Human Relations in the Digital Library Environment: New Management Directives for the Information Age

Sohair Elbaz
Illinois Institute of Technology

Carolyn Maraist
Illinois Institute of Technology

Human Relations in the Digital Library Environment: New Management Directives for the Information Age

Elbaz, Sohair - Maraist, Carolyn
Illinois Institute of Technology - Corporate Transitions

A wave of change is taking place within academic libraries. The incorporation of information technology into libraries has created change at an unprecedented pace. In the past, two comparable revolutions - the invention of movable type and the application of micro technology - took place five centuries apart. Today, and in the coming decades, academic librarians can anticipate an even greater impact on higher education in general. Moreover, librarians can anticipate a specific impact on scholarly communication, information storage-and-retrieval, library operations, theories and practices. As we struggle to meet the challenges of tomorrow, we must remember that although our tools and users are changing, our basic mission remains the same.

Carl Sagan provides a thoughtful definition of a library's basic mission in his book, ***Cosmos***. "A library connects us with insights and knowledge, painfully extracted from nature, of the greatest minds that ever were, with the best teachers, drawn from the entire planet and from all human history, to instruct us without tiring, and to inspire us to make our own contribution to the collective knowledge of the human species."

The heart of a librarian's professional mission remains one of connecting people with information. This mission was true when book catalogs were a librarian's predominate means of information access. It remains true in this era of electronic networks. This truth crosses the boundaries between the era when librarians managed collections through specific acquisitions and access points to the current age of information abundance where librarians now filter and evaluate service functions.

Technological change presents a special challenge to library management. Managing this change is the way librarians can carry the library's mission forward. Opportunities abound not only for survival, but for excellence as well. Just as the librarians' tools have changed, so have the management skills required to affect the transitional process effectively and to maximize the new technology. This change impacts library management on several levels: technical, organizational, and individual.

On the technical level, the change entails new equipment, new technical knowledge and training, and even modified work spaces to fit the hardware and related shifts in some job responsibilities. On the organizational level, technological change requires increased interdepartmental cooperation, open communication and flexibility as jobs become more streamlined and departmental tasks to heavily overlap. This change necessitates alterations in conventional management styles. Alterations may require flattening the traditional vertical hierarchy to a horizontal structure to increase teamwork and staff input. The transition process can be a stressful activity for management. Excessive structure, however, usually impedes productivity, flexibility

and empowerment strategies. Many management experts suggest a maximum of five layers in any organization. This philosophy recalls the old adage, "Less is more." A simple organizational structure not only promotes openness and responsiveness, it also infuses a strong sense of identification with the library-as-a-whole instead of a single and territorial area or department.

On the individual level, change involves increased confidence and productivity as staff members realize new technological applications. This results in greater feelings of responsibility and higher self-esteem. The acquirement of new skill sets gives employees a greater sense of value and marketability. Another benefit is the shared library-wide pride-of-accomplishment when staff members are successful in setting up the new technology.

These are the positive impacts of technology within a library. However, another side exists as well. Change is chaotic. Understanding that even the best managed change process can experience many problems is important. Broadly focused strategies that management designs to ease transition will still encounter problems in the transitional process. Comprehending and anticipating the types of problems that can occur and being prepared to tackle them is vital for library management.

Technical problems are the easiest to identify. A computer malfunction is an obvious problem. So too are crammed and inefficient work spaces. We can identify the solutions to these types of problems before or as they occur. Management usually focuses on preventive planning for many of these common technical problems. The inclusion of library staff in this planning process can help to alleviate technical problems through the identification of needs. The match between staff's job and equipment requirements plays an extremely important role in insuring their satisfaction and acceptance of the new technologies. Other institutions' experience and the library and management literature can provide helpful insights into the planning process. Staff involvement in planning decisions throughout all levels of the library will always remain the responsibility of library leadership.

The more difficult problem areas are the organizational and individual levels. Combined they present the greatest challenge to management. First, identification is usually difficult. A problem may manifest as a "typical" issue. For example, the source of increased departmental disagreements or tensions between librarians and support staff may not be immediately apparent. The problem might stem from job insecurity or role confusion created by the new technology. Some problems, which can occur because of technological change, are:

1. Staff members feel devalued, as management redefines jobs, because their jobs now require a new set of skills. This is particularly difficult for staff members who have had only minor changes in job responsibilities over an extended time. Loss of role identity and subsequent loss of self esteem can occur as job definitions change.
2. Staff is unwilling to adapt to the new technology. This unwillingness may result from the discomfort of doing things in a new or unfamiliar way. Or, it may stem from a lack of understanding concerning the use or added value of the new technology. The difficulties associated with a fast-paced learning curve may also be a contributing factor.

3. Mounting pressure on staff to function more efficiently, through the use of the new technology, will weaken any existing unsturdy structures within the organization.
4. Morale becomes low because staff members are increasingly uncertain about job security and may begin to develop fears of being replaced by machines or people with the required new skills.
5. Change can exacerbate tensions between librarians and support staff as responsibilities shift from action-centered to intellectually centered skills.
6. Staff might doubt management's long term commitment to the change process if it is viewed as a fad and thus, remain uncommitted.
7. Traditional organizational hierarchies can be too rigid to encourage the cross-level staff communication necessary for effective change.
8. Depersonalization can occur as people spend less time in direct face to face interactions and spend more time interfacing with machines.

At IIT, we have had a successful transition into a digital library environment. Yet, we have encountered most of these problems, in some form, during the change process. This is not unusual because change is a process of constant adjustment and reassessment. Unfortunately, no blueprint or manual for change exists because, in our various university environments, we each have distinctive needs for the new technology. Nevertheless, a certain commonality exists in our experiences and adaptive management techniques can enable us to convert many problem areas into success stories. These techniques involved empowerment; therefore, they are applicable to all libraries.

The question we are addressing today encompasses how to best manage the change process. What are the constructive ways that library management can control the impact of technological change? To give a framework for how we addressed these issues at IIT, we would first like to describe the actual technological changes that were carried out.

In 1992, the library participated in a university-wide, grant submission project to the Department of Defense. DOD funded the library's component for a total of $640,000. The planning stage took eighteen months. Library management sought library staff participation throughout this process. The proposal constantly changed because product specifications and availability had high turnover.

Planning updates were usually communicated through meetings. When allocations were received, implementation started and, for the most part, remained on schedule. A review of the technological environment that emerged, in less than one year, will contribute to an understanding of the problems encountered. Before the technological change took place, library computer equipment consisted of a homogeneous mix of stand alone units. Public units were, for the most part, dumb terminals. Multiple software versions were used. To date, the library's network environment includes the following:

- An Ethernet cabling infrastructure that connects all library departments and public areas. This cabling system connects the library's computers to a local file server as well as to the campus backbone via a fiber optic trunk, which further connects the library's computers directly to the Internet.

- A primary file server, running the Novell 4.1 operating system, serves ninety plus clients. This server stores and manages shared information among staff members and individual user directories. Two Windows NT servers manage the library networked 28 CD-ROM databases. Two Unix-based systems provide both remote access to these CD-ROM databases and firewall security for the network as a whole. All network operating systems have been integrated through the primary server to create a platform-inclusive-network. Users now easily access a variety of resources from a single desktop environment.
- Network versions of popular software packages are available for staff use. For example, all staff members now use the same word processing and spread-sheet programs which have improved document integration among departments. An internal electronic mail program allows staff to communicate efficiently with other staff members and departments. This program also allows users to share scheduling information and exchange documents seamlessly. As a result, time, paper flow and photocopying costs are reduced. This system will soon be integrated with the existing Internet E-mail service. Staff members can also utilize a variety of other common software packages, CD-ROM databases, and other library specific applications, e.g., IO, LCS, OCLC, thus creating a universal workstation.
- Pentuim workstations have replaced older, low end PCS within the library. All new PCS are built and warrantied by major computer manufacturers. Network laser printers are located in each department. Dot matrix printers are provided for low end printing.
- Scanning workstations, located in Public Services, support archival projects, Internet-based document delivery services (ARIEL), and the electronic reserve program.
- Other technologies include bar coding, the library's WWW site, and our current project - an Integrated Library System and digital imaging system.

This implementation process impacted all three levels of change. As previously mentioned, the technical level was the least difficult to manage. Changes were obvious. Staff acquired more powerful workstations. Work areas were rearranged to accommodate peripheral computer equipment. Small group training sessions were conducted by members of Network Service Department and department heads. Specialists were brought in when needed. For higher level technical training needs, staff were sent outside the organization. The approach for training involved empowerment techniques with hands on participation by management and feedback to the trainers about training intensity. An electronic help desk was established for answering user questions and reporting technical problems.

A less obvious but equally important impact has been made on the individual level. Initially, everyone was excited about the new technology. The digital library vision was conveyed through a variety of techniques, e.g., general meetings, scenario planning, visual presentations, and written reports. Staff participated in planning and decision making. Excitement ran high until the new machines were sitting on staff's desks. At this point, people began to feel overwhelmed. Staff didn't know where to start or what their roles entailed. Time constraints, budget pressures and technical issues resulted in management's inability to spend equal amounts of time on follow-through with staff. Therefore, the vision was not continuously conveyed to support

each staff member's sense of their ongoing role in the process. Gradually, many of the problems we've listed became evident. There was exacerbated tension between librarians and support staff. Each group felt that their own knowledge base and perspective on the technology was more relevant. There were increased conflicts between these groups over areas of responsibility. In some cases, staff used the technology as an excuse not to cooperate with one another. Certain areas of the library with weak organizational structures became less productive. Instead of interdepartmental relations improving as functions crossed departmental lines, confrontations began occurring over who was responsible for different jobs. For example, reserves has always been a function of the circulation department. The new network has allowed us to implement a faster, widely accessible electronic reserve's project. In this new electronic environment, the reserve function is now a function of three departments: Reference, Access Services, and Network Services.

Conflict initially arose over project workflow when Access Services was given the responsibility for receiving, preparing and scanning all documents. The new procedures radically changed the way in which reserve materials were made available to users. Now once the documents are scanned, librarians from the Reference Department locate the image files on the server, index them, convert them to viewing format, and place them on the library's web page. The implementation of this project required a high level of training and negotiation to foster cooperation between departments. Nevertheless, some staff members still distrusted other staff member's knowledge. Two staff members even went to the extent of checking the validity of their suggestions at other institutions.

Management initially tried to deal with the problems through its administrative advisory council and by utilizing the Quality Action Teams already in place. These teams were interdepartmental and emphasized the individual's role as part of a larger process. Although these teams had previously functioned well, the technological changes exacerbated interdepartmental tensions. Since these team were interdepartmental in composition, the teams were undermined. Teamwork suffered. Management became increasingly identified with the change and was resented. It became difficult for the library administration to arbitrate the disputes. As tensions increased and conflicts became blatant, it was clear that the old management techniques were not working in the new library environment.

The question became what to do about the problems. An outside specialist, who facilitates conflict resolution, negotiation techniques and change management, was consulted. The approach used by the consultant was one of empowerment. This involved direct hands-on work with all levels of personnel. The staff needed to feel valued. They needed to maintain a sense of esteem and self-worth in the transition process. All their boundaries had changed. They did not know where they stood. They needed to feel a renewed sense of connection with leadership's vision of change.

The consultant's first step involved an assessment of the overall situation. It was important to separate the actual causes of the problems from the intense feelings that they generated. The consultant interviewed staff members to get varied perspectives. As a result, it was possible to analyze the accuracy of both management and staff's views relative to the nexus of the problems experienced.

After assessing the situation, the consultant implemented an approach which utilized direct empowerment and specifically entailed greater communication at all levels of the library. This was not a short term fix, but rather a concentration on the individual first and his role within the library structure second. Meaningful change can only occur when it involves self-knowledge and personal motivation to change. For example, in order for an individual to communicate her needs relative to new technology, she must first have an understanding of what her needs are. An individual can only determine this when the nature of the new technology has been effectively communicated to her.

Once staff realized that their own sense of their roles and job identity could be integrated into the new library, there was a need to establish a forum for their input. This was accomplished on several levels. Dialogues with the consultant provided staff with additional frameworks for their needs assessments. The interview-dialogues were as basic as asking a staff member to describe his job. This was a topic that each person felt confident discussing. In turn, this confidence helped to establish a comfortable base for discussion. This was the beginning of the empowerment process. The very act of having a consultant there listening assured staff of their value within the organization. This process was a first step in the restoration of trust as staff realized management was taking their issues seriously and was considering their input. As a first attempt to deal with the change issues, staff were asked to think about and describe how they perceived their future role within a digital library. Such questions enabled staff to project a more progressive role for themselves within the new environment. There was an increased sense of self-determination. Change was not being forced. Rather, there was a chance for integrating an individual's goals with the overall goals of the library.

Listening is not sufficient in and of itself. Follow through is an equally important part of validating staff input. The consultant helped management to institute a systematic approach to follow through. This approach involved staff generating individual notes on problems and recommendations for solutions. These notes were addressed in formal meetings with departmental supervisors. Minutes were taken at each meeting and addressed at subsequent meetings to insure that there was follow through on the issues raised. Supervisors discussed recommendations with management. The most suitable solutions were implemented but all input was recognized. Such a degree of involvement impacted the change process by encouraging individual participation and communication at all levels within the library structure.

Additional steps were taken to facilitate conflict resolution. Managers and supervisors who had difficulty shifting styles, were encouraged to use new leadership skills through hands-on training and mentoring. Staff were stimulated to work in teams again. Weak organizational structures were reorganized and strengthened. Empowerment involving a sense of individual value was a key step in implementing these changes.

Recommendations

Today empowerment is a buzz word in the management literature and seminars. The reality is there is no quick fix. Empowerment is a process requiring a deep belief in the value of others. It is a process requiring personal commitment and a willingness to

change. Empowerment does not happen overnight, it is a lengthy process that requires planning.

What is truly paradoxical is that many of us already know how to empower and have employed empowerment techniques in other areas of our lives. Simply put, empowerment is about making people feel valued. It's about treating people in such a way that they feel able to do things which might be challenging or threatening. Communication is essential in the empowerment of individuals. It involves many skills that we use in our daily interactions. But it is important to remember that communication is a two-way process. It involves not only an effort to convey information to staff at all levels of an institution, but an equal effort to listen to their input. An individual's value to an organization is emphasized by effective listening and follow through on input. This enables individuals to integrate their needs with the greater needs of the organization in such a way that they feel personally motivated toward participation in the change process. A review of the issues involved in empowerment follows:

1. Listening.

Listening is one of the most important skills in the process of empowerment. We all can listen. We listen to our bosses, to our friends, to our family, to the radio. The fact is we do a different type of listening in each of these cases. We hopefully pay much more attention and are more involved when we listen to our boss than when we listen to the radio while we relax. We might listen more intently to the problems of our family members than to those of colleagues. The important difference has to do with level of involvement in the listening process. To empower people, we need to listen wholeheartedly. We need to convince the person to whom we are listening that we understand and value what they're saying. To make sure of sound understanding, clarify points which might seem unclear. To let the speaker know they've been heard and to stimulate further comments, repeat back aspects of what they've said. This allows for feelings of validation. Ask good questions and try to avoid questions with yes/no answers. An example of this can be seen in the following dialogue:
Tom: "I don't feel the staff like me. They resent me."

Listener: "Why do you feel they don't like you? What makes you feel that way?"

Tom: "They never include me in anything."

Listener: "So you feel they don't care for you because they don't include you in anything. That sounds hard. What else makes you feel they don't like you?"

This type of listening is particularly important in the resolution of a conflict because it will enable you to get in depth information and perspectives on the cause of problems. People will feel they're being heard and thus will be more willing to communicate. It is important to provide a forum for this listening. An open door policy communicates your willingness to hear others and encourages staff to voice their concerns. Seek staff out informally and engage in dialogue. Ask their opinions and encourage them to seek you out in the future. This can be accomplished by periodically taking people out for coffee, or stopping at their desks to chat. The more a supervisor listens to staff, the

more he is able to lead effectively. On the formal level, meetings are a good platform where information can be exchanged and staff can express opinions.

2. Follow through.

Another component of the empowerment process is follow through. Listening must generate a response. When possible, act on suggestions. This sends a message that the listening process matters and staff input is valued. If it isn't possible to incorporate suggestions then provide feedback that the suggestions were considered. Recognition of particularly valuable input is essential. For example, recognition, either formal or informal, is considered by Tom Peters in his book Striving on Chaos to be the single most important opportunity to parade and reinforce the specific kinds of new behavior one hopes others will emulate.

3. Quick Recovery.

Mistakes or misunderstandings will probably occur. The faster we move, the more mistakes will be made. However, the better our attitude toward mistakes, the faster we can correct them and move ahead. Corrections must be made promptly to insure maintenance of a good atmosphere during the transition process.

4. Communication.

The issue of communication can't be stressed enough in managing technological change. Communication can facilitate change, particularly when jobs need redefinition. The more people can communicate their feelings, the more they will feel involved in the change process. If handled incorrectly, communication can undermine change. Change concerns everyone. Insufficient information can create opportunities for speculation. When this occurs act quickly to make the necessary corrections.

5. Leadership.

Leadership has a new role in this era of technological change. Leaders must convey vision and a commitment to the new technology. This should involve mentoring, consistent feedback and giving staff a greater sense of autonomy. One can never make another person change. One can only facilitate the internalization process which enables each individual to feel confident, valued and secure enough to try something new. In the information age leaders must not concern themselves only with the organization's basic purpose; they must be vision oriented as they create new ideas, policies, and methodologies, inclusive of the human elements. The Leadership Challenge of the 90's prompts leaders to change the basic metabolism of the organization by creating and innovating new services. This cannot be done by isolating staff from the decision making process.

6. Vision.

An effective vision is necessary - one which is clear, challenging and flexible. A vision must inspire and ask people to give their best performance. It must speak to the individual and the institution as a whole. Most importantly it must be realistic and applicable to all levels of an organization.

Finally, we need to embrace change although it can be chaotic and unsettling. We must master the paradoxes presented by managing in a time of transition. We must remember that our greatest challenges are also our greatest opportunities for growth.