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E-JOURNAL CONSORTIA:
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E-JOURNAL CONSORTIA: INDIAN AND GLOBAL PERSPECTIVES

Preceding chapter has discussed about e-journal consortia in general, this chapter deals with e-journal consortia initiatives in India as well as outside India. Due to economic constraints, it is not possible for libraries to procure all documents, or to subscribe journals and CD-ROM databases, as a result many libraries in the world have set up consortia for resource sharing of information sources and services among them.

4.1 Major E-journal Consortia: Indian Scene

Major research and development organizations spend a huge amount towards library acquisition annually. In spite of this, they are not in a position to maintain the subscription of core journals. The accessibility to international journals in Indian universities and technical institutions has been improved many folds with setting-up of a few Government-funded library consortia. These circumstances naturally force Indian universities and R&D organizations to form the consortia for accessing more and more e-journals. Prior to setting up of these consortia, the access to e-journals was restricted to a premier institutions like IISc, IITs, IIMs and a few central universities who were subscribing to few e-resources including bibliographic databases on CD ROM, few e-journals accessible free with subscription to their print versions and negligible fraction of journals on subscription (Gouder & Narayana, 2004).

There have been few attempts over the years facilitating resource sharing among Indian libraries. Indian initiative towards Library Consortia is considered to be just at the formative stage but picking up slowly and steadily. Mainly for the reason that “libraries in India are very slow in taking note that the advantages of networking”. However, due to some important and outstanding developments in library and information networking, some formal library networks came into existence in country such as ADINET, BONET, CALIBNET, DELNET, MYLIBNET, PUNENET etc. the establishment of
INFLIBNET by the UGC in 1998 gave a real boost to automation and networking of University libraries in the country. Nowadays library consortia in India are growing fast (Manju Devi, 2011). After launch of the “Indian National Digital Library in Engineering Sciences and Technology (INDEST) Consortium” in 2003 and “UGC-INFONET Digital Library Consortium” in 2004, availability and accessibility of e-resources increased phenomenally in centrally-funded technical institutions (IITs, IISc, IIMs, IIITs, etc.) and universities, setting in a new culture of electronic access and browsing in educational institutions. A number of library consortia have emerged in India in past few years (Venkadesan, 2009). In India, major initiatives regarding consortia and their activities are described below:

- Consortium for e-Resources in Agriculture (CeRA)
- DAE Library Consortium
- ERMED (Electronic Resources in Medicine) consortium
- FORSA Consortium
- HELINET Consortium (Health Information Network)
- ICICI Knowledge Park
- ICMR Library Consortium
- IIM Consortium
- IGCAR Consortium
- INDEST-AICTE Consortium
- ISI Library Consortium
- JCCC & VIC, Hyderabad
- National Knowledge Resource Consortium (NKRC)
- N- LIST of UGC and MHRD
- NTRMEDNET Consortium
- MCIT Library Consortium
- OUHYD- MATHS Consortium
- SONET
- SpaceNet- ISRO Consortium
- TIFR Libraries Consortium
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- UGC-INFONET Digital Library consortium
- Urdu Research Library Consortium

The details of some of the prominent ongoing library consortia successfully operational in India such as ERMED consortium, FORSA consortium, Health Science Library & Information Network Consortium, INDEST-AICTE Consortium, NKRC, UGC-INFONET Digital Library Consortium, N-LIST, IIM consortium etc. have been discussed below.

4.1.1 ERMED (Electronic Resources in Medicine) consortium

Electronic Resources in Medicine (ERMED) Consortium is an initiative taken by Director General of Health Services (DGHS) to develop nationwide electronic information resources in the field of medicine for delivering effective health care for all.

The authorities decided to provide financial support required for the purchase of electronic journals under the ERMED consortium project for Government medical colleges and institutions. For private Medical colleges/institutions the payment per site for e-resources purchased by the consortium will be charged. The Consortium is being coordinated through its headquarter set up at the National Medical Library (NML).

NML started ERMED consortium in 2008 with 40 members including 28 ICMR+10 DGHS + AIIMS + NTR Health University, Andhra Pradesh. It provided electronic journals from 5 publishers, which contained 1515 medical journals. The ERMED invested Rs. 2.6 Crore for electronic journals in 2008. The ERMED resources can be searched and browsed through a versatile search platform www.nmlermed.in. In 2009 the ERMED members increased from 40 to 72 Government Medical Colleges/Institutes across the country. NML paid Rs. 7.55 crore for Government Medical Colleges/Institutes. The letter for self payment has been sent to some Private Medical Colleges/Institutes.

ERMED is providing over 2742 journals in March 2012 from 1065 journal publishers, which include 932 open access journals, 770 consortia based journals, 946 Proquest journals and 54 Gale journals. Among this 1031 journals are subscribed by ERMED and 284 are subscribing by cross sharing.
Even though ERMED gives more focus on medical journals there are some journals from other subject also such as: Engineering (43), Arts and humanities (38), Agriculture (33), Business, Economy & Management (16), Chemistry (41), Engineering (43), Earth science (6), Environmental science (50), General and Multidisciplinary (12), Information Technology (11), Law (8), Library & Information Science (7), Mathematics (8), Material Science & Metallurgy (6), Physics (12), and Social Science (124) but naturally Health Science (2096) and Life Science (386) journals are the majority.

Membership

There is no membership fees charged from the Government Medical Colleges and Institutions. The Private Colleges and Institutions are to make payment per site price for e-sources purchased by the consortium in every calendar year. The proposal for new membership will be considered before November-December of every calendar year.

How to access electronic journals

Electronic journals can be accessed by member of the consortium through static IP address of the institutions and customer ID & Pass word.

- **Static IP address of the institutions:** The online journal will be accessible only in the campus of the institution. There is no limit on IP addresses that an institute can have. However, institutions should ensure that the IP addresses provided to the publishers are assigned to them in their campus.

- **Customer ID and Pass Word:** In this case online journal may be available to individual desktop, but it will be under the observation/monitoring by the publishers (ERMED, 2012).

4.1.2 FORSA (Forum for Resource Sharing in Astronomy and Astrophysics) Consortium

During 1980s, due to tremendous growth of literature, proliferation of information, librarians working in Astronomy institutes in India came together for sharing and organizing literature in the country. As a result, FORSA was informally launched on 29th July 1981, during a meeting held at Raman...
Research Institute, Bangalore with a *mission and vision* to share and exchange information and make best use of available resources in the country. At present there are 12 special institutes in the forum, who participate in consortia formation (FORSA, 2012).

This is an open ended model having participant institutes affiliated to different government departments. This is a model where professionals willingly come forward and support consortia activities. FORSA has realized four consortia deals, viz.

- Indian Astrophysics Consortium for Physics /Astronomy journals of Springer online;
- Nature Online Publications;
- Scientific American Online Archive (EBSCO); and
- Lecture Notes in Physics (Springer) (Patil, Christina, Nirupama, Barwe & Anil Kumar, 2007).

Institutes including ARIES (Aryabhatta Research Institute of Observational Sciences), BOSE Institute, CASA-OU(Centre of Advanced Study in Astronomy, Osmania University), HCRI (Hawaii Coral Reef Initiative), IIA (Indian Institute of Astrophysics), IUCAA (Inter-University Centre for Astronomy and Astrophysics), NCRA (National Centre for Radio Astrophysics), PRL (Physical Research Laboratory), RRI (Raman Research Institute) SINP (Institute of Nuclear Physics) and TIFR (Tata Institute of Fundamental Research) actively participate in resource sharing. They joined the consortium for negotiating licensing of astronomy journals and identified a subscription agent as a supplier of journals. Subscriptions for both paper and electronic format are paid through supplier. In 2002, consortium was formed for Kluwer journals but PRL could not join it. Since 2003, PRL is part of the consortium for *Kluwer* journals. FORSA is subscribing to 25 e-journals to their users with the payment of 12.5% over the print subscription. This consortium has successfully negotiated with publishers of *Nature* to provide access to its e-version at a price of almost 1/3 of the list price (FORSA, 2012).
4.1.3 Health Science Library and Information Network (HELINET) Consortium

HELINET, the Health Science Library and Information Network, an outstanding initiative by Rajiv Gandhi University of Health Sciences (RGUHS) has set a new benchmark in health science education in India concerning access to information. It was started in 2003 as a collaborative effort to network 25+ medical colleges in the State for promoting e-journal access and resource sharing.

Mission is to network all the Health Science libraries for minimizing the cost of acquisition and maintenance of learning resources and maximizing their utilization among the faculty, students and researchers in the health science colleges and institutions.


4.1.4 INDEST-AICTE Consortium

The "Indian National Digital Library in Engineering Sciences and Technology (INDEST) Consortium" was set-up by the Ministry of Human Resource Development (MHRD) in the year 2003 on the recommendation of an Expert Group appointed by the Ministry. The name of INDEST consortium has been changed as INDEST-AICTE Consortium in 2005, with the collaboration of All India Council of Technical Education (AICTE). The IIT Delhi has been executed all the activities as the Consortium Headquarter. The Ministry provides funds required for subscription to electronic resources for 62 centrally-funded Government institutions including, IITs, IISc, NITs, ISM (Indian School of Mines), IIITs, IIMs & NITTTR's and few other that are consider as its core members with a provision to extend it to all engineering colleges and technological institutions under its open ended proposition. While the Ministry provides funds required for access to selected e-resources for the
core members, other institutions may join the consortium for any of its resources by paying for them at highly discounted rates and a nominal membership fee. 60 Govt./Govt.-aided engineering colleges are provided access to selected electronic resources with financial support from the AICTE and 102 universities/ institutions have joined the consortium under its self-supported category in 2012. The total number of member of consortium has now grown to 1235.

Mission: The INDEST-AICTE Consortium is the most ambitious initiative and biggest consortium in terms of number of member institutions in India as well as in Asia. The consortium attracts the best possible price and terms of agreement from the publishers on the basis of strength of its present and prospective member institutions. The consortium subscribes to over 12,000 electronic journals from a number of publishers and aggregators.

Membership: The INDEST consortium members include the following:

- **MHRD funded Core Group of Member institutions:** 62 centrally-funded Government institutions including IITs, IISc, NITs, ISM, IISERs, IIMs, NITTTRs, IIITs and few other institutions are core members of the consortium. The Ministry provides funds required for providing differential access to electronic resources for its core members through the Consortium Headquarters at the IIT Delhi.

- **Members with Financial Support from the AICTE:** The AICTE has identified 60 Government Engineering colleges or technical institutions that offer programmes at postgraduate level. These institutions are being given access to a number of electronic resources. The AICTE is actively considering provision of access for selected e-resources to all Govt./Govt. aided institutions.

- **Other Engineering Colleges and Institutions:** The consortium, invites AICTE-accredited and UGC-affiliated institutions to join hands with the leading Engineering and Technological Institutions in India. 102 other engineering colleges and institutions have joined the consortium on their own

The INDEST-AICTE Consortium, on the basis of sheer strength of present and prospective numbers of institutions has attracted the best possible price and terms of agreement from the publishers. The Consortium subscribes to over 12,000 electronic journals, numerous conference proceedings, standards and e-books from a number of publishers and aggregators. The INDEST Web Site hosts a search and browse interfaces to locate journals, their URLs and member institutions. The consortium supports for setting up Interoperable Repositories for Electronic Submission of Theses, Dissertations, and Institutional Repositories for all consortium members and open access initiatives and has taken-up new initiatives related to content creation under its extended activities (INDEST- AICTE Consortium, Annual Report, 2012).

Functions: Major activities of the INDEST-AICTE Consortium are as follows:

- Arrange subscription to select electronic resources for member institutions;
- Identification of new resources;
- Interaction with member libraries to ensure optimal utilization of subscribed electronic resources;
- Ensure access to subscribed electronic resources to member libraries as per their subscription;
- Organize training programme for the member institutions on use of electronic resources;
- Initiate additional activities complementary to the present activities of the consortium and;
- Encourage interactions amongst member libraries.

Governance: The Consortium operates through its headquarters set-up at the IIT Delhi under a National Steering Committee consisting of members from amongst beneficiary institutions including Director, IIT Delhi, and Chairman, AICTE who serve as Chairman and Co-chairman for the National Steering Committee respectively. A National Review Committee has also been set-up
with an overall responsibility for making policies, monitoring the progress, coordinating with UGC and AICTE for promoting the activities of the INDEST- AICTE consortium.

**Services:** Electronic resources subscribed by the Consortium can broadly be divided into the following two categories:

*Full-text Electronic Resources:* Full-text electronic resources contain complete articles along with their bibliographic details. The Consortium subscribes to several full-text e-resources like IEL Online, Science Direct, Springer Link, ACM Digital Library, etc. All full-text resources subscribed by the INDEST-AICTE Consortium contain electronic journals. However, IEL Online and ACM Digital Library also host conference proceedings and standards.

*Bibliographic Databases:* Bibliographic databases contain references to articles published in journals, conference proceedings or chapters in books, etc. Most bibliographic databases contain abstracts of the articles along with links to their full-text and are subscribed for IITs and IISc only (Group I); however, JCCC is available to all the core member institutions. The Consortium subscribes to 12,000 journals from 20 e-journal publishers and access 6 bibliographic databases. The member institutions are provided differential access to these resources based on their needs and activity profile (INDEST-AICTE Consortium, Annual Report, 2012).

Therefore, the INDEST Consortium is the most ambitious initiative taken so far in the country. The benefit of consortia-based subscription to electronic resources is not confined to 48 major technological institutions in the country but is also extended to all AICTE-accredited and UGC-affiliated institutions. 102 engineering colleges and institutions have already joined the consortium on their own.

### 4.1.5 National Knowledge Resource Consortium (NKRC)

**Mission:** The National Knowledge Resource Consortium (NKRC), established in year 2009, is a network of libraries and information centers of 39 CSIR and 24 DST institutes. It aims to provide electronic access to
international Science & Technology journals to CSIR Science & Technical personnel, thereby strengthening the facilities for pooling, sharing and electronically accessing the CSIR information resources in a cost-effective manner, and also for nucleating the culture of electronic access with a view to catalyzing the evolution of digital libraries.

NKRC's origin goes back to the year 2001 as CSIR E-journal Consortium, when the CSIR Network project with NISCAIR set up the Electronic Journals Consortium to provide access to 1200 journals of Elsevier Science to all its users. Over a period of time, the consortium not only grew in terms of the number of resources but also in terms of the number of users as more like-minded institutes evinced interest to join the consortium.


Services: At present, NKRC facilitates access to 5,000+ e-journals of all major publishers, patents, standards, citation and bibliographic databases, namely Web of Science, Derwent Innovation Index, ASTM International Standards for providing wide access to CSIR S&T personnel. Apart from licensed resources, NKRC is also a single point entity that provides its users with access to a multitude of open access resources. The Consortium envisions emerging as a leader to serve the R&D sector with much needed information to strengthen the research and development system in the country (National Knowledge Resource Consortium, 2013).

4.1.6 UGC-INFONET Digital Library Consortium

The University Grants Commission is an autonomous organization working under Ministry of Human Resource and Development (MHRD), Government of India. It is established by an act of Parliament in 1956 and
working for co-ordination, determination and maintenance of standards of University education. Realizing the need for common mechanism for access to scholarly information, UGC has set it as a priority for the academic and research community. Therefore, an initiative of e-resources subscription was made to provide wider and larger access to electronic journals and databases.

The UGC-INFONET Digital Library Consortium is a major initiative of University Grants Commission (UGC) in the field of education and research was formally launched in December, 2003 by the President of India, Dr. A.P.J. Abdul Kalam, at Vigyan Bhavan on 28th December, 2003 by dedicating a bouquet of e-journals to the nation.

With globalization of education and competitive research the demand for the journals has increased over the years. Due to scarcity of funds, libraries have been forced to discontinue the scholarly journals, which have great impact to the users. UGC has initiated the UGC-INFONET Digital Library Consortium, to facilitate free access to scholarly journals and databases in all areas of learning to the research and academic community across the country. It is a national initiative for providing access to scholarly electronic resources including full-text and bibliographic databases in all subject disciplines (Arts, Humanities, and Social Sciences, Physical and Chemical Sciences, Life Sciences, Computer Science, Mathematics and Statistics) to academic community in India. It facilitates access to high quality e-resources to academia in the country to improve teaching, learning and research. The consortium provides current as well as archival access to more than 5,790 core and peer-reviewed journals and ten bibliographic databases in different disciplines from 23 publishers and aggregators. The access to all major e-resources was given 50 universities in first phase in the year 2004. It has now been extended to 159 universities in three different phases.

The University Grants Commission (UGC) provide funds through INFLIBNET required for providing differential access to various electronic resources subscribed by the consortium for selected member institutions. There are 189 members state wise. The following are the core members of UGC-
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INFONET.

- Universities covered under Phase I 50
- Universities covered under Phase II 50
- Universities covered under Phase III 58
- Associate members 27
- IUCs and other institutions 04

4.1.6.1 Operation

INFLIBNET administer and monitor the programme and have independent electronic access to all the publications to help with the process. It will be provided one free print copy of each journal from many publishers, which can be a national repository at Ahmadabad on the Gujarat University Campus. A web site has been created to provide all needed information to consortium members about the status of the programme at http://web.inflibnet.ac.in/econ/index.htm. INFLIBNET. It conducts various training programmes at different places to spread awareness and to develop expertise in the university community in the use of e-resources. Special training programmes, seminars are conducted on different University campuses by publishers of complex databases (INFLINBNET, Annual Report, 2012).

4.1.6.2 Electronic Resources available on UGC-INFONET Digital Library Consortium

The Consortium subscribes to electronic resources covering all major subject discipline being taught in universities. It includes wide variety of materials e.g. e-journals, bibliographic databases, reviews published by scholarly societies, university presses, institutional and commercial publishers. The Consortium subscribes to 19 full-text e-resources and 10 bibliographic databases from 25 publishers and aggregators. The member institutions are provided differential access to these resources based on their needs and activity profile as per the recommendation of the National Steering Committee.

Services: The resources subscribed by the Consortium can broadly be divided into the following two categories:
• **Full-text Electronic Resources**

Full-text electronic resources contain complete articles along with their bibliographic details. The consortium subscribes to full-text e-resources from scholarly societies, university presses, commercial publishers and aggregators including *American Chemical Society, American Institute of Physics, Oxford University Press, Cambridge University Press, Cell Press, Springer Link, JSTOR, Project Muse*, etc. All full-text resources subscribed by the Consortium contain electronic journals.

• **Bibliographic Databases**

Bibliographic databases contain references to articles published in journals, conference proceedings or chapters in books. Most bibliographic databases contain abstracts of the articles along with links to their full-text.

4.1.6.3 **E-journal prints gateway archival library**

The INFLIBNET Library has also maintaining a National Archive for the print version of e-journals subscribed under UGC-Infonet in its “E-Journal Gateways and Archival Library”. Archiving is a vital part of the post production work flow process allows uncommitted projects to be saved for future use ensuring that they can be revisited without having to redo the whole post production process, saving time and effort. The intention of archiving is preservation and they remain accessible even as technology changes. It has to be flexible to adopt the new technological generations. The need for providing guidance and assistance on creation, maintenance, use and deposition of e-journal archiving is the need of the hour. The responsibility of archiving printed journals lies with the libraries. Further, the related issues like security, mirror sites and CDs are also a kind of new archiving methods that are adopted with the help of technology. The librarians have to adopt new ventures of forming consortia for this purpose. With the above venture the INFLIBNET Library is maintaining a National Archive. The journals are received from the publisher like *The Royal society of chemistry (RSC) The Institute of Physics (IOP) and Cambridge University Press (CUP)*. Users can access these databases on their desktop by using the web-site (Murthy 2005). In terms of
number of users, the UGC-INFONET Digital Library Consortium is the largest consortium in India with a vision and plan to reach out to all universities and colleges affiliated to these universities, over a period of time.

4.1.7 N-LIST of UGC and MHRD

National Library and Information Services Infrastructure for Scholarly Content (N-LIST), being jointly executed by the UGC INFONET Digital Consortium, INFLIBNET Centre and INDEST- AICTE Consortium, IIT Delhi by the Ministry of Human Resource Development (MHRD) under its National Mission on Education through ICT, provides cross-subscription to e-resources which are subscribed by the two consortia and access to selected e-resources to colleges. A total number of 1,118 colleges have registered with the N-LIST programme. It provides 2037 full text journals, 3046 e-books and other bibliographic databases.

With the launching of N-LIST programme, e-resources which were accessible to universities only, are now being made accessible to colleges as well. These programmes would certainly benefit the higher education system in India immensely.

Current Status

As on March 2013, a total number of 3216 colleges have registered themselves with the N-LIST programme including 2933 Govt./Govt.-aided colleges covered under the section 12 B/2F of UGC Act as well as Non-Aided colleges. Log-in ID and password for accessing e-resources has been sent to the authorized users from these 2933 colleges. All e-resources subscribed for colleges under the N-LIST Project are now accessible to these 2933 colleges through the N-LIST website (N-List, 2013).

4.1.8 IIM (Indian Institute of Management) Consortium

The concept of IIM Consortium has been floated a few years back. Need of resource sharing was realized by IIM libraries a long back. Besides entering into the interlibrary loan practice, IIM Libraries also thought seriously of resource sharing in many other areas such as cooperative acquisition,
cooperative processing and decentralized utilization. IIM Consortium is becoming a reality. The two areas were identified for partnership viz.:

a) Developing the collection on shared basis and

b) Developing the services for exploiting such collection (IIM Consortium, 2012).

The Indian Institute of Management (IIM) has launched the IIM Library consortia in the year 2000 to facilitate better resource sharing among the IIM libraries and to minimize the expenditure on subscription to various resources. IIM Library consortium has in the last few years successfully executed a few shared acquisition services such as *Science Direct* of Elsevier, *John Wiley* and *Kluwer* electronic journals, *Proquest* and *EBSCO* services. Six IIMs have formed a consortium and jointly approached the publishers of e-journals and databases in the area of Management, Social and Behavioural science source. They have been giving IP enabled access to e-journals *Elsevier* (247 titles), *Blackwell* (268 titles), *Kluwer* (33 titles), *Wiley* (3 titles). Apart from 25 titles free against print subscription, 2300 titles as a part of *EBSCO* databases and 800 titles as part of *ABI Inform* database have been made available to users of IIM libraries electronically. IIM consortia did not find any difficulties dealing with the publishers as they were able to make payment directly to the publishers individually (Raina, 2004).

The CD-ROM/Digital Databases being currently subscribed to by the various IIMs are:

- ABI/Inform (Abstracts), ABI/Inform (Full-Text - Business Periodicals On disk - BPO) is being subscribed to by IIMA, IIMB, and IIMC respectively.

- Business Source Elite (BSE), the Full-Text journal service of EBSCO, is being subscribed to by IIMA, IIMI, and IIMK and

- Econlit (Silver Platter) at IIM Ahmedabad and IIM Kozhikode, and Econlit (Ovid) at IIM, Indore (IIM Consortium, 2012).
4.1.9 TIFR Consortium

TIFR (Tata Institute of Fundamental Research) Libraries Consortium: TIFR library, Mumbai took a resource sharing initiative in 1999 among the five centers and six field stations libraries of the institute. These five centers Homi Bhabha Center for Science Education (HBCSE), Mumbai, National Center for Radio Astrophysics (NCRA), Pune, Computational Mathematics Laboratory (CML), Pune, National Center for Biological Science (NCBS), Bangalore and TIFR Bangalore Center for Mathematics and six field stations i.e. High Energy Gamma Ray Observatory (HEGRO), Pachmarhi, Giant Meterwave Radio Telescope (GMRT), Khodad, Cosmic Ray Laboratory (CRL), Ooty, Radio Astronomy Center (RAC), Ooty, Gravitation Laboratory & Balloon Facility stations are the constituent part of the TIFR institute. Initially they started consortia based subscription from ASM (MathSciNet) & Springer LINK to provide unlimited access to 250 titles on Computer Science, Life Science, Math, Physics & Astrophysics and Elsevier Science Direct (Provide unlimited access to aprox 150 titles), Biomed Net, Cell Press Online for limited centers. Subsequently they increased the co-operation and now they have several consortia-based subscriptions of electronic resources (TIFR, 2012).

4.1.10 DAE Consortium

The Department of Atomic Energy (DAE) Consortium caters to the information requirement of 36 institutions including BARC, TIFR and SAMEER. Funded by the Department of Atomic Energy (DAE), Govt. of India, the Consortium subscribes to e-resources from 4 publishers (including Science Direct, Springer, and MathSciNet) for providing access to around 2,000 e-journals. Established in 2001, the Consortium is administered by the BARC, Mumbai.

4.1.11 MCIT Library Consortium

Ministry of Communication and Information Technology initiated the MCIT Library Consortium initiated in 2003. The Ministry comprises of three departments, viz Dept. of Information Technology (DIT), Dept. of Telecommunication (DOT) and Dept. of Post (DOP). Each department has a
number of organizations and autonomous bodies and their own library & Information Centers.

Mission MCIT Library Consortium aims to develop digital or electronic library, resource sharing and networking among participating libraries. They subscribe e-journals and other resources on a consortium platform.

Services Digital library provide resources and electronic services like e-Granthalaya software, union catalogue to their users and creating a model for Govt. of India Libraries Networking (MCIT Library Consortium, 2012).

4.1.12 SpaceNet- ISRO Consortium

SpaceNet is a Closed User Group (CUG) based communication network of Dept. of Space and ISRO catering to a variety of space community needs. It offers wide range of potential benefits both to libraries and end users across the ISRO centers in India. (Prasada Rao, 2009) The resource sharing initiative taken by ISRO libraries by avoiding duplicate subscription to bibliographic databases is expected to result in savings of Rs. 41 lakhs per year. A move is there to form formal consortia for providing access to e-journals and also J-Gate Custom Content for Consortia (ISRO Consortium, 2012).

4.1.13 Consortium for e-Resources in Agriculture (CeRA)

Indian Council of Agricultural Research (ICAR) is a major agricultural scientific autonomous organization in the country. ICAR Network is also in the process of constituting a consortium for its institutes. The CeRA Consortium of IARI (Indian Agricultural Research Institute) facilitates institutions under ICAR and it was launched on April 2008 at its headquarters at New Delhi (Veeranjaneyulu, 2010).

The major objectives of CeRA are:

- To develop the existing R & D information resource base of ICAR institutes/ agricultural universities, etc. comparable to those existing in world leading institutions.
- To create an e-access culture among scientists/teachers in ICAR institutes.
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- To develop a *Science Citation Index* (SCI) facility at IARI for evaluation of scientific publications.
- To assess the impact of CeRA on the level of research publications measured through SCI. CeRA has helped in developing the world class R&D information base of ICAR institutes/ agricultural university, and an e- access culture among scientists/ teachers (Consortium for e-Resources in Agriculture, 2012).

4.1.14 ICICI Knowledge Park

Informatics launched the first formal and organized resource sharing consortium, using J-Gate Custom Contents for Consortia (JCCC) as the basis, in the Virtual Information Centre (VIC) at ICICI Knowledge Park (ICICI-KP), Hyderabad. Encouraged and funded by NISSAT, VIC at ICICI-KP used the concept of JCCC to promote and translate the concept of providing access to diverse areas of information into a ‘networked resource sharing consortia for journals’. Services provided by the consortium:

- Union catalogue of all members
- Search facilities
- TOC directory
- Access to abstracts/full text/ pdf/ html/ doc etc.
- Statistics on usage from vendor

According to Ram and Sharma (2006) there are some other Indian consortia initiatives which are worth mentioning here are:

4.1.15 SONET

Society for Networking of Excellence in Technical education (SONET), Hyderabad has been established in September 2003 with association of all engineering colleges in Andhra Pradesh.

4.1.16 OUHYD- MATHS Consortium

Osmania University, Hyderabad was pioneering to establish consortia in 1998. This is only for mathematics as covered by Math Science Net of American Mathematical Society.
4.1.17 IGCAR Consortium

Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam, Tamil Nadu has 12 units and 14 field stations under the institution for resource sharing and the consortia initiative has in agreement with Elsevier Science publishers.

4.1.18 NTRMEDNET

Consortium of the Dr. NTR University of Health Sciences provide net based service to the doctors, research scholars, students and paramedical students of all affiliated colleges of the university.

4.2 Development of E-journal Consortia: Global perspectives

Libraries, especially academic libraries have long formed consortia for the purpose of sharing existing physical resources—principally books and journals held by member libraries. Library consortia, does not have any remarkable history but the consortial arrangements started with the concept of resource sharing since long back. In 1990’s, new types of library consortia began to flourish that exploited the advances of information technology. The global development of OCLC (Online Computer Library Centre) in USA is a prime example.

The major library consortia around the world have been discussed below:

- Anatolian University Library Consortium (ANKOS)
- Association of National University Libraries, Japan (ANUL)
- Bibliographical Center for Research (BCR)
- Consortium of Independent Health Information Libraries in London (CHILL)
- China Academic Library & Information System (CALIS)
- Consortium of University Libraries of Catalonia (CBUC)
- Consortium on Core Electronic Resources in Taiwan (CONCERT)
- Co-alliance
- GALILEO (Georgia Library Learning Online)
- Gauteng and Environs Library Consortium (GAELIC)
- HEAL-Link (Hellenic Academic Libraries Link)
- International Coalition of Library Consortia (ICOLC)
The details of some major and operational e-journal consortia around the world such as GALILEO, HEAL-Link, ICOLC, Ohio-LINK, VIVA, WRLC etc. have been discussed as under:

4.2.1 Georgia Library Learning Online (GALILEO) Consortium

GALILEO was initiated by the University System of Georgia to be a web-based virtual library, but was always intended to be for the whole state, including public, academic and school libraries, with the goal “Through collaboration and resource sharing, GALILEO seeks to provide equal access to information for all Georgia citizens”.

GALILEO stands for Georgia Library Learning Online, an initiative of the Board of Regents of the University System of Georgia. A World Wide Web-based virtual library, GALILEO provides access to multiple information resources, including secured access to licensed products. Participating institutions may access over 100 databases, indexing thousands of periodicals and scholarly journals. Over 10,000 journal titles are provided in full-text. In addition, GALILEO hosts the Digital Library of Georgia, a gateway to Georgia's history and culture found in digitized books, manuscripts, photographs, newspapers, audio, video, and other materials.

Membership: The community of more than 2000 GALILEO institutions includes the University System of Georgia, K-12 schools, public libraries, the adult technical institutes and colleges, and a group of private academic colleges.
and universities. At this time, only educational institutions are eligible to participate in GALILEO.

**Governance:** The consortium is governed by Steering Committee comprising representatives of all participants. The GALILEO Steering Committee will be responsible for providing a budget recommendation to the Chancellor concerning the ongoing expenses of the GALILEO program, including the operation of the central GALILEO computer sites, the licenses for databases, training, and hardware or software upgrades.

**Services:** GALILEO provides access to resources that are produced by the GALILEO staff as well as resources provided by many different vendors, and the types of usage statistics available for these different resources vary. Since 2003, GALILEO has been developing a method of incorporating vendors' monthly usage data into the locally-recorded data available through the GALILEO usage statistics reporting tool. Monthly reports created with this tool for time periods from 2002 to the present now include search, citation, and full-text article counts for **EBSCO host** databases, **ProQuest** databases, **LexisNexis Academic**,** Encyclopedia Britannica**, and most locally-hosted GALILEO databases, including Digital Library of Georgia databases (Georgia Library Learning Online Consortium, 2013).

### 4.2.2 HEAL-Link (Hellenic Academic Libraries Link)

HEAL-Link (Hellenic Academic Libraries Link) is the consortium of all Greek Academic Libraries.

**Membership:** it comprises 37 Higher Education Institutions, the Athens Academy, the National Library of Greece, the Cyprus University and 21 Research Institutions of Greece.

**Services:** HEAL-Link provides full text access to more than 7,500 scientific journals in electronic format, offered by 18 publishers as well as access to bibliographic databases, e-books and dictionaries, borrowing books, inter-library loan, copying services and other more services (HEAL-Link, 2013).
4.2.3 International Coalition of Library Consortia (ICOLC)

The International Coalition of Library Consortia (ICOLC) first met informally as the Consortium of Consortia (COC) in 1997.

Mission: The Coalition serves primarily higher education institutions by facilitating discussion among consortia on issues of common interest. At times during the year, ICOLC may conduct meetings dedicated to keeping participating consortia informed about new electronic information resources, pricing practices of electronic providers and vendors, and other issues of importance to directors and governing boards of consortia.

Services: International Coalition of Library Consortia (ICOLC) is not only a meeting place for consortium leaders to exchange ideas but is also emerging as the prime organization for setting up consortial guidelines. The Coalition is an international, informal group currently comprising over 160 library consortia in North America, Europe, Australia, Asia, and Africa. The member consortia serve all types and sizes of libraries. ICOLC facilitates discussion among consortia on issues of common interest, and conducts two meetings per year in North America and one meeting per year in Europe. The organization is dedicated to keeping its members informed about electronic information resources, pricing practices of electronic publishers and vendors, and other issues of importance to consortium directors and governing boards. The Coalition also meets with the information provider community to discuss product offerings and issues of mutual concern (International Coalition of Library Consortium, 2012).

4.2.4 Ohio LINK Consortium

OhioLINK is a cooperative venture of university libraries and the Ohio Board of Regents, grew out of a 1987 recommendation by the board's library committee that "the state of Ohio implement, as expeditiously as possible, a statewide electronic catalog system." In 1996, OhioLINK began offering services through the World Wide Web.

OhioLINK is limited to Ohio State and substantially funded by the State. It covers both the state library and academic libraries and is beginning to add
public libraries to the mix. It is strongly focused on shared access through the provision of a union catalogue and electronic resources and one of its key roles is to broker deals for resource purchasing. OhioLINK has been servicing 75 of the academic libraries in Ohio. The Electronic Journal Centre of this consortium has impressive collection of electronic journals from publishers like Elsevier, Academic Press, Project Muse, Kluwer Academic, Springer-Verlag, John Wiley & Sons, American Physical Society etc.

Membership: The Ohio Library and Information Network, OhioLINK, is a consortium of 89 Ohio College and university libraries, and the State Library of Ohio, that work together to provide Ohio students, faculty and researchers with the information they need for teaching and research. Serving more than 600,000 students, faculty, and staff at 90 institutions, OhioLINK’s membership includes 16 public/research universities, 23 community/technical colleges, 50 private colleges and the State Library of Ohio.

Services: Together, OhioLINK and its member libraries provide access to:

- 50 million books and other library materials
- Millions of electronic articles
- 12,000 electronic journals
- More than 100 electronic research databases
- Over 81,000 e-books
- Thousands of images, videos and sounds
- Over 39,000 theses and dissertations from Ohio students

Governance: A governing board is authorized to oversee the OhioLINK program. The OhioLINK Executive Director is chosen by, reports to, and serves at the pleasure of the Chancellor of the Ohio Board of Regents. An advisory committee on education and technology has been formed to advise the Chancellor on OhioLINK and other programs related to the intersection of technology and education (OhioLink Consortium, 2012).

4.2.5 Virginia’s VIVA Consortium

VIVA is the consortium of the academic libraries in Virginia. It covers all the publicly funded academic institutions in Virginia and most of the non-
profit private ones. It is largely state funded and consequently its membership is limited only to the State of Virginia. VIVA is guided by three fundamental principles: equitable access to information, cooperation across institutions, and cost-effective use of public resources.

Membership: The Virtual Library of Virginia (VIVA) is the consortium of the nonprofit academic libraries within the Commonwealth of Virginia. Members include all of the 39 state-assisted colleges and universities, as well as 34 of the independent (private, nonprofit) institutions and the Library of Virginia.

Mission: VIVA's mission is to provide, in an equitable, cooperative and cost-effective manner, enhanced access to library and information resources for the Commonwealth of Virginia's nonprofit academic libraries serving the higher education community.

Services: Its primary role is the procurement of electronic resources, but they also provide other services, including a very active Inter Library Loan function throughout Virginia, coordination of the special collections for the Virginia Heritage Project, and several outreach projects. Much of the work is done by representatives of the member libraries, with only a very small central office, which is how they can keep their overheads down to less than 3.5% of total costs (http://www.vivalib.org/about/index.html).

Funding: The majority of VIVA's funds come directly from the Virginia General Assembly, augmented by the local institutional library budgets and some outside grants. Funding is allocated to VIVA by the General Assembly on a biennial basis.

Governance: VIVA operates under a Memorandum of Understanding (MOU). VIVA is headed by a Steering Committee comprising 14 members elected from the member institutions and supported by a variety of committee also comprising members selected from the member institutions (VIVA Consortium, 2012).
4.2.6 Washington Research Library Consortia (WRLC)

It is one of the most established amongst the 100 large electronic consortia in USA. It was started in 1987 by some of the major universities in the Washington D.C.

*Mission:* WRLC works with the aim of sharing library collections and information technology in order to enhance the resources available to students and faculty.

*Services:* WRLC provides mission-critical services to its member universities:

- Information Technology supporting library operations and resource-sharing
- Access to online resources
- Technologies to support digital collections and share campus scholarship, and
- Offsite storage to free valuable space in campus libraries.

*WRLC Program Goals*

- Shared Digital Library (Library Information Technology Services)
- Cooperative Collection Development and Access

4.2.7 Anatolian University Library Consortium (ANKOS)

*Mission:* The Anatolian University Library Consortium (ANKOS) was founded in 2000 with 12 member libraries and three database subscriptions. ANKOS is a voluntary association working since 2006 under the Inter-university Council, which is an academic advisory body of the Council of Higher Education comprising the rectors.

*Services:* Faculty members at universities all over Turkey as well as the staff of some research institutions have access to bibliographic and full-text databases in science, mathematics, social sciences, humanities, medicine, agriculture, business, education, informatics & computing, and engineering. ANKOS holds an Annual Meeting which all members and firms attend. ANKOS is responsible for all administrative and financial work and for
subscriptions, renewals and national site licensing of electronic databases on behalf of all Turkish universities. ANKOS takes its place alongside the world's library consortia as a member of the International Coalition of Library Consortia (ICOLC), the Scholarly Publishing and Academic Resources Coalition (SPARC), the Southern European Libraries Link (SELL), and the international initiative COUNTER (Counting Online Usage of Networked Electronic Resources). ANKOS acts as Electronic content licensing, Electronic content loading/presentation, Interlibrary loan/document delivery, Training (Anatolian University Library Consortium, 2013).

4.2.8 Association of National University Libraries, Japan (ANUL) Consortium

Mission: JANUL aims at supporting the advancement of library function through close coordination and cooperation among the members, promoting inter-library use of scholarly information resources extensively, and contributing development of infrastructures for scholarly information distribution in order to help universities and achieve their missions.

Membership: Japan Association of National University Libraries (JANUL) is a membership organization comprising libraries of national universities in Japan, the University of the Air Library, libraries of four inter-university research institutes, totaling 92 libraries and library facilities.

Services: JANUL carries out various operations, such as research and investigation that are necessary to advance the functions of national university library, cooperative maintenance of scholarly information resources, promotion of inter-library use, activities to enhance ability of national university libraries' staffs, and coordination and cooperation with domestic and foreign organizations for scholarly information distribution (Japan Association of National University Libraries, 2012).

4.2.9 Consortium of Independent Health Information Libraries in London (CHILL)

Mission CHILL was started since 1998, CHILL aims to act as a forum to exchange views, take part in projects of mutual benefit, share resources and
represent the combined interests of the Consortium and to improve the availability of and access to information resources for the benefit of members and their users.

Membership CHILL membership is open to any health related provider of library services within the London area which is non-profit-making and is not aligned to an NHS or university-related library group. There are currently 45 members, plus a further 4 affiliate members from organizations outside the London area. CHILL members to take benefit of its services (Consortium of Independent Health Information Libraries in London, 2013).

4.2.10 China Academic Library & Information System (CALIS) Consortium

CALIS is highly centralized integrated consortium, serves about 700000 students spread over 27 provinces. It has UMI, EBSCO, Elsevier and Web of Science databases for the members.

Funding: China Academic Library & Information System (CALIS) is funded primarily by the Chinese government, and operates under the leadership of Ministry of Education of China.

Mission: The mission of CALIS is to promote, maintain and improve library resource sharing among Chinese universities, academic libraries, other libraries and information institutions.

Services: CALIS have made lots of efforts to build an open and distributed infrastructure. Full text databases on e-journals, thesis and dissertation (ETD) and reserved e-book, and abstract and Index databases of Union Catalogue, CALIS Current Contents of Western Journal, “Key discipline” and “network resource navigation” are the most important databases that CALIS imported and developed. Services which are CALIS provided to member libraries is emphasis on cooperated database purchasing, union catalogue, interlibrary loan and document delivery, digital library model designing and training (China Academic Library & Information System, 2012).
4.2.11 **Consortium of University Libraries of Catalonia (CBUC)**

CBUC is a consortium of the state-funded universities and the State Library of Catalonia in Spain.

**Mission** The main aim of CBUC is to provide a common core of electronic information for all users of the libraries of the CBUC. Most of the subscriptions are paid for by the member libraries, though the Government also provides complementary aid. The expenditure is distributed according to an internal formula that takes into account, among other parameters, the previous expenditure of each member with the publisher in question and the dimension of the university within the consortium.

**Membership** The Consortium of University Libraries of Catalonia (CBUC) is composed of all the Public Universities of Catalonia and the National Library of Catalonia, as members, while CBUC allows all types of libraries to participate in its programmes as users.

**Services** Since 1999 it has followed a clear line of action with regards to negotiating licenses of electronic resources through consortia purchasing of journals, books and databases, which are offered under the "trademark" of the Digital Library of Catalonia together with electronic resources produced by the member and user institutions of the Consortium.

**Funding** Structure of Funding of CBUC is the 55% of the CBUC's budget is provided by the contributions of the Catalan university administration, 38% by contributions of the members of the consortium and the remaining 7% is covered by income from services provided to libraries that are not members of the CBUC (Consortium of University Libraries of Catalonia, 2013).

4.2.12 **Consortium on Core Electronic Resources in Taiwan (CONCERT)**

**Mission:** It is a government supported consortium. Primary functions of the consortium are, electronic content licensing, electronic content loading/presentation & training.

**Membership:** There are 210 member libraries (107 public and private universities; 48 public and private colleges; 14 public and private junior
colleges; 41 research institutions (Consortium on Core Electronic Resources in Taiwan, 2012).

4.2.13 Gauteng and Environs Library Consortium (GAELIC)

The largest academic library consortium established in 1996 in South Africa, which is striving to achieve greater efficiency in the area of document delivery, with the objective of providing information rapidly, cost-effectively, and in accordance with users' needs and expectations (Gauteng and Environs Library Consortium, 2013).

4.2.14 Korean Education & Research Information Service (KERIS) Consortium

KERIS was founded in 1999 as a governmental institute under the Ministry of Education and Human Resources Development (MOEHRD). At the same time the Korea Education and Research Information Service Act was enacted. Two institutions called KMEC (Kalakaua Marine Education Center) and KRIC (Kootenay Rockies Innovation Council) were consolidated into KERIS. The main target of KMEC was elementary and secondary schools and the nation's first comprehensive educational information service, “EDUNET” was launched in 1996. KRIC was for academic sites and the nation's first service for enhancing national research competitiveness “Research Information Service System (RISS)” was launched in 1998. In 2001 KERIS was created as the “National Education and Research Information Center” by the Ministry of Information and Communication. In 2002 KERIS was designated as the national operation center for the “National Education Information System (NEIS)” by the MOEHRD. In 2003, 100 percent of all universities and research institutes in Korea joined with RISS. From the standardization of educational materials and work process point of view, KERIS earned certification on KEM as Korean Standard for educational metadata (KS X 7001) and certified with ISO 9001 on KERIS Quality Management System in December 2004 and July 2005 respectively (Korean Education & Research Information Service Consortium, 2012).
4.2.15 Korea Research Sharing Alliance (KORSA)

Korea Resource Sharing Alliance (KORSA) operated by K-JIST (Kwangju Institute of Science & Technology) has been established for the purpose of sharing the 18,000 academic materials and reducing the cost of journal subscriptions with making public databases of holding Information and content of academic journals through a nationwide library system provided on the internet by an efficient access to the online databases (Korea Research Sharing Alliance, 2012).

4.2.16 Malawi Library and Information Consortium (MALICO)

MALICO was established in 2003 and developed its mission statement, vision, constitution and memorandum of agreement.

Mission: MALICO's objective is to encourage national, regional and international cooperation among information stakeholders; influence information policy at the national level; work for adequate ICT infrastructure for members, especially sufficient internet bandwidth; assist in the development of appropriate ICT skills at all levels; facilitate access to electronic journal articles in international databases; organize and digitize Malawian content; and provide information consultancy.

Membership: MALICO membership includes: University of Malawi (UNIMA) (Chancellor College, Kamuzu College of Nursing, Polytechnic, College of Medicine), Lilongwe University of Agriculture and Natural Resources (LUANAR), Mzuzu University, Malawi National Library Service, Reserve Bank of Malawi, Domasi College of Education, Malawi Bureau of Standards, Malawi Human Rights Resource Centre, National Commission for Science and Technology, Malawi Institute of Management, National AIDS Commission, Malawi College of Health Sciences, Ekwendeni School of Nursing and the National Archives of Malawi (MALICO Online, 2012).

4.2.17 Thailand Education and Research Network Consortium

The consortium came into being in the year 1996 with the assistance of MUA (Ministry of Education) with the objectives of providing internet access for Universities, network infrastructure for research and facilitate IT campus
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for Distance Learning. Applications of this consortium included are: Distance Learning, Video Conference, Electronics Library, Internet, Courseware, Research, and Internet2/APAN Activities.

Membership: There are 145 current members including Public universities/institutes, IT Campuses; Academic Resource Centers, Private universities/institutions, Priest Universities, Military Universities and others Institutions.

Services: Thai Library Integrated System (ThaiLIS) include union catalogue, digital collection and reference databases. There are 13 reference database including: Dissertation Abstracts Online (DAO), MEDLINE with TOXLINE and AIDSLine, The IEEE/IEE Electronic Library (IEL), ERIC (Education Resources Information Center, ABI/Inform full text, cataloging books, papers, etc. information search/retrieval and display, reference support system, user/database management, MIT CogNet, ACM Digital Library and HW Wilson Education full text (Thailand Education and Research Network, 2013).

4.2.18 Bibliographical Center for Research (BCR)

BCR covers most of the north-western states of the U.S. with the goal of providing resource sharing throughout the library community. It is possibly the oldest consortia having started in 1935. It provides its members with access to electronic resources, bibliographic services such as OCLC and technical support for Internet based services. It has agreements with the state library agencies in Alaska, Colorado, Idaho, Iowa, Kansas, Montana, Nevada, Oregon, Utah, Washington and Wyoming and covers all types of libraries in those states (Bibliographical Center for Research, 2012).

4.2.19 Co-alliance

The Colorado Alliance of Research Libraries is a consortium of nine institutions representing eleven major libraries located in Colorado and Wyoming. Originally known as CARL, it started in 1974 as a means of developing shared collections for a range of academic and public libraries in Colorado, particularly for such material as expensive paper or microfilm.
collections, and then moved on to looking for an integrated library system in the 1980's. CARL developed an online library system at a time when there were not commercial products available. This was then split off from the non-profit parent body to become a separate organization and the consortia continued with its original aims, but renamed Co-Alliance. Although they provide similar services as other consortia in the provision of group purchasing of resources, their product development work sets them apart (Co-alliance, 2012).

4.2.20 The Southeastern Library Network (Solinet)

Solinet was the first consortia set up to use OCLC products. It originated 38 years ago when ASERL (Association of South East Research Libraries) wanted to be able to use OCLC. Solinet was established as consortia to subscribe to and deliver OCLC services. It has since grown to cover all types of library across 10 states, east from Louisiana and south from Virginia. It is entirely funded from member fees and has the widest range of products and services for its members of any of the consortia I visited. Not only does it provide access to discovery tools such as OCLC and licensed digital content, but it also has a strong emphasis on library education and training for the staff of the member libraries. Its strategy and vision is to support a collaborative infrastructure for all the states of the southeastern USA and it has identified 3 key roles:

• As a broker of services (such as OCLC) delivering economic value (cost reduction) training and support

• To prepare and sustain a viable workforce, particularly for people already working in libraries. This includes consulting to provide staff development programmes.

• As a facilitator and communicator-providing the opportunity to get librarians together to network and learn from each other, and to provide frameworks for things like strategic planning focus groups (The Southeastern Library Network, 2012).
4.2.21 The BIBSAM Consortium

**Mission:** The BIBSAM consortium is to improve the provision of information for higher education and research. Coordinating a licensing consortium and negotiating favorable prices and access terms is one way to fulfill this goal. The department has 11 staff members, of which three are working with licensing issues.

**Membership:** The BIBSAM consortium has about 55 active member institutions including universities, university colleges, and government funded research institutions. The consortium members choose on a deal-by-deal basis which agreements they want to be part of, and they pay the full cost for the licenses out of their own budgets.

**Services:** BIBSAM manages about 30 licenses, including “big deal” agreements with several of the major journals publishers. In addition, BIBSAM supports a network of National Expert Libraries who negotiate agreements for subject-specific resources on behalf of the BIBSAM consortium. Their efforts significantly extend access to electronic resources for the consortium members. BIBSAM has never worked with e-journal models which mandate the members to keep their print subscriptions (The BIBSAM consortium, 2012).

4.2.22 Network of Alabama Academic Libraries (NAAL)

Academic libraries in Alabama established a cooperative organization to fund shared resources. As with other consortia, this started with getting records online, creating a union catalogue, and then purchasing specialist resources to be shared across the members. This then moved into the purchase of electronic resources. There was a wide disparity between the resourcing and capability of the various institutions, so the focus is on delivering outcomes for all students, rather than resources for individual libraries. This made sharing easier to achieve and appears to have engendered a strong sense of ensuring the smaller institutions are enabled to keep up with the more advantaged institutions. It also means a strong emphasis on ensuring that students get easy access through fast and free inter library loan services. NAAL is an example of a consortium with very limited funding looking for innovative ways of delivering benefits.
and resources to their members. Currently they are developing low cost ways to provide a digital repository (Network of Alabama Academic Libraries, 2012).

In UK a national framework contract is achieved for consortium so that every academic library is participant to a national site license. This is done through Joint Information Systems Committee and delivery of electronic journals is done through National Electronic License Initiative.

In Germany there are four major consortia models in operation.
- Regional Consortia for higher education libraries
- Regional Consortia for multi-type libraries
- Institutional consortia
- Multi-institutional research library consortia.

In South Africa GAELIC (The Gauteng and Environs Library Consortium) is the largest Academic Consortia formed in 1996 but is marred by political atmosphere.

In Iran, there are two consortia. CONSIRAN has been actively working with the libraries of the Ministry of Science, Research, and Technology (MRST) and medical university libraries. By 2008, 57 universities are involved in this consortium and they are sharing an online access to licensed resources through networks.

In the Philippines, Fe Verzosa, 2004 reported that many consortia are still informal and voluntary in nature, borne from institutional linkages of academic libraries within a particular geographical location, and established expressly to engage mainly in interlending activities and bibliographic access. Only one, the Department of Science and Technology (DOST), Engineering and Science Education Programme (ESEP) Consortium, is a government-sponsored consortium. It has focused on a programme of activities to upgrade the science and technology infrastructure in the country via education, in particular engineering and science education, as prescribed in its Memorandum of Agreement drawn up by DOST, and it derived its funding from a World Bank grant. South African academic libraries have been involved in consortia
activities since the 1990s and examples include:

• Cape Library Cooperative (CALICO), established in 1992.
• Gauteng and Environ Library Consortium (GAELIC) established in 1996.
• Free State Library and Information Consortium (FRELICO), established in 1996/97.
• Eastern Seaboard Association of Libraries (eSAL), established in 1997.
• South East Academic Library System (SEALS), established in 1998 (Moghaddam & Talawar, 2008).

4.3 Discussion

The current age of library consortia proves to be the best form of library cooperation locally, regionally, nationally and internationally. It is one of the emerging phenomena for libraries to provide information to their users with an edge over the normal routes of accessibility. The library consortia through its strength of the number of institutions, offers vigorous business opportunities to the electronic publishers which can attract the best possible price and terms of agreements. Perceiving the same, the libraries all over the world are forming consortia of all types and at all levels with an objective to take advantage of current global networks to promote better, faster and more cost effective ways of providing information. In India, a good number of consortia deals have been made with the consistent growth of consortia in international scenario. Such Indian initiatives are expected to trigger remarkable developments so as to ensure a sustainable growth of the libraries in the country.

The present study depicted that the e-journal consortia activities are fast growing in India. DU and JNU is the member of UGC-INFONET digital library consortium whereas IITD is the members of INDEST-AICTE consortium which provides access to over 12,000 full-text e-journals and six bibliographic databases from a number of publishers and aggregators worldwide and AIIMS is the member of ERMED consortia providing number of full text and bibliographic databases from major publishers. There is a need to work sincerely so that the funds can be saved which are otherwise spent
unnecessary when the journals and electronic databases are subscribed by an individual library where the scope of negotiation with vendor for price and benefits is very low in consortia. Also, there is an urgent drive to pay attention for the induction and motivation of the library communities towards the technology driven opportunities and to orient with the challenges of the current environment. The consortia is a thing of past and has flourished to its fullest in developed nations. However, it is gaining momentum in the developing countries also like India and in future more and more consortia would emerge to serve their members with more information and with modern techniques and tools.
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