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Impact of Library Automation in the society

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ABSTRACT

The main aim of any library is to provide access to proper information, to the right users in as possible as short time. In an environment of information explosion, due to growing demands of the user and shrinking of financial resources, library is not able to obtain all the reading materials on demand. The only way to overcome these problems is resources sharing through networking. The development of library services in higher learning is a complex process to cover up advances of disciplines, strategic planning for acquisition, use of information management's techniques, use of new technologies and regular updating. Therefore this review articles clusters on its advantages in the society.

Keywords: Library Automation, Networking, and Technology.

INTRODUCTION

One of the prerequisites in library automation is to create database of in-house collection. This is essential not only for Public access cataloguing (OPAC) but for circulation system also [1]. Although the technical staff in a library can be familiar with the DBMS software in a few weeks data entry may take care few months to a few years depending on the size of the collection data entry may not be serious problem for newly established libraries or information centers starts fresh. But older libraries will have a serious problem as they have to take up the data entry work in addition to the routine work [2]. The word 'library automation' is being used in literature for the last four decades. A perusal of the literature would indicate that many authors have not tried to define the term explicitly. They use the term 'Library automation' to mean the use of computers as an aid for library activities. However, some authors have tried to define the term. For instance [3] says "Library automation in the broadest sense can be taken to mean the employment of machines for library processes. In general, however, library automation has come to mean the application of computers and related data processing equipment to libraries. [4], has tried to give a more exhaustive definition. According to him "Library automation is the use of automatic and semi-automatic library activities as acquisition, cataloguing, and circulation. Although these activities are not necessarily performed in 90 traditionally associated with libraries; library automation may thus be distinguished from related fields such as information retrieval, automatic indexing and abstracting, and automatic textual analysis" [5]. Further, he says that "linguistic purists have argued rightly that the term 'automation' applies more correctly and narrowly to automatic process control and 'library automation' is now far the most commonly used term for mechanization of library activities using data processing equipment." Form the first part of the above definition it can be observed that the term 'library automation' is used to imply just the mechanization of traditional and/or manual house, keeping routines of a library. In other words, it confines itself to the use of data processing equipment and associated technology to perform exactly what has always and already been done in libraries through a manual process, of course, with the justification

of reduced cost and/or increased performance [6]. However, literature shows that such distinction is not maintained. The scope of library automation goes beyond the automation of just house-keeping activities of the libraries.

The Current State of the Library Automation Industry

We live in a time of rapid change in the library automation arena. Although change has been a given throughout the history of library automation, the shifts taking place now seem especially dramatic and tumultuous [7]. Some of the dynamics currently taking place involves an acceleration of the mergers and acquisitions that have resulted in fewer, but larger, companies involved in library automation. The consolidation of companies has resulted in the elimination of some of the available automation products. This narrowing of options from the traditional vendors has opened the door for open source alternatives and a new breed of companies that base their business on the promotion, support, and development of these products [8]. Libraries find themselves today intertwined with an automation industry undergoing considerable transition and turmoil. Libraries have become reliant on integrated library systems produced by a clique of specialized vendors. The standard approach for acquiring these products involves substantial up-front license fees, annual payments for software updates and support [9]. The licensed software includes only the executable files; the underlying source code remains the proprietary property of the vendor and is kept safely from competitors and customers. This model, although still well established, is no longer the only alternative. Over the last few years, open source versions of library automation systems have begun to find a following. The initial wave of interest emerged mostly from public libraries, but in recent months some academic and special libraries have also been choosing open source ILS products [10]. The open source movement has forever changed the dynamics of the library automation industry.

Three different open source library automation systems have become part of the competitive landscape: Koha, Evergreen, and OPALS (OPen-source Automated Library System) [11]. Some other open source systems have been developed in other parts of the world, but have not seen significant levels of adoption in North America. Koha was originally developed in New Zealand beginning about 1999. One of the first libraries in North America to implement it was the Nelsonville Public Library serving Athens County, Ohio. Some of the staff involved in implementing Koha in this library eventually founded LibLime as a company to provide support, hosting, and development services surrounding open source library automation software [12]. Evergreen was created by the Georgia Public Library System (GPLS) to support the 152 libraries involved in the PINES consortium [13]. This system went into production on September 5, 2006. Evergreen has also been adopted by other libraries and its original developers from GPLS formed Equinox Software as a company to provide support and development services surrounding this product. OPALS was developed in the open source model by Media Flex, targeting primarily K-12 school and special libraries. This system has been implemented by many school districts and consortia of school districts. Most of these installations lie within the state of New York, but the software has begun its spread to other geographic regions [14]. Some of the events over the last few years have diminished many libraries' confidence in the incumbent set of companies involved in producing core automation software products. We have experienced a number of mergers and acquisitions that have ultimately resulted in an uncomfortable narrowing of the products available to libraries. In some cases libraries that had recently invested in the purchase and implementation of a new automation system found themselves facing the need to migrate. Whether it was out of their own experience or in

observing the plight of their peers, many libraries have acquired a sense of skepticism toward the incumbent companies [15]. Financial entities from outside the industry have bought their way into a strategic role in shaping the direction of the companies that produce software for libraries. In an earlier phase, many companies sought investments from venture capitalists to help finance research and development efforts. Today's library automation industry includes involvement from large private equity firms capable of acquiring one or more entire companies. Transitions that in previous phases were carried out with a more gentle hand toward the libraries involved have taken place recently with harsh expediency [16].

Yet, it's important to look at the corporate behavior and business strategies of each of the companies individually. Although some have demonstrated some fairly harsh business plans that have had negative consequences on libraries, others have expanded their development efforts and have been able to attract new library customers. Despite the momentum that open source library automation has gained recently, it still represents a minority of the overall industry [17]. The traditional vendors continue to sell their products and services at levels that maintain their dominance in the market.

Advantages of Library Automation

Improved Customer Service

Automation of the library helps take some of the workload off of librarians and other staff members in the areas of acquisitions, cataloging and circulation, which in turn allows them to better serve their patrons [18]. This extra time can lead to more programs being facilitated in the library and make library staff available to answer reference questions and help people who having trouble researching or finding the right information.

Cataloging Improvements

Automated cataloging standards, such as MARC (Machine Readable Cataloging), allow for quicker cataloging of library items [19]. Not only does this allow the librarian more time to dedicate to improving customer service, but it also makes the sharing of materials from location to location much easier and much more affordable.

Easier Access

Not only does automation of library materials make it easier to find books, buy it also makes it easier to access journals and some books online from a home computer or elsewhere [20]. The automation of library collections also allows the library to be more flexible when it comes to any increases in demand.

Collections

Automation of the library allows for an improvement in the variety, amount and quality of materials that are available in the library's collection [21]. It can also help make weeding out old, outdated and irrelevant books and materials from the collection, which helps keep the library's collection more streamlined and easier to find the right item.

Lasting Effects

Automation is also a way of preparing the collection to become sustainable with the ever-increasing shift to a technology-based society, in terms of information dissemination, paired with the ever-decreasing amount of funding for libraries [22]. Automation will help libraries who begin to struggle and are forced to lay off staff. Switching to an automated system allows libraries to add on features when they become available in the future, instead of having to do a complete overhaul of their collections and cataloging methods.

Disadvantages of Library Automation

- Financial Expenses
- Financial Expenses
- Maintenance of Automation software is totally depend on Computer administrator
- Continuous staff training are required for it
- It is totally depend on Electricity
- Costly maintenance
- Untrained users [23].

A Vision of Next Generation Library Automation

I think that it's time to begin to think beyond the current slate of library

automation systems, including both the traditionally licensed and open source versions. Given that libraries have dramatically changed what they do over the last decade or so, could they be better served by automation systems that were designed anew, rather than evolved from times past?

One of the fundamental assumptions of the next generation library automation would involve a design to accommodate the hybrid physical and digital existence that libraries face today [24]. This environment would include inherent support for all the ways that libraries deal with collections and services. It would not extend software intended to manage physical inventory to handle print, nor would it give primacy to digital content. All formats would stand on equal footing. Given that different libraries have different proportions of physical versus digital content, having a system that handles both should make it easier to allocate resources appropriately. One of the difficulties that libraries face today involves finding ways to allocate staff to deal with increasing levels of electronic content, often having to wrest them away from the entrenched workflows surrounding print materials [19]. When the automation environment addresses print and electronic content in a more unified and integrated way, personnel do not necessarily have to be uprooted to accommodate transitions in collections. It's not that I necessarily believe that the legacy systems cannot evolve to meet the needs of today's libraries. These systems will likely continue to be used in libraries for many years to come. There may be benefits, however, in the creation of an alternative option of one or more new automation environments that have the opportunity of a fresh start based on the work that takes place in libraries today. One of the key characteristics of today's library automation systems lies in the way that it's organized into the standard set of modules: cataloging, circulation, serials control, acquisitions, and online catalog [20]. It may be that these functional modules no longer provide the best way to organize the work that takes place within libraries. We should at least be open to the possibility that a fresh look at building automation systems for current library operations might end up with something other than the traditional model.

In today's technology environment, one of the major trends involves the emergence of service-oriented architecture (SOA) as the preferred approach for building software applications. SOA provides an automation environment for an organization based on fairly small units of functionality implemented as Web services. Each Web service performs a discrete task, using communications protocols such as SOAP (Simple Object Access Protocol) or REST (Representational State Transfer) [21]. Automation systems based on SOA can be thought of as composite business applications created from a number of Web services. This architecture ideally provides a great deal of flexibility for an organization. If each of the business systems of an organization follow SOA, high-level interfaces can be created that draw on data and functionality spanning many different applications provided by different vendors implemented across multiple units of the organization [10].

In an academic library environment, SOA would provide a basis for interoperability not only within different applications implemented by the library, but also with the business systems of the university. The acquisitions process of the library might be based on software that interacts with the library-specific software for bibliographic control and with the university's business systems for vendor and payment functions [22]. A new generation of library automation software created on top of the service-oriented architecture would present the opportunity to reassess many of the fundamental assumptions that constrain the effectiveness of the legacy automation systems. Rather than having a number of modules that reside within an integrated library system that manage the print inventory and a number of separate applications that specialize in various aspects of electronic content, any new

automation environment would weave together business services that span both types of content. The creation of an automation environment based on SOA involves an analysis of the workflows performed by personnel in the organization and by the users of the system [23]. This analysis would yield an understanding of new ways that the individual tasks performed by library staff and users might be assembled in ways that yield more efficiency than possible when shoe-horned into the prevailing ILS modules and add-on applications.

This new generation of library automation may take some time to emerge. Most of the automation products available continue to build on and extend the existing foundation. There are some initiatives in the early phases that may result in at least some of the benefits associated with breaking away from the traditional models. One project, called the Open Library Environment (OLE), with proposed funding from the Andrew W. Mellon Foundation, aims to take a fresh look at library workflows and create a set of requirements that can form the basis of a new library automation environment based on SOA [24]. Duke University will lead the multi-institutional OLE initiative with other core participants to include Kansas University, Lehigh University, the National Library of Australia, the Library and Archives Canada, and the University of Pennsylvania. Marshall Breeding will also serve as part of the leadership group. Advisory participants include the University of Chicago, Wittier College, the University of Maryland, the ORBIS Cascade Alliance, and Rutgers University [24]. One or more of the traditional library automation vendors have also indicated some level of planning of next generation automation along these lines, although no formal announcements have been made as of this writing.

CONCLUSION

The pressures that libraries face in meeting the expectations of their users have never been greater. Libraries continue to provide access to their physical collections and provide services in person while their involvement in electronic content and services to remote users has seen enormous growth. The development and deployment of automation products over the last few years reflect these trends. Libraries have shown a strong interest in a new generation of discovery-layer interfaces that work more like some of the popular destinations on the Web such as Amazon, moving away from the older style of Web-based catalogs. These new interfaces allow libraries to offer a greatly improved environment for their users while maintaining their current core library automation systems.

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