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Abstract:

It is a good impact of computers and data technology and its application on the libraries because of that a method of great amendment is happening in libraries. Modern technology is tending to alter radically the nature of our society and affect the prevailing economic, political and social values and libraries are also in the process. Industrialized countries were the primary to understand that within the context of stock of data, classical approaches concerning storage, retrieval and utilization of the information were no longer adequate and effective which the answer lay in creating fullest use of recent developments in physics, computer, telecommunications and micro-recording etc.

Keywords: *Library Automation, Library Computerization, Library Software's*

Introduction:

Library is Heart of any academic institution. Also it's soul of any learning and analysis establishment, that is pivot of teaching-learning method. Now in these day's we've got simply entered in new millennium or new technological era. The ICT build a lot of changes in each field conjointly in Library data Services. In recent decades we've got witnessed the institution of automation industries and library data networks and services round the world through use of ICT. The use of knowledge Technology tools facilitates an enormous flow of knowledge to finish user via information services.

ICT makes many changes within the space of library data services like book acquisition, cataloguing Serial -control, Web-OPAC, CAS and SDI etc. And change the normal library into the e-library or data Centre. Library data Officers area unit save budget, the time workforce in routine jobs and able to offer effective library data services with none geographical limitation.

What is Automation:

The term automation is introduced used first D.S. Harder in 1936. He outlined it as, "the automation is handling of components between progressive production processes. Since then the term has been applied to a large form of automatic machinery and automatic systems. And is action for human efforts of intelligence.

Definition of Automation:

1.According to Encyclopedia Britannica, "The name given to an automatic system of working. The distinction between automation and mechanization is especially one among degree" "The technique of creating equipment or a system that operates automatically". In general automation is the automatic, as opposed to human, operation or control of a process, equipment or a system; or the techniques and equipment's used to achieve this. In libraries automation refers to the method of automatic in-house functions like circulation, cataloguing, Acquisitions, Serials Controls etc.

2.According to Webster's Third New International Dictionary of English Languages, automation is, "the techniques of making an apparatus, a process or a system operate automatically". In different words, it is the machinery that mathematically manipulates information storing, selects, presents and records input data or internally generated data. Mechanization of library house-

keeping operations preponderantly by computers is understood as library automation. (Gove, 1986).

3. According to the Oxford English Dictionary It defines automation as "application of automatic control to any branch of industry or science by extension, the use of electronic or mechanical devices to replace human labour". (Simpson & Weiner, 1989).

Library Automation:

The Phenomena of mechanization of ancient library activities, like acquisition, serial management, cataloguing, circulation management etc., was referred to as library automation. "Library automation refers to the use of computers, associated peripheral media like magnetic tapes, disks, optical media etc. and utilization of computer-based product and services within the performance of all style of library functions and operation. Computers square measure capable of introducing a good degree of automation operational, operate since they're electronic, programmable and square measure management over the processes being performed". Library automation is the general term for Information communication technologies that are used to replace a manual system in the library.

Needs of Library Automation:

Libraries are the lighthouses for information. The thirst of information is increasing on a daily basis of varied levels and on various subjects. There is an excellent demand to produce such data quickly on demand that AN economical and correct devices or tools are introduced, that relies on mechanized method. Today library automation is that the want of the hour Use of knowledge technology in libraries has become inevitable in AN era of knowledge explosion and also the rising of a wide range of latest technologies so as to satisfy ever-changing complicated data wants of users. The factors necessitating automation of libraries are the following:

- capability to handle any quantity of knowledge and information;
- Speedy processing of information and its retrieval;
- Flexibility in information search;
- Standardization of library procedures;
- Participation in network programming and resource sharing;
- offer higher list management at native, regional, national and international level;
- High rate and better quality in performance;
- Avoid/eliminates duplication of works;
- Facilitate interdisciplinary nature of research and information;
- Economic implications of latest information technology;
- Overcome geographical and other barriers to communication; and
- Improve the standard of existing services and to scale back routine and time overwhelming clerical works.

Areas of Library Automation:

Following square measure the areas of Library Automation: Acquisition; Cataloguing and Indexing; Circulation; Serial Control; Library Administration and Management; On Line Public Access Catalogue; CDROM Databases Searches; Resource sharing through Library; Network/INTERNET; publishing (DTP); workplace Automation; info Retrieval.

Essential Requirements for Library Automation:

Hardware:

Hardware is that the primary demand for library automation; differing kinds of hardware are out there within the market. A hardware specification depends on Available budget.

- Size of the data to store.
- Usage load.
- Required speed.
- Features to upgrade when it required.
- Availability of servicing (maintenance).
- Compatible with software system, what we tend to ar reaching to use.
- Warranty period.

Computer: Standalone, Server or On Cloud

Cloud server worth could also be varied from supplier to supplier and primarily supported the following:

- Storage capacity
- RAM
- Operating system (Linux, Ubuntu, Windows)
- Supporting software of library automation software.

Peripherals:

a) Keyboard & Mouse

These are the common as minimum needs

b) Printer

Any electrostatic printer to print circulation slips library use

c)Scanner

The basic model scanner is needed to scan book cowl pictures & library user pictures to transfer into the library automation software package.

d)Barcode Printer

Barcodes area unit needed as per Code 39standard for books & user library cards.

- needed barcode printer to come up with & to print.
- Numbers of open supply barcode generators area unit obtainable to come up with needed barcodes. Some area unit single barcode generators; some area unit multiple barcode generators. We can print the barcodes with the traditional electrostatic printer to scale back the value of the project.

e) Barcode Scanner:

- Barcode scanner needed for circulation & stock verification.
- victimization barcode scanner we will start up from the incorrect checkouts and check-ins.
- It saves the time, manpower & gets the exact figures in stock verification by using barcode scanners.

f) Software:

Operating System Selection of the operating system depends on

- Hardware compatibility
- Further supporting from operating system developers
- To be user-friendly
- Upgrade facility (service packs)
- Library automation software
- Supporting software for library automation software.

Implementing Library Automation:

Library automation, that started in late 70's in few special libraries, has currently reached the university libraries. It is nevertheless to require off in school libraries in Bharat. Library automation refers to the employment of computers within the routine and vital services of a library. Automation of a library has principally 2 parts, viz. computerization and networking. Computerization can facilitate a library to modernize its in-house operations whereas networking can enable it to access alternative libraries for the exchange of data.

Housekeeping Operations:

Housekeeping operations of a library embrace all operations like acquisition, cataloguing, circulation and serials control.

Acquisition:

Acquisition is one in every of the vital functions of any library. The goal of the library that is to satisfy the users can rely on the acquisition system of the library i.e. the user of the library are glad as long as the library acquires reading materials supported the users' demands. Acquisition also results in effective and efficient collection development of the library and hence acquisition of reading materials is an important job and is also highly labor intensive. Therefore, automation during this space is extremely abundant needed.

Cataloging

The catalogue is taken into account as a mirror of the library as a result of it reflects the gathering of the library i.e. whether or not the library possesses sensible, dangerous or satisfactory assortment. it's thought of to be the bottom for many of the library activities like acquisition, reference, lay to rest library loan etc. In acquisition activity, the catalogue is stated avoid duplication of reading materials. In reference and lay to rest library loan activities, the catalogue is consulted to visualize reference and different documents which may be provided on loan or may be consulted to answer reference queries. Hence, the catalogue is taken into account as a very important tool within the library. So, if automation of the catalogue is completed, then it'll be significantly helpful to the users and therefore the employees whereby they'll get the specified data with no time. Similarly, if the catalogue is created accessible in an exceedingly network atmosphere through LAN, then users will have synchronal access to an equivalent info. therefore, conjointly the library employees can appreciate the machine-controlled system since it'll eliminate their job of printing the cards, filing the cards, keeping the catalogue up-to-date, etc. The machine-controlled catalogue conjointly conserves house as compared to the massive catalogue cupboard, that occupies heaps of house within the library. (Saffady, 1988).

OPAC (Online Public Access Catalogue):

is one amongst the present aspects of library automation. OPAC could be a catalogue, that is out there for looking on-line. Such OPAC could also be searched from a terminal within the library or at a terminal elsewhere within the organization remotely via national or international telecommunication networks. nowadays majority of the software's that area unit used for automation in libraries give a separate module of OPAC. With the most recent developments in integrated systems the OPAC is connected to the circulation system so the used will return to understand whether or not the document he/she is searching for is presently accessible within the library or on loan. OPAC conjointly promotes resource sharing program and bibliographical search may be done by author, title, accession variety, ISBN, Keywords etc. Search in OPAC is by mistreatment formal logic or by truncation. (Hussain & Raza, 2002).

Circulation:

The main part of a circulation system is that the dealing of documents i.e. issues and come back of documents. This info contains bibliographical details of the documents which give data on titles, authors and business enterprise details, that area unit utilized in notifying the users regarding the due. Circulation involves the charging and discharging of library materials, reservations, statistics, causation of reminders for the over-due material, etc.

Serial management:

Serials area unit revealed at regular intervals and therefore the publication is meant to continue indefinitely. Besides studious journals and common periodicals, serials embrace magazines and every one different periodical publications as newsletters, newspapers, annual reports, proceedings of learned bodies, treatise series etc. the term serial management typically denotes 2 terribly distinct aspects: bibliographical management and process management. bibliographical management of serials involves preparation and maintenance of a central master list of all serial publications which incorporates full title, short title, variation kind earlier titles, publishers, ISSN, frequency etc. Serials process management contains of acquisition, claims controls, cataloguing, circulation, binding, removing etc. (Vyasamoorthy, 1987).

Automated Library Services:

Information services area unit provided to help individuals and alter them in resolution their issues and deciding. trendy libraries and knowledge providing a spread of documentation and knowledge services to support analysis and development, selling and trade, management and every one different programmes associated with the event of establishment.

Mahapatra (1985) has given the subsequent machine-controlled services are:

1. Current awareness Service (CAS):

Current Awareness Services are those services that keep the users informed the developments and advances happening their fields of specialization or in areas of analysis within which they're engaged. This technique is restricted to a number of, because it isn't meant to come up with comprehensive review of all activities in any subject field. CAS is given in varied forms like by title, current content list, compartmentalization and abstracting etc. during a library by creating use of computers the embers is provided CAS by causation emails, through varied databases, CD-ROMs etc.

2. on-line Search Service:

Online search is finished through on-line terminal. The search includes of a series of keywords along with Boolean logic. The search strategy or the search statement ought to be framed before logging-on. once communication is formed by logging-on, knowledge of the system is displayed on the screen of the terminal and also the user is requested to pick out the specified info. As search yield the interaction between the machine and also the user goes on and also the user offers a series of commands to that the pc responds.

3. written Indexes:

In data retrieval, computers were used for preparation on in-house indexes i.e. among the library and additionally for production of indexes for major abstracting journals. Index consists of a series of terms organized in alphabetical order.

4. Selective Dissemination of knowledge (SDI):

In SDI service, the knowledge during a library is matched against the topic interests of the users; which implies that the user receives solely that information that has relevancy to his analysis work. In processed SDI service, a user profile is built. at the same time, document profile is additionally created once documents are received within the library. each these profiles are matched by the pc and sent to the user. Feedback is received from the user. just in case the user isn't happy then the profiles are checked and adjusted on the idea of user's analysis.

5. Stock Verification:

Stock verification is a vital activity in any library. it's one in every of the foremost tedious jobs to be done that involves a great deal of your time. historically, it took several months to finish stock verification for a standard assortment however with the impact of knowledge technology, this has been overcome and fewer time is needed relatively. By victimization bar-coding technology, all accession numbers are saved within the barcode scanner memory. the foremost economical and quick means of getting into accession variety is to use a mobile code reader to scan accession numbers of books from code tags in books. This optical device scanner is left out the barcoded books within the stack. The accession numbers of books offered within the stack are recorded within the memory and also the accession numbers, that aren't in show, are checked if they're on loan and thereby, the quantity of missing books is understood. it's additionally doable currently with the proliferation of non-public laptop to only key all told accession numbers as and once checked to consolidate the loss in terms of missing accession numbers. (Sridhar, 1991).

7. Reference service:

Initially, the reference librarians trusted written compartmentalization and abstracting services, listing sources and directories to perform literature search and answer queries of factual or listing nature. however nowadays it's seen that the necessary reference books like encyclopedias, directories, bibliographies, ar offered within the non-print format either within the kind of read-only storage or ar displayed on the net. they'll be used as an info for accessing data for responsive queries.

Barriers of Library Automation:

Library automation brings nice changes within the functioning of the library and proving effective and economical library services. however, in spite of those nice benefits, there are several barriers that occur at the time of implementing the automation in libraries.

• Fear of adverse impact on employment:

Let us examine every of the points. If we have a tendency to analyze the varied jobs like book acquisition, technical process, circulation and reference service one will conclude that human interference is important at every and each step. the sole space wherever substantial work force will be saved is that the cataloguing. the info entered at the time of ordering will be used for cataloging with some change would eliminate multiple card preparation and ulterior filing. The work force so saved will be used in retrospective conversion and afterward for analytical cataloguing or introducing new services. Therefore, there'll be no adverse impact on employment.

• Apprehension that the technology may be too high-priced

There is a terror that the technology, each hardware and software package would be high-priced and unaffordable. the price of hardware and software package depends on the extent of automation. From the user purpose of read cataloguing system is most vital and conjointly forms the bottom for different library activities. Keeping these 2 points visible UN agency developed

laptop based mostly software package titled 'CDS/ISIS' and is on the market at a really nominal worth to all or any the libraries in developing countries.

• The library employees must endure intensive coaching

The in-house coaching for handling the software package is sometimes provided by the developers and one will opt for the software package which may suit their budget. However, coaching for CDS/ISIS is on the market at INSDOC, INFLIBNET and DRTC. For more data on coaching programmes one will contact NISSAT. The coaching of library employees conjointly depends on the extent of automation. If one decides to travel just for cataloguing a minimum coaching of 1 or 2 week's period can alter the librarians to develop a information and maintain it. With this military training one will simply transfer constant information on a server/main machine in a very network setting. the task becomes straightforward as most of the establishments have systems department with laptop professionals maintaining the network.

• Lack of support from the management, is also attributable to budget Constraints

Fourthly lack of support from the management, is also attributable to budget constraints, are one amongst the barriers. Here the role of librarians becomes crucial in convincing the management that the users of libraries also will be the most important beneficiaries of automation. Also, the talent and initiative play a serious role in convincing the management.

• Retrospective conversion of knowledge

The fifth reason may be retrospective conversion of knowledge. As mentioned earlier the work force saved may be used for retrospective conversion and afterward for analytical cataloguing.

Conclusion:

Information and Communication Technology (ICT) is dynamic the work of libraries and knowledge centers. Library automation activities square measure gaining momentum throughout the state. it's quite a smart sign that SOUL is currently on the market at an inexpensive value as a comprehensive library automation package. However, librarians ought to be ready to fulfill the challenges. they ought to acquire adequate information concerning the hardware and software package choices on the market. All libraries ought to use normal software package packages for automation and information creation to facilitate the exchange of bibliographical records between libraries. Databases might well be created within the MARC21 format as a result of most libraries at the international level follow this. there's would like for continuous observance of automation activities for improvement of true and for meeting the longer term wants. Therefore, it's over that the standing of automation of library work operations and laptop based mostly library services of school libraries is in emergent stage.

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