ABSTRACT

Libraries are service agencies organised in a systematic order to serve users. Libraries and information centres are creations of the slow and steady growth of modern civilization. The rate of growth of libraries and information centres and their use have been changing over the years. From the traditional services of lending books and other documents, libraries now offer various types of services. The emphasis of libraries and information centres has shifted from books to the feeding of information to the users. Information is a vital resource and essential ingredient in decision making. Technology is dominating every sphere of human activity. The computer application for various operations which is resulting in time saving and removal of drudgery is a great leap for mankind.

It is restricted to systems dependent on microelectronics based on combination of computers and telecommunication technologies. Information technology is the boon for mankind. It gives accessibility to information at fingertips. There has been discussion on “Information Highways” and high tech libraries. The promising and diversified possibilities of information technology have reduced the space and time between the people, country, continent and ultimately have led to the emerging concepts “Global Society” and Global Village”.

The present work is a modest step in studying the need and importance of information technology in the present situation of information explosion. The present study examines the “Impact of Information Technology on Select Health Science Libraries and their Users”. Advent of information technology has changed the scenario of information storage and retrieval in today’s libraries. According to one school of thought the proliferation of ICT will make library professionals redundant, while others think that the technology will certainly assist the librarians/information scientists in the provision of effective library services specially, in Health Science Libraries.

In a developing country like India, cost of implementation of ICT in libraries is a matter of consideration. The start up costs of implementation of ICT in libraries may include hardware, software, licensing price as well as the cost of training employees in an unfamiliar environment.
In addition to that information technology systems require proper maintenance systems, which may include cost of engaging/hiring skilled technicians for making necessary customization as and when required.

The ability to store information in an electronic database facilitates quicker, more efficient communication. In the past, an individual would shift through stacks of paper records to retrieve data. With properly implemented technology, information can be recovered at the touch of a button.

Although information technology systems allow libraries to provide services at a faster pace, they are not without their flaws. Information technology systems are vulnerable to security breaches, particularly when they are accessible via the Internet. If appropriate measures are not in place, unauthorized individuals may access confidential data. Information may be altered, permanently destroyed or used for unsavoury purposes.

In view of the afore said boons and perceived threats or disadvantages of implementation of Information Technology in libraries in general and that in Health Science Libraries in particular, the present study investigates the implementation of IT in select Health Science Libraries. As per the survey conducted by this researcher, there are more than 300 Health Science Libraries in the country. However, some of the best libraries amongst them have been selected for the purpose of the present study. These libraries are:

1. B. B. Dixit Library, All India Institute of Medical Sciences, New Delhi
3. National Medical Library, New Delhi
4. ICMR Library, Indian Council of Medical Research, New Delhi
5. Maulana Azad Medical College, New Delhi

The above libraries will serve as the representatives of the best libraries services being offered by Health Science Libraries in India.

The following hypotheses were formulated for the study
1. Health Science Libraries being most important amongst all types are fully satisfied.

2. In view of the advent of Information & Communication Technologies (ICT), Health Science Libraries are equipped with the latest techniques of ICT.

3. Health Science appear in the priority list of the Govt. of India, it is therefore expected that most important area in the society, there should be no shortage of budget for HSLs.

4. As the subject is directly concerned with the human life, libraries make every effort to make all the resources (print and non print) available to the users of the library.

5. Users of the library (students/ faculty) being the elite class, are well aware of the information communication technologies to know what is available where.

6. The libraries somehow make the users aware of their resources through computer aided instructions (CAI), workshops etc.

   The most common research methods of data collection are: literature searches, focus groups, personal interviews, telephone surveys, mail surveys, email surveys and internet surveys.

   The data collected through questionnaires for library staff and library users separately, annual reports of the concerned libraries, information brochures, websites and personal interviews was analyzed and presented into tabular form. The main purpose was to draw inferences and prove/disprove the hypotheses and fulfill the objectives of the study.

   For providing the bibliographic references, American Psychological Association (APA, 2001) format has been followed.

   The present study has been presented in seven chapters. The first chapter is the introduction entailing the preamble, objectives, scope and limitations, statement of the problem, terms used in the statement of the problem, hypotheses, methodology, data analysis and presentation, standard used for bibliographic references and outline of the study. The second chapter deals with the review of related literature.

   The third chapter deals with definition, need, importance and historical developments of computers and information technology. Objectives and components
of information technology has been discussed in this chapter. The application of
information technology in libraries specially, in the areas of in house operations such
as acquisition, management, classification and cataloguing, circulation and in services
like OPAC and information services has also been the part of this chapter. Security
devices used in libraries has also been included in this chapter.

Chapter fourth covers the various library software packages that are available
for automation. The chapter also provides the details of the modules of each software
package and their utilities for different kinds of libraries.

Chapter V deals with the health science libraries using information technology
in information processing and its retrieval. Here some of the specialised health
science libraries have been covered. The libraries of AIIMS, NIHFW, ICMR, NML
and Maulana Azad Medical College make the contents of this chapter.

Chapter VI interprets the data, which was collected from health science
libraries for the study. This chapter also provide tables and graphs for further study.

Chapter VII provides major findings and recommendations needed for
improving the library services. This chapter also provide the conclusion and discusses
the future of health science libraries and information processing and its dissemination.

The introduction of information and communication technology and its steady
growth during the last decade of the 20th century and the first decade of the present
century till date, has revolutionized every walk of human life. The libraries in general
and Health Science Libraries (HSLs) in particular are no exception to this revolution.
The aim of present thesis was therefore, to study the impact of Information
Technology on select Health Science Libraries and their users. In the process of
selection, five Health Science libraries namely B.B. Dixit Library of AIIMS, ICMR,
National Medical Library, National Documentation Centre of the National Institute of
Health and Family welfare and Maulana Azad Medical College library (all students at
Delhi) have been included for conducting this research. A number of aspects were
taken into consideration to study the said impact as follows:

As the world of library in terms of its staff is dominated by the females
specially in developed countries, a gender wise analysis of the staff of HSLs reveals
that it maintains 60 : 40 ratio of male and female staff members. It was however
found that the libraries are not fully staffed as 33% of the total sanctioned technical
staff were found to be vacant. It is therefore, suggested that the vacancies in HSLs should be filled up without any delay so that full fledged services to the medical students and faculty be provided. This is important because the services of such libraries are directly connected to the health of its country and the society.

The staff of HSLs is by and large well qualified as they are mostly holding graduate / post-graduate degrees in library science. Even some of them have done M.Phil and Ph.Ds. Not only that they have either received training of ICT or have adopted to the latest technologies themselves. Quite a good percentage of the library staff have attended conferences, seminars and workshop in order to develop expertise in ICT. In this context, it may be said that the top administration should keep a watch on the awareness of library staff to keep pace with the changing technologies.

The HSLs in general are well funded to meet the requirements of infrastructure and the resources procured for the library. It may however, be added that the chief librarian should be vigilant about the new library services that come up every now and then and add their cost to the next year’s budgetary requirements. This is probably the only way to keep the services of HSLs at the top.

A study of library membership has revealed the keen interest of the users in library services. It may, therefore, be said that they heavily depend upon their information requirements on their libraries. It may be because of the fact that the resources in medical sciences (print and non print) are too expensive to afford.

As to the collection of HSLs under study, the number and type of resources forming the core collection of the libraries justify the availability of sufficient funds. In this context, it may be said that the librarians must keep in mind ‘Obsolescence factor’ because literature in Health Sciences becomes obsolete, sooner then in other subjects.

As to the library automation and provision of infrastructural facilities the HSLs were found to be fairly well. It again justifies the funding to these libraries. Here also a word of ‘caution’ may be followed about the rapidly changing hardware and software technologies. The chief librarian has to ensure that the latest technology is made available to his users, either through upgradation of the existing hardware/software or through the procurement of latest technologies.
Apart from what has been described above, the chief librarian of any HSL must take care of the fact that their libraries remain the leaders in the technologies adopted, services offered and collections maintained to serve the elite class of users who in turn will emerge as the persons, maintaining the health of the society.

On the basis of the data analysis of collected data and above findings, the following recommendations and suggestions may be offered for further research and improvement of library services :-

1. In view of the growth of electronic resources, it has become essential to make use of ICT in library services and in-house operations to the users as much as possible.

2. Information technology has an impact on every aspect of library and therefore, libraries should create healthy and appropriate environment and prepare staff to willfully accept and adopt this change.

3. Adequate funds in the form of special grants should be provided for HSL to adopt the modern technologies for the storage and retrieval of health science information. This will increase the provision of enough funds to develop the required sort of IT infrastructure and its maintenance and procurement of e-resources.

4. Use of IT in Health Science Libraries is hitherto limited to few areas of library operations like acquisition and to facilitate e-resources, it is suggested that IT should be used in all library functioning like circulation, serial control and in value added user services like CAS and SDI, Online Database procurement of E-books & E-journals, Reference services.

5. Whatever IT based services are prescribed by Health Science Libraries, they should be well brought to the notice of users. The libraries therefore, should organise user awareness programmes and other user education programmes to make optimum usage of e-resources.

6. The libraries must pay due attention towards the increasing demands and systems and improvement in internet speed. The old systems must be upgraded and latest versions of computers be procured for better access of e-resources.

7. Most of the technical posts are found vacant in libraries, therefore, appointments should immediately be made in HSL, wherever posts are vacant to meet out the actual requirements of libraries to impart quality library services.
8. It was observed that the database development activity in HSL seem to be very slow. Neither the library are subscribing Health Science Databases nor creating such databases at their own to promote e-learning. It is suggested that HSL should subscribe more Medical databases for the benefit of users.

9. Most of the HSL have no separate division for e-resources. It is suggested that libraries should establish a separate division of e-resources.

10. HSL should subscribe more e-resources and international databases in order to provide access to a wide range of electronic resources.

11. HSL should promote resource sharing among them. One library is not able to acquire all resources due to financial constraints, they should therefore, share the accessible e-resources from other libraries and institutions.