

Knowledge Resource Centre in 2020: a case study in Respect of CGCRI Library

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Abstract : This paper outlines the activities of the CSIR-CGCRI library for the fifty years period from its inception. Discusses the changes faced in its activities. The case of changes and evolution of the CGCRI library is an indicator that narrates the activities of the R&D libraries in India. Finally, it has made an attempt to give a direction to the R&D libraries in India from the experience gained studying changes and activities of the CSIR-CGCRI library.

Keywords: Case studies, Knowledge Resource Centers, CSIR-CGCRI libraries, Trends of library services

Introduction

A good number of R&D institutions were established in India soon after independence of India to make India self reliant. As a result, R&D libraries were established along with the respective R&D institution to cater the information needs of the researchers of the institutions. All these libraries are housed in a good ambience with sound collection of their respective domains. Now, various issues are coming up for discussion. It is asked whether these libraries and the professionals are competent to carry out the activities to fulfill the objectives of the set up for which these are meant for. It is true libraries and the ambience of the libraries, services of the libraries have been changing and the issue needs attention. Here is discussion what did we see last 50 years in CSIR-CGCRI library in respect their work and services.

Fifty years: Glimpses of the activities of the CGCRI library

In 1950's, the library, an integral part of the R&D activities of the Institute started functioning and evolving with the requirement of the Institute. In 1950, mostly the activities were confined procurement of documents, cataloguing, circulation, etc. In early stage, after formal opening of the building in the evening of August 26, 1950, library was housed in a hall adjacent to Director's cell. By the end of the 1950s, the collection size went more than 8100. In 1960's, with a view to provide a medium for rapid dissemination of information to scientist and technologists on the important contents of world literature on glass, ceramics, enamels, refractories, mica, etc., the Institute library started bringing out a monthly publication of classified titles under the title "CGCRI Documentation List". The first number of the bulletin for the month June 1966 listing 268 titles brought out. The publication enumerates references scanned from the current scientific literature received at the Institute. The entries were arranged subject wise according to Documentation Europeenne Ceramique system of classification. By the end of the 1960's, the collection size, total number of books including bound volumes reached to 25243. The number of scientific and technical journal subscriptions including those received against membership of learned societies was one

hundred forty nine. A quite good no of journals were also received in the library on exchange basis against CGCRI Bulletin.

In 1970's, the activities of the library and information processing work of the Institute were carried out in three different sections, namely Library, Documentation and Data Bank. In order to cope with the progressive increase in an annex having floor area 61 ft X 25 ft was constructed and the entire library was reorganized for effecting overall improvement in storage and preservation of documents to ensure quick retrieval. Amenities in the reading room were also increased. Development activities in information retrieval techniques were also continued and a model thesaurus was developed on glass fibre technology for deep subject indexing with controlled vocabulary for the bibliography on glass fibre technology. Another important work done was receipt and technical processing of scientific publications offered by the Ministry of Overseas Development, U.K., through the British Council, Calcutta. Information was catered to the researchers through supply of reference materials on various research and industry matters. Selective short bibliographies were prepared and supplied on request from the scientists. The work of processing and publication of subject bibliographies were continued. Evaluation of a system for collection, organization, storage and retrieval of scientific and technical and techno-economic data were undertaken. Apart from the existing data-base (CII) of the Documentation data, compilation work on raw materials, process, production, capacity, quality, control, demand, costs, factory layout, plants, manpower, exports, imports, and other techno-economic data in the field of glass and ceramic was taken up. By the end of the 1970s, the collection size, total number of books including bound volumes reached to 31,235. The number of scientific and technical journals received on subscription and membership basis 139, on exchange basis 124 and on complimentary basis 75 respectively. In 1980's, The library continued to render infrastructural information facilities to the R&D personnel of the Institute as well as to those from the glass and ceramic industries, universities, and other research organizations. For the purpose of wider dissemination of information Documentation Unit of the Institute made available subject references and information relevant to the different R&D projects to the project leaders and scientist subject references and information relevant to the Institute. Data Bank also continued to cater to the various work of compilation work of techno-economic, industrial and commercial data/information needs of the R&D personnel of the Institute as well as of the related industries, consultancy organizations. An organization of the National Information Centre for Advanced Ceramics (NICAC) under aegis of the National Information System for Science and Technology (NISSAT), Govt. of India, was set up. To meet the consistent demands from the industries, business houses, etc. in India and abroad, "Directory on ceramic and glass industries in India" a National directory" was compiled by the Documentation Unit. The same was published by Vilmy Ricerche, Italy for international circulation. The end of the 1980's saw the Computerization of Documentation Services. In order to cope with the increasing volume of the existing conventional bibliographic data base as well as for quick current awareness, and bibliographic services, steps started to computerize the information storage and retrieval system. To implement the first phase of the plan for the computerization of the Documentation services input of bibliographical references selected from the relevant literature was given to the computer. In an effort to create a comprehensive bibliographical data base in the relevant fields, the computer was also fed with a portion of the retrospective bibliographical references from the manual database of the section. A detailed program for development of a microform library unit was prepared and included within the purview of overall "Informatics" programme of the seventh and eight five-year plans of the Institute. The Library also included in the computer networking of scientific and technical libraries (LIBNET)

programme sponsored by NISSAT, Government of India, New Delhi. By the end of the 1980's, the collection size, total number of books and publications including bound volumes of journals, standards, micro documents etc. reached to 35,531. The number of scientific and technical journals received on subscription and membership basis 73, on exchange basis 110 and on complimentary basis 30 respectively.

In 1990's, the Calcutta Library Network (CALIBNET) as envisaged by NISSAT, Government of India, was a Metropolitan Area Network (MAN) for libraries in Calcutta. The CGCRI Library included as one of the 40 S&T libraries of the Calibnet programme which aimed at automating the nodal libraries as well as creating a library service organization for providing global user services. The CGCRI Library expanded services through CALIBNET. The Data Bank continued development, augmentation and updating of techno-economic, industrial and commercial data bases. The two important services of the Documentation and Data Bank were to bring out Documentation list on Glass and Ceramics and CGCRI Data Bank Bulletin for the wider dissemination of glass and ceramic information for the Scientist of the Institute as well as for the related industries, business house and others. However, at the dawn of the 1990s, new trends and developments worldwide pose great challenges for library services in India. This was information and communications technology, which opened new doors in every profession and segment of the society. By the end of the 1990's, there was a great change in information access due to Internet. Library introduced dial up Internet access facility in the library and provided informal training to the users of the library as and when they requested for the same in respect to how to surf net, how to use e-mail facilities, etc. etc., in a word user were acquainted with how to access internet resources and services.

The New Millennium and Changes in the CGCRI library activities

The above discussion outlined the activities of the library from the 1950's to till new millennium. In 2002, to improve the over all efficiency of the library services, it was decided to automate library's key functions such as acquisitions, serials control, cataloging, circulation and the public access catalog. Accordingly, an integrated library software Libsys was installed in 2003 and retrospective data approx for 30,000 documents were feed to the system. In 2005, Library shifted to a new site of the Institute, having floor area of 6800 sq ft merged with the three units, namely, Library, Documentation and Data Bank and named as S Kumar Library. The S Kumar Library again has been recently renamed as CSIR-CGCRI Knowledge Resource Centre as decided in the last Meet of the Head of the Libraries of the CSIR Laboratories.

By the beginning of the new millennium, great achievement of the Library of the Institute was to introduce e-journal services to the users of the library that were free on print subscription. Now, library resources are not only remained confined within four walls of the Institute. The library resources are now consisted of both print and digital document. Due to CSIR-Ejournal Consortium library has now enormous number of journal access of various publishers including patent, standard and citation databases. Managing services of the e-journals are the most important issues. E-journals added enormous resources to the collection and improved the service of the library, enhanced access to journal literature, and decreased the demand for photocopy services as well as document delivery of single articles. Library organized both formal and informal training to the staff as well as library users as and when it was required.

Now let's see the changes occurred in the activities of the library. Some old activities have been disappeared where as some new activities are getting created. The information need of

the researcher are categorized in three divisions, current approach, day to day need, and exhaustive approach, i.e. literature searching. Libraries adopted mechanism to keep researcher abreast of the recent developments of their respective fields. The library provided Current Awareness services of the contents pages of the subscribed Journals, subscribed Current Content services, compiled Documentation list and Data Bank Bulletin to meet the information needs i.e. current approach of the researcher. But, due to the development of the information and communication technologies, internet, these are now gone in the hand of publishers. As a result library has been compelled to discontinue the compilation work of contents pages of the subscribed journals, compilation work of Documentation list and Data Bank Bulletin and discontinued subscription of the Current Content services. There is reduction in shelving documents, reduction in Xeroxing. Even circulation work, reading room readers are getting less day by day. Users are mostly seen in the internet access zone of the library. Researchers are accessing their required information at the desktop, in their lab itself and in laptop, mobile phone. Time moves ahead and CGCRI library reengineered itself. What are we seeing ultimately? Once we had struggle with the management for the extension of library space, reorganization of library collection, now we are looking for the disposal of print publication, donate to others.

There is change in nomenclature from library to Knowledge Resource Centre. Storage media like microfilm, CD-ROM are obsolete. Regional library networking to provide more resources at the hand of researcher is all issues of the past. Internet has created tremendous opportunity for all. The way we carried research work are changed. Who bother now to consult a printed secondary source to carry out literature survey? Information in respect to keep researchers abreast of recent developments is being provided by the publishers direct to the researcher through mail, RSS feed, etc. More and more resources are being subscribed and procured in digital form and are accessed through internet. The activities in relation to the consortium are taking more importance to extent resource base for the research work and this is the scenario for others too. The case of changes and evolution of the CSIR-CGCRI library is an indicator that narrates the changing activities of the R&D libraries in India.

Further, there are changes world wide in scholarly communication activities and libraries being a part of the scholarly activities are getting affected by this changes. Traditionally, the research result, knowledge was mainly communicated through journals, books, booklets, technical leaflets, technical briefs, posters, videos, radio transmission and get communicated through print media, electronic media, optical media, Internet, etc. Publishers were mainly involved in the publishing activities. But, development in digital technology has given many alternative opportunities to communicate research result to scientific community. Here is the discussion on the issues.

World wide changes in scholarly information dissemination activity

Societies worldwide are in the midst of great change, agrarian society to industrial society, and now information and knowledge based society. Some of the important development of this information and knowledge based society in respect to scholarly communication activities is Open Access, Digital Library and Social Networking Services. Open access is very important debate now for dissemination of research result. Institutional repositories are developed to provide open access to institutional research output by self-archiving. The role of libraries in providing widespread and inclusive access to knowledge is widely acknowledged. Open access initiative is a new paradigm shift for research library. The role of

libraries in providing widespread and inclusive access to knowledge through creation of Institutional repositories is also widely acknowledged. Institutional repository is an online locus for collecting, preserving, and disseminating - in digital form - the intellectual output of an institution, particularly of a research institution.

Digital technology can make the works of man permanently accessible to the billions of people all over the world. A social networking service is an online service, platform, or site that focuses on building and reflecting of social networks or social relations among people, who, for example, share interests and/or activities. The prospect, followed by the reality, of e-journals and e-books, and of cloud computing, together with the rise of repositories, and other sources of open access scholarly materials, have further raised questions as to the future nature and viability of libraries. Question has raised whether the work of librarian as intermediaries between information source and researcher are not required. It is further debating whether the structure of the library within four walls is not required. These have changed the activities of researchers. The way information was generated and consumed all are now in a world of change. In one side the role of R&D libraries in providing widespread and inclusive access to knowledge is widely acknowledged, other side question has raised whether the work of librarian as intermediaries between information source and researcher are not required.

Development of scholarly information dissemination activity in India

The above changes are visible in India too. India has launched many new Open Access journals and converted some reputed subscribed-based journals to Open Access. In India, Institutional repositories are coming up. Some of the initiatives are The Indian Institute of Science, Bangalore; Indian Institute of Management, Kozhikode; Indian Statistical Institute, Bangalore; Indian Institute of Technology, Delhi; National Institute of Technology, Rourkela; National Aerospace Laboratories, Bangalore; National Chemical Laboratory, Pune; National Institute of Oceanography, Goa; and Raman Research Institute, Bangalore, National Metallurgical Laboratory, Jamshedpur, etc. Some of the important digital library initiatives are Cultural Heritage Digital Library in Hindi (CHDLH), Archives of Indian Labour: Integrated Labour History Research Programme, Digital e-Library (Dware Dware Gyan Sampadaa/ Providing Books at Your Doorsteps), Digital Library of India, India Education Digital Library, Kalasampada: Digital Library - Resources of Indian Cultural Heritage (DL-RICH), Muktabodha: Digital Library and Archiving Project, Traditional Knowledge Digital Library, Vidyanidhi, Vigyan Prasar Digital Library. Some of the organization from India has joined to the Universal Digital Library (UDL), an initiative by Carnegie Mellon University to mass digitize human knowledge by capturing all books in digital format and make them freely available over the internet. The Universal Digital Library has a particular focus on digitizing (and storing safely) rare and unique books from around the world. When it says about Social Networking sites, India is not very far behind. There are plenty of social networking sites to choose from. Various professional groups have created their own platform to debate and discuss issues within the professional groups. These are all issues now have impact on library services and the CSIR-CGCRI library is not also exception.

Future for the CSIR-CGCRI library

In today's context, CSIR-CGCRI library has to play two distinct roles - to serve as a local centre of information and knowledge, and be a local gateway to national and global knowledge for the ceramic community. In one side, the CSIR-CGCRI library needs to remain

busy at present to manage changes. Other side, they need to develop the systems which are now coming up through out the world for information based or knowledge based society.

Since the establishment of the CSIR e-journal consortium service at the end of 2000, the library in CSIR and DST set up in India has made rapid progress in constructing information resource sharing system and offering web-based information services to the patrons of scientific and technical communities all these institutions. It is felt that the importance of the consortium access will be continued until a remarkable change occurs from the open access movement and as a member of the consortium the library has to maintain coordination with the consortium to provide services to its local users. It is importance to bring the information and the user closer together, regardless of the location and the format whether through local procurement or consortium based procurement. Though information are channeled from the publisher to the researcher, there is a still need of a intermediaries to keep tract of all available information required for his/her organization, to carry out subscription activities and to bring them in one place so the user of the lab need not be bewildering here and there for their required information at least for the end of the decade i.e. 2020.

The work for the development of open access institutional repository has just started here in CGCRI. But, it is not yet taken active participation from the scientists. The CSIR has made mandate and library professional are vested the responsibility to develop the institutional repository. Presently, we are working in this area. One of the problems we are facing in working for the development of the Institutional repository is lack of controlled vocabulary for the standardization of the terms. Therefore, we should go now for find out obstacles and opportunities to open research result, assist in formulating law and policy to open research result, develop metadata for the repository. Further we need to find out how social networking services can be utilized for the providing information services to our users at local and global level.

Further, In India after advent of independence, technological developments have been taking place in leaps and bounds. India has almost achieved self-reliance in the ceramic needs of the country. It is required to develop a digital repository in ceramics to improve an integrated resource where diverse information sources on the topic on ceramics to be brought together in a single navigable web site. This is needed to bring together the wealth of ceramic information resources of India that is scattered in the different places. The author feels that the library professional can take a great role in this direction.

Conclusion

Once, the strength of the R&D libraries in India was evaluated on the basis of the size of the collection of their respective discipline, availability of funds to subscribe and procure relevant documents for the discipline, building, and reading room amenities. Now, in addition to serve the local users' communities, these R&D libraries need to be part of global community of the respective discipline bringing together the best of their disciplinary output of India of the respective discipline. The R&D librarian's job content is to concentrate on servicing users on specific discipline and it is now not only for local user. As India has almost achieved self-reliance in the most of the disciplines, it is required to develop digital repository in these disciplines brining together in one place all the works of the respective disciplines in a single navigable web site. Role of library professional is now important for the creation of these repositories in order to develop the respective community-based information system and thus maximize the dissemination of India's best works of the

disciplines and thus make visible to the world community. Further, the main issue is to develop disciplinary repositories needs development of domain specific metadata. The boundary of the discipline so far achieved can be well documented once we could develop the domain specific metadata of the disciplines. It is hoped that by now we R&D libraries shall start work in this direction and can achieve the target by 2020.

Reference :

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