

1997

How to plan for library automation

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Petersen, Ann, "How to plan for library automation" (1997). *Graduate Research Papers*. 1314.
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How to plan for library automation

Abstract

An understanding of various library automation issues will help guide the media specialist to a successful automation effort. This paper is designed to offer basic guidelines for such an effort. It is not the aim of this paper to cover all the details and obligations for undertaking an automation project, nor to discuss specific automation systems. Its main purpose is to assist library media specialists in the decision making process concerning automation systems designed specifically for school libraries.

How to Plan for Library Automation

**A Graduate Review
Submitted to the
Division of Curriculum and Instruction
in Partial Fulfillment
of the Requirement for the Degree
Master of Arts
UNIVERSITY OF NORTHERN IOWA**

by

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August 1, 1997

This Research Paper by: Ann Petersen

Titled: How to Plan for Library Automation

Original Title: Review of Literature

Submitted to: Department of Curriculum and Instruction

Submitted by: Ann Petersen

Submitted on: January 3, 1998

has been approved as meeting the research requirement for the
Degree of Master of Arts.

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Chapter One

Introduction

Library automation systems are found in thousands of school library media centers around the country and the world. More media specialists are discovering the tremendous benefits of automating their school libraries with computerized circulation programs, on-line card catalogs, acquisition routines, and the ability to perform other library functions that can help save time, money, and effort. The benefits of an automated library system are numerous and well documented in library media literature (Sachar, 1996). It frees staff from tedious and repetitive tasks, increases the efficiency of the library media program, and enhances access to information. The benefits are enjoyed by both the media staff and patrons. Many supporters of automation systems consider the computerization of library functions essential in order to keep up with the demands of the Information Age.

Hundreds of school library media centers have had automation systems in operation for years, and many more will soon begin the process of automating (Sachar, 1996). Before a decision is made to automate, you must consider the advantages and disadvantages, be knowledgeable of the library's resources, and decide if the planning, effort, and costs involved are manageable in your situation.

Automation technology has advanced tremendously since its early years requiring media specialists to consider not only the needs of today, but also the needs of tomorrow (Barry, Griffiths, and Wang, 1996).

So where do you start? With so many system choices, media specialists can easily have a case of information overload. They

may not be sure of where to begin or certain that they even want to begin. Confusion, anxiety, and apprehension are common feelings for media specialists who are facing the pressure of automating their library media centers but know very little about how to do it. Deciding to automate is a serious challenge for library media staff. Getting started may seem like an overwhelming task but there have been thousands of others who have gone before you and thousands more who are still undecided about accepting the challenge. There will be many questions, concerns, and even problems that will arise during the automation journey. But with careful planning and support from many knowledgeable people they accomplished the task of automating their libraries and are now enjoying the tremendous benefits of their efforts.

Purpose

An understanding of various library automation issues will help guide the media specialist to a successful automation effort. This paper is designed to offer basic guidelines for such an effort. It will discuss different steps involved with automation, such as the importance of assessing needs in relation to library program goals, setting priorities, gathering pertinent information about various systems and vendors, and preparing for automation installation. Even though the steps appear to be somewhat sequential it is important to realize that some steps can overlap and take place throughout various stages of the automation process. For example, checking and standardizing the shelflist cards should start as soon as one begins to explore the idea of automating the library.

It is not the aim of this paper to cover all the details and obligations for undertaking an automation project, nor to discuss

specific automation systems. Its main purpose is to assist library media specialists in the decision-making process concerning automation systems designed specifically for school libraries. It is apparent in the review of literature that there are some prevailing suggestions and guidelines which school library media specialists may want to consider (Advice from Librarians, 1995). The reason for a thoughtful planning and selection process is to help the media specialist find the most efficient and cost effective method for automating a particular library.

The purpose of this review of literature is to provide information on the current state of automation in school libraries. The review will focus on the most recent literature available on the subject. The review will also include a list of references for further reading. The review will be organized into sections based on the following topics: the current state of automation in school libraries, the benefits of automation in school libraries, the challenges of automation in school libraries, and the future of automation in school libraries. The review will conclude with a list of recommendations for school library media specialists.

The first section of the review will discuss the current state of automation in school libraries. This section will provide information on the number of school libraries that are currently automated, the types of automation systems that are being used, and the reasons for the current state of automation in school libraries. The second section of the review will discuss the benefits of automation in school libraries. This section will provide information on the ways in which automation can improve the efficiency and effectiveness of school library media specialists. The third section of the review will discuss the challenges of automation in school libraries. This section will provide information on the ways in which automation can create problems for school library media specialists. The fourth section of the review will discuss the future of automation in school libraries. This section will provide information on the ways in which automation is likely to change in the future. The review will conclude with a list of recommendations for school library media specialists.

Chapter Two

Review of Literature

Collecting Data and Assessing Needs

It is recommended that the process of automation begin with a careful study of the library program goals and objectives, procedures, resources, and services (Moe, 1995). Establishing a total profile will help to identify strengths and weaknesses and help define the areas which may benefit from a library automation system. These should be areas that require a lot of time or procedures that could be performed more efficiently. There are important questions that should be asked that will help focus on immediate and future needs, as well as identify needs that are not being met at the present time. Ask questions such as "How will an automated system provide more efficient service?" and "What are the benefits of a modular system over a fully integrated one?" A critical question to ask is "What services and capabilities do you want your library to have five years from now?" There will be numerous questions arise as data from the needs assessment is studied (Moe, 1995).

Peterson (1995) suggests that a committee be formed to work with the media specialist to find answers to questions and to assume the responsibility to develop and prioritize the needs list, determine general cost estimates, develop a timeline for automation, and make recommendations to the administration and school board. According to Peterson, it is important for the committee and the media specialist to read the current literature about library automation to get a general perspective on automated functions, as well as the possibilities and problems concerning

automation. The media specialist can become informed about the various systems on the market by reading descriptions and reviews that are found in the literature (Alford,1992). These can help develop a list of features desirable in the automation software programs. It is also possible to increase knowledge by attending technology conferences and workshops on automation systems. A valuable way of acquiring information is to visit the vendors' exhibits at these conferences, collecting their literature and brochures for a particular automation system, and perhaps, acquire a low-cost or free demonstration disk. From the various literature and brochures it is possible to prepare a checklist of software features and hardware requirements that are available from various vendors and consider what features may be desired or needed for the automation plan. Visiting with other media professionals about automation concerns can provide expert advise from those who currently are using automated systems.

An analysis of available school resources should also be studied, especially in regard to faculty and staff, budget, expertise, and motivation essential to implement an automated system. It is important to work with others to select the system that best supports the curriculum and accomplishes the goals and objectives of the library program. According to Adams (1994), by carefully analyzing the needs assessment and being knowledgeable about various automation systems and their functions, it is possible to "avoid being lured into selecting the latest 'hot' technology for its own sake" (p. 5).

Analyzing the Shelflist and Retrospective Conversion

The purpose of analyzing the shelflist cards is to take an

inventory of the collection and verify existing bibliographic information in the shelflist records, and to correct any misinformation on the cards. The first step involves examining the shelflist to determine its condition. The media specialist should keep in mind long-term goals because the decisions that are made will influence the effectiveness of the automation system in future years (Cohn, Kelsey, Fiels, 1992). This process can begin at the time when the inventory is taken. Shelflist cards can be corrected or weeded during the same procedure. Shelflist cards which do not represent the current library collection should be eliminated (Advice from Librarians, 1995).

Once the shelflist cards have been checked for accuracy they will be ready for the bibliographic information to be put into the computer that will run the circulation program. This is called retrospective conversion. MARC records is the recommended standard format of the data. It can be used for multiple applications and should another automation vendor be used in the future the same data information can be used when converting to the other system.

A MARC record refers to a machine-readable cataloging record. A particular type of computer or machine is able to translate the bibliographic data from a shelflist card to a form that is transferable to a computer database. It contains information about a library item such as its description, main and added entries, various subject headings, and Dewey classification numbers. The MARC record has a guide or direction before every piece of bibliographic data thus standardizing and organizing all of the information about an item. Using MARC records allows libraries to share bibliographic information without duplicating the same data,

and also allow for the option of using commercially made records that are available with many library automation systems. MARC records can appear to be very complicated and confusing (Cohn, et.al., 1992). Learning more about MARC terms and their importance in identifying specific bibliographic information, however, will help in understanding it.

Cohn recommends that media specialists carefully investigate the two options available for retrospective conversion and decide who will perform the data entry. One option is to perform all of the data entry manually, along with the help of other library staff. The other is to send the shelflist cards to a data entry service; this option can become very costly. There are advantages and disadvantages to both methods and each should be carefully studied. The method or vendor chosen should be based on available funds, staff, and time involved.

Current literature stresses the importance of being able to access the Internet as a new and exciting function associated with library automation systems (Library Automation and Beyond, 1997). Successful media specialists, therefore, must have a vision of what is possible with these new library technologies and become involved with systems that go beyond the traditional services to include networking and accessing the Internet (Library Automation Visionaries, 1997; Rux, 1995). The literature also suggests that libraries in the "initial retrospective conversion process will need to consider making records with URL addresses as well as MARC" (Library Automation and Beyond, 1997, p. 68).

Software/Hardware Requirements

Even though computer hardware is much more expensive than

software programs, the literature recommends that the automation software be considered and selected first. The software's design and complexity of features should help determine the kind of hardware needed. Deciding on what the automation will accomplish will help determine which software can do the best job. The hardware can then be selected that will be capable of operating the software. This is the most logical approach to selecting software and hardware. Sometimes, however, media specialists must find appropriate automation software that will work with existing hardware the library already owns, especially when funds for automation are limited.

There are numerous software programs designed specifically for school libraries. There are a number of issues that should be considered when evaluating automation software packages (Essentials, Bells, & Whistles, 1992). A careful study of the literature will help the media specialist make an informed and well-founded decision. Take time to study reviews of particular programs which can be easily found in numerous magazines, newsletters, and other review sources. A software program that has received a favorable review, however, does not necessarily mean that the program will be beneficial or appropriate for the specific library use in mind. Software reviews are often written by media specialists who have been actively involved with library automation for many years. They can be very helpful when evaluating the performance of automation features. But it is important to remember that every reviewer has prejudices and biases about what is important. Determine how important a particular feature is to the operation of the library.

Other valuable information on automation systems can be obtained from attending relevant conference or workshop sessions and visiting vendor exhibits to view software and hardware demonstrations. A request for information (RFI) about their automation packages can be sent to a variety of vendors. The information received from the vendors can help create a comparison checklist of specific features offered by each system, including hardware specifications required to run the program. Compare the various systems as they relate to the local library needs to be able to evaluate and narrow the field of available automation systems and prospective vendors. The literature suggests that the media specialist also prepare a request for proposal (RFP) to send to three to five selected vendors, in order to have enough for good comparisons. The RFP allows the creation of a criteria from which to evaluate and make comparisons of the automation systems with similar program features, costs, and specifications. A provisional selection of a software vendor can be made using a combination of responses to the RFP. The reputation of the vendor, customer support, costs, software that is "user friendly" and fulfills the library's needs, and the ability to accept MARC records are many issues that will help you make a good choice (Cohn, et.al., 1992).

Visiting with media specialists who have experienced library automation functions and making onsite visits to their libraries to observe how the software is used are excellent means by which to learn more about a particular system (Hare, 1997).

There is no one system better than all the others. The selection process involves compromises, choosing the "best" possible system to serve current and future needs, and one that

can accomplish program goals, and stays within the available resources of budget, time, and staff (Advice from Librarians, 1995).

Selecting a Vendor

After studying the literature and comparing checklists of various systems the media specialist should be able to narrow the choice of systems to two or three vendors. If possible, ask the vendors for a demonstration disk of their automation system. They will be very limited but they can provide an idea of how the programs work. Visit a school site to review the automation system in greater detail and observe it while in use (Southard, 1997). The vendors should provide the media specialist with a list of names of current users from which to contact in order to arrange for the site visit or to answer questions (Hare, 1997).

Additional information to consider when making a final selection of the automation vendor include the reputation, history and size of the vendor, the primary market for the system, installation and training provisions, technical support, maintenance, and costs. Consider the vendor's record on timely delivery, product warranties and servicing charges, expansion capability, as well as customer satisfaction and complaints.

After making a final choice of vendor and software to be purchased, draft an agreement and sign a contract with the vendor. Ask for timelines for installation and a clear statement of the responsibilities of both the school and the vendor. Long after the automation system is installed in the library, the media specialist will continue to have an ongoing relationship with the company through training sessions, service contracts, expansions and upgrades. A good working client/customer relationship is essential

to the success of the automation project (Anderson, 1994).

Implementing the System

After the automation system has been contracted prepare the library for the system installation. The physical area will need to be made ready, with such items as necessary workstation furniture, wiring, lighting, security, and telephone capability, and other improvements as planned. Arrange for retrospective conversion and send shelvest records to the software vendor, or make arrangements for assistance if the plan is to manually enter all of the data on site. Review the tasks which need to be performed once the system is installed and assign various responsibilities to specific individuals, depending on staff resources. Once the vendor has installed and tested the necessary hardware and software the library staff will be ready to be trained in using the system. Be sure there is more than one person who understands how the automation system works. The library's bibliographic database will need to be loaded into the system and a plan for backup procedures will need to be established. The automation process will continue with the editing, deleting, and revising of records, the placing of barcodes on each library item, the retraining of staff, and constant evaluation of the system. This final phase also should include the introduction of the automation system and training activities to the school faculty, administrators, and students (Cohn, et.al., 1992).

Wang, 1991.

The library automation project will be a success if the library staff and administrators are well informed and documented in what they are doing. The library staff and administrators who are well informed and documented will be able to meet on their own and

Chapter Three

Conclusions and Recommendations

Sachar (1996) states that school districts all over the country are "embracing the technological revolution through enhancements to the library media center" (Sachar, p A24). This is an exciting time to plan for automation. Great improvements have been made in software and hardware technology since early automation systems were introduced many years ago. According to Sacher (1996), however, media specialists "are faced with a dizzying array of choices and vendors once they decide to automate" (Sachar, p A24). It is impossible for schools to stay current with emerging technologies. Technology is constantly changing and school officials must understand that items that are bought today are already considered out-of-date.

The literature supports the fact that the market is full of good automation programs and good hardware to run them. But remember that any system chosen will be a compromise because there is no perfect system. Technology is advancing so quickly that it is very time consuming and overwhelming to wade through volumes of information on library automation. Nonetheless, it is extremely important that the media specialist of the twenty-first century be well-informed and prepared to efficiently plan, manage, and use new automation technology (Barry, Griffiths, and Wang, 1996).

No library automation system is without its problems. The disadvantages of these systems are documented as well. There are many articles written by media specialists who offer ideas and suggestions for automating libraries based on their own successes

and failures in planning their own. Frustrations, however, are often the result of inefficient planning. Some problems occur due to disruption in daily routines during the initial changeover to an automated system, lack of sufficient training time for staff, skeptical or negative attitudes of the staff, system down-time, lost data, and unexpected costs. Oftentimes decisions are hastily made because of the lack of information and insufficient planning time.

Careful planning cannot eliminate all of the problems but it may help lessen some of the frustrations (Anderson, 1994). Library automation is a long and labor-intensive process. By reviewing the various aspects involved in the automation process discussed in this paper, and placing quality planning time as a high priority, anyone considering an automation project should feel confident that they will be successful in implementing an automated library system.

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