CHAPTER 3
Library Consortia: A Historical Perspective

Introduction:

Information revolution is the marked way in which a society becomes an information society from whatever it was before- traditional, agricultural or industrial one. The information has become an open phenomenon over which every individual has a right to access. The libraries which were earlier known as store houses too have widened their scope by accommodating the user to get information from all corners of the world. “Information Revolution” has made Libraries around the world to adopt new philosophies and technologies for their service and also reduce the cost of providing information. It is a greater challenge to libraries to maintain the breadth and lengths of collections, irrespective of their nature. Failure to confront this challenge successfully and fundamentally threatens the Library’s mission and vision. Hence libraries have realized no matter how they are well funded, that it is difficult to acquire all the materials needed by their users. In this regard, partnership and cooperation – local, national and international – have become inevitable for all libraries. One way of achieving cooperation is through the establishment of consortiums – a syndication arrangement which enables libraries to work together more effectively and efficiently. The terms consortium, networking, resource sharing, cooperation and partnerships are used inter-changeably to refer to strategic alliances amongst libraries with the aim of meeting the demands of clients for services that are delivered faster and reliable. Therefore library network is a situation where two or many organizations are necessarily engaged in the exchange of information through common communication channels usually for achieving their cherished objectives. Networking is a way to gain access to a greater range of expertise and other resource and avoid duplication of efforts by the efficient use of resources available. This is done through the development of national and international linkages with number of agencies both governmental and non-governmental working in relevant areas.
Library conferences, participation in colloquium and other occasions facilitate situation to librarians to perform this very easily.

**Cooperation – a formative stage of sharing the library resources**

The social system is organized on the basis of cooperative principles. Cooperation is the important feature of public life. Recognizing the importance of courage in cooperative life, ancestors had involved the cooperative system in the life of villages and towns and agriculture as well. Cooperation means people working together with common interest and intention. This means, they take care to act in ways that nurture each other’s interests. When it is not possible to meet everyone’s interests, they agree for joint plans of action that aim at sharing the pain on a basis that all regard as fair. Enhanced user services and greater satisfaction of user wants and needs must be a principal rationale for any sort of co-operative activity among libraries; libraries all over the world recognize that they can no longer endeavour to own all the materials that their users need or want, and that sharing is necessary in order to achieve maximum reader satisfaction. Co-operation in terms of resource sharing and collection development is one way to satisfy the users’ demand.

Nothing can exist in isolation in the complex global situation. Library a public place to visit is not an exception. Co-operation is an essential facet of modern library management in most of the countries. Co-operation occurs at many levels; from simple inter library loan services and reciprocal access for users, to more direct resource sharing and joint storage facilities, to co-operative collection development and joint licensing agreements with vendors and publishers. These co-operative activities are becoming increasingly important for library services primarily because of the rapidly growing data, improvements in telecommunications and rising costs associated with the acquisition of library materials. Evidently there is a growing body that electronic access begets greater usage of resources. The motivation for co-operation that might lie embedded in the philosophy of librarianship goes beyond a statement of principle and becomes increasingly realistic as the
factors facilitating delivery - technological, organisational, political – improve the common sharing of information through a network is ordinarily consortium.(1)

**Historical Perspective**

Library cooperation developed from sharing of union catalogue information, storage facilities, collection development, and human resources at local, national, and regional levels. Another form of co-operation has been based mainly on inter-library lending services where co-operating libraries agree to enter into reciprocal borrowing and use of materials from other libraries. This form of co-operation enabled libraries to borrow books and periodical articles which were not available locally. (2) Though there was need for library cooperation in the past, it was meted out locally with locally available resources and locale network. However the so called information revolution that transformed the world into a global village extended the library services to collect and retrieve information available in various forms either in their building or outside. Library co-operation has long been practiced in the West, but at varying levels and in various ways over time. In the early 1960s and 1970s proper "resource sharing" was much touted as the way of the future, and practiced in many countries with considerable success. Then for a short time the decade from the mid-1970s to the mid-1980s co-ordinated collection development was felt to be the best solution, but this was gradually overtaken by interest in co-ordinated collection management, which is where the profession is positioning itself at present.

**Definition:**

Co-operation among the group for attaining certain common objectives has been basic requirement of civilisation. Cooperation, as defined by Merriam Webster’s Collegiate Dictionary, is “the action of cooperating with common effort; the association of persons for common benefit” (3). It is an autonomous group of people, with a common object for fulfillment of economic, social and cultural needs. According to the Library of Congress Subject Headings “library
cooperation” is to be defined and used for “interlibrary cooperation; interlibrary resource sharing; library consortia; and library resource sharing” and it is related to the subject usage of “cooperative cataloguing; intellectual cooperation; international librarianship; and library storage center”. For cooperative efforts among libraries, this means that two or more libraries are working together to provide better and enhanced services for the library patrons through cooperative cataloguing, centralized processing, cooperative acquisition of library materials, exchange of bibliographic information, interlibrary loans, library information networks, and library storage centers.

**Major barriers to co-operation:**

The logic that co-operation helps us achieve these two key aims of our profession seems incontrovertible, yet there are many who continue to resist the reality. Evans, in the third edition of Developing Library and Information Center Collections, devotes considerable space to barriers to cooperation under six headings:

1. Institutional;
2. Legal, political and administrative;
3. Technological;
4. Physical;
5. Human and
6. knowledge-based issues.

In our view these impediments present an unrealistically pessimistic view and tend to give minor problems the same level of significance as major barriers. In our view there are four major barriers to effective co-operative ventures:

1. Desire for autonomy;
2. Competitive environment;
3. Changing institutional focus;

In many libraries there is little will to succeed in a co-operative activity beyond the most rudimentary because of an underlying desire or need
for each library sector or even individual library to remain autonomous, for instance, where administrative realities do not permit the three main library sectors to engage in much meaningful interaction at present. This is a powerful reality based in part on the premise that what have paid for own and also control; the corollary is that, if are not the owners, then do not control the resource.

These barriers to co-operation are more than matched, in our view, by factors that facilitate the development of effective co-operative arrangements. The unending inflationary spiral in the cost of library materials, as already indicated, is probably the principal factor in favour of co-operation. This is accompanied by increased output by publishers, and the escalating introduction of new or improved multimedia formats. Costs and volume will continue to be the principal motivators that push libraries into co-operative arrangements. These factors favouring co-operation are evident as the co-operative enterprise over the years has evolved from resource sharing to co-ordinated collection development to co-ordinated collection management. In our view these have emerged as the three principal phases in the history of library co-operation to date.

Resource Sharing:

Resource sharing is considered as one of the pillars of modern librarianship. The main objective of resource sharing is to maximize the availability of materials and services and to minimize expenses. Availability of a variety of electronic tools for document identification such as access to online OPACs, publishers’ catalogues, contents pages, and bibliographic databases has enhanced the awareness of library users about literature produced in their areas of interest. Rapid growth in world literature along with problems such as shrinking library budgets, steady increase in document prices, and depreciating currencies have made it increasingly difficult for individual libraries in developing countries to acquire and retain everything their users might like to read.(4)

Objectives of Resource Sharing
The principle behind resource sharing has been the availability of maximum service at the minimum cost or the maximum service at the same cost. The objectives of resource sharing are to create an environment in which libraries can offer better services and more materials for the same cost. It aims to make the resources of one library available to users of other library and vice-versa.

The main objectives, therefore, are:

1. increase availability of resources
2. extend the accessibility of resources
3. diminish cost, and
4. promote full utilization of resources (5)

“Library user should have access to more materials or services providing level service at less cost, increased service at level cost, or much more service at less cost” (6) It is noticeable that many possible objectives can be identified for specific networks. These objectives can be achieved without adversely affecting the agenda of the participating libraries, although their methods of operation must be adjusted as required. Similarly, the objectives can be realized by sharing materials and resources in a mutually beneficial way, by

1. sharing of the burden of purchasing materials;
2. sharing of the burden of processing the materials;
3. sharing of services; and

The area and the scope of resource sharing are wide, comprising mainly people, processes, materials or any other possession of the library. All these are subject to common sharing for mutual benefits. Some of the areas of cooperation may be enumerated as under: “shared or cooperative acquisition, storage, technical processing, lending or inter library loan, as well as any other cooperative ventures” (7).

**Essential elements Affecting Resource Sharing:**

The major factors that affect the resource sharing of libraries are:
1. existence of computerized databases,
2. existence of communication facilities (computer, telephone, satellite communication, reprography, fax, e-mail, etc.);
3. standardization of library organizational practice;
4. existence of financial resources;
5. efficiency in the governance of network and
6. basic agreement.

While the barriers may seem rather more prohibitory than the motivational factors are favourable, the latter have the advantage of being in the ascendant for the foreseeable future, and this is most evident in resource sharing through consortia arrangements. In fact resource sharing is the simplest and most traditional type of library co-operation. By resource sharing librarians mean the sharing of library collections through a variety of functions that include:

- sharing of information on the holdings of co-operation among libraries;
- reciprocal lending and borrowing of materials;
- reciprocal services to users of the cooperating libraries.

Today, however, resource sharing does not involve just ‘… improved bibliographic access, or better document delivery, or more co-operative collection development, but a combination of activities in all three areas” (8)

**Networking system:**

The term ‘network’ is synonymously used for ‘Resource Sharing’ or Cooperative system, it is because of two important reasons, potential improvement of Library and Information operations by interconnecting individual library systems with the more recently developed facilities for data and information transfer; and the significant role played by the computer telecommunications and new reprographic technique. Network implies “Computer and Communication links with each other and to share
programmes, facilities, data and knowledge-bases”. A network can be local, national or even international. It consists of two or more computers connected through a phone line or network cable. It may be in the next room or halfway around the world. The connection provides additional field, storage, space, and use of other resources. The connecting computer is more useful because of its enhancing capabilities being provided by the main computer. Wherein multiple computers are interconnected is known as computer network system. It is a set of communication channels interconnecting computing devices or nodes that can communicate with each other. The nodes may be computers, terminals, workstations or communication units of various kinds distributed over different locations. Networking is important for all types of libraries in modern times as they enable users to have access to the resources of other libraries. With rapid advancement in communication technologies such as Telecommunications, Satellite communications, etc. several networks in India can be grouped into local networks, regional networks, national network, and international network.(9)

Establishing the connectivity with the help of Technology and linking together with resources of all types Indian information professionals, education specialists and scientists have realized that the time has come to share the information resources and to coordinate mechanisms. This has resulted in discernible change in the information scenario in India. A large number of library resource sharing networks like the Metropolitan Area Networks such as CALIBNET in Calcutta, DELNET in Delhi, BONET in Bombay, PUNENET in Pune, MALIBNET in Madras, HYLIBNET in Hyderabad, ADNET in Ahmedabad, and countrywide ones like ERNET, INFLIBNET for Universities and Research Institutions and DESINET for Defence Laboratories, and sectorial ones like BTISNET for Biotechnology Networks etc. are under various stages of conceptualization, design, development and implementation. The objectives, services, functions, future prospects and stages of completeness of these library resource sharing networks are special in one to one networks.(10)
MYLIBNET:

In the beginning city based network started in Mysore. It is the first library network established in a small city. MYLIBNET was launched in association with Mysore city library consortium (MCLC) on 12th June 1995. It has 16 institutional members. Libraries of Mysore city under this network have been computerized and software has been developed to enable users to access the catalogue and information on-line. MYLIBNET provides e-mail facilities to its members. (11)

BONET:

Following the principles of resource sharing and cooperative form of library network another network was developed in Bombay on 6 November 1992 Bombay Library Network (BONET) was set up at the National Centre for Software Technology (NCST), Bombay. The Network is sponsored by NISSAT. BONET aims to build a low cost library information system which can possibly be used as a model for future expansion of this service even outside Bombay.

BONET offers training related to library computerization and networking, and speed up computerization of Bombay libraries. BONET membership provides for access to its centralised catalogues and for E-mail among BONET members. BONET also benefits significantly from the experience gained, and facilities created, by the Education and Research Networking (ERNET) project of the Department of Electronics, Govt. of India, assisted by the United Nations Development Programme. The focus is on inter-library activities, rather than on computerizing individual libraries, which will no doubt computerize their own operations and are likely to share their experiences with each other. BONET has an object of promoting cooperation among libraries in Bombay. However, use of ERNET is required having access library related services outside Bombay in India and abroad.

BONET offers the following services: Consultation on standards, Organized training for selected staff of participating libraries, on-line catalogue of periodicals for the region, on-line catalogue of books for the region, on-line
catalogue of preprints/reprints, inter-library lending of books and periodicals, inter-library request for photocopying, computer network support for book ordering, information retrieval services, on-line document delivery of items such as technical reports made available by participating libraries in machine readable form, on-line access to foreign databases, subject to the user’s willingness to pay the costs incurred, E-mail interface for inter–library queries, e-mail facilities to order reprints from abroad, when necessary, dissemination of information, on new books etc., using E–mail, Bulletin boards, and SDI techniques, courier service for inter–library exchange of materials, under BONET the following databases were created, 25,000 items in a bibliographic database on computers and software technology, union catalogue of journals and other periodicals in libraries in the region, tables of contents of 250 Indian periodicals created by the national centre for information, a number of CD ROM databases have been mounted on a Novell Server for use to members

It has the following objectives

a. to build a low cost library information network which enables use of exponential information even outside Bombay
b. to promote cooperation among libraries in Bombay with emphasis on interlibrary activities rather than computerizing individual libraries
c. to train the personnel in the modern library service skills.(12)

PUNENET:

Another city based network is Pune net. At present, PUNENET has been accessed by 30 libraries and 15 professionals of Pune. It facilitates not only PUNENET data, but also the e-mail and internet services. PUNENET offers following databases to its members: catalogues of holding of all member libraries, union catalogue of current periodicals in Pune libraries and information centres, union catalogue of books available in British libraries in India, publishers and book sellers database, database on international grants and fellowships in the health sciences, hard databanks in biotechnology, access
to NICNET and databases available on NICNET e.g., MEDLANS, US patent database, AIDS database, access to internet and various databases available on internet. (13)

**ADINET:**

With intent to establish an information hub in a growing city of Ahmedabad, Ahmedabad Library Network (ADINET) was formally inaugurated in February 1995. It was the result of memorandum of understanding signed between NISSAT and ADINET at Ahmedabad. Ten institutional members, five associate institutional members and two professional members form the executive chorus of ADINET. It has centralized database which contains institute master, journal master and book databases. It also organized six workshops and training programmes. ADINET provided e-mail connectivity to 30 libraries of Ahmedabad. (14)

**DELNET:**

In Delhi the libraries have been growing very fast in number and site during the last four decades. They cater to specialized and general clientele and are of various types which include institutional libraries, research libraries, government libraries, public libraries, departmental libraries and libraries of the universities, colleges and schools. During the recent years, cumulative information has been increasing at a very fast pace and with it the increase in demands of the users.

It has been noticed that in the era of information explosion the libraries in India are generally ill equipped to handle and retrieve information effectively. The limitation of financial resources and space for housing library collections in the libraries in Delhi led to the promotion of sharing of resources by automation and networking and establishment of the DELNET in 1988. NISSAT took the initiative in setting up DELNET. It has emerged as an important resource centre for the libraries in Delhi.

In the beginning, there were 40 libraries directly linked to the DELNET host system through e-mail to promote library mailing, interlibrary requests, transfer of files, exchange of messages, interlibrary services, etc.
Simultaneously, with the automation of participating libraries, the functions and services have also started. At Present 90 libraries are members of DELNET. All the participating libraries are now computerized by means of acquisition and fund accounting, cataloguing, circulation, serials control and local users’ services. Users have been enabled to locate books and serials through Online Public Access Catalogue. A union catalogue of current periodicals is available in Delhi libraries, and a union list of current serials is available in Indian libraries. DELNET provides for participant libraries both the catalogues. A central database of DELNET has been created and made operational. The central database has the library holdings of DELNET member libraries used as union catalogues of books/monographs.

DELNET provides access to the central union catalogue for books and monographs, efficient electronic mailing facilities to access databases of member libraries. It also aims to develop a network for accessing CD–ROM databases available at member libraries in the near future. DELNET also provides for CAS and SDI services, consultancy in library computerization, training and H.R.D. and assistance to libraries on standardization, local automation, retrospective conversion etc. DELNET is likely to emerge as a co-operative network incorporating all disciplines of science, technology, social sciences and humanities. (15)

**CALIBNET:**

In the eastern part of India too arose a need for setting up of library network. It was a fruitful effort when The Calcutta Library Network (CALIBNET) was inaugurated on 21 December 1993. NISSAT, Department of Scientific and Industrial Research (DSIR), Govt. of India, took the initiative in setting up CALIBNET, which has adopted a two way system for networking: the networking route with library automation and networking through its own application software “Maitrayee ” and the e-mail route connecting member libraries with on-line access to various databases within network and Internet access. It is formed of 38 science and technology libraries in the metropolitan
city of Kolkata. With an independent software of Maitrayee, CALIBNET supports MARC ad other records supported through CCF. (16)

**MALIBNET:**

The information revolution has been under way for quite many years now and is transforming society round the world into a more matured and enlightened civilization that should transcend the original vision that even Nehru and others had only dimly seen. When the libraries are unable to meet the information demands of the present day society mainly due to information explosion on the one hand and the escalation of the price of information on the other, it can well be managed by networking of libraries and information centres. With an aim sharing of resources and information among the libraries by fostering a spirit of cooperation and weaving these together in a networking arrangement network system has been set up in Madras. MALIBNET (Madras library Network) is an attempt in this direction which has been conceived by academicians, scientists and technologists of Madras to overcome the resource crunch to libraries in and around Madras and provide information at a low cost to the users. In order to have the benefit of flexibility and quick decision making, MALIBNET has been registered as a Society with a Governing Board, manned by professionals.

The primary objective of MALIBNET is to provide a common forum to the professionals; and to develop understanding and co-operation particularly libraries and the librarians. The need for interconnecting libraries and information centres in Madras was visualized in the Indian National Scientific Documentation Centre (INSDOC) in 1991. Initially six major academic institutions were directly linked to the MALIBNET host system. Two important databases have been created utilising the resources available in Madras libraries. One is a Directory Database of Current Serials in Madras covering 30 libraries, and the other is a Contents Database covering articles published in 300 journals available in Madras libraries. Both these databases are continuously updated and also expanded. They are available for online-
access to any user and the information is also supplied in diskettes and hard copy. Photocopies of articles from member libraries can be supplied within two days.

It promotes outstanding library practices by identifying the Best Librarian from information professionals’ community and recognizes the best academic work on an annual basis. It acts as teacher and consultant to each other that helps in identifying issues and overcome challenges with advice and support from around the country.

Madras has about 60 important libraries besides information centres like INSDOC. About 15 of these libraries have a holding of well over 100,000 items. These libraries act as good resource centres on the network. As of December 1993, all the 60 libraries together invest about Rupees 8,000,000 on acquiring journals and books every year. It is estimated that 40% of the information acquired is redundant. With the libraries networked and resource sharing implemented, each user on the network can get access to a vast amount of literature, and redundancy can be brought down significantly. A novel and unique feature of MALIBNET is that the members will be permitted to offer their own innovative information services on the network. A membership in MALIBNET is open to universities, colleges, R&D institutions, industries and individuals. MALIBNET presently offers the following information services: Current serials acquired in about 60 libraries, Full journal holdings of about 60 libraries, Contents information of about 500 important journals, Electronic mail including internet connectivity, Door delivery system for document photocopies, It also offers access to about 1000 international databases. (17)

Dawn of Consortia Movement

The human race is on the threshold of a new emerging civilization: the information civilization. It is an extension of and successor to the agricultural and industrial civilizations that had determined our social structure until now. Microelectronics technology applied in the form of computers is the essential ingredient in the making of an information society. Most of these technological innovations are born in research universities-their role is almost similar to that
of a steel factory in an industrial society. Information is such a highly valued commodity that individuals who produce this are super elites of an information society. This superior class status is accessible through merit and education and attaining of knowledge through the sources and the retrieval agencies. Hence the information seekers emerged with the advancement of communication technology

An information society is often an individualized and demassified with each individual wanting specific information. Thus the modern communication technologies are so designed to combine the qualities of interactivity, demassification and a synchronicity to free the individual from the tyranny of mass media.

The object of sharing has changed over a period of years, so also the techniques. Recently resource sharing has come to mean sharing computing resources, unlike sharing of bibliographic materials like books, journals or journals articles on Inter-library loan basis or preparing union lists of serials, etc. Many Indian university and college libraries are not in a position to subscribe to all the required journals and databases mainly due to lack of management support and financial constraints. The libraries are forming consortia in order to facilitate knowledge sharing at a much cheaper rate. The development of consortia is the outcome of the desire for resource sharing.

**Major Shift from Acquisition to Access:**

The impact of information and communication technologies has made rapid transformation of libraries and information centres. The advent of Internet and its subsequent proliferation has made dynamic changes in the communication and use pattern in libraries. The electronic publishing has made it possible to process and distribute the documents digitally. The transition to electronic publishing has provided the commercial publishers an excellent opportunity to produce the journals electronically where libraries are able to purchase large number of journals bundled in single package. In order to combat the escalating cost of the journals the Governments have developed
consortiums with the objective of collective responsibility to access those journals. The reputed publishers started publish e-books. Publishers have also developed databases both full text and bibliographic, indexes, abstracts, directories, encyclopedias, dictionaries and other reference works, etc., in electronic form. Contextually, the concept of open access publishing now has prevailed over the usual access publishing system in which the authors demand their work be made easily and freely available on the web for all users. The provision has made it possible for the users to access the entire scientific journals at their desktops. Due to emerging demand of the researchers, the publishers and institutes producing the statistical resources find it very suitable to convert the print document into their electronic counterparts. The libraries also find it convenient to use these statistical sources through the web based technologies.

**Growth of technology:**

The problems like lack of continuous updating of information, expensive to distribution, aiming at one particular target, print depends on subscriptions, therefore reaching far less customers made the publishers shift from print medium to e publishing. E-publishing is short for electronic publishing, referring to a type of publishing that does not include printed books. E-publishing instead takes the format of works published online, on a compact disk, emailed, or provided in a file format compatible with handheld electronic readers. E-publishing is an alternate form of publication especially attractive to new publishers.

**Emergence of E Publications:**

Print form is the oldest medium of expression and communication. The print form is subject to decay and destruction and occupies space making the hoarding very difficult to maintain. Hence arose the need for a technology that could be stored in a small place and be available at any time and any corner. The computer provided for soft copy. It is basically a form of publishing in which books, journals and magazines are being produced and stored electronically rather than in print. These publications have all qualities of the
normal publishing like the use of colours, graphics and images and they are much convenient also. It is the process for production of typeset quality documents containing text, graphics, pictures, tables, equations etc. it is used to define the production of any that is digitized form. Later with advent of internet the soft was placed in the internet to be made available to the reader, which was in turn developed publication of books and journals in particular have now manifested into electronic formats. E Books and E- Journals, E-publication is the publication of any kind of information on any form of electronic media. E-publications provide many advantages compared to its print counterpart like portability, easy and any time access, search ability, space saving, customized content can be created, multimedia can be included, wider reach than print publications.

**Converging technologies:**

As already reiterated print form of publication that made the storekeeper or holding it a problem in various forms like- storing, shortage of place to hold them, maintenance of print form and the financial assistance. There is a move from a physical world based on atoms to a digital world based on bites. Today new techniques of information packaging and delivery ensure its availability at the point of demand instantly. This can be achieved by exploiting the technologies provided by telecommunications, computer networking and broadcasting media. The developments in information communication and technology which have pushed knowledge in the forefront of development of activities. The process of gradually transforming societies in knowledge based societies, besides globalizing the world economy. The immense change in the acquisition, store, search and disseminate information. It has added voice and picture to information content, making it a better learning resource and thus generated more interest in information use.

**Formation of Consortia:**

It is not clear that when the word “library consortium” was came to be introduced. The exact date for the introduction of the term “library consortium" is not clear but the concept of a consortium as being an
association or partnership has long been a tenet of librarianship. The published literature indicates that the concept is not new, and it refers to co-operation, co-ordination and collaboration between, and amongst, libraries for the purpose of sharing information resources. However a library did not use it widely until about the 1980s. The main drive for co-operation arose when there was increase in the output of publications or the information explosion, the rise in the cost of publications coupled with stringent budget allocations, and growth in student enrolment. Increasing demand for service from users together with the need to improve inter-lending services and the library collection are additional factors.

Some special libraries and organizations like the Indian Institute of Astrophysics (IIA) Library, Inter-university Centre for Astronomy and Astrophysics (IUCAA) Library, National Centre for Radio Astrophysics (NCRA) Library, Physical Research Laboratory (PRL) Library, Raman Research Institute (RRI) Library, Tata Institute of Fundamental Research (TIFR) Library, Council of Scientific and Industrial Research, Department of Atomic Energy, etc., have established consortia to share electronic access to journal literature. NISCAIR is developing a consortium for CSIR labs for accessing e-journals. Consortia in India are still a new concept that requires proper guidelines and methodologies. (19) Complexity involved in managing the consortia

Academic libraries are the treasure trove of knowledge which cater to the needs of scholars, scientists, technocrats, researchers, students and others who are directly associated with the mainstream of higher education. In this competitive age, the policy makers have to rise to the occasion and create a new generation of knowledge workers. The information personnel of the academic libraries are also called upon to equip themselves with the best tools, techniques, procedures and practices. The ways in which people communicate, and acquire and share knowledge, will inevitably have an impact on the library, its services, and its staff. The academic libraries play an important role in the academic community by providing necessary forum and resources for faculty
and students to do their research and advance their knowledge. In order to effectively meet the growing needs of the clients and achieve success in the management of academic libraries, the academic libraries need to actively address the many challenges for the design and delivery of innovative resources and services.

Academic libraries are also required to play the role of scholarly partner in exploring new pathways to knowledge and acting upon this. It is widely acknowledged that meaningful reference work and research support is absolutely essential to ensure successful dissemination of knowledge to the clients on the basis of meaningful team spirit and work. It is imperative that subject reference workers adapt to the reality of dealing with socially networked clients.

Reference interaction has always been a conversation moving towards reference in the social environment is therefore a natural development that has been shown to be not only practically viable, but also to benefit the community of users in the field of higher education. Academic libraries are required to develop know how and show how systems which are highly essential elements of meaningful academic library management.

The vision and mission of academic libraries are changing in India. These academic libraries now take on the key role of providing the competitive advantage to various universities, research and development organizations which play a pivotal role in the process of nation building. Academic libraries are positioning themselves to be the torchbearers and path makers of educational advancement by way of integrating knowledge systems and resources. These academic libraries are required to do serious introspection on their roles, responsibilities and contributions. Comments and observations are noted very frequently on their strengths and limitations in various national and international forums.

The vast literature gleaned from IFLA, ACRL and allied publications on academic libraries aptly reveal the changing roles and responsibilities of information professionals in the modern society. The academic libraries are
also called upon to exploit all forms of digital and telecommunication technologies and explore new avenues and possibilities for the enhancement of knowledge resources which are available in different forms and places. The builders and managers of academic libraries are also required to enrich computer security and authentication techniques which promote information diffusion. The information personnel are also required to enrich their professional competence and leadership qualities which would facilitate meaningful identification, location and evaluation of information resources in order to promote professional excellence among the user community. The “user-centered” paradigm has been adopted in the developed countries to create customizable interfaces and enrich the process of collection development in the academic libraries. The academic libraries really demand a well-conceived, designed and maintained systems, practices and operations which would effectively meet the needs of different constituent groups and individual users. The administrators are mainly responsible for creating and sustaining software, hardware, human resources and data bases which would go a long way in promoting research and development in India. “The proficiency of library information science and information skills must be complemented by hardware and software skills for working in an information technology intensive environment”

**Development of various consortia in India:**

Formation of library consortia is the need of the hour for the purpose of sharing of information. In India many consortia has been formed in different areas to share information. Following are the some of the renowned consortia working in India.

**UGC – INFLIBNET - INFONET Digital Library Consortium**

The Information and Library Network (INFLIBNET) Centre is an autonomous centre within the University Grants Commission (UGC) of India and is involved in creating the infrastructure for sharing library and information resources and services among academic and research institutions as stated on its web site (www.inflibnet.ac.in). This is being achieved via the UGC-
INFONET network, which aims to provide high speed internet connectivity to 150 institutions in its first phase. INFLIBNET functions as a resource centre with an aim to cater for the needs of its members for resources not accessible to them either in electronic media or in print media (20).

The electronic subscription initiative under UGC-INFONET is expected to trigger a remarkable increase in sharing of both print and electronic resources among university libraries through one of the gateway portals being identified. The gateway portals provide customized solutions not only to access the resources online but also access to resources of other libraries participating in the consortium. With subscribed resources accessible online in electronic format, the member libraries would have less pressure on space requirements for storing and managing print-based library resources. Moreover, all problems associated with print media such as their wear and tear, location, shelving, binding, organising, etc. would not be an issue for electronic resources.

The possibilities of alliances with publishers for adapting a consortia-based approach to e-subscriptions for journals are also growing fast. These journals will be available over UGC-INFONET to all the universities. Much of the new research publications are also available on the net as freeware, thereby, making quality information accessible to a wider academic scholar base spread across the country, at an affordable price. It provides details of the use made of e-journals between 2004-2007 by members of the INFLIBNET consortium. (21).

**CSIR Consortium:**

The only name recognized for research platform consisting of a network of laboratories that spans the geographical dimensions of India in India is none other than Council of Scientific and Industrial Research (CSIR). Its acts as bridge between various disciplines, address specific needs which arose in the process of social transformation in the post-colonial context and demands which our society faces in this period of globalization.
The CSIR was established in 1942 as an autonomous, non-profit organization with a wide ranging charter of functions. These included promotion, guidance and co-ordination of scientific and industrial research, collection and dissemination of information on research and industry, founding of laboratories to carry forward scientific and industrial research and utilization of the new knowledge so generated for development of industry. CSIR was also charged with other tasks such as rendering assistance to other institutions conducting research, awarding of fellowships and publishing of scientific journals. There are as many as 39 laboratories and 80 field centres being run by this multidisciplinary and trans locational council.

The Fundamental and applied research is carried out in all branches of science and technology. The expertise of over 5000 active scientists of repute supported by over 10,000 scientific and technical personnel form the heart of this dynamic dimension of the network of knowledge. With an investment of a huge amount approximately equivalent to 1 billion US dollars at current value this scientific infrastructure was built up over six decades. The foresight of its founding vision has been vindicated by CSIR’s capability to serve not only as a national R&D infrastructure but also a platform for international collaboration and research projects, thanks to its interlaboratory and interdisciplinary experience. It now works on an annual budget of around $250 million. On one hand, CSIR has assisted industry in the development of viable and globally competitive technologies and on the other, has provided backup support in exploration and exploitation of indigenous raw materials and natural resources for import substitution, pollution control and effluent treatment, waste utilization and energy conservation. CSIR’s inherent strength lies in its ability to form special interdisciplinary, interlaboratory, international groups to tackle specific research and development problems.

In yet another endeavour, CSIR laboratories have teamed up with academia, steel industry and government to develop mathematical models to
stimulate steel production in a blast furnace. There are many more other similar alliances. (22)

INDEST Consortium

The library consortia, on the basis of sheer strength of numbers of institutions, offers healthy business growth opportunities to the electronic publishers and thus attracts the best possible price and terms of agreement in a win-win situation for both. The collective strength of consortia members facilitates the libraries to get the benefit of wider access to electronic resources at affordable cost and at the best terms and conditions. Moreover, the technology has changed expectations of researchers, their patience, and their willingness to accept services that are available on demand. The Web-based electronic resources are an apt answer to the expectations of researchers.

- Provides access to electronic information resources at highly discounted rates of Subscription;
- Facilitates convenience of desktop access to high quality e - resources to your students and researchers 24 hrs a day, 7 days a week;
- Facilitates better management of information resources in electronic environment and saves you from the hassles of print resources and their management

The Ministry of Human Resource Development (MHRD) has set up the Indian National Digital Library in Science and Technology (INDEST) Consortium. Under this, the ministry provides funds required for the subscription to electronic resources for 38 core institutions including the Indian Institutes of Science (IIScs), the Indian Institutes of Technology (IITs), the National Institutes of Technology (NITs), Regional Engineering Colleges (RECs), Indian Institutes of Management (IIMs) and a few other centrally funded government institutions through the consortium. Besides that, 60 government or government-aided engineering colleges and technical departments in universities have also joined the consortium with the financial
support from the All India Council for Technical Education. In addition, a total of 26 other engineering colleges and institutions have also joined the consortium on a payment basis.

The electronic resources subscribed by the INDEST are as follows:

- Association for Machinery (ACM) Digital Library.
- ASCE (American Society of Civil Engineering) journals.
- ASME (American Society of Mechanical Engineers) journals.
- Elsevier’s Science Direct.
- IEEE/IEE Electronic Library Online (IEL).
- ProQuest Science.
- Springer Verlag’s Link.
- Indian Standards.
- Nature.
- COMPENDEX on EI Village.
- INSPEC on EI Village.
- J-Gate Custom Content for Consortia (JCCC).
- MathSciNet.
- SciFinder Scholar.
- Web of Science.

Members of the INDEST consortium generally have a networked infrastructure of computers available at their campuses. For example; the Indian Institute of Technology (IIT) Guwahati has a distributed networking arrangement spread through the length and breadth of its campus, virtually enabling all the users to access the available electronic resources. The computing infrastructure is maintained and monitored by the computer centre, which provides access via the Unix and Windows operating system, as well as Hewlett Packard workstations and Sun servers, which are used for high-end computation. A power system called “Silicon Graphics” is used for generating high-end graphics. There are also a large number of Intel based Linux servers used as computer servers, mail servers, name servers, etc. Currently the
Institute has the campus-wide network on an optical fiber backbone to all the departments, offices and hostels, which terminates at the central network switch housed in the computer centre. In order to provide internet connectivity the centre has two microwave-linked leased circuits, which provides a total download-bandwidth of 3Mbps, of which 2Mbps is a leased line from ERNET and 1Mbps is a leased line from the Software Technology Park of India, Guwahati. The library web page provides links to all subscribed online journals. In addition, it provides links to all e-resources available through the INDEST Consortium. The library users are provided with a secured and hassle-free log-on procedure. The users can access all the e-resources through the Institute’s IP Ranges. This arrangement helps the users to access the resources immediately and provides a foolproof system of security. They are free from memorising user ID, password, publishers’ URLs, etc.

INDEST offers the best possible price advantage at an average of 80 per cent plus through its pricing agreements with e-resource providers. Furthermore, the consortium provides technical assistance and in house training for optimal usage of resources subscribed. Likewise, it endeavours to identify other e-resources relevant to the institutions and enables access under best possible subscription prices and license terms. With continuous monitoring of international developments in this domain and liaison with agencies like ICOLC, INDEST tries to bring best possible consortium-based e-information services to its members.

Finally, INDEST is an open-ended proposition, and welcomes other institutions with the similar area of interest and who can join for sharing benefits. The INDEST consortium is the most ambitious initiative taken up so far in India in the area of engineering and technology disciplines. (23)

**FORSAConsortium:**

The Forum for Resource Sharing in Astronomy & Astrophysics (FORSAC) came into existence in the year 1982, for sharing the resources available in astronomy libraries in the country. In 2004, this group has extended its membership to Physics and Maths libraries in the country who
have common interests to carry forward the aim of FORSA and its activities. Currently FORSA has twelve members and it works towards the goals and services which the founder members have started.

With increases in prices of journals, shrinking library budgets and cuts in subscriptions to journals over the years, there has been a big challenge facing Indian library professionals to cope with the proliferation of electronic information resources. There have been sporadic efforts by different groups of libraries in forming consortia at different levels. The types of consortia identified are generally based on various models evolved in India in a variety of forms depending upon the participants' affiliations and funding sources. Indian astronomy library professionals have formed a group called Forum for Resource Sharing in Astronomy and Astrophysics (FORSA), which falls under 'Open Consortia', wherein participants are affiliated to different government departments. This is a model where professionals willingly come forward and actively support consortia formation; thereby everyone benefits. As such, FORSA has realized four consortia, viz. Nature Online Consortium; Indian Astrophysics Consortium for physics/astronomy journals of Springer/Kluwer; Consortium for Scientific American Online Archive (EBSCO); and Open Consortium for Lecture Notes in Physics (Springer), which are discussed briefly.

The Indian Astrophysics Consortium called Forum for Resource Sharing in Astronomy (FORSA) is a typical example of a homogeneous group of members wherein the libraries have a common area of interest and establishing the consortium is slightly easier than in a heterogeneous type of members. The FORSA consortium consists of five members who joined together for negotiating licensing for astronomy journals and identified a subscription agent as a supplier of journals. Subscriptions for both print and electronic format are paid through their supplier. The agreement was originally meant for only astronomy journals, published by a particular publisher. However, consortium
members also now share the licence fee to enable e-access to the journal Nature.

Several other organisations such as the Indian Council of Agricultural Research (ICAR), State Agricultural Universities, Indian Space Research Organisation (ISRO), Defence Research and Development Organisation (DRDO), AICTE and some other individual groups of institutions have started working to form different consortia. Francis (2005) observes that library consortia in India is a separate effort and the present system of formation and maintenance of different library consortia for each group of academic and research institutions is unscientific. He suggested that instead of establishing separate library consortia by different groups of educational and research institutions, it is better to form one consortium for all educational and government research institutions with countrywide access to all online journals and databases. (24)

**Advantages of Consortia**

1. A comprehensive collection is possible
2. Building communication among different libraries
3. Avoid duplication of core collection especially for core journals
4. Scope of electronic archives
5. Easy access to resource sharing on Internet by developing common resources database
6. Reduce cost of information and time saving
7. Improved resource sharing
8. More professional services to users and help to develop a competitive professionalism among LIS professionals.
9. It becomes a vehicle for distance learning.
10. It is a tool for distribution of education material and journals to remotest of areas.
11. It is a resource for researchers and scholars for tapping most up-to-date information.
12. It forms a medium for collaboration among teachers and students, not only within the country but all over the world.

13. It is on Intranet for university automation.


Disadvantages of consortia

1. Duplication of efforts
2. Wastage of resources
3. Confusion for libraries/publishers
4. Reduction in purchase power (26)

Conclusion:

With the help of networks and the internet, libraries in developing countries have also begun to create consortia at national, regional and international level to share their resources and expand access to print and electronic collections and develop new services to meet their customers’ needs. However, some barriers such as poor technological and communication infrastructure, inadequate finances, culture and context, attitude toward consortia and multiple efforts are reported to be limitations of consortia activities in developing countries.

It is clear that the creation of the web and networks brought many possibilities for integrating consortia activities both in developed and developing countries. The library consortia are shifting from a peripheral and limited position of resource sharing to an integrated system-wide resource sharing in recent years in the West.

Library consortia are considered as a coalition between libraries, publishers and vendors. They often provide a reasonable price in a win-win situation for all stakeholders. Thus, libraries have increasingly turned to consortia as a way of brokering better prices and rendering rapid and efficient services to information seekers. However, library consortia are facing new challenges, such as increasing expectations and a static budget, fair use,
archiving of information, pricing strategies, measures of effectiveness and licensing e-resources.

It can be concluded that libraries in developing countries need to battle with the problems that prevent a successful consortia effort, because the advantages of consortia, especially for sharing electronic resources, are much more for these libraries. Membership of international consortia can be recommended for all developing countries as it brings them all together to redefine and re-engineer their consortia efforts. Libraries cannot satisfy the informational requirements of their users by their own resources due to the lack of resources. This is the need of the hour to cooperate with each other for the optimum use of their resources. Due to the revolution in the field of information technology the expectations of users from the library has increased and this compelled the libraries to share their resources to cater to the informational needs of the users. Here comes the concept of library consortium. This is a common agreement between various libraries which agree together to cooperate with each other to achieve certain common objectives. They have to form the consortia to save their manpower and finance. Workshops may be organized between the universities to enlighten the libraries w.r.t the importance of consortia. UGC is spending such huge money for the subscription of online journal, the practice shall become futile if the research is not promoted even after this wonderful boon of consortia.
References:

15. DELNET available at delnet.nic.in/ accessed on 28/09/2012.
22. CSIR consortium available at www.csir.ac.in accessed on 28/09/2012.