Library automation – concepts & challenges

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Abstract

Prior to computerization, library tasks were performed manually and independently. Readers in the library ordered materials with ordering slips, cataloguers manually catalogued items and indexed them with card catalogue system. This card catalogue system included all bibliographic data which was written & maintained on a single index card. The reader was fined for not retuning the borrowed book in specified date. The readers signed books manually in a register, indicating their name on cue cards which were then kept at the circulation desk. But with the computer technology, application of ICT operations for Library operations has become easy. A reader has now acquisition, cataloging, public access (OPAC and Web PAC), indexing and abstracting, circulation, serials management, and reference of a book in one single step.

Keywords: library automation, computer technological help, increasing readership, challenges

Introduction

Library automation is the application of ICTs to library operations and services. The functions that may be automated are any or all of the following: acquisition, cataloging, public access (OPAC and Web PAC), indexing and abstracting, circulation, serials management, and reference. Prior to computerization, library tasks were performed manually and independently from one another. Selectors ordered materials with ordering slips, cataloguers manually catalogued items and indexed them with card catalogue the system in which all bibliographic data was kept on a single index card, fines were collected and users signed books

out manually, indicating their name on cue cards which were then kept at the circulation desk. Early mechanization came in 1936, when the University of Texas began using a punch card system to manage library circulation. While the punch card system allowed for more efficient tracking of loans, library services were far from being integrated, and no other library task was affected by this change. (Muhammada Riaz - library automation, Atlantic publishers 1992).

Evolution of internet- With the evolution of internet during 1990s, ILSs began allowing users to more actively engage with their libraries through OPACs and online web-based portals. Users could log into their library accounts to reserve or renew books, as well as authenticate themselves for access to library-subscribed on online database inevitably, during this time, the ILS market grew exponentially.(Muhammada riaz - library

automation, Atlantic publishers 1992).

The process: library automation is a process which involves following processes. Finding & branching

1. number of titles ,
2. number of volumes in collection ,
3. number of borrowers ,
4. number of new materials required for library ,
5. number of circulated
6. number of inter library loans ,
7. number of total borrowings ,
8. library hours of working / operation

This data should include both current & anticipated or project strength of library users. Besides there is a need to understand the automation process in terms of

1. Percentage of collection that has catalog records in machine-readable form;
2. Description of collection without machine-readable

records, by category (e.g. monographs, audiovisuals);

3.   Description of currently-automated library functions (if any);

4.   Estimates of the location and number of workstations (to show where you intend to have equipment in any future system); and,

5.   Specifications for any existing equipment to be re-used with any future system (if any).

Key indicators : Library automation depends on

1.   Library user needs

2.   Library requirement of the borrowers

3.   Involving all stakeholder of library

4.   Understanding service priorities of library

5.   Scheduling library improvement projects

6.   Identifying service needs of the library

This process involves indentifying SWOT factors needed for strategic planning are to be discussed in priority

Challenges – but there are several challenges

1.   Loss of commitment

2.   Vendor viability

3.   **Supports of higher-level administrators-**Support of higher-level administrators are necessary. Because library management depends on several factors which can be met with administrators such as infrastructure budgetary allocation etc.

4.   **Computer center support -** Computer center support is needed for successful automation of library process. Creating Wi-Fi facility, inter connectivity with up loadable data services is required.

5.   **Inadequate resources-** inadequate resources such as infrastructure

6.   **Organizational changes-** Organizational changes

7.   **Staff attitudes-**

8.   **Patron attitudes-** Patron attitudes

(Kochtanek, Thomas R. (2002). The Evolution Library

Information Systems: From Library Automation to Distributed Information Access Solutions. Westport, CT: Libraries Unlimited 2002).

Advantages of automation –there are several advantage of library automation the initial support comes from customers. cataloguing improves , access becomes simpler , improvement in the number of collections , Automation helps the collection to become sustainable with the mounting move to a technology-based society, in terms of information distribution, paired with the ever-decreasing amount of funding for libraries. 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 . Besides there are other advantages from automation.

1. 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. 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.

2. Cataloging Improvements

Automated cataloging standards, such as MARC (Machine Readable Cataloging), allow for quicker cataloging of library items. 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.

3.   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. The automation of library collections also allows the library to be more flexible when it comes to any increases in demand.

4.   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. 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.

5.   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. Automation will help libraries who begin to struggle and are forced to lay off staff. (Joan Tracy – Library automation for library technicians scarecrow press 1986). 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. (Joan Tracy – Library automation for library technicians scarecrow press 1986).

Major automation software- major automation soft ware's names are many the following list lists only a few.

1.   Adlib library
2.   Aleph
3.   Alexandria
4.   Aura online
5.   Bibliotheca
6.   Con course

7.   Koha ILS
8.   Mandarin
9.   Opals
10.   Resource mate
11.   Soutron global

These software benefits with catalog searching & circulation of library collections. It helps to build good relation with borrowers ,library members & patron information, check in checkout transactions are made known to each member , thus circulation data is available all the time , printing library labels circulation reports , separate ISBN book cataloguing , optional transactions, managing fine transactions etc becomes very easy. (Joan Tracy – Library automation for library technicians scarecrow press 1986). Even if the personnel of the library are less or insufficient automation helps to manage library in an efficient way. (Marlene Clayton- Managing Library automation , Ash gate publishers 1992). The use of cloud based library management systems has increased drastically since the rise of "cloud"

technology started. Some common management systems include Insignia, Libramatic, OCLC World Share, Alma, Aura Software and Librarika.. This technology was pioneered by Libramatic, although it is currently in use by systems such as Librarika and Insignia (Marlene Clayton- Managing Library automation , Ash gate publishers 1992).

e- Granthalaya: A Digital Agenda For Library Automation and Networking - is an Integrated Library Management Software from National Informatics centre NIC which works under Department of Electronics & information technology Ministry of Communications and Information Technology, Government of India. The software has been developed by a team of experts from software as well as Library and Information Science discipline. The software is useful for automation of in-house activities of libraries and to provide various online member services. The software provides built-in Web OPAC interface to

publish the library catalog over Internet. The software is UNI CODE Compliant ,thus, supports data entry in local languages. Latest version of e-Granthalaya i.e. Ver.4.0 is a 'Cloud Ready Application' and provides a Web-based data entry solution in enterprise mode with a centralized database for cluster of libraries. e- granthalaya 4.0 uses **Post GRE SQL** - an Open Source DBMS as well as Free Edition of MS SQL Server (any version) as back-end database solutions. e- granthalaya 4.0 is made available in NIC National Cloud for Government Libraries on request basis with free hosting of application and databases for online access (National Informatics centre NIC Department of Electronics & information technology , Ministry of Communications and Information Technology, Government of India New Delhi 2014).

e-   Granthalaya was started as an in-house project at 'Karnataka State Centre of NIC, Bangalore' and first version of the software was designed for the Public Libraries in the State. Later, NIC HQs 'Library and Informatics Services Division' took over the designing of the software where library professionals were involved in the designing process and, thus, improved the software with enhanced user interface and simplify the work-flow of library functions so that it can suit to all kinds of libraries. Following table shows the release of various versions of the software: (National Informatics centre NIC : Department of Electronics & information technology , Ministry of Communications and Information Technology, Government of India New Delhi 2014) . The software is provided at zero cost to the Government and Government Funded/Aided Organizations. The support is given by email/phone/VC/remote access, etc. The on-site training, Data Entry, Migration, and dedicated support, etc are provided on payment basis.

Conclusion- The greatest threat to automation is that these days cloud technology has become very accessible. Many modern cloud based solutions allow automated cataloging by scanning a book's ISBN. But automation has several benefits which is needed to manage library smoothly & swiftly.

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