

# **TITLE : AUTOMATION AND DIGITIZATION OF SCHOOL LIBRARIES :ISSUES AND CHALLENGES WITH SPECIAL REFERENCE TO DELHI SCHOOLS**

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## **ABSTRACT :**

As we see computers are being used in every field of human activity as its number of physical properties. Computers have been in use from last many years into library and providing best possible information services to the library users.. Automated libraries have taken shape in the society. This paper will help us to know various library processes that have been automated, to identify the school libraries schools that have automated, to determine challenges faced by schools in automating the libraries, to determine what policy makers can do about school library automation in Delhi.

**KEYWORDS: LIBRARY AUTOMATION, SERIAL CONTROL, INTERNET, INTRANET, OPAC**

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## **INTRODUCTION:-**

The library is considered part and parcel of the academic set-up in any school. Many educational institutions create the library primarily for it to serve as a supporting facility for educational activities. As the information technology revolution sweeps across every sector of the society, the library and information field is not spared. Schools are recognizing the importance of having computers in the library and automating their processes. The results realised from automating are of great importance to schools as there is efficiency and cost-reduction in terms of Library processes.

Now in these day's we have just entered in new millennium or new technological era. The ICT make lots of changes in every field also in Library information Services. In recent decades we have witnessed the establishment of automation industries and library information networks and services around the world through use of ICT. The use of Information Technology tools facilitates a vast flow of information to end user via information services.

Reasons for automating as given by Addullah (2002) ranges from need for school and libraryefficiency, curriculum support, information access, information skills instruction, publicrelations and facilitating collaboration. The other significant reasons especially for usersof the systems include improved cataloguing and circulation of resources, availability ofreports while educational benefits for students would include greater access ofresources.

ICT makes several changes in the area of library information services such as book acquisition, cataloguing Serial-control, Web-Opac (Online Public Access Catalogue), CAS and SDI etc. And change the traditional library into the e-library or information centre. Library information Officers saves budget, time, manpower in routine jobs and able to provide effective library information services without any geographical limitation.

The users of the library are from different areas such as producers, policy makers & experts, judges, observers, professors, teachers and students, as well as educated workers and farmers etc. The main purpose of the library is to provide "information" to all of these according to their needs. After re-updating the information, alloingaccess to this information to their respective users is the main purpose of libraries. But the students who are actually our future, who are the developers of the new society, new grounds of technology, and therefore they are most priorotised ones who must be served with this facility of automated library.

The late period of the twentieth century has been the peak period of the development and communication of knowledge related to science. Since 1965 its growth rate has increased from 5% to 7% per annum. Communication techniques are playing an important role in spreading knowledge. The modern instrument of communication presented by the web; and internet has introduced a special energy and velocity in the world of knowledge. Now

we have to anticipate the future libraries of 21st Century and need to develop them accordingly.

Information technology is a mode used to convey or disseminate information and use innovative research in technology. Today, this information technology has absorbed all sectors from its activities. Computers are contributing in almost all the works. But information technology has given its attention to its work. Information technology is being used in the library for the spread of knowledge science.

### **Importance of research presented.**

Every day, the science is leaving its effects in different areas of the society. Science has left its impact so far that we cannot complete any activities of life without the help from any of these informatics techniques and devices. In the era of this scientific revolution, we have gradually been using information technology in all areas. In other words, the whole world has become a global village. Within a few seconds, we can broadcast any kind of information, through information technology, everywhere. Most of the use of information technology is currently being used to disseminate information along with the industrial areas. While the whole world is moving towards this technical edge the students who are perceived to be our future are the ones who must be made habituate with these technology and techniques. And particularly library automation could be the one from where a student can take the maximum advantage of learning.

### **Understanding Automation**

The term automation is used in automatic manufacturing, control system, computing machinery or equipment that reduces the participation of human labour in production or services” – New Encyclopedia Britannica

“Any work which has been done with help of automatic machine like computer without any human interface is called automation. The biggest benefit of automation is that it saves labor, however, it is also used to save energy and materials and to improve quality, accuracy and precision”.

On the basis of the definitions of automation the following may be considered to be its essential characteristics:-

- The operations of processes are carried out automatically
- Avoids or reduces human actions and thus save labour
- Increases accuracy and quality of work
- Increases efficiency and speed- up the operations

### **Library Automation:**

The Phenomena of mechanization of traditional library activities, such as acquisition, serial control, cataloguing, circulation control etc., was called library automation.

“Library automation refers to use of computers, associated peripheral media such as magnetic tapes, disks, optical media etc. and utilization of computer based products and services in the performance of all type of library functions and operation. Computers are capable of introducing a great degree of automation in operation, function since they are electronic, programmable and are control over the processes being performed”.

Library automation is the general term for Information communication technologies that are used to replace manual system in the library.

### **Importance of Proposed Investigation:**

Traditionally school libraries have been catering to the document needs of their users These libraries also provide their library and information services to the students by allowing them to have access and use of books, journals, magazines, maps and atlases, reference books, audio and visual documents, and other such printed and non-printed documents. Libraries have to provide their valuable library and information services to the large community of students as it comes under their duty of social and professional obligations.

Since now a days, computers are being used in every field of human activity because of its speed, accuracy and capability of large scale processing. Computers have literally invaded and entered into library and information services for the effective use and for the benefit of the library users. It is perfect space saving device as well because information stored on computer readable devices takes much less space than the conventionally stored systems.

Libraries and information centres have devised library automation efforts and practices in order to provide their better library and information services to the right users in right time at the earliest.

The following are the areas where computer are being used at present.

1 Online public access catalogue

Online Public Access Catalogue (OPACs) the problem being faced by the users in locating the document was the first to be targeted in the library automation. As a result the work first started in this direction. There was one more reason for this and that was the availability of CDS/ ISIS software which had the facility of catalogue only. It was in contrast of the special libraries where the work first started on providing information services like CD-ROM search. Even today this area of automation has more activity than any other area. It has now graduated to Web-OPAC (web based online public access catalogues) where university libraries have made their databases available on their websites. This has eliminated the need of installation of search software on the user's terminal. One potential which remains unutilized is the use of search data for research purpose as the search history can provide very useful tools for the librarians to formulate their collection development plans.

2 Circulation

Circulation Circulation is one of the main activities of a university library or any library per say. In university libraries, however, the number of books issued and returned are more than in special libraries. Therefore, the next area which was taken up was the circulation. In some of the libraries the number of books issued/returned may be more than one thousand per day. We at IIT Roorkee (formerly University of Roorkee) has experience of issuing 1500 books in six working hours. Sometimes there used to be a queue of more than 100 students, since the free hours for all students used to be the same, before automated circulation started. Use of barcodes had made the life very simple due to added accuracy and speed. Besides speeding up the issue/return, printing reports, sending reminders also become very easy. Circulation data

also provides a very important insight into the book use pattern. Librarians should try to use this data for research and development purpose.

3 Acquisition

Acquisition- Use of computers in acquisition remains a low priority area. Not many libraries are using computers in acquisition. One reason may be the continuously reducing budget for purchase of books. But this area needs to be strengthened. Computerization at the stage can help not only in order processing but also can be a very effective tool in budget control. You can allocate funds to different departments based on a set formula, can send department heads about non availability of funds, can control over ordering and also utilize the data entered at this stage for technical processing and OPAC.

4 Serial control

Serial Control Idiosyncracies involved in serial control affects the use of computers in serial control and hence the area is not very well represented at automation scenario. One more reason is the unsuitability of serial control modules available in most of the library Management Softwares. The procedures developed by these softwares are so cumbersome that sometimes it looks easier to use normal method rather than automation. However, this area provides very good stage for use of computers as it can help tracking the missing issues very efficiently and provide the current awareness services and even the SDI services besides budget control.

5 Intranet

Making the information available on intranet is also growing popularity as it eliminates the need of installing the software on the users' terminals. Users can access the catalogue through intranet or they can find the status of the books issued to them through web access. CD-ROM resources and other digital resources can be accessed on intranet. The beauty is that one need not be conversant with the software as the web links are available through the web page. Growing installation of campus wide networks is also playing a positive role in this direction.

6 Internet

Internet Use of Internet for academic purposes is also increasing day by day. More and more libraries are putting their resources on Internet. Internet is the medium both to access and disseminate information. Internet has emerged as a very big virtual library which has information on practically every subject and in every media may it be text, audio or video. Libraries should use this facility to the best of their capability. They should provide links to similar type of libraries through web pages. One very good use can be designing of e-gates where user can have access to the electronic resources through a common user interface. I would like to mention that a number of free e-journals are available on the Internet. The prominent among library and Information Science are 'D-Lib Magazine', Issues in science and Technology Libraries", "Cybermetrics" etc.

7 CD-ROM services

Digital Libraries: Digital library has recently become the buzzword for librarians. In the last year most of the seminars and the conferences had 'digital libraries' as their theme. Digital libraries can be of two types i.e. digital libraries of the digital text available in the market such as e-journals, CD-ROM databases, e-books, software etc. or it can be developed from the printed text available in the library. If a library takes a decision to develop a digital library of its collection specially theses, dissertations and old journals, it can solve the problem of space and preservation both. But the decision about creating such decision is taken to be very carefully as it will prove a very costly venture both in terms of money and manpower.

**Prospects: Future of Library Automation**

Having talked about the problems and areas of applications let us talk about future prospects. I can definitely say that the things are changing for the good. Now school authorities are realizing that there is no way to escape library automation. They are finding various ways to finance their library automation projects. Librarians are also realizing that they can not remain indifferent to the change, otherwise they will be labeled outdated. One area of concern is the library science graduates being produced by our library schools

It is surprising that UGC is giving responsibility of refresher courses of library science to the library science school and not to the libraries who are established themselves as advanced libraries and uses the technology far ahead than the library science schools. Existing staff is getting rid of the fear of computerization. They are coming forward to learn and make themselves suitable to face the challenges of the new millennium. Standardization is increasing and the better softwares are available.

### **Review of Literature**

BEHRA (J K) & SING(S P). Problem & Challenges of Collection Development of Indian Libraries in Digital Era -An Assignment .Journal of Arts, Science & Commerce .V2(1).Jan,2011 Singh has written in his present article that the advancement of knowledge in the human civilization led to the emergence of the library. Due to the increase in daily library collection, one time physical stocking becomes difficult due to this problem. The library has started.

BERGMAN (H).The Library and its User as Exemplified by Vienna University Biblos V 34(4), 2002. In his report, Vienna University conducted a survey related to their library usage among 500 teaching staff. The literature related information was included in it. The facilities provided by the School Library, User Training, SchoolLibrary opening hours, critical studies about services and the need for improvement etc. have been taken into account.

CHOI(Y)and RASMUSSEN( E).What is Needed to Educate Future Digital Librarian: A study of Current Practice & Staffing Pattern in Academic & Research Libraries.D-lib.V12(9),sep,2006 In view of the current changes in the library, in the article, what is the quality and education in the library should be evaluated in the future.

DAS (A K) and DATTA(C D). Information Retrieval Features in India Digital Libraries: A critical Appraisal Vol23(1),2007. Das, Datta and Sen have tried to explain the current nature of digital library, various aspects of digital library and requirements in their joint articles.

DEOGHURIA(S)Are research Libraries in India Prepared in Digital Age? LIS conference,2010. In this article, they told that digital information is continuously growing

as a component. Research has a significant impact on research libraries. The collection of research by digital libraries in digital form is increasing day by day

But how much adaptation of research libraries in India and how much adaptation of this new technology has been introduced, it has been presented in this article. At the same time, detailed explanation of what difficulties are being faced by the research libraries in India

JONES&THOM: Mobility, Digital Libraries & a Rural Indian Village.JCDL.2009. Jones, according to one of his surveys, found that in the developed countries, lots of people use information technology in daily activities. Therefore, they have prepared a blueprint for Information Technology-based libraries for the promotion of education. In this article, on 3 mobile platforms, they have been explained.

SAMANTARAY (M).Preservation & Management of Digital Resources Policies, Issues & Challenges INFLIBNET Planner. 2006. Analyzing the long term strategies and techniques for their preservation, while explaining the difficulties in the maintenance of digital tools and their systemization in their articles.

Ahmad (2009) studied on Library Automation of Al-Barkaat Institute of Management Studies, Aligarh with the help of Alice for Window (AFW) Library Software. The study found that ABIMS Library was the first fully automated library among all self financing Institutes available in Aligarh, which has provided, Online services to its users through Inter Library LAN System in which users can access the library database from the Online Public Access (OPAC) and also help to library staff to provide good reference service to staff and students.

The concept of automation has changed the scenario of library management. In this regard, discussing library automation, its problems and prospects Bhanja and Barik (2009) highlighted in a study that success of library automation mostly depend upon nature of softwares used for the purpose and emphasis on selection of good library software for automation.

Ibohal Singh and Giridhari Singh (2009) in a study discussed the library automation in public library system in North East India. Based on the findings of a sponsored research

project, the study highlighted Public Library System, ICT, Scope and Methodology adopted and emphasized background information, services, existence of library committee and automation status of the libraries in the region.

The status of Automation of the Central Library, IIT Guwahati has been assessed by Sarma and Jyotirekha (2009). The study discussed the status of automation and networking, hardwares used in the library, services and facilities provided. The same has shown that the library was fully automated using Libsys software package. The study also revealed that IIT Guwahati Library provides excellent service to its user and it could be considered as one of the best libraries in North East India.

In carrying out a pilot survey in ten special libraries in Manipur assessing their automation status, Vaiphei and Bembem (2009) analysed the problems and prospects of automation in Manipur. The study revealed that most of the special libraries in Manipur are not automated due to various problems like lack of separate building, untrained staff, no qualified librarian and paucity of funds for library, etc.

Information has been regarded as a national resource which affects all human activities. Information is power and indispensable. In this context, Bhuyan (2011) in a study discussed about the automation and networking of public libraries in India with special reference to two districts of Assam. The study shown that due to financial inadequacy, lack of proper administrative structure within the library, lack of professionally trained staff and nonavailability of mechanical devices, the public libraries are limiting themselves to the traditional and pedestrian functions of the library.

In assessing the present status of automation of public libraries in Assam, Das (2011) found that infrastructure and the service of the public libraries in Assam are not modernized but somehow traditional services are provided to community and public library automation is in its initial stage though its process have been started during 2004-2005.

Jayaprakash and Balasubramani (2011) in their study have emphasized that automation of library operations and services are essential for efficient functioning of the library and saving the library user's time. In this purview, the study has investigated the Automation in University libraries in Tamil Nadu. It discussed automation, its need and application in university Libraries. The study explained the various problems faced by authorities and

the staff during the process of automation. The tool adopted to conduct the study was a well structured questionnaire.

Joshi and Nikose (2011) discussing problems and prospects in automation and networking in libraries in India, highlighted some of the scientific and technical libraries working and leading in library automation under such R&D institutions like CSIR, ICMR, ICAR AND DRDO. The study also described networking as the linkage of working procedures for the exchange of information resources and revealed some of the barriers of networking as higher education authorities still have a dilemma as to whether or not resource sharing is possible through networking. Potentialities of INFLIBNET, as the study shows, are still not known to many academic libraries and UGC fails to provide appropriate funds to academic libraries for computer software and hardware.

A study was carried out to assess the automation status of district library Kamrup by Medhi and Deka (2011) which has revealed that the library does not use computer for automation of the library services. The study also found that the library was still giving traditional based services to the users.

Akinyi R, Mulaha in "The evolution of school library resource centers in Kenya" aimed to help the Kenyan educational authorities and others to understand the value of a school library resource center in the educational process and in the school program.

"School library provision in Nigeria: case studies of six secondary schools in Oyo, Ondo, and Ogun states" by Olabisi Kolapo was a summary of findings on school libraries into the development of formal education in Nigeria and the relative neglect of school library provision. The author attempted to establish the factors responsible for the generally poor standard of school library provision and suggested what might be done to improve the status.

Omrin and Olayinka (2007) in a study seek to find out the advent of computer on libraries and information centers. Majority of the public libraries in Nigeria are found to perform their operations manually and have no requisite technologies to easily access information resources and services most especially on the internet, on-line data bases and CD ROM databases and lack of skilled staff in computerization was also observed. Computerization

has a lot of impact on library and information centers since it helps them perform better than when their operations are manually carried out.

Imchen (2009) in his study, discussed computer application in libraries of Nagaland and also made an attempt of bringing awareness among the librarian the importance of computer application in libraries in the state. Personal interview and random sampling technique, and observation method have been used successfully in his study.

ICT infrastructure is an important resource of modern library or information centre. In the study of ICT Infrastructure in Special Libraries in Kerala, Mohamed (2006) has revealed that the libraries of Kerala apply ICT for providing efficient services. The investigation also shows that majority of the special libraries have basic hardware facilities like servers, computers, printers, barcode printer, and barcode scanner, etc.

College libraries play an important role in keeping pace with modern development in information technology and information service to the student, as Sinha and Bhattacharjee (2007) studied. The study concluded that the status of computerization of library housekeeping operations and computer based library services of college libraries of Southern Assam was in nascent stage. Only few colleges, which are best colleges affiliated to Assam University, Silchar have started implementing project of automation and networking their college libraries which serve of the students more better. The study suggested that Government of Assam and UGC should come forward to provide substantial financial assistance to the colleges located in the remote areas of South Assam, which is popularly known as Barak Valley to start with modernization of their college libraries and services so as to bring these colleges at par with the college libraries located in other parts of India. ICT in fact encompasses any medium to record information (magnetic disk/ tape, optical disks (CD/DVD), flash memory etc. and arguably also paper records); technology for broadcasting information- radio, television, and technology for communicating through voice and sound or images- microphone, camera, loudspeaker, and telephone to cellular phone.

Libraries and Information centres have been employing ICT and electronic information resources and delivering services to satisfy the diverse information needs of their users. Gupta (2009) in a study investigated the views of the users towards e- resources provided

by CSL library. The finding of the study have shown that most of the users are using computer daily and revealed that CDRL library uses LINUX Windows NT and Windows 98/2000/XP operating system for networking purpose which are useful in automating the library.

While conducting a national survey of the status of school library automation in Malaysian Chinese secondary schools, Tee Lay (2010) revealed that the Malaysian Chinese secondary school libraries started automation during 1990s and have been actively involved in library automation projects since 2000. It also identified important factors in determining the system used and areas, need for future planning, initiatives in implementing library automation, etc.

### **Research Gaps Identified in the Proposed Field of Investigation**

Under the above review, it has been clarified that no research work has been done in the current research study. It will be the first research work by the researcher who will reveal the state of the application of information technology in the selected school libraries of Delhi. So there is a considerable distance between research available and current research research.

### **Objectives of the study**

- Recognize the need for information technology in libraries.
- Information about the various software used in library digitization and the usefulness of their methodology.
- Responses to the implementation of Information Technology in the selected school libraries of the State of Delhi (To identify appropriate, useful, economical and simple rules from the methods used in the information mechanism)
- To study the difficulties in the implementation of Information Technology in the selected school libraries of the State of Delhi.
- Analysis of the impact of information on employees working in libraries from information technology.

- Evaluation of benefits and services from digitization.

### **Hypothesis**

The proposed research report is based on some important concepts: The following hypothesis for this research work has been created: -

1. Information technology in the libraries of the State's School is developing.
2. If proper use of Information Technology is used in Library, than they lack its systematic implementation.
3. The present practice of information technology is boosting in libraries of the Selected School of Delhi State.
4. In the school's library, the status of trained employees in the service of the ICT is not satisfactory.
5. In the absence of proper Student's training, the response of Studentin using ICT based automated Library remains negative.

### **Source of information**

1. Books
2. Journals and Magazines
3. WebandInternet

### **Other tools and research methods**

The tools and research methods used in this study will be the primary sources of research. In the absence of which, we cannot build research-oriented building. Therefore, the selection of appropriate, competenttools and procedures for the quality, authenticity and utility of research should be extremely prudent.

### **Method of Research:**

Out of many methods available for any research, any one can be adopted. And here I as a researchers will use the survey method for my current study. Survey method is such a significant method, when it is to identify, what is the behavior of normal or representative situations in the present state. Hence we found the survey method to be most appropriate.

**Justification of the study:**

Collections of responses related to the survey work will be done from the selected school of Delhi state.

Responses will be collected from the selected school of Delhi state through questionnaires and interviews, in which the samples will be collected from the following consumers.

- 1 Librarian
- 2 Faculty
- 3 Student

A total of 200 respondents will be asked to fill a questionnaire for the comparative analysis, and on the basis of the data obtained the results of the research will be measured using the statistical method. We hope to get feedback from around 70% of respondents. The table and Graph will be displayed as per the requirement and comparative study will be done.

**Extraneous**

Many research methods will be used in this research such as-

- 1 Questionnaire and Interview
- 2 Reviews
- 3 Survey
- 4 Statistical Tests

Questionnaire is a technique by which we can easily learn about users and their needs. Questionnaire will be divided into two parts.

**Part I:** - Personal details of consumers and

**Part II:** - Details regarding their requirements and usage procedures will be given.

Based on the received questionnaire, the available facts and data a comparative analysis will be done on this basis. Therefore, in this research, both the direct and indirect questions will be collected and analyzed by the statistical method so that the situation can be understood properly.

**This Thesis is divided into following chapters as follows:**

- 1 Introduction
- 2 Review of Literature
- 3 Research Methodology
- 4 Data Analysis
- 5 Findings, Conclusions and Suggestions.

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