

**GROWTH AND DEVELOPMENT OF SELECTED  
LIBRARIES OF INDIAN COUNCIL OF  
MEDICAL RESEARCH INSTITUTE  
IN DIGITAL ERA: A SURVEY**

**ABSTRACT  
of  
Thesis**

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Submitted by

**AKLESH KUMAR**

Under the Supervision of

**Dr. R. K. CHOUDHARY**  
Assistant Professor

BABASAHEB  
BHIMRAO  
AMBEDKAR  
UNIVERSITY



प्रज्ञा शील करुणा  
ESTABLISHED 1996

Department of Library and Information Science  
(School for Information Science and Technology)  
Babasaheb Bhimrao Ambedkar University  
(A Central University)

Vidya Vihar, Raibareli Road, Lucknow-226 025, Uttar Pradesh

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## ABSTRACT

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### INTRODUCTION

Growth is a process of growing, an increase in size and number of any branch of knowledge or organizations. Development is the process of developing or being developed, a specified state of growth. The web and information communication technology have emerged one of the most powerful media for the instant access to millions of information resources and services in a moment. In the digital era, the information explosion has brought many changes in every field of knowledge, especially in medical sciences. Medical library has played an important role directly in the promotion of medical education and health related information in the country.

Indian Council of Medical Research Institute (ICMR), New Delhi responsible for the promotion and coordination of biomedical research in India. It is one of the oldest medical research institutes in the world. The ICMR supported and funded by the government of India through the department of health research, ministry of health and family welfare. The council was set up in 1950 with headquarters located in New Delhi. The institute promotes biomedical research throughout the country through intramural as well as extramural research. The structure of the institute is divided into three types i.e. Mission Oriented National Centre, Regional Research Centre and Unit Centre. The Indian Council of Medical Research Institute is scattered over India. There are thirty-two research institutes situated in different parts of the country. It covers fifteen states and thirty-two places. The present study is limited to only select twenty research institutes.

The medical library environment is totally changed that of a century back. The digital revolution has given the opportunities to develop digital library and electronic

resources. In the digital era gathering of information has become more complex and expensive. The traditional library services such as CAS, SDI, Reference service, Document Delivery Service, Translation service etc. are not sufficient but present day demands and nature of the user are totally changed; they want latest interactive services such as electronic clipping services, Ask librarian, Alerting services, blogs, listserv, E- CAS etc. 'It is essential for medical librarians to be skilled in web designing, making database and portal, web publishing, managing information resources and networks.' (Morgan, 1996; Scherrer, 2004).

## **STATEMENT OF THE PROBLEM**

There have been many studies directed on the libraries of medical colleges and similar research institutes. But very few studies have been done on the Indian Council of Medical Research institutes library; especially in all over India. Only one thesis submitted on the topic "Communication Patterns and Information Seeking Behavior of Health Science Researchers/ Scientists: A study of ICMR Institute." At Andhra University in my knowledge which has been submitted on ICMR institutes libraries. A careful study of literature reveals that there has been no comprehensive study done on the ICMR libraries as a topic of advanced research. In view of the gap that exists in the literature on this topic, the present study proposes to focus its thrust mainly on "GROWTH AND DEVELOPMENT OF SELECTED LIBRARIES OF INDIAN COUNCIL OF MEDICAL RESEARCH INSTITUTE IN DIGITAL ERA: A SURVEY"

The study covers different objectives i.e. availability of information resources, library services, status of automation, resource sharing, professional attitude towards implementing ICT application in libraries and so forth. The majority of the studies identified with specific library furthermore, all the study limited in nature. They have

still no deep study conducted. The study has given the useful information; especially to ICMR librarian and policy maker identified with medical education. In addition to provides a recommendation to enhancing library resources and services.

### **OBJECTIVES OF THE STUDY**

1. To trace the historical development and present status of the selected ICMR Institute Libraries.
2. To know the availability of IT infrastructure, networking, manpower in selected ICMR Libraries.
3. To analysis growth pattern of their budget.
4. To know the status of resources sharing among various ICMR libraries.
5. To know the libraries resources and automation status of various library activity.
6. To know the views and attitudes of librarian towards the implications of information communication technology in Libraries.
7. To know the availability of services and nature of collection in ICMR Libraries.
8. To provide recommendations on the basis of major findings for improving resources and services available in ICMR libraries.

### **HYPOTHESIS**

The following hypotheses formulated for the present study:

1. All the ICMR libraries are using information technology in libraries. There are no differences between availability of Information Communication Technology and network infrastructure.

2. There are difference between physical facilities, information resources, services, and workforce available in libraries.
3. Resource sharing, library resources and automation status of various library activity among all ICMR libraries almost same.
4. The attitude and opinion of all the library professionals towards ICT and problem faced by knowing emerging information technology related to the library almost same.
5. All the ICMR Libraries are growing in every field like budget, manpower, resources etc.

### **SCOPE OF THE STUDY**

Although there are thirty-two research institutes situated in a different part of India. It is an oldest research medical institute in the field of biomedical sciences. The ICMR funded by the Government of India. It is in the department of the ministry of health and family welfare. All the ICMR research institutes divided into three parts. They are-

1. **Mission Oriented National Centre** - Its cover twenty-one (21) Research Institutes.
2. **Regional Research Centre** - Its cover only six (6) Research Institutes.
3. **Unit Centre** – Its cover only five (5) Research Institutes.

The scope and coverage of the present study are covers only selected twenty (20) research institute of ICMR libraries which situated in different parts of the country. The study includes all three types of research Institute Libraries. These are–

**Table 1.1: List of the institutes stated; in the various state, selected for the present study**

S.N.	NAME OF THE INSTITUTE	NAME OF THE STATE
1	National JALM Institute for Leprosy & other Mycobacterial Diseases	Uttar Pradesh
2	Institute of Cytology and Preventive Oncology	Uttar Pradesh
3	Desert Medical Research Centre	Rajasthan
4	Rajendra Memorial Research Institute of Medical Science	Bihar
5	Bhopal Memorial Hospital & Research Centre	Madhya Pradesh
6	National Institute for Research in Environmental health	Madhya Pradesh
7	National Institute of Pathology	New Delhi
8	National Institute for Malaria Research	New Delhi
9	National Institute of Medical Statistics	New Delhi
10	National Institute of Occupational health	Gujarat
11	Regional Medical Research Centre, Odisha	Odisha
12	National Institute for Research in Reproductive Health	Maharashtra
13	National Institute of Immunohematology	Maharashtra
14	Enterovirus Research Centre	Maharashtra
15	Genetic Research Centre	Maharashtra
16	National Institute of Virology	Maharashtra
17	National AIDS Research Institute	Maharashtra
18	National Institute Of Cholera and Enteric Diseases	West Bengal
19	ICMR Virus Unit	West Bengal
20	Food Drug Toxicology Research Centre	Andhra Pradesh

The present study limited to the –

- The study covers only selected ICMR Institute Libraries in India.
- The study limited to collection development, budget, manpower, ICT infrastructure & library services.

- Automation status and resource sharing among ICMR institutes library in the light of Consortia and Library networking.
- All the data covers only 2003-2004 to 2012-2013.

## **RESEARCH METHODOLOGY**

In the age of multidisciplinary research, there are several methods available in the field of social sciences such as historical, survey and experimental, etc. The nature of the present study based on survey method. This method is very effective in historical research. On the basis of comprehensive literature survey and in the light of defined objectives and need of present study, the researcher has followed this method for data collection. The present study is empirical and theoretical in nature. The imperial data collected through questionnaire, informal interviews, and observation. The questionnaire prepares only for a librarian. The questionnaire contains two types of questions, close-ended as well as open-ended.

Thus, the survey method is adopted to study the growth and development of ICMR Institute services, resources, nature of the collection, IT infrastructure, etc.

Collected data were coded, tabulated and analysed by the simple statistical method on the basis of, nature of data. The analysed data presented through table and graphs supported by interpretation. The table, charts, and diagrams drawn by using MS-Excel version 2007

Reference and bibliography prepared according to American Psychological Association guide 6<sup>th</sup> edition available on [www.apastyle.org](http://www.apastyle.org).

## **SELECTION OF THE SAMPLE SIZE**

It is very difficult task to covers all ICMR Institutes Library; due to some reason such as time duration, funds, lack of research facilities, lack of cooperation, etc.

researcher selected only twenty ICMR Institutes Library. The selection of institutes based on the status of the library (collections, manpower, services, automation, users, etc.). The study covers all three types of Institutes Library, (Mission Oriented Research Institutes, Regional Research Centre, and Unit Research Centre). The total population is thirty-two while the sample size of the present study is twenty which represented in Table 1. But after visiting in the institutes; it found that out of twenty institutes, three of them having not its library and one of the institute i.e. Enterovirus Research Centre is state funded and perform project work for ICMR. Thus, the total sample size of the present study is sixteen which represented by the Table 2.

**Table 2. Sample Size of the present study**

<b>S.N.</b>	<b>NAME OF THE INSTITUTE</b>	<b>NAME OF THE STATE</b>
1	National JALM Institute for Leprosy & other Mycobacterial Diseases	Uttar Pradesh
2	Institute of Cytology and Preventive Oncology	Uttar Pradesh
3	Desert Medical Research Centre	Rajasthan
4	Rajendra Memorial Research Institute of Medical Science	Bihar
5	Bhopal Memorial Hospital & Research Centre	Madhya Pradesh
6	National Institute for Research in Environmental health	Madhya Pradesh
7	National Institute of Pathology	New Delhi
8	National Institute for Malaria Research	New Delhi
9	National Institute of Medical Statistics	New Delhi
10	National Institute of Occupational health	Gujarat
11	Regional Medical Research Centre, oddisa	Oddisa
12	National Institute for Research in Reproductive Health	Maharashtra
13	National Institute of Immunohematology	Maharashtra
14	National Institute of Virology	Maharashtra
15	National AIDS Research Institute	Maharashtra
16	National Institute Of Cholera and Enteric Diseases	Kolkata

There are three research institute library not respond the questionnaire, so total population is thirteen.

#### **Response Rate**

<b>Sample Size</b>	<b>No. of respondents</b>	<b>Response Rate</b>
16	13	81.25 %

### **STRUCTURE OF THE THESES**

This study comprises of six chapters. Each and every chapter deals with different aspects of the research work, which explained below -

#### **Chapter 1- Introduction**

This chapter introduces the whole picture of the present study. The chapter started with an introduction, explaining the background of the study and also explain the important term used in the study, objectives, hypotheses, scope, limitations, methodology and the structure of the study are also included in this chapter.

#### **Chapter 2- Reviews of the Related Literature**

This chapter reviews the important literature related to this study. It deals with various aspects of the study i.e. impact of ICT on the library, growth, and development of the library, resource sharing among the library, sources of information, library services, nature of the collection, a feature of a special library, services of the special library, etc.

#### **Chapter - 3 Indian Council of Medical Research Institutes: A Profile**

This chapter provide brief descriptions about selected institute's libraries and a detail profile of the concerned institute which includes, the introduction, area of specializations and unique feature of the particular institutes.

#### **Chapter – 4 Growth and Development of ICMR Institute Libraries: An overview**

The chapter deals with the historical background of the ICMR Institute, objective of the institute, feature of the library, growth of the budget and professional staff, list of the total number of ICMR research institute and with their website, year of establishment and actual locations of the particular institutes and also discuss about services and library collection.

#### **Chapter – 5 Analysis and Data Interpretation**

In this chapter, researcher analyses and interpreted the data that collected through the questionnaire and other research methods. The acquired data presented through pie chart, line chart, bar, graph etc.

#### **Chapter – 6 Summary, Conclusion, and Suggestions**

The chapter deals with the summary and findings of overall study, testing of the hypothesis and it's also provides suggestions for improving the status of ICMR libraries. A short conclusion and suggest the some topic/ area for further research are also added in this chapter.

#### **Major Findings**

- It is found that the maximum numbers of research institutes were established during the period of 1980 to 1990 i.e.12 (37%).
- Most of the libraries i.e. 61.54% preferred open access as a mode of access while, 38.46% of them provide open as well as closed access.
- When it is asked to mention the technical schemes used in the libraries it was found that UDC classification scheme is used by the most of libraries rather

than CC, DDC and local schemes while, AACR2 is most popular cataloguing scheme among the libraries rather than CCC, RDA. ISBD as its importance in the most of the libraries as bibliographic standard format rather than MARC, CCF, ISO, DUBLIN CORE etc.

- It is very awful that only 7.69% of institutes have their separate building for the library while rest of them i.e. 92.31% attached with the main building.
- Availability of ICT infrastructure in the responded libraries revealed that all the libraries have computer with them as the hardware facility. There are various equipment too but in low scale such as video conferencing equipment, Smart TV and Fax is available in 7.69% of libraries.

Most of the libraries have library automation software rather than institutional repository, digital library software, content management, e-learning software. All libraries have internet connection and most of the libraries have connected through leased line. While, NICNET provide internet service to most of the responded libraries.

- Most of the libraries i.e. 61.54% connected to various library networks. It is observed that most of them connected through J gate Plus, LAN, ICMR Library network.
- In most of the libraries, there are adequate numbers of staff and they feel training program as an essential one to provide better service to their user.
- Most of responded libraries have collection development policy and most of them revised their collection development policy ‘yearly’ and in all that Director played an most important role in creating and approving the policy while other had equally important role too such as librarian, committee.

- Most of the libraries engaged in collaborative services and most of them collaborate nationwide. When it is asked why they shared their resources among others it found that most of them collaborate to provide better services and there are many other reasons come forward behind their collaboration such as for fulfilment of present day need of the user, to reduce the library budget, for save the time of user as well as staff too. One of the main point come forward with this reference that professional communication among participated institutes is one of the reason for the resource sharing.

Most of the respondents have also the member of various consortia such as ERMED Consortia, ICMR consortia, J-gate, J-Gate Plus, JCCC, NML-ERMED.

There are various functions which responded libraries share with each other such as most of them share their e-resources followed by the 23.08% of respondents who provide collaborative acquisition as well as collaborative service too.

- To find out the automated status in the responded libraries, it found that most of the libraries have automated and most of them are fully automated in nature too.

Most of the libraries used commercial software while open software is equally important in various institutes but most of them don't have their separate server. Even a single library has not their webpage.

There are various automated housekeeping operation carry out by the responded libraries such as circulation process, acquisition process, serial control, library report, library statistics, OPAC/Web OPAC etc. and most of the responded libraries are satisfied with the automation.

- There are various services provided by the libraries in both methods manually as well as automated such as reference service, bibliographic service, document delivery service, translation, CAS, SDI, E-mail/list service, OPAC, ASK librarian, web casting etc.
- There are various problems in front of the librarians in implementing the ICT applications such as lack of funds, lack of support from the authorities, lack of trained staff, lack of ICT infrastructure, increase cost of ICT application software, problem related to system security, lack of awareness about newly ICT applications, etc.
- The attitude of librarians towards ICT have positive in nature which revealed various points such as ICT improve library services, it develop positive attitude in staff as well as users, provide latest information to the user, save the time of user and staff, increase the reputation of the library and maximise the use of e-resources, increase the research output of the institute etc.
- The entire research institutes have no separate library web pages and also not updated the necessary information related to library on the website.
- The researcher observed that there is no need for the separate building for the library, because most of the biomedical literature available in electronic format. There is no need more space. And another reason behind this is also observed that users have no enough time for visiting the library. They want all the information on their desk.
- Most of the libraries suffering from the lack of library professional but they can't respond the negative answer.

- The entire ICMR institute libraries budget; varies from institute to institute. It is based on the number of user, staff and specific research area of concerned. Most of the library budgets are not fixed for the particular year. Budget is based on as per requirement basis.
- Most of the libraries working between 9.30 A.M to 5 P.M. No single libraries open to 24 hour.
- Most of library professionals not aware about latest 2.0 based technology and application to how can implement these tools in the library.
- Most of the librarians are aware about advantages of resource sharing among them but they have no appropriate policy for resource sharing. The status of resource sharing is very low. Most of the libraries purchase the required resources on the basis of their own capacity; there is no role of resource sharing in it.
- Most of the libraries have not used the open source software, main reason behind this data security. (fear to loss of data)
- Most of the libraries do not maintains all the statistics related to housekeeping operations of libraries.

## **TESTING OF HYPOTHESES**

- 1. All the ICMR libraries are using information technology in libraries. There are no differences between availability of Information communication technology and network infrastructure.**

From the survey, it is found that most of the libraries are using information technology in libraries. Thus the formulated hypothesis ‘All the ICMR libraries are

using information technology in libraries. There are no differences between availability of IC technology and network infrastructure' is accepted.

**2. There are difference between physical facilities, information resources, services, and workforce available in libraries.**

From the analysis it is revealed that there is no difference between physical facilities, information resources, services and workforce available in the libraries. All the libraries have organized common facilities in the libraries. Therefore, the hypothesis 'there are difference between physical facilities, information resources, services and workforce available in the libraries' is rejected.

**3. Resource sharing, library resources and automation status of various library activity among all ICMR libraries almost same.**

In all the libraries resource sharing, library resources and automation status of various library activity among all ICMR libraries is almost same. Thus, this hypothesis is accepted.

**4. The attitude and opinion of all the library professionals towards ICT and problem faced by knowing emerging information technology related to the library almost same.**

There are various points such as ICT improve library services, it develop positive attitude in staff as well as users, provide latest information to the user, save the time of user and staff, increase the reputation of the library and maximize the use of e-resources, increase the research output of the institute etc. raised by the researcher and all the respondents accepted that points. Thus, the hypothesis 'the attitude and opinion

of all the library professionals towards ICT and problem faced by knowing emerging information technology related to the library is almost same' is accepted.

**5. All the ICMR Libraries are growing in every field like budget, manpower, resources etc.**

It is found that growing rate in every field like budget, manpower, resources etc. represented in the chapter-4. Thus, all the ICMR libraries are growing. Therefore, the formulated hypothesis is accepted.

**CONCLUSION**

Change is inevitable, and the need for progressive changes is important for Library and Information Science (LIS) professionals, change is usually associated with modern information technologies and management issues. Over the past few decades, the nature of library environment and mode of service has changed significantly. Use of emerging technologies and its applications enhance the status of libraries and reduce the workload of library professionals and help to provide better user services.

All the ICMR institute/centre have well established library and provides major supporting services to achieve specific goals. The ICMR institute library has collection of government document, book, journals (Print & electronic), database, video and audio tape, patent, dissertations, theses, research documents microfilm/ microfiche etc. These information resources are organised in systematic and helpful manner to serve the need of scientist, research scholar, students, medial professional engaged in biomedical research and development.

It is found that majority of the institute libraries have provide all common services i.e. reference services, CAS, SDI, Translation, Photocopy service etc, but

majority of the services in traditional way and very few libraries have provided 2.0 based library services to the users.

There have been tremendous changes throughout the last decade within the type of resources, services, users' needs, mode of access, medium of storage and retrieval of information available in the research Libraries and information Centers all over the world. Therefore the study recommended that, responsible authority should take appropriate decision for reconstruct the status of library by using emerging tools and technologies.

### **SUGGESTIONS**

- ✓ In order to run the libraries in effectively, smoothly, interactive and provide better and more services to the users, the responsible authorities must appoint the permanent library professionals in the libraries.
- ✓ The library authorities should see that proper staffing pattern is implemented in the library which is recommended by UGC/HEALTH Library to provide efficient services to the users.
- ✓ In order to cope with lack of budget and staff, librarians should take initiative to adopting new ICT tools and technology, especially web-based technologies, in order to provide to new value added services to their users such as.
  1. Web based services – Blog, Wikis, Social networking, Mashup, RSS feed, Podcasting etc.
  2. Library websites, Portals, Subject gateways etc.
- ✓ In the digital era library need to modify all library housekeeping operations, services need to be modified, so librarian should start, re-planning,

restructuring, reengineering the exiting workflow process and services which will reduced the manpower effort, time and money and enable librarian to introduce latest ICT enabled services.

- ✓ The Library must regularly evaluate the all activities and services.
- ✓ Study suggested that headquarter should purchases the valuable electronic resources and provide links to all the other centre of the institutes under its control, and avoid the purchases of same resources in other institute.
- ✓ The institute should be increased the library timing and services facility.
- ✓ It is suggested that librarians be encouraged to improve their ICT knowledge for modify the existing library setup, if necessary librarian should visits others library to observed their functions and services and attend more training and awareness programs.
- ✓ Resource sharing network must be established between the different libraries in various institute. The resource sharing network should be connected with a national network.
- ✓ The librarians should design own web page which will providing all essential web link of information about services, databases, functions etc. performed by the libraries, which will enable the resource sharing program also.
- ✓ The library budget should increase as regularly, the library should be provided with the adequate amount of funds for reference books, textbooks, book bank, periodicals, back volumes, CD-ROM, E resources and other collection like e resources, technical reports and back volumes CD's. etc.

- ✓ To suggested the responsible authority to prepare a written collection development policy including traditional and modern information resources and sources.
- ✓ Therefore recommended that some special areas or spaces must be created for people or such students/Researcher/scientist to relax in order for them to minimize their interruption on those students who would be studying in the libraries.

### **FURTHER AREA OF RESEARCH**

In the study important aspect could not cover due to limitations of the study. There is a need to study in depth all the important aspects related to libraries and library profession. The future possible areas of research that can be brought about after the study of existing facilities prevalent at selected institutes libraries of Indian council of medical research institutes under study indicate that:

- The Problem related to emerging information communication technology applications and tools in ICMR libraries in association with various relevant issues i.e. planning and management of electronic resources, organizational environment, motivational factor, personality, job satisfaction and attitudes etc.
- Present study limited to broad aspects of growth and development and selected only twenty institutes libraries out of thirty two institutes , there is need to conduct to such study in depth and taking only one or two aspects in all India basic.

- Changing role and responsibilities of library and information professional in India: A study of ICMR institute librarians
- There is a need to conduct a deep study on problem and prospects of application of information technology in ICMR institute libraries
- Information needs and seeking behaviour of scientist of ICMR institute : A Survey
- Citation study of scientists publication in ICMR institute during 2010 to 2016
- Digital literacy among the scientist ,research scholars, P.G. students of ICMR institute : A critical study
- Leveraging quality web –based library services in digital age :A study on ICMR institute libraries