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AUTHOR Christensen, John O.
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ABSTRACT

After noting that library processes are continually becoming more automated and that services are being introduced at an ever-increasing rate, this paper goes on to describe the composition and functions of Brigham Young University's Integrated Library System (ILS) Committee, which was established by the library administration to advise it on automation decisions. The results of a survey of about 400 academic libraries that was conducted to determine how they were making their automation decisions are then presented, based on the approximately 100 replies received. The respondents' replies are summarized under the following five categories: (1) computer expertise among librarians; (2) parent organization and other outside library support; (3) vendor support; (4) funding; and (5) decision making structure. It is concluded that the significant costs, tight budgets at most libraries, and the nontechnical backgrounds of most librarians indicate a need for careful decisions on these processes and services. (14 references) (MAB)

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# AFTER THE INSTALLATION: MANAGEMENT OF LIBRARY AUTOMATION

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**by John O. Christensen**

ABSTRACT: Library processes are continually becoming more automated and services are being introduced at an ever-increasing rate. The significant costs, tight budgets at most libraries, and the nontechnical backgrounds of most librarians indicate a need for careful decisions on these processes and services.

AUTHOR FOOTNOTE: John O. Christensen (M.L.S., BYU, 1975) is a professional librarian at the Harold B. Lee Library of Brigham Young University, where he is currently the Physical Sciences Librarian and was, for three years, the chair of the Integrated Library System Committee, formed to advise the library administration on automation decisions after the installation of the NOTIS System in 1985. Mailing address is 2402 HBLL, BYU, Provo, Ut. 84602

## AFTER THE INSTALLATION: MANAGEMENT OF LIBRARY AUTOMATION

Computer terminals have been appearing in increasing numbers in libraries, replacing books and bookshelves as the most noticeable physical objects. In the last decade, many libraries have had to face choosing an automated circulation system, subscribing to a cataloging utility, selecting an online public access catalog system, buying periodical indexes on CD-ROM, choosing personal computers for library office automation, and a variety of other automation decisions. Frequently an ad hoc committee is set up to make the decision, and everyone involved breathes a sigh of relief when the decision is made and they can get back to their normal work.

Most librarians come from nontechnical backgrounds; the operation of libraries and library-related institutions and industries has reflects this nontechnical emphasis. Also, the nonprofit nature of libraries has reinforced resistance to applications of new automated technology; with no profit motivation, libraries have been less pressured to keep up with advancements in technology. Even though budget cuts and escalating materials costs have pressured administrators to reduce the labor-intensive nature of their operations through automation,[1] all too often administrators have found that the promised savings in labor costs have not materialized.[2] The improvements which come with new technology may only benefit the

patrons, and thus may lessen the appeal of the new technology, because it is not accompanied by savings to hard-pressed budgets.

Library managers are unused to setting aside money for capital-intensive technological applications. A system that may cost tens, even hundreds of thousands, of dollars but does not put one new book on the shelves seems alien to many librarians. Also, the need for future replacement of the main components of hardware of the system every three to seven years may be almost unthinkable. Traditionally a new building has been the one major capital expense libraries are prepared to make simply because the building lasts for decades and has a very visible use.

Although these tough technological decisions have to be made, resistance and conflict are not inevitable byproducts of these decisions. To fulfill patrons expectations we must embark upon a program of automation development, just as we have done for years in collection development. Lowry suggests that

> the potential of technology for libraries . . . will be realized most effectively 1) where good management principles exist; 2) where key personnel have a basic understanding of technology; 3) where managers can select technologies most relevant to their given institution; 4) where personnel are qualified to embark on capital accumulation; 5) where managers are capable of selecting skilled technical personnel; 6) where managers understand the structure and dynamics of their library; and 7) where libraries are already effectively

employing their most important resource--their staffs.[3] The principles which Lowry suggests imply a much different situation than the use of ad hoc committees to make automation decisions. Bruntjen and Hall summarize the situation:

> Any office, institution or library is an ongoing operation. It cannot close down for two months while the perfect solution is put in place. And the computer field is anything but stable. The right answer in any plan often becomes obsolete before it is even implemented: prices keep dropping; capabilities keep increasing; new capabilities and lower costs generate new horizons of what could be accomplished; and users are never satisfied.[4]

The organizational structure needed to handle technological development in a library can, if not managed properly, grow as fast as the technology. A small library may depend on one staff person to be its technical expert. Because this staff person then becomes the key to technological development in the library, selecting the right person is critical. Large libraries may have an automation staff of their own, very capable in technical aspects but lacking the library science training helpful in applying their technical expertise to the library. Whether a library administrator finds himself in the former or later situation or somewhere in between, technological development is still necessary, and its management must be directed by the library's administration. "The

understanding of the role of management is a critical issue and on it may depend the success of any scheme of computerization."[5] "The real danger is not that top managers will not change their roles to fit the computer, but that they may."[6]

To make efficient use of the unprecedented expansion of technological applications in libraries, the Brigham Young University library administration established an Integrated Library System (ILS) committee to advise it on automation decisions. Each area within the library affected by technology is represented. A representative for each system module of the Library's NOTIS system (e.g., circulation, cataloging, order, bibliographic) is a permanent member of the committee. The committee has strong public services representation and includes the director of automation. The committee chair and several of the memberships rotate positions, in order to bring in fresh ideas. To maintain close contact with the library administration, one of the library directors is an ex-officio member of the committee. Various working groups, subcommittees, and ad hoc committees are appointed from time to time to study particular problems and either deal with them or present recommendations to the ILS committee. This facilitates the operation of the ILS committee and also provides opportunities for other staff (non-ILS members are regularly included in these groups) to become involved in automation decisions in their areas of specialty.

Since the ILS committee is an advisory committee to the

library administration, the committee chair regularly reports to the library administration on the activities and recommendations of the committee. Also, the library administration initially refers all matters regarding automation to the ILS committee for their recommendations. The most competent, dedicated personnel are appointed as members of this committee; their recommendations will directly affect the future course of automation in the library. A bad decision can be disastrous to both the budget and services. Just as libraries need to devote large amounts of their budgets and personnel to the development of their collections, library administrators are becoming increasingly aware that libraries must also devote large amounts of their budgets and personnel to library automation.

The ILS committee does not just act on the Brigham Young University library administration's requests for advice on specific matters but actively seeks to solve automation problems. Meetings are frequently held, to ensure that lines of communication are open, and to keep on top of problems as they arise.

After three years as the chair of the Brigham Young University Library ILS committee, I decided to find out how other libraries were making their automation decisions. I sent out an "open-ended" questionnaire to about 400 libraries. Because my purpose was to get a variety of unstructured responses from a diverse group of libraries, I chose to send the questionnaire to all DYNIX (vendor of small to medium size library automation

systems) and NOTIS (vendor of automation systems for large libraries) customers. I wanted to avoid the artificial channeling of responses which often happens in quantifiable surveys. I received about 100 replies, which are summarized within the following five categories.

## Computer Expertise Among Librarians

Most librarians do not have expertise in computers. Of necessity, in many libraries, one or more of the librarians have been designated as computer experts among the staff. These computer librarians' expertise range from just personal computer use to degrees in computer science (though this is unusually and found only at larger institutions). Smaller libraries frequently purchase "turn-key" systems that require much less local maintenance and reduce the need for computer expertise among the library staff. Other libraries receive outside local help from parent (university, city, county, etc.) organization computer centers or enjoy "piggyback" arrangements with larger libraries or systems.

Most of the librarians who answered agreed that librarians must improve their computer skills. In-house computer experience is preferred, and those libraries with it have an advantage. Carolyn Langlinais describes the following scenario:

> The staff begins to feel levels of distinction arise based on familiarity with the system. Imagine the senior staff member, friend to all the patrons, feeling

> suddenly as though she is being rated on the advances she has made in computer use! And the new employee, as quick as lightening on the computer, zips along making intuitive leaps that seem like magic.[7]

Familiarity with the computer systems used in the library is no longer an option for the staff. Library administrators must emphasize computer training in the continuing education and hiring of staff.

**Parent Organization and Other Outside Library Support**

Many of the libraries who responded to the questionnaire are part of larger organizations. Most of these libraries emphasize the need to make use of the resources of the larger organizations and emphasize to the larger organizations the special needs of their libraries. Libraries which establish good working relationships with their parent organizations benefit both financially and with borrowed technical expertise. Therefore, having your own autonomous automation system may not always be in the best interests of the library. I received many letters outlining the excellent working relationships between libraries and their nonlibrary computer centers and the significant benefits those libraries gained.

Small libraries can make use of many nonlibrary resources. Some state and regional library organizations have hired computer consultants for the use of their member libraries. Friends of the Library organizations may have members with computer

expertise or computer resources available to them. Friends' groups can certainly be used to lobby for automation funding. Many small libraries hire outside consultants familiar with library automation problems to help them make particularly critical automation decisions; also colleagues at other institutions are among the most helpful sources of information.

**Vendor Support**

Look for vendors with excellent user support. A good vendor will encourage and support activities of a user's group of its system. Many vendors have not been very responsive to library issues; however, the best vendors are now recruiting experienced librarians (library-computer experts) to help fill this need. Small libraries depending on turn-key systems are especially vulnerable and need a vendor with fast and efficient customer support. Vendors prefer to designate one person, usually the head of library automation, to interact with them, but it is in the best interests of the library to have at least a backup and, if possible, several staff familiar with the routine operation of the system.

**Funding (Ongoing and One-time)**

A variety of funding methods, including federal and state grants, special appropriations, gifts, fund-raising campaigns, bond issues, savings accounts, and, in one case, insurance money from a fire[8] were used to pay for the initial system. Once the

initial system is installed, on-going funding can become a large problem, which must be addressed:

> If one looks at technology and the way technology has been used, two problems come back again and again: recurring investment and maintenance. The university says 'it must have a big computer,' and the state buys a big computer. Five years later the university needs another one. The state says, 'what is this, we bought you one.' It is clear that if we are going to be successful in technology, we must have a plan that allocates regular capital funds every year; there is no other way to do it. We can't make one time purchases and expect to get anywhere. Universities don't buy library books only once, they make that capital investment every year. Information technology in all of its forms is exactly the same. Furthermore, despite jokes to the contrary, libraries don't buy books, place them in a big building, lock them up and say there is going to be no further cost. Once the libraries buy books or materials, more money is needed to maintain and operate the library. In many states today, there is a tendency not to provide funds for maintenance and operation of information technology. As a result, much of the technology is being used ineffectively.[9]

Many of the librarians who responded to my survey were deeply concerned about future funding and had no suggestions for

a solution. However, a significant percentage had managed to find a way to put funds aside annually into a contingency or escrow fund for future system replacement needs. This seems to be the only proven funding method--saving for the future. Some libraries that were attached to larger computer centers did not have to worry about future system replacement, since their computer centers had an ongoing contingency fund. It seems that the computer centers, having been in this business from the onset, have set aside such contingency funds.

The other problem of ongoing maintenance has a similar answer. Parent organizations must be convinced to include sufficient funds in budgets to cover ongoing automation costs. Automation has become a necessity, rather than an option, in libraries, and its funding must be fought for:

> As to proven funding methods: Do your homework when competing for scarce dollars. Know the bottom line so administrators can easily plan funding. Have an easy to understand, well-thought proposal which stresses the benefits to users rather than library staff. If you can tie it into the standards of an accrediting agency do so.[10]

## Decision Making Structure

Good decisions are never made without taking all factors into account. The initial decision to purchase a particular automation system usually involves an ad hoc committee, but as

mentioned, automation is not an ad hoc operation in a library; automation decisions require an ongoing decision-making organization. Small libraries frequently rely on an automation expert on the staff to make many routine decisions with the help of the vendor. However, even in the case of a small library, the staff need to be continually involved in automation policy decisions. Greater staff involvement leads to improved services and better use of the automation options available in a library. Many large libraries use an organizational structure like the Brigham Young University structure outlined above. However, the same principle applies in a large library: "If the staff are involved in reaching that decision then the chances of a successful outcome are much enhanced.[11]"

Many libraries are seeing the benefit of recruiting library-computer experts. In some academic institutions the merger of information and computing is seen as a desireable trend.[12] Automation is not only taking over the workplace but the library as well:

> The best staff relationship between expert and library staff is one in which the system is allowed to grow in accordance with the expertise of the staff, and in which the staff is taught to think out the uses of the system making ther troubleshooters and experts, as well as librarians.[13]

Librarians must be prepared and organized to make library automation decisions as easily and readily as they make

cataloging, acquisition, reference or circulation decisions.

## SUMMARY

Library automation decisions can no longer be handled in an ad hoc manner. Given tight budgets, the financial repercussions of bad automation decisions can be disastrous. Automation has become part of library's everyday existence. Manual methods of doing many library operations are no longer competitive. As one librarian explained:

> Automation is a change in our way of life. It is a process and a program. It is NOT a project. Consequently, our customers and those who fund us get the wrong idea. They think it's a one-time expense, which it isn't. They think it's a short term project and that we should have it up much sooner than we can. . . . It reminds me of Michelangelo and the Sistine Chapel with the Pope down below continually asking, 'when will you make an end?[14]

The respondents to my survey were almost all enthusiastic about the possibilities that automation has helped to open up in libraries in the last twenty years. Thus we must usher in a new era of librarianship and make library automation an integral part of our libraries, our service to our patrons, and our profession.

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