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I.1 INTRODUCTION

The term 'social science' can be used in a very broad sense and can be defined as the application of the scientific view-point of understanding the human-society as a whole. The role of social sciences in national development is being increasingly recognized by decision-makers, scholars, planners and administrators. The social sciences have played a significant role in projecting the socio-cultural, political and economic situations of any society. The social sciences today form an active force in society fulfilling a significant role towards development. However, it may mean differently to different people and sectors. The Webster's Third New International Dictionary defines social sciences as 'the branches of knowledge that deal with the institutions and functioning of human society and with the inter-personal relationships of members of society.'

According to Encyclopedia Brittanica, "Social Sciences concern the disciplines that deal with the human behaviour in its social and cultural aspects, economic, political science, sociology, social and cultural anthropology, social psychology and social and economic geography." Therefore, social sciences for our purpose include all these areas and their inter-disciplinary fields. All it needs us to do is to know and understand each area and blend it in the fast changing socio-economic political sphere.

I.2 DEVELOPMENT OF SOCIAL SCIENCE RESEARCH

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In India social sciences is of recent origin. There has literally been information explosion, as a result there is information need, awareness and an increasing use of information in social sciences. The social sciences acts as a source of guidance to
administrators and academicians. The developmental issues can be perceived in a wider perspective and progressive ideas can thus be conceived.

It is only after late fifties that the social science research in India has come off its conservative shell of being mostly in Universities, Archives and other few Research Institutions, like Asiatic Society Bengal, National Archives of India, Gokhale Institute of Politics and Economics, Tata Institute of Social Sciences, and Indian Council of World Affairs. But as the planning of our nation took the lead and India started witnessing planned development, there was manifold increase of work on part of the planners and policy makers. As the planned phases of development took pace, the Fifth Plan stressed on the expansion of educational facilities and Research Institutions. This resulted in the existence of 34 Social Science Research Institutes by 1950 and 139 came into being during 1951-1980. Most of these Social Science Research Institutions were sponsored by the national body called Indian Council of Applied Economic Research. Each Centre or Institute of ICSSR provides information services in their mission-oriented fields. These services are essentially directed towards meeting the requirement of the work in progress in the respective organizations. Thus, the development of the Research Libraries has been significant. Most of the specialized Information Centres undertake documentation activities also. The ICSSR provides financial assistance to these Research Institutes and their Libraries.

To really understand the processes of change in social science research, a balanced and well-developed information system/service in social science is very essential. Libraries and Information Centres that collects and makes available for use, the materials on a given subject or field is often termed as a Research Library. These centres are designed to serve a limited clientele or experts, scientists, researchers, etc. The information seekers are wide group comprising of students, teachers, scholars, industrialists, policy makers, and general public. Only after realizing the importance of social sciences information in nation building,
various types of tools and techniques for providing information services to the users have been developed. Information sources, systems and services in the particular area have been created at the national, regional and international levels.

Our planners have to bear this in mind that information is power and no effort should be left out in getting this strengthened. When compared to other advanced nations, our country's investment in this regard is ridiculously low (0.25% as against 23% to 25% of GNP). According to statistics collected by INSDOC, it is estimated that our country is now deprived of world's information in social sciences. We are facing information drought and have to depend on foreign databases and secondary sources at a very heavy foreign exchange. The only remedy foreseen is to build our own resources.

1.3 GENERAL OVERVIEW OF SOCIAL SCIENCE LIBRARIES IN INDIA

A seminar on Social Science Research and Libraries was held at Sapru House from 2-4 January, 1959 under the direction of Dr. S.R. Ranganathan. The discussion highlighted the different areas of social sciences, the documentation of various publications of social sciences, co-ordination of work among social science Libraries. All this was planned to conduct research in a manner to achieve better research results. The vast literature appearing in the field of social sciences has to be scanned through, studied, analyzed and digested. The prime job of the Libraries is to bring forth the relevant literature for use of social scientists. In social sciences, literature is primary source and literature search is a secondary activity. But in recent times, documentation and abstracting has been of prime importance in social science research. As a result, a number of bibliographies in several areas of social sciences have become popular. The reasons, however, for the inadequate level of research are:
A. Lack of sufficient documentation facilities.
A. Insufficient financial support.
A. Lack of a sound National Information System.
A. Lack of uniformity in information resources and use of IT products.
A. Insufficient infrastructural facilities for research.

I.4 INFORMATION TECHNOLOGY: ITS GROWING IMPORTANCE

The entire world order has entirely changed due to fast and ultimate changes brought about by information. This change influences quick access to various resources and the method, mode and speed of delivery. This not only facilitates the transfer, dissemination and application of technology.

In the present era of information society, the technological revolution has laid great amount of impact on our information needs in a more challenging way. Now information can be acquired, processed, stored, retrieved and disseminated in vocal, pictorial, textual and numerical form by a micro-electronic based combination of computing and telecommunications. Basically, Information Technology is tools and applications support through which information is transferred, recorded, edited, stored, manipulated and disseminated. Due to this, more and more IT products and services are being provided in any information system. This will almost meet all the attributes of Information Technology, like timeliness, precision accuracy, quantifiable, verifiable, accessible, freedom from bias, comprehensiveness, appropriateness and clarity (John G. Burch).

I.5 WHY TOWARDS INFORMATION TECHNOLOGY?

There has been a tremendous scientific and technological progress to bring about socio-economic development of society, which has resulted into exponential growth of information and its communication. There is now information pollution instead of
information explosion. The need for National Information Technology (IT) strategy arose due to this. The need may be viewed in three perspectives:

- **IT is a strategic industry.** Many developing countries have targeted IT for special policy and infrastructural support since it is the largest (worth over 1.5 millions), fastest growing and most profitable global industry.

- **IT is a generic technology, whose applications span all industries and services.**

- **IT is an essential infrastructure in imparting the ever growing knowledge.** It helps to collect, process and transmit information at breath taking speed and at declining cost. This, thereby, increases the level of efficiency and quality of productivity in rendering information services to researchers.

In social science research libraries, the use and application of IT is of immense importance and is already established. To provide right information to the right-user at the right time is a primary task to be performed by the information Managers of today. So the information demands of the researchers have been well assessed and managed. For this, more and more advanced services like documenting, scanning, and indexing even the micro-documents are to be provided. Providing such services is difficult but not impossible. The only answer to providing advanced information services to researchers is computer and communication technologies. These technologies include computer, telecommunications, micro-electronics, networking, cyber-technology, desk-top printing and reprographic technology. Along with these technologies support of electronic devices is important to shape the various components of Information Technology.

The convergence of all these technologies have made it possible to not only provide but market various information products by the Libraries and Information Centres (LICs). The more and more use of these technologies have also resulted in lower costs of data storage, handling and its transmission. This change in the overall scenario of LICs has not only posed major challenges to the Information Industry but also to the Information
Managers in providing and satisfying the complex requirements of scientists. The social scientists want pin-pointed, specific and exhaustive information retrieval. The information technology takes care of these aspects and makes use of storage media for recording, storing and dissemination of information. The technology has provided a new shape and outlook to the professionals by making every person globally accessible with computer linked up to different Library Networks to seek the required information. Information Technology consists of five components:

- Electronic and photonic technology.
- Computer Technology
  - Software
  - Hardware
- Communication Technology.
- Artificial Intelligence Technology.
- Human-Machine interface Technology.

In LICs only the first three components are in use. This has given way to the following three combined uses of Information Technology:

(i) New means and ways to store information in a compact manner and cost-effectively use different photographic micro-forms, magnetic storage on tapes and discs, optical storage on CD-ROMs and video discs;

(ii) New mechanism of software packages to store, search and handle data, both directly and sequentially.

(iii) New facilities for cheap and fast transmission of information through telecommunication systems and networks.

I.6 INFORMATION TECHNOLOGY IN LIBRARIES AND INFORMATION CENTRES (LICs)

Information is the need of the time for its uses, but if it is not well managed, organized, stored, retrieved and disseminated, it is worthless for the users. As automation and computerization of Libraries took place, even the most traditional libraries have started
providing their services using advanced techniques. Gradual changes in modern technology
gave use to Information Technology, wherein, information is managed well, making it
available for use expeditiously on demand or in anticipation of such demand. Now most of
the LICs are under the influence of IT, which includes:

- The processing of data into information
- The storage and retrieval of information so that it is made available to users
  efficiently and effectively. It also makes the job of the Information Managers less
  cumbersome and lengthy. The extensive use and application of various
  communication media and microelectronic facilitates information location,
  processing and its transfer within minimum possible time.

There is not only widespread use of storage devices like microforms and optical
discs but use of computers, on-line indexes, full text searching and retrieval, automated
record keeping and even computer based decision making.

1.7 I.T. AND LIBRARY SERVICES

The computerized and IT based library services are mentioned below but are
detailed in Chapters IV and V. The impact of IT on library services is not only speeding
up of routine work process but also widening the choice of available information
resources for users. These are as follows:

- Bibliographic:
  - Current Awareness
  - Retrospective Searches
  - Developing Local Databases

- Information Services:
  - SDI
  - Reference Services

- Document Delivery Services
  - Barcode based online circulation
  - Full Text delivery

- Instruction Services
  - User Induction/Orientation
Bibliographic instructions and training.
In-house personnel training.
Facilities:
- Public Access catalogue
- Resource sharing
- Browsing and Interactive searching
- Networking

With this kind of facilities being extended to the academicians, researchers and library users, Information Technology would surely be used in due course of time by even the traditional libraries not only to improve their services but also to share resources by way of creating their own specialized networks.

I.8 THE PROPOSED STUDY

The study involves the assessment of social science research libraries of India, i.e. the ones which are ICSSR funded. There are total 27 LICs of these research Institutes and only these LICs are taken for the study because:

- These research institutes and their LICs are established at different points of time, i.e. over a period of as much as forty-five years.
- Yet the ones established more than 20-25 years back have not shown desirable progress in terms of their resources, facilities, services and state of technological advancements.
- These LICs and the related Research Institutes have the same parent body and should necessarily have the same criterion of budget allocation.
- The variations in the budget allocation in these LICs hinder the overall growth of these Libraries to an extent. Yet there are some Libraries which progressed in spite of low budget. This study would emphasis on budget to a great deal.
- Only ICSSR Institutes LICs are taken for this study because all of them together have covered almost all areas of social sciences and have inter-disciplinary approach in their research.
These parameters adopted in the study would provide us a clear picture of the overall state-of-the-art of these LICs.

- These LICs can be taken under an umbrella of the proposed National Information System Network since all of them are national level core LICs of social science disciplines.

A comparative study of their resources, facilities, infrastructure, budget, etc. has been done with a view to increasing IT facilities and services. An assessment of IT resources available in these Libraries and Information Centres is made in order to establish the status of IT applications available in these LICs. This is done with a view to provide better services and facilities to their readers. At the same time, changing information needs priorities and behaviour in an IT based environment is made so that their changing information requirements can be satisfied with modern IT resources and other technological advancements after having gained the overall status of these 27 LICs, a National Information Centre and Network Model of these LICs is proposed so that they can share their information resources in future.

This, along with the use of IT products would be estimated only after assessing through a detailed study of:

- The use of computers in the in-house operation and documentation activity.
- Sufficient use of IT applications and the type IT products used.
- The hardware and software available.
- Use of other modern equipments like Photocopier, Microform reader, Audio-visual equipments, etc.
- Whether the Library has Internet facilities for its clients.
- To what extent he LICs are automated.
- Whether these centres are using CD-ROM databases or have created in-house databases for their clients.
The assessment of changing user needs in view of the technological advancements in these LICs.

Whether these centres are on other computerized network.

The budgetary provisions in these Libraries.

It may not be out of place to mention here about how I came to offer this area of study for research. Being part of the ICSSR family, i.e. working in an ICSSR funded Institute for more than twenty-two years and knowing well about the growth, development and the fund situation of the LICs of these Institutes. Their growth has been uneven in terms of the resources, infrastructural facilities and technological applications in these LICs and providing services to their users. Apart from this not much has been touched on the issue and no study has yet been conducted on growth and development of social science research LICs in terms of providing technologically advanced information services to their users, especially in view of the changing user needs in view of technological advancements and IT applications.

I.9 AIMS AND OBJECTIVES

The aims and objectives of the study are as follows:

(i) To study the library resources, facilities and services of Social Science Libraries over a period of time.

(ii) To assess the growth, achievements and development of these Libraries in terms of modern means of communication and IT applications.

(iii) To assess the impact of automation and IT applications on the quality of services.

(iv) To assess the changing user-needs in an information age in terms of technological advancements in these LICs.

(v) To examine the state of the art of these Libraries viz-à-viz IT applications.
(vi) To examine the budgetary provision in these LICs viz-a-viz the Institute budget and their year of establishment.

(vii) To make a comparative study of ICSSR LICs to assess the reason of their lagging behind in terms of providing services and facilities.

(viii) To plan and propose a model of National Information Centre Network of ICSSR LICs in three phases by way of distribution in terms of their infrastructural facilities, services and IT usage.

I.10 HYPOTHESIS OF THE STUDY

(i) Though there are sufficient library resources and infrastructural facilities available in most of the ICSSR Libraries, still they are not bringing out satisfactory library products and services for the users through electronic media or are not providing IT based services to their readers.

(ii) There has been substantial increase in the quality of information dissemination services to the user community in the Libraries of North-Region of the country through use of IT products.

(iii) Uneven facilities and financial support to ICSSR Libraries results in lack of uniform growth towards electronic media of communication.

(iv) Major pitfalls faced to impart computerized Library services and provide in-house databases according to user requirements is due to lack of sufficient infrastructural facilities for automation.

(v) The imbalances and variations in the budgetary provision of these Libraries are so high that there is no library which constantly fall under the high category of budget allocation.

(vi) Some of the ICSSR LICs have shown more progress towards automation and providing IT based services in spite of lesser and limited budget allocation from ICSSR. The case is reverse with a few other LICs.

(vii) No ICSSR Library is fully automated or equipped in order to establish the use of Information Technology products and services.
The recently established ICSSR LICs have shown more progress in technological advancements and providing IT based services than the ones which are as old as 25-30 years.

I.11 **SCOPE AND SIGNIFICANCE**

A host of research organizations have rapidly come into existence in India, playing a significant role in overall developmental activities. As much as 245 such Institutions have been established (UNESCO DARE Data, 1991) in various disciplines of social sciences. It was thus found desirable to study the Libraries of ICSSR funded organizations (as mentioned in the proposed study) to have meaningful and comparative assessment of their resources, facilities, services and status of IT applications since it is presumed that ICSSR LICs should be behaving uniformity in their budget allocations from their parent body, i.e. ICSSR. The total 27 ICSSR libraries set up at different points of time may have presumably different levels of development in terms of their resources, facilities and services. The constraints regarding uneven finances, if any, especially since the funding body is the same will be analyzed. The changing user needs in IT environment would also be looked into in order to establish the status of IT applications and requirements. Valid suggestions and recommendations would be made to the functioning body and related Institutions to automate the Libraries and make sufficient use of IT products. This would not only help in fulfilling of user needs but also help these libraries to network their resources. Further, a National Information System Network of ICSSR LICs is proposed since there is no such system and Network established in social science research field in India as yet.
I.12 **METHODOLOGY**

The primary details and data of ICSSR libraries on resources, facilities and services were collected through a detailed questionnaire, which was suitably analyzed and presented in tabular form in the light of the objectives of the study. At the same time, visits were also made to these libraries. The Library Staff members and Librarians were interviewed and a select group of users were also interviewed. A total sample of 100 users was taken from 10 different LICs of different regions by way of doing purposive random sampling. The Director, NASSDOC was also interviewed to know about the future plans, to automate the ICSSR Libraries to establish a National Information System in Social Sciences, and Networking of ICSSR Libraries. A great deal of information on their library resources, facilities and services was collected from their printed brochures and leaflets and other compiled documentary sources of information.

The data provided in the questionnaire was analyzed both quantitatively and qualitatively. To assess the impact of infrastructural facilities on the information services of these LICs and the budgetary provision in proportion to the Institute budget, analysis is done through various statistical techniques. The standard deviation, mean and coefficient correlation of institutions is done for each year and both for Institute and Library budget. Thereafter, ranking of library budget for each year is also done. The summation of rank value of each institute in all the respective years is done. The real rank value is also done for each Institute to place the more advanced institutes' budget in order of their ranks. The coefficient correlation will also show us the negative and positive correlation among the Institute and the Library budget. The overall efficiency of the services provided to users was quantified on the basis of this analysis. The paired ranking of the user survey was also done for analysis of user requirements, usage and preferences of IT products and services in ICSSR LICs.
The assessment of overall application of IT status was done by the available facilities, resources, services and extent of automation and use of IT products in these LICs and the user assessment of the usage of IT products and services in these LICs. On the basis of the overall status, a network model of these LICs with a National Information System is proposed. The network model is proposed to be divided in three phases. The first phase would include LICs of higher ranking in terms of resources, facilities, services and IT products. Gradually the LICs in the second and third phases would be incorporated. The Network Topology and Architecture is also proposed. Accordingly, the assessment of the financial expenditure is also done.

I.13 LIMITATIONS

While collecting the primary data through a detailed structured questionnaire, it was observed that not all the libraries and information centres completely responded to the questionnaire. Only about 85 per cent of the information was filled up by the concerned Librarians. In such a case, the data was collected from annual reports of ICSSR LICs, files or through interviews with the Librarians. This resulted in an unorganized form of data which was organized for the sake of the study.

A sample of 100 users from 10 Libraries from different regions were collected because with a large sample the analysis would not have been paired. It was easier to get the results of the user survey by a sample of 100 users. Almost all categories of users responded to the interviews and user surveys. Interviewing the Librarians was also an interactive exchange of information. However, it was rather difficult to get time from the heads of the Institutions for their interviews. Most of them left it for the Librarians of the Institute to say.
I.14 **SCHEME OF CHAPTERS**

The following scheme of chapters has been adopted.

The first chapter **Introduction** includes the development and need of Social Science Research in India along with a general overview of Social Science Research Libraries in India. The social science research viz-a-viz research libraries and their structure are also been highlighted. The growing importance of Information Technology and its products and services has also been emphasized. The aims and objectives, scope and significance and methodology of the study are also detailed.

The second chapter is **Review of Literature** wherein a number of published and unpublished work, primary and secondary sources, have been surveyed on the subject relating to this study which are detailed as well as recapitulated in the chapter.

The third chapter concerns a **general overview of the growth and development of social sciences emphasizing** on the state of the art of social science research in India. The general trend of social science growth as a discipline is also been discussed. In view of information explosion, the structure of social scientists and in turn the structure of social science research libraries and their resource base is also studied. The overall growth and importance of social science research has been emphasized.

The fourth chapter relates to the **general overview of ICSSR libraries in terms of their resources, facilities and services.** Emphasis has been laid on the qualitative aspects, i.e. how extensive is the library network in terms of books, services, facilities, etc. Within the intensive study, emphasis has been laid on the quality collection in terms of the user needs. The technical status, i.e. the overall library infrastructure and services has been taken care of. Within the administrative and other management aspects of the library, the financial issues and staff patterns have been discussed. The budgetary aspect of the Libraries has been touched upon in detail analysing it by getting out the percentage of the
Institute budget. The various statistical techniques like taking out coefficient variation, coefficient correlation, standard deviation and mean has been taken out. Thereby ranking has been done for each LIC for various years covered for the study would be adopted to analyze the budget. This approach would help us to compare the existing resources of these LICs to assess their overall growth and development.

The chapter fifth relates to the Status of IT Applications in the ICSSR LICs viz-a-viz User Satisfaction: An Overview. A comparison of the resources and services of these libraries is also done. At the same time, assessment of the IT products popularly in use by these LICs is also done. Accordingly, the LICs using the IT products and services to a greater extent for users have also been identified. The user satisfaction for IT products and services has been assessed by way of sampling their responses and doing their paired ranking.

The sixth chapter encompasses a proposal for National Information System with a Network Model of ICSSR LICs. According to the identified core LICs using IT products and services, phase-wise distribution of these LICs would be done so that they may be incorporated in the Network Model of NIS. A plan for the new proposed site detailing the required network devices and financial aspects is also mentioned.

In the concluding chapter, the state of the art of IT applications in Social Science Research Libraries and Information Centres of ICSSR is assessed. This has been done keeping in view the overall information base, services and IT resources available in these LICs. The changing user needs, usage and preferences for IT products has been done as part of the outcome of user survey. The constraints faced by these LICs have also been highlighted. The importance of this study lies in establishing that once these LICs are automated are self-sufficient in their resource base and providing sufficient IT based services to their users, a National Information System Network of ICSSR LICs be planned so that these valuable information resources may be shared. Thereby, recommendations and suggestions are provided.
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