree Master of Science in Administration in Educational Administration

Minnesota State University, Mankato

December, 1998
Chapter I

Introduction

Since Columbia University announced that it was merging (hereafter referred to as converging) its library and academic computing services in 1985 and naming Patricia Battin Vice President and University Librarian, many colleges and universities within the United States have merged various information technology offices on their campuses. Information Services is often used to describe a new administrative unit due to the exploding and converging of computing and communications technology.

When academic libraries began to apply computer technology to their operations in the late 1960s, they purchased service and computer storage from computing centers like other campus departments. Lyman (1989) described specific scenarios when academic libraries would be heavily dependent on academic computing: when the library system software is hosted by a central mainframe computer maintained by academic computing, when the library catalog is accessible over the campus computer network, if the campus decides to write its own library system software, and if external databases are housed on the campus mainframe computer. Though the library and academic computing were linked by these functions, the departments still had to decide the following: which would support microcomputer hardware and software housed in the library, which was responsible for storing and providing access to the data files accessed via the library automation system, which trained users of databases accessible over library automated system, and which supported instructional software that was used at the university.
By the mid 1980s, increasingly related and overlapping responsibilities of the library and academic computing forced universities to begin to consider linking administration of the two departments. Woodsworth (1988) specifically noted that the breakup of AT & T led to a merging of computing and communication that caused universities to reassess computing and information delivery options. The reporting relationships of the library (usually academic affairs), administrative and academic computing (usually administrative affairs), and telecommunications (usually administrative affairs) were reconsidered. Convergence was considered for practical administrative reasons and only toward the end of the 1980s were collaboration and convergence considered to improve strategic planning, development of campus information policy, the offering of educational programs, and to provide greater support to curriculum development (Creth, S. D., 1993). In the 1980s, 200 United States colleges and universities created Information Services divisions to oversee such areas that might include any or each of the following academic departments: the library, administrative and academic computing, voice and data technologies, technology planning, television services, institutional research, printing, copying, mail, and media service (Rosser & Penrod, 1990).

In 1987, the Association of College and Research Libraries noted in preliminary guidelines to convergence that Brown University, Carnegie Mellon University, Columbia University, Dartmouth College, Notre Dame University, University of New Mexico, University California at Berkeley, University of Minnesota, University of Michigan, and Virginia Technical Institute had already begun to successfully collaborate on computer
networking, public access library catalogs, technology instruction, system maintenance, and housing of automation equipment (Bass, 1987). Hardesty noted that Richard Dougherty, Dean of Libraries at University of Michigan, began a publication at this time, *Libraries & Computing Centers: Issues of Mutual Concern*, to address issues of convergence.

Convergence became less popular in larger universities following the 1980s, but by the mid 1990s, convergence regained momentum, especially in smaller colleges. Gettysburg, Berea, Bucknell, Carthage, Coe, Connecticut, Eckerd, Kalamazoo, Lake Forest, Macalester, Mount Holyoke, and Wellesley all converged libraries and computing centers in the 1990s (1998). Johnson (1997) published one bibliography listing citations and some abstracts to over 50 sources related to convergence or library reorganization.

The head of Information Services functions as a chief information officer (CIO). He or she usually has the title Vice President, Vice Provost, Dean, Associate Provost, Associate Vice President, Executive Director, Director, Chief Information Officer, or College (or University) Librarian (Hirshon, 1998). He or she might report to the chief executive officer of the institution or the chief academic officer. At times, a librarian or computer center director will become CIO, and add the work of the CIO to his or her previous responsibilities; in some cases, a librarian or computer center director will be named CIO, and another librarian or computer center director will take his or her place in the former position; in other cases, an engineer or management professional will be named CIO (Hardesty, 1998 and Penrod, J. I., Dolence, M. C., & Douglas, J. V., 1990).

Why do institutions converge? Although some might consider personnel cost savings as a reason to converge, this is usually not the case in reality. One librarian CIO commented,
"How can you save money by combining the old 'bottomless pit' [the library] with the new 'black hole' [the computer center]?' (Hardesty, 1998). Most CIOs earn over $100,000 a year and because the position relates closely to a position outside of academe, higher education must offer a salary competitive with business for such an officer (Hardesty, 1998). Others converge to facilitate administration; computing, library, multimedia, and telecommunications all relate to information: why not realign administration to reflect this similar function? Higginbotham (1986) noted that both units collect information and assist end users in using it; if libraries and computing centers remain separate, libraries will lose out, as electronic information replaces printed information. By converging units, it is clearer to the end user where to go for service and the institution saves by reducing redundant staff time and access points. Converging departments fosters “one-stop information shopping” (p. 15).

Statement of the Problem

In the field of technology and higher education, to converge is to combine academic library, computing services, and perhaps additional departments related to information technology. This research will describe reasons to converge, why convergence might be difficult, and if users services are directly enhanced after convergence. After convergence, do students, faculty, staff, and the general public (hereafter referred to as end users) receive better personal service when they use information sources? After convergence, are faculty receiving improved assistance as they attempt to implement information technology in curriculum development? After convergence, do end users have improved access to the necessary computer hardware, software, and computer networks to meet their information
needs?

**Definitions**

*Academic computing*—computing hardware, software, and networking provided and maintained by computing center to enhance electronic information use by students, faculty, and staff in colleges and universities for instructional and research purposes.

*Administrative computing*—computing hardware, software, and networking provided and maintained by computing center to enhance institutional record keeping by administrative departments in higher education (such as the admissions office, development office, registrar’s office).

*Chief Information Officer (CIO)*—person with executive responsibility for the organization and control of information in a company or organization. Areas of responsibility in higher education often include academic computing, administrative computing, libraries, audio-visual collections, broadcasting, and telecommunications; see information services.

*Collaboration*—cooperation of staff members of individual information departments (such as library, computing, telecommunications, and audio-visual media) to enhance service to students, faculty, and staff in higher education.

*Convergence*—merging of the library and academic computing services and one or more of the following departments in higher education: administrative computing, telecommunications, broadcasting, and audio-visual media.

*Information manager*—"a position responsible for an operation dealing with information access, retrieval, technology, or transfer, i.e. computer center director, library director, media center director, or telecommunications director" (Woodsworth, 1987, p. 6).
Information services--organizational unit that provides print, audio-visual, electronic, and telecommunications data to enhance acquisition of knowledge by academic users and or operation of work place tasks by nonacademic users in higher education; see chief information officer.

Telecommunications--"systems that handle voice, data, and/or video transmission throughout the campus" (Woodsworth, 1987, p. 7).

User services--direct assistance provided to students, faculty, staff, and general public by workers in information services to help these individuals acquire necessary information needed for the completion of their academic, recreational, or occupational information needs.

Procedures of the Study

The study is based on a literature review of primary and secondary source material found in the professional literature of technology and higher education and results from a questionnaire of a stratified sample of 44 United States CIOs of higher education. The sample represents public undergraduate/graduate institutions, private undergraduate/graduate institutions, and private undergraduate institutions. A copy of the cover letter (Appendix A) and questionnaire (Appendix B) are attached as appendices. The list of CIOs was found in Hirshon (1998, pp. 35-37).

Limitations of the Study

Woodsworth (1987), Rosser and Penrod (1990), and Hirshon (1998) all surveyed CIOs in higher education. Even considering that their works were composed in different years, there is a significant difference in number of CIOs that each reported. This suggests that there is not a complete agreement as to whether a college or university has a CIO or not.
Furthermore, not every institution includes the same administrative departments under the heading of Information Services. The results of the survey to CIOs included five responses from 11 privately funded undergraduate institutions, four responses from nine privately funded graduate institutions, and five responses from 24 queried publicly funded graduate institutions, for a total response rate of 32 percent.
Chapter II

A study of the primary source literature (primarily graduate papers) and secondary source literature revealed difficulties associated with convergence, philosophical and practical reasons to converge or at least collaborate, and specific examples of effects of convergence and collaboration on user services.

Difficulties Associated with Convergence

The greatest reported difficulty associated with convergence was the difference in cultures between computing and library staffs. Academic library history is as long university history and library collections have been seen as the heart of the university. The academic library has well established standards, philosophies, procedures, and connections with the book trade. Academic computing is roughly 40 years old; it has operated in a rapidly changing environment and has strong connections to the commercial worlds of computer hardware and telecommunications (Weber, 1988). Another historical difference is that libraries have generally offered services free of charge (lending of materials, searching of databases, transacting interlibrary loans with other libraries, offering library bibliographic instruction) and focused on the user. Academic computing has historically "charged back" university departments for its service and emphasized not the user but the tool (Saunders, 1996).

Librarians have seen service as a hallmark of their profession and many librarians claimed that this is not so in the computer field. Computer professionals have been viewed as eager to try a new venture, but less likely to support it after it has been installed. One librarian noted, "Supporting and educating is not in their vocabulary. There is also a sense that
solutions are seen as providing hardware and connectivity," and another, "This may appear smug, but I see librarians more as educators and computer people more as technologists."

Computing staffers have commented, "The library has taken an attitude of being aggressively helpful, and I have taken an attitude, 'If you ask me, I will help,'” "I would say that our concern is much more with getting access, and we do not fret about the uses," and "While our views are extremely charitable toward the users, theirs [the librarians] are overly compensatory. There is almost the presumption of the user being lost. 'You cannot do without us.'" Furthermore, Herro participated in one conversation about the convergence of library and academic computing services at Minnesota State University, Mankato. One librarian feared that convergence would lower librarian status on campus. The librarians (presently with faculty status and accustomed to being treated with the respect of university faculty) might be viewed more as technical experts and possibly face a decline in status (and perhaps salary and benefits as well) in the eyes of academic colleagues on the campus.

University classroom faculty might be strong opponents of convergence, accustomed to libraries as scholarly, academic organizations and fearful that convergence would threaten library autonomy. Weiskel, a Yale anthropologist wrote of fear of losing traditional library service after convergence (Martin, 1992).

Woodsworth (1991) presented a historic mistrust of computer staffs by librarians. The bibliographic record is the intricate data record for each unique item that a library owns. Librarians have been reluctant to surrender control of these precious data records to
non-librarians. The Association of College and Research Libraries formed a task force in the mid 1980s to prepare guidelines on library and computer center convergence because academic libraries were untrusting of convergence (the final guidelines submitted by the task force were not approved). Baker (1990), Associate Director of Massachusetts Institute of Technology Libraries, noted a degree of fear and paranoia that some librarians have:

In the investigations for this paper, I feel that I have learned the answer to my original question: both libraries and computer centers have problems that we wish alliance with the other would solve. Perhaps both libraries and computing have been adventurers, each hoping to making a killing by alliance with the other. Nevertheless, the larger problem--the support for information technology within the university--can best be addressed through an alliance. Not the least of our strengths may be our record and talent for sound fiscal management. We need to have a clear sense of the strengths and motivations of our colleagues in computing. With our eyes open--and with our hands on our wallets--we should form that mutually beneficial alliance (p. 249).

Though librarians have been viewed as being more "customer oriented" than computing professionals, Naylor (1988) notes that they might not be best equipped to be the service providers in an era of electronic information. Does unfamiliarity with electronic information outweigh perceived customer orientation? Naylor suggested that the cost of training librarians to be electronic information professionals might outweigh their tendency to be user centered professionals. Furthermore, Naylor noted that there is no conclusive evidence that convergence has led to an increased number of personal computers and work stations for the public to access the increased amount of electronic information.

Dougherty and McClure (1997) stressed that institutions should have modest expectations of convergence:
Although case studies on restructuring campus information systems are rare, anecdotal evidence supports the view that such changes are more likely to be successful in smaller academic organizations, than in larger, more complex research universities.... For all of the theoretical debates, the promise of quick and easy mergers proved to be illusory. Consequently, the goals of reorganization have generally become more modest. Even a simple streamlining of information units under one person has not always produced financial savings because the creation of the new administration often adds yet another layer to that hierarchy (p. 71).

Philosophical and Practical Reasons to Converge

Libraries and academic computing have much in common. Both services are concerned with tools and information. Libraries have tended to focus on how people use tools to meet their information needs while academic computing has tended to focus on how technology helps meet information needs. The units have shared networks, share staff shortages, and share the need to construct flexible facilities to meet user needs in the use of information (Saunders, 1996). Librarians are skilled in interpersonal relations, organizing knowledge, marketing, training, and sales; computer professionals are skilled in system development, telecommunications, and product development (Creth, 1993). Creth wrote that not only should libraries and academic computing collaborate or converge, but that they must:

Libraries and computer centers are the two organizations within higher education that can provide leadership and create new directions for the campus through the application of information technology. They also have the most to lose. In order to be leaders--and not losers--librarians and computer professionals will have to be willing to make fundamental changes in all aspects of their roles and responsibilities, skills and knowledge, working relationships and organization cultures. By aggressively exploring opportunities to work collaboratively to deliver services including wholly new services, librarians and computer professionals can exploit the full potential of information technology in innovative and timely ways (p. 113).
According to Woodworth and Maylone, both units are involved in the specific functions of developing training tools and system documentation; designing and operating local area networks; planning and selecting system hardware and software; collecting software for end users; managing databases; performing system analyses; and providing technical assistance and consulting advice, instructing faculty, staff, and students on research strategies, file management techniques, and network access. Their professional goals are similar, to help users make optimum use of hardware, software, and communication systems to manipulate information. Libraries package information, computing centers store and retrieve it; libraries lend information, computing centers display it. Libraries acquire and borrow information and computer centers input it. Both deal with copyright, free access to information, ownership, standards, site licenses; both are impacted by telecommunications, and media services (Martin, 1992).

With the library, computing, telecommunications, and other information units functioning as one administrative unit, universities may achieve a more efficient financial administration of information technology funds and all computer hardware, software, and networks could work in greater cohesion (Woodworth, 1988). Convergence could lead to greater chances for obtaining capital for new technology initiatives, improved access for students and scholars, and a greater appreciation for the skills of all staff members involved in the information mission (Woodworth, 1991).

Institutions that converge or collaborate are better at answering users direct questions, according to Bly (1996):
Cooperation between the units would save much replication of effort and, in many cases, much frustration for both staffs of the library and computer center, as well as for the user. In many cases, the user does not know whom to ask when confronting a “computer” problem or is put off by the answer received. At the same time, there are many times when the academic staff member who is asked does not know who is responsible for answering the question or solving the problem. A single coherent and predictable set of channels for dealing with questions and triage techniques must be developed among all information providers to meet this need (p. 215).

How does convergence and the establishment of a CIO enhance user service? Drake (1991) noted that both computer professionals and librarians are not customer oriented; the former are machine oriented and the latter are collection oriented. A CIO is needed to insure that information services prioritizes the provision of quality customer service. The survey of Penrod, Dolence, and Douglas (1990) of CIOs revealed comments such as, “We are 100 percent service and have no other function,” “Service distinguishes us from similar institutions”, “If we can’t do it better, faster, cheaper than any other alternative, than we shouldn’t be doing it at all”, and “Our IRM [information resource management] unit’s existence is justified based on the services we offer; we seek to understand user expectations and perceptions by conducting ongoing evaluations of our service and align the services provided with those needed” (p. 16).

Kesner (1994) suggested integrating total quality management as part of convergence. Amongst other steps in a successful convergence, staff members must be superior listeners of customers and totally customer driven. Implementing total quality management includes the sharing of ideas all staff to enhance user services. The establishment of information service help desks and improved training and documentation for end users are indicative of total quality management enhancements to users in information services.
Kesner (1994) defined information resource management (IRM) as “… the economical and efficient management, servicing, and support of all information...that is of value to the organization. The value added component of IRM is the information utility’s ability to deliver accurate specific information to the end-user in a timely manner” (p. 375). Information utility was defined, “Within any organization, the information utility includes all those resources, services, and facilities that comprise, process, and deliver information to the end-user. More than computer hardware and software, an information utility is an approach to customer service that emphasizes availability, ease of access, economy, efficiency, and accountability to the community” (p. 376).

If the library invests in the information utility model, the user would benefit by better overall customer service and support, delivery of information to the individual desktop, enhanced integration among all information sources for better overall use of all available information, greater recognition of all information utilities contribution to the parent organization’s mission and goals, improved access to new information technologies, better resource planning, and staff cross training. Kesner noted that librarians are most likely to understand user needs and if librarians are true partners in information utility, this skill may be passed onto other professionals to supply improved user service.

Lester (1992) presented a checklist of skills needed for a user services professional in an information services division. The person must enjoy working with people in a cooperative environment, and not focus on winning and losing; the person must be willing to learn and continually experiment in all related areas; the person must possess excellent verbal and written skills; the person must be able to compromise and negotiate; the person must be
able to see the larger and the smaller picture at the same time; the person must be able to admit ignorance yet search for knowledge; the person must be willing to fail; and the person must have an enthusiasm for technology, process, organization and public service.

Nguyen (1997) cited Internet training as a perfect example of collaboration between library and computing staffs to serve the wider university community. Some have noted that the training could have never been as successful if either unit had done it alone (“...collaborative workshops provide a further opportunity for these service units to join forces and offer the university community the experience and expertise developed by each department” [p. 13]). Creth (1993) also cited librarians and computing professional combining to help develop new approaches to instruction (such as hyper media); librarians teaching not only typical library skills, but combining with computer services to instruct patrons on effective use of all information sources and publishing, print and electronic.

Examples of Convergence and Collaboration

Secondary literature and personal responses have revealed the success of convergence and or collaboration at Dickinson College, Rutgers University, San Jose State University, SUNY Albany, Carthage College, University of Wisconsin--Parkside, UCLA Graduate School of Management, University of Montana, Rice University, Kalamazoo College, and Lehigh University.

From 1982-1987, computing and library staff at Dickinson College collaborated to convert 200,000 library records to electronic format so that the library catalog could be accessible to over 200 campus users. The new search software enabled keyword searching, Boolean logic (the ability to combine terms with and, or, and not searching). Other colleges
have also collaborated to automate the library catalog, but Bechtel (1988) noted:

For such collaboration to be successful, special skills are needed on both sides. The desire to cooperate is of utmost importance. Individualists, isolationists, and superstars need not apply. On the other hand, librarians and computing people who want to learn, who tend to respect each others’ differences, and who are or who can become good negotiators, and who are committed to the educational aims of the institution can find enormous professional rewards in working together to enhance the educational process (insert between pp. 34-35).

Rutgers University and San Jose State University typified examples of collaboration to support improved micro computing for end users in academic libraries. In 1985, Computing and Information Services of Rutgers received funds to install and provide hardware and software support for Apple and IBM compatible computers and printers that would be used to start an unmediated online search service for university users of the BRS After Dark online information service. Librarians provided user instruction and consultation for the online searching, as well as publicity and policies for the services. Librarians felt that this service was needed for non graduate student users, who seemed to be neglected from online searching services. As one professional stated, “...We have worked effectively together and look forward to continued cooperative ventures--both for our mutual benefit and that of the entire university community (Hoffman, Kesselman, Nash, Langschied, 1988, insert between 306-307).

The resolution of tensions involved in collaboration at San Jose State Library stemming from a new microcomputer lab reflect differences in cultures between libraries and academic computing, but also how these differences can be worked out. In 1986, Instructional Systems and Computing Group and the library launched a joint microcomputer
lab in the library of 23 Apple computers and three printers. Benefits of placing the lab in the library included the convenient and impartial campus location for users, the number of hours that the library was open, promotion of the library’s holistic view of information access, and the opportunity for the library staff to become more computer savvy. The Computing Group would hire and train student assistants for the lab, maintain the software and hardware, pay for supplies, and serve as liaison to the donor (Apple Computer). The library would provide the space, circulate the software, supervise the student assistants, and provide backup instructional services (Hafter & Kittinger, 1990).

Within six months after the lab opened, the library and Computing Group discovered problems. Neither had projected such a high cost for supplies (toner cartridges alone cost the Computing Group $3500 after six months). The Computing Group wanted the lab to showcase other Apple products, as it tried to foster the relationship with Apple for future donations; the library sought to limit the visibility of the Apple Company in the lab. Furthermore, the library staff was frustrated with the performance of the Computing Group’s students assistants in the lab and with the nonacademic use of the lab. The lab was not increasing use of library services as much as promoting recreational microcomputer use. These differences underscored differences in library and computing cultures. The Computing Group saw its role as paying bills, providing equipment, and staffing the lab; the library saw its role as providing user support. The Computing Group was used to a self service model of service while the library was used to value added through professional service and one to one service between staff and user. The Computing Group viewed the lab as another campus computing lab while the library viewed it as an extension of library service (Hafter &
Differences and problems were resolved when the Computing Group became solely responsible for hardware and software issues and the library, with its innate service orientation, became solely responsible for recruiting, training, and staffing the lab. The library was also charged with funding the lab and it instituted a .25 per page printing fee. The hybrid facility was not been totally supported by either the Computer Group or the library, but did bring the greatest satisfaction to the end users. After having learned to collaborate on the computing lab, the two information units began to collaborate with the implementation of an online public access library catalog and in campus wide computer planning equipment. The Computer Group began to apply library circulation policies to loaning of its hardware and software and the library learned how to better relate to vendors and apply innovative uses of technology (Hafter & Kittinger, 1990).

SUNY Albany has implemented a model of decentralized service that has become common for end users. When the university upgraded the technology infrastructure to increase the number of campus computer network users from 2,000 to 20,000 people, the CIO knew that this would demand increased trainers by the information units. The university developed local technology coordinators in every school, college, university department, and residence hall. These coordinators represent service providers for any information accessible from the desktop computer, information formerly accessed separately from the library, computing labs, or telecommunications office. As the single unit, the PC, has become a nearly comprehensive tool to gather all forms of information, service providers of information have become adept at serving all kinds of information needs. As long as the end
user is able to forgo old service alliances and contacts and depend on the new local service provider, prospects for more efficient user support are possible (Butler, M. A. & DeLong, S. E., 1997).

Engledinger (Carthage College) and Meachen (University of Wisconsin--Parkside) (1996) have written on convergence in smaller institutions. The former rose from director of a liberal arts college library to a CIO and vice president of the college; the latter rose from the director of a smaller public university library to CIO and a vice president of the university. Parkside converged in 1992 and Carthage converged in 1993; the two are located near each other in southeastern Wisconsin. Both library directors became CIOs because, “... each institution’s top administration believed the interests of their campus would be best served by the library’s overall vision, its public service philosophy, and its broad view of the use and importance of information technology. In neither case did the reorganization result from a grass roots or rank-and-file [sic] staff initiative” (pp. 1-2).

Convergence was obvious at Carthage, as computer service staff troubleshooted library computers and helped install new automated library system software, the newsletters of both information units were combined, the user instruction room was jointly planned, the units jointly planned and presented an annual “Information Technology Day” workshop for faculty and staff as well as “Computer Awareness Week” activities every spring. Furthermore, numerous instruction sessions related to computer resources, the campus network, and electronic library resources were planned and presented together by computer and library professionals for college students, faculty, staff, trustees, prospective students and their families, and conference participants using Carthage meeting facilities. The college invested
heavily in network able full text and other electronic resources and realized that increased
staff would be needed for users to make best use of the tools. Convergence forced cross
training of library and computer center staffs. The Academic Information Services User
Education task force realized that permanent staff and student assistants in former library and
computer centers would have to become adept at providing service in all electronic
information task, ranging from email, to library online public access catalog, to word
processing, to electronic periodical index, to World Wide Web support. (Engeldinger &
Meachen, 1996).

At Parkside, convergence led to the modernization of laboratories and classrooms for
advanced electronic information needs, enhanced faculty use of technology in instruction, the
development of an Information Services newsletter, and enhanced user instruction. The
university created two new positions for software instruction to students, faculty, and staff;
the library became partially responsible for instruction in email, totally responsible for
instruction in the use of the World Wide Web, and the new Computing Assistance Center
received funds and personnel from both the library and the computing center budgets. This
center adapted a library reference desk model of service (Engeldinger and Meachen, 1996).

UCLA John E. Anderson Graduate School of Management pursued collaboration at
the facilities level. Frand, Director of Computing Services, and Bellanti, Director of the
Library, began to discuss an integrated information complex for the school in the late 1980s.
Donations by John E. Anderson and Eugene and Maxine Rosenfeld enabled the university to
construct a single facility to serve as an information complex for the Management School.
Bellanti and Frand surveyed faculty and students of the Management School in order to help
determine the future information needs of the school. Their goal was to build a facility in
which patrons could connect to a computer network anywhere in the complex, as well as remotely. There are 2467 Ethernet ports in the building, one for every office, desktop, library and classroom seat. By accessing the computer network, users are able to access large library catalogs, subject specific CD ROM databases, and hopefully international company data and industry analyst reports. The two information units had been cooperating in computer training workshops since 1991 and in the construction of the graduate school home page since 1995 (Bellanti & Frand, 1996). As Frand noted, users should not have to be separated by artificial divisions of library and computing center and that if convergence has truly occurred, a user will have the necessary computer hardware and software at side wherever one consults information sources. Bellanti agreed by saying, “If it’s information that they need, they shouldn’t be compartmentalized in how they think about getting it” (Hall, 1990, p. 70).

Samson, Pengally, & Brown (1997) described how collaboration has benefitted the user at the University of Montana. The university developed an Information Technology Plan through campus wide planning that included library and Computing and Information Services (CIS). Since 1991, the two have been offering joint Internet classes to users (presently, 17 different classes are offered), as well as sessions devoted to integrating technology in curriculum planning for all disciplines, departmental workshops and seminars, conference workshops, and a three credit Honors course. The library and CIS cosponsored two information technology conferences and an Internet teleconference and planned, designed, and maintained the university Gopher site together. From 1993-1994, university CD-ROM databases and library online public access catalog became remotely accessible through the
collaboration of the departments, and they jointly produced written aids to guide user access
to the tools. Hardware and software issues are referred to CIS and information access
questions are referred to the library. In 1994, help desk workers from each information unit
exchanged positions for a limited time in order to provide continuing communication at each
reference point, establish a basis for referrals, and expand communication between the two.

Rice University has had a CIO since 1989. In 1993, a new university department was
formed, User Services Division, from former public service professionals from the library
and academic computing. The division encompasses what had been library reference services,
laboratory services, government documents services, training, and publications. According to
Flowers and Martin (1995), “With our new organization, the focus is on serving customers.
Customers have one interface to the organization, which implies that the rest of the
organization must provide adequate backup support. In the new group, librarians and
computing professionals are working side by side as part of the same team....(pp. 40-41).”
The new division formed a library in the computing center to supply manuals, journals, and
reference service to campus computing users and a computing reference center to allow users
to test and research computer products before investing in them. It was staffed by a librarian.
The division also established a computing lab in the library and developed the Rice’s campus
wide information service (RiceInfo) as a gateway to local university information sources
(such as the library online public access catalog, the course catalog, and a database of
research and grant opportunities for Rice personnel) and links to external information sources
(such as the Library of Congress). User Services also developed a virtual library, as librarians
and computing professionals selected and installed external research databases (such as
Current Contents, MLA Bibliography, and Expanded Academic Index) for internal and external access to university users.

Reference librarians and the training team of User Services have developed a series of Internet resource workshops for the campus; reference librarians and divisional representatives from the academic majors have planned informational presentations to academic departments; and the marketing and public relations team of User Services has developed a Technology Showcase in the library, which displays vendors products and university information system and curriculum development projects (Shapiro & Long, 1994).

Since 1993, Rice has had an Information Arcade in the library that provides small group computer facilitated interaction and individual information exploration. It features an electronic text center, curriculum development center, and electronic classroom. The Arcade contains a help desk and students, faculty, and staff have space, services, and professional guidance for the use of electronic information that they never had before (Flowers & Martin, 1995).

Long and Shapiro (1994) described how the new User Services division has implemented degrees of total quality management. It practices a “90% solution”, a goal that 90 percent of all user needs be successfully addressed as quickly as possible; a tiered staff that will be in the loop for all information related decisions; and a User Services staff that will be professionally trained in customer service skills and management of customer expectations. The division has established written mission and goals to provide superior customer service for all Rice users.
Kalamazoo College formed an Information Services department in 1997, after the library and computing center were both without a director. Palchick (1988), the new CIO, reported that a new curricular support division was established to assist faculty in implementing technology in curriculum, develop computer consulting in residence halls, and supply a help desk; that the library will implement a new Web based catalog, and that infrequently used materials will be moved to an off site storage facility to allow more current materials to expand. Furthermore, under the leadership of the new CIO, the college has secured grants for nearly 50 percent of all faculty to receive training in integrating technology in their courses by off campus professionals. The student portfolio requirement has been strengthened, as what was a Web based portfolio limited to the students’ own floppy disk is now supported by the college’s technology infrastructure, and the portfolio is now accessible over the campus computer network. A plan for a building renovation and addition includes additional teaching and learning facilities; a faculty, student, and staff development center; a media/video editing and production center, additional user support points, and teaching labs. The new space will emphasize academic interaction, collaboration, and learning outreach for all Kalamazoo users.

Foley (1997) described convergence at Lehigh University. The new Information Resources unit includes the following teams: Lead Team, Client Services Team, Information Infrastructure and Services Team, Technology Infrastructure and Services Team, and Resources Planning Team. The university included feedback from three faculty groups, one staff group, one administrator group, one undergraduate student group, one graduate student group, and one mixed group before creating its new Information Resources unit. The initial
charge produced five recommendations: improvement of client orientation, improved availability of electronic information, increased usability and accessibility of networked information, improved quality and availability of classroom technology and support, and a developed plan for technology life cycle funding. According to Foley, two of the greatest challenges facing the new administrative structure were to staff the Client Services team with professionals who were flexible enough to serve the great multitude of user backgrounds and to maintain a positive working relationship between those in client services and those in infrastructure services.
Chapter III

Summary of Findings from CIOs

The author surveyed 44 CIOs of higher education from September 30, 1998- November 5, 1998 to determine why their institutions converged, how services to users have improved following convergence, and if institutions would converge again. It was a stratified sample of privately funded undergraduate institutions, privately funded graduate institutions, and publicly funded graduate institutions. Fourteen CIOs (or library directors, 32 percent) of those surveyed responded. The list of CIOs was derived from Hirshon (1998, pp. 35-37).

Improved user services was not given as a primary reason to converge (or in the case of some, to change reporting relationships so that individual information managers would all report to a CIO). Six respondents noted that the structure was changed due to vacancies in the directorship of the library or the computing areas, the failure of an individual information manager, or the desire to establish the office of a CIO. In other words, personnel factors and not enhanced user services were the driving reasons to converge or amend reporting relationships of information managers to a single CIO. Improved efficiency by cutting some costs, improving communication and relationships between various information units, consolidating budgeting and staffing, locating two or more information units in the same building, joint planning, and maximizing use of physical and financial resources were also reported as reasons to converge.

After convergence, or altering reporting relationships so that all information managers report to a CIO, respondents noted how user services have been improved. Examples of improved user services include the following: joint training sessions by staffs from different
information units; interchangeable use of staff members from different information units; a combined help desk to help answer typical library, computing, and telecommunications questions; development of information consulting teams for individual departments or colleges within the university; improved integration of technology and curriculum development; and improved relations between computing staff and academic departments after the computing center adopted the library’s liaison model. Some universities noted the specific enhancements of the construction of a new facility that promotes “one stop information access” for end users, the successful completion of a program to provide students with interface cards for computers for their residence halls, the establishment of end user advisory groups, and construction of a “faculty commons” in a new facility that emphasizes the use of electronic information in teaching, learning, and research.

Based on improved user services, CIOs were asked if they would converge again. One responded no, because the job was too much for one person. One thought so, but noted that it was too early to say definitively. Eleven responded yes, some of whom emphasized that the team approach used by the different information units in order to deliver improved service has been the greatest reason to converge or ally their reporting relationship. One respondent specifically noted that services to students in the continuing education program (who are distance learners) have particularly benefitted from the university’s converging all information units. One respondent noted that the question was not applicable to the institution.
Response to Findings from Survey of CIOs and Literature Review

The benefits of synergy, utility, and practicality were more evident than improved user services when CIOs were asked about reasons to converge and or results of convergence. The literature does reveal some concrete examples of improved user services following convergence or joint facilities, such as the examples cited from Rice University, Carthage College, University Wisconsin--Parkside, University of Montana, UCLA School of Management, and Lehigh University, but it appears that information services administration is guided more by practicality than by user satisfaction.

Like many decisions by administrators in United States higher education today, the overriding rationale for a decision seems to be financial cost. Many CIOs and much of the literature emphasize cost savings after convergence; services and staff operations are not duplicated, some middle management positions have been eliminated or left unfilled, and there is better fiscal management of technology resources. As government financial support continues to decline, income from outside donors becomes more costly to attract, and the public becomes more and more skeptical of rising tuition costs, colleges and universities will have to continue to improve at “doing more [technologically] with less [money]”. Economic realities, including relatively less income for more expensive instructional services, will continue to demand that information administrators consider cost efficiency and user services when making policy.

The experience of the author does conflict with some of the findings of the literature. Naylor’s (1988) suggestion that librarians might not be able to provide user service in an electronic environment has been proven wrong. As public service librarians use online
catalogs, search the Internet, construct home pages, and train others to do likewise, it is clear that librarians have adjusted to this era of electronic information.

The “service orientation” of the library culture and the “technical orientation” of the computing culture, including relationships to end users, described by Hardesty (1998) should not be generalized to include all colleges and universities. After serving as an academic librarian for over eight years, I have found academic librarians who have been both service and non-service oriented; furthermore, I have colleagues in computing services that range from the “read the darn manual” user response to computing center directors who have paid “office calls” to users to personally eliminate the most basic hardware problems. I have benefitted from classroom training on UNIX, Windows, presentation software, and other applications by computer service staffers, as well as having learned from their newsletters. Computer staffers can teach and can care about user support.

After having worked in academic libraries where librarians do not have faculty status and libraries in which they do, I can say that librarians are more fearful of losing their status and being associated as “techies” and not “academicians” in universities where they do have faculty status. Professional competence, and not job title or classification, should determine one’s credibility in higher education.

Conclusion

Decisions by administrators in higher education must be guided by both financial expediency and service to students, faculty, and staff, and service to students must remain of utmost importance. It is for the education of the student that higher education exists.

Should a college or university converge its information units, or minimally, alter the
administrative structure so that individual information managers report to the same administrator? I echo the words of Dougherty (1987):

Over time, the new organizational infrastructure will take shape, but no specific structure will be universal. Rather, the organizational structures are more likely to reflect the history, traditions, and institutional personalities of individual campuses.

One guiding principle we should follow as we prepare our profession’s future is that changes should be based on plans that enhance the educational missions of our institutions, not on the mere impression that certain redirections are, to be blunt, trendy and likely to attract attention (pp. 290-291).

Information service units will lose patrons to commercial book stores and Internet service providers if service to users is not enhanced by convergence and or collaboration. Bly (1996) was correct in stating:

... If academic libraries and computing centers do not work in a cooperative effort to support the clientele of their universities, then that clientele will go elsewhere to find the information and support that they need....If libraries and computer centers are not able to coordinate and broaden their services to fill the needs of academia, libraries will become archives and repositories to retain records of the past, and computing centers will be limited to their old role as data processing units serving campus administrative needs, if these needs are not also contracted to an outside forum (p. 222).

As a public service librarian, I have heard library patrons say, “You mean I don’t have to go to Barnes and Nobles?” One also must wonder why so many students, faculty, and staff decide that they must subscribe to America Online for Internet access when their university is an Internet provider. They are already paying for Internet access through tuition and often times technology fees, yet the service and support are so inadequate that the user must pay twice and subscribe to a commercial provider. If converging information units does not decrease the need for such “double purchasing”, something is wrong.
Furthermore, I challenge my colleagues in user services of information units to put behind their fear of change, paranoia of each others’ departments, and “turf” battles and to put the user first. Shapiro and Long wrote eloquently (1994):

If the library of the 21st century is to be more than a warehouse of old books staffed by a cadre of reference librarians, user services librarians must take the lead in forging new directions and new relationships with colleagues on campus. The transition will not be smooth because there are enormous cultural differences and mistrust between library and computing organizations that must be bridged. But the successful collaboration between our organizations will benefit not only these two organizations but more importantly our users who are, after all, at the heart of what we do.... (p. 290).
September 29, 1998

Dear Chief Information Officer in United States Higher Education:

You have been identified as a chief information officer in United States higher education today. As a graduate student in Educational Administration with a concentration in higher education at Minnesota State University, Mankato, I am researching the effects of the merging of library and computer services on library and computing services supplied to students, faculty, and staff. There are many reasons to merge, such as improved communication between library and computing staffs, improved administrative organization, expected cost savings, etc. but I am specifically concerned with if and how such a merger directly improves library and computing services for students, faculty, and staff (i.e. improved instructional support for use of technology and electronic information, improved support for integration of information technology in curriculum development, improved campus access to electronic information, etc.)

I ask your cooperation with my research by completing a short questionnaire and returning it in the enclosed self addressed stamped envelope. Your anonymity will be protected. An abstract of my findings will be posted on my home page, http://www.lib.mankato.msus.edu/staff/herro.html

I ask that you respond by Oct. 25, 1998. Thank you for your help.

Sincerely,

Steven J. Herro
227 Floral Ave.
Mankato, MN 56001
(507) 389-2507
steven.herro@mankato.msus.edu
Appendix B

Questionnaire

1. Classification of institution: bachelors institution, masters level institution, doctoral level institution, or research institution.

2. Sponsorship of institution: public or privately funded

3. What was the primary reason that your institution merged library and computing services? Use the reverse side if necessary.

4. If such is the case, how has your students’, faculty’s, and staff’s library and computing services been enhanced due to the merger of library and computing services? Please be as specific as possible; use the reverse side if necessary.

5. Based on positive (or lack of) results experienced by your students, faculty, and staff, would your institution merge library and computer services again? Please be as specific as possible; use the reverse side if necessary.

6. Please feel free to add any additional comments below and on the reverse side.
References


