AUTOMATION TECHNIQUES AND THEIR APPLICATION IN SCIENCE AND TECHNOLOGY INSTITUTE LIBRARIES OF NCR

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ABSTRACT

Automation is a slogan of modern libraries and digital libraries are the need of modern age as it provides latest and update information. Library automation has improved efficiency of libraries and provides maximum users services by exploring maximum resources available in libraries.

There are always change in life and environment and human carried out their activities because of many reason, i.e. change in technology, change in communication technology, and as such the libraries particularly the science and technology libraries. Libraries have adapted to modern technologies like computers, laptops, CD-ROM, Scanners, Photocopy and printer etc. Many libraries have created repositories housing important publications and making them available to users.

Keywords: *Automation, Advance Library, Computer based information technology, OPAC.*

INTRODUCTION

Computers are used to increase efficiency and effectiveness of their operation and services in libraries. Computers also help in talking decision in information management. Today libraries are capable or talking position by developing information and communication technology (ICT) to serve their clientele the appropriate information available in library. In addition the users can access information available in other library and information centres at local or outstations. [1]

The automation is economically feasible as it required reasonable economic load. It is technologically required in modern libraries to meet the new knowledge. There has been enormous increase in library collection and its has become the problem to handle the problem of acquisition, storage space problem, processing, dissemination and transmission of information. All these problems are being solved by the introduction of computer as it has capability of improvement, qualitative, quantitative, particularly in online technology. Computer leads to automation and automation leads new technologies to access information.

PREREQUISITES OF LIBRARY AUTOMATION

Library automation has been the backbone of science and technical libraries. But there are few prerequisites for library automation:

(1) Acceptance and willingness of the librarian and the institutional authorities,

(2) Sufficient finance provisions,

(3) Proper planning,

(4) Hardware requirements : (a) PC (b) UPS (c) Scanner (d) Storage media,

(5) Software requirements : (a) operating system (b) software (c) application software,

(6) Sufficient and skilled library professionals.

FACTORS OF LIBRARY AUTOMATION

a)   Increase in information:

b)   Increase in number of users:

c)   In Increase in funds (budget provisions):

d)   crease in cost of printing and electronic reading material:

e)   Processing description:

f)   Appraisal of present (current) status:

g)   Need assessment:

h)   Cost evaluation and Budget allocation:

RESEARCH METHODOLOGY

The important method is a survey method. The methodology used for the present study is questionnaire based survey, the contact with different science and technology institutes/universities of NCR and collected data through formal and informal sources. A well structured questionnaire was sent to each institute/university to ascertain the status of library automation and understand the problem faced by them in automating their routine function and services. In the investigation 9 institutes/universities have been taken for study.

Libraries under study

1. Amity University, Noida	AMUND
2. DTU Delhi Technological University, Delhi	DTEUD
3. Faculty of Engg. And Technology, Manav Rachna Institute, Delhi	ETMRI
4. Indian Institute of Technology, Delhi	IITLD
5. J.C. Bose University of Science and Technology, YMCA, Delhi	JCUST
6. J.P. Institute of Information and Technology, Noida	JIITN
7. Jamia Millia Islamia University, Delhi	JMIUD
8. Netaji Subhash University of Technology, Noida	NSUTD
9. School of Engg. and Technology Sharda University, Greater Noida	SETSU

HYPOTHESIS

Hypothesis is known as probabilities of the present position of the institute/universities of NCR. The following hypothesis will be identified and proved in study:

1)   Majority of the science and technological institutes libraries have taken up the process of automation.

2)   All institute/universities (NCR) are taken up the project of automation and applying ICT.

3) Science and technology institutes in question have sufficient resources for automation.

4) Human resources are sufficient in such institutes/universities.

5) Automation has been useful and beneficial to users in these institutes.

6) User awareness about automation system is sufficient.

REVIEW OF LITERATURE

1. **Am DC Kerk and Joamma R. Euster (1988):** The author described about the rapid change in technology being applied in technical libraries. This has caused seeping changed in the pattern the libraries are organized and managed. On the other hand few organization realized that such sweeping change was occurred. There has been one paper published by Association of Research libraries, its official management studies in which they have published few systems and exchange centre procedures under the heading of organization chart No. 1 in 1978 and chart No. 129 in 1986. But it did not clear the number of libraries organized under the charts.

2. **G.Bhojraju (2002):** This paper discuss the library automation and the working of ATE central library. Automation is growing system in modern libraries. The author made a detailed study of automation development, procedures and applied tools in automated library. **Keywords:** Automation of libraries, Automation procedures.

3. **Hijgar Safaish and Asfile Aserni (2010):** The authors discussed the status of higher education libraries and the use of websites in academic libraries. He further explained the importance of websites performance and calculations of IIT libraries. Medical libraries and University libraries. He concluded with the effect and importance of websites in national institutes. **Keywords:** Websites, University libraries.

4. **C.K. Sharma (2011):** The author given an account of the articles and views of different of specialists. Such knowledge also helped the librarians in their study and references. He determined that few articles are also helpful to users which are related to library resources. **Keywords:** Library specialist articles, library resources.

5. **Adyemi Adenale Akinola (2021):** Author related reading with culture and intelligence. Author examine the promotion reading habits which help in social development. ICT played an important role to bring back the reading culture in our schools. The paper reviewed the stack holders and their involvement in reading culture. They include teachers and librarians. ICT played a role to transform in reading and knowledge.

IMPACT OF AUTOMATION ON USERS OF TECHNICAL INSTITUTES LIBRARIES OF NCR

Automation system should be fool prove and should review the user awareness in these institutes library as it effects the efficiency and effectiveness of users using library resources and service facilities. The following table clear the awareness picture that 90% of users in the library of Indian Institute of Technology are aware of automation system of library and more than 60% users use website/workshop. In DTU 76% users are aware of automation system and 5% is maximum source of awareness while 45% in staff. 18% population of DTU library is

still not aware with automation system properly. It is 24% in IIT library the users are not aware with automation system. The reason of lack of awareness of users in IIT library is that users did not attend awareness orientation/training programme organized by the institute.

In NSUTD only 48% students are aware of library automation system used in library. It shows that institute website/workshops and faculty are main source of awareness among the users.

Institute	Users awareness	Unawareness	Institute websites	Oriental programmes	Newer interested to knowledge
1. AMUND	76%	24%	5%	-	-
2. DTEUD	88%	18%	3%	1%	2%
3. ETMRI	72%	38%	4%	2%	-
4. IITLD	90%	10%	4%	3%	-
5. JCUST	81%	19%	1%	0%	1%
6. JIITN	90%	10%	0%	0%	0%
7. KMIUD	72%	28%	2%	0%	0%
8. NSUTD	48%	52%	0%	1%	2%
9. SETSU	55%	45%	0%	0%	2%

CONCLUSION

It is very essential to motivate the users to use the libraries to the maximum reading help in finding out information as reading gives a way for new inspiration, knowledge etc. The time has come to remove access barriers. The advantage of technologies are economical, accessible to large society. This has given a way to learn through ICT (Information Communication Technology). There has been in use at home and classroom, the information technology and networking through electronic media has resulted to consortia of institute, web based collection.

It is not possible to all science and technology institute libraries to hold the whole stock of e-resources because of paucity of funds, insufficient and lack of professional staff and many technical problems. There have been many efforts to redress this problems by application of inter library loan, document delivery service and library network.

Other important solution of availability of e-resources and access to information is consortia. We can call it collective purchasing e-resources economically and collect or use e-journals on cooperative base. Union catalogue, cooperative acquisition, cooperative cataloguing, ILL and shared library system and moreover, shared professional expertise and human resource development.

FINDINGS OF THE STUDY

The study distributed 640 questionnaires to users, out of which 540 questionnaires were considered for study (90.73%): Faculty 90, Research scholars 45, P.G. students 180 and U.G. students 225 only.

1. There have be found – (a) Increase in user no to 31.85%, in service 60%, print collection 20.74% and digital collection 65% of the total accountability.

2. All institutions have taken benefit of all main e-journal consortia particularly UGC-NET and JEEE-G-Gate etc.

3. From study it has come out that science and technology institute of NCR are partly s satisfied with use of library consortia (31.48%) and satisfied (28.15%) but only 13.33 were fully satisfied. On the other hand 25% respondents were unsatisfied and institutes need more attention to users need.

4. So far the approach to websites for searching information is concerned, library website and search engine are more actively used, while online journal websites need more attention of librarians.

5. While studying and investigation the problems faced on using new technologies, it was found that e-journals available in these institutions are not sufficient or to the needs of users (42.59%). Moreover the tracing and accessing is time consuming (20.79%) it needs staff/students training.

6. Faculty and R.S. give more time to search information and attending the library (61.53%) and 67.05%). In whole all respondents give more time (56.11%) while seldom (25%).

7. Bulletive Board System is more used by users (77.78%) in comparison with e-mail and file transfer. Users gave less attention on Telex and Video conferencing (22.22%, 33.33%).

8. Most of the respondents prefer virtual system than traditional systems. (82%, 18%).

9. It was found that the e-journals subscribed did not cover the full needs of users (31.48%), while users could not found sufficient time to access information because of busy schedule of teaching and projects.

10. The respondents of age 21.25 consult internet in more number (44.44%) than other age groups.

11. Libsys and KOHA are more preferred software used in science & technology institutes/universities.

12. Google and Yahoo is most favorable search engine.

13. Automation has cause to increase in user's number (78%) and also increase in circulation or access to information.

RECOMMENDATIONS

On the view of the findings and study of science and technology institute of NCR, the following points may be stated as recommendations for the more better collection of e-resources, accessing the information and better services are as follow:

1. Human resources skilled should be enhanced by organizing refresher courses, seminars, and conferences from time to time.

2. More e-resources of choice of library users should be acquired under serious review of present e-resources so that more satisfactory and user's choice e-resources should be acquired and such e-resources which are not for more use may be discarded.

3. Latest and updated e-technologies should be adopted and similarly users should be aware with new technologies time to time.

4. The trend of increase in users number is no doubt at slow speed, even them new technologies should be encouraged.

5. There have been insufficient increasing trend of digital collection because of unawareness of users and less smartness of guidance and help of library professionals and faculty help. It should be encouraged.

6. No doubt consortia have been more useful to the users in a library. But sometimes it could not be more useful because of not reviewing the requirement of users and faculty unawareness.

7. Web technology has not been still common among users, which should be encourage and guided.

8. It has been experienced that users attend/visit libraries often or with interval due to curriculum load. Library professional and the open declaration of library services, users should be award continuously.

9. Libraries should provide more latest and advanced computer system to enjoy the use of internet increasing 2-3 times more to provide user's service.

10. Open access service is not more popular which should be put before the knowledge of users.

11. Digital reference service should be developed and users should be encouraged.

However, automation technology is not still popular among the users of libraries. It is a part of life. University/Institute libraries have adopted new technologies, but still there have been many barriers liked skilled staff, insufficient staff, insufficient funds, lack of referral services which should be given more attention to redress. These barriers at the level of librarian and the institute authorities.

FUTURE PROSPECTS OF RESEARCH IN THIS FIELD

Automation technologies are a vast field of learning in automation field. It covers many information systems including software, e-resources, information medias and barriers covers in the way of automation awareness.

However, a good number of researches have been undertaken in the field of automation and automation technologies and automation information systems. But still there have been much scope and field in automation, its technologies and related information systems in which much more researches may be taken up for more conclusions to be drawn.

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