



A Study of Indian Library Consortiums: An Overview

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Abstract

Any cooperative association of libraries, whether they are school, public, academic, special, or information centres, that organises resources and/or activities on behalf of its members is known as a library consortium. The information age has given rise to library consortiums across the globe. The aim of this study was to comprehend the growth and progress of library collaborations in India. The distinguishing traits, resource categories, and service offerings of these consortia collaborations in India were examined using a checklist. It is made clear that the consortia's resource offerings differ depending on the needs of their user base. While the CSIR collaboration offers the greatest quantity of e-resources, INFONET, HELINET, E-ShodhSindhu (INFLIBNET), and CeRA consortiums offer bibliographic databases, full text e-journals, and free E-Resources.

Keywords: Library Consortia, Library Resource Sharing and Library Consortia, Library Network and Cooperation, Mutual Association among Libraries

Introduction

The 21st century, modern era of digital information, library consortia play an important role in the academic community. Consortia are groups of libraries that work together to exchange resources and create cooperatives. Thus, the consortia approach greatly enhances the efficiency of library services. Additionally, it can be noted that relatively handful library consortiums offer open-access materials and are based on the characteristics of their user group. The statement of (Sudhier, 2011), who proclaimed that Indian librarians have to seriously rethink and reinitiate consortium movements like western countries to get maximum benefits of resources at a reduced cost, time, and space, as now the UGC-INFONET, INDEST, and N-LIST consortia have incorporated to form E-ShodhSindhu, which provides its services to universities, centrally funded technical institutions, and technical colleges. It offers more than 1500 peer-reviewed journals. The daily update of consortiums is essential, and the incorporation of more resources is also necessary in Indian consortia.

The library consortium in India illustrates the regular growth of libraries in India. The INDEST, a premium consortium, was founded by the national government, which funds subscriptions to electronic resources for 38 of India's pure and allied science, information, and technology research institutions. There is also the University

Grants Commission of India, which provides high-speed internet access to 150 research institutions.

Library Consortia

The evolution of the literature revealed a wide range of perceptions about the Library Consortium. In 1998, Koop's opinion was that the word "consortium" was derived from the Latin word "consors". It means "shared in property," and it was first adopted in the seventeenth century. In the Merriam Webster Dictionary (2002), the term "consortium" is defined as "an agreement combination or group formed to undertake enterprise beyond the resources of any one member". The phrase "Library Consortium" is frequently used to describe a network of libraries that are interconnected to outline a structure to achieve some predefined objective. Consortia connect libraries into a network of cooperating entities that benefits the end user. Baathuli Nfila and Darko-Ampen (2002) define library consortia as "cooperation, collaboration, and cooperating with one another to provide open communication services". Arora (2005) defines consortium as "a resource sharing organization jointly formed by libraries."

From Library cooperation to Library Consortia

The library and information science literature shows how the early 1900s were the period when cooperative endeavors required the support of formal consortia. In the present situation, most

libraries have started transforming their cooperative activities from an “organizational self-sufficiency model” to a “collaborative survival model” (Allen & Hirshon, 1998). The Triangle Research Libraries Network (TRLN) was established in 1933 by North Carolina and Duke University, which was considered the first major academic library consortium (Bostick 2001). Rona (1999), in his study on “The very model of a modern library consortium,” examines various factors and circumstances under which the voluntary alliance of non-affiliated consortia should start thinking about a legal structure. While providing evidence of migration from the usage of the word “cooperation” to “consortium”, James Kopp observed how the term “consortium” began to flourish during the 1950s and the 1960s, the period when the majority of the academic library consortia came into existence (Koop, 1998). Baathuli Nfila & Darko-Ampem (2002) review the major trends in the history and growth of the consortia system. According to them, the exact date when the term “Library Consortium” was introduced for the first time is not clear, but it was widely published in the published literature in the 1980s.

Once more, Koop (1998) noted that in the midst of the 1960s, the first key project of library systematic automation was undertaken, and consortia began supporting their activities by sharing their expertise and skills in this developing field. The main activities of consortia during this period were inter-library loan, cooperative acquisition, and shared cataloguing. Bostick (2001a) emphasized that the greatest force for the advancement of formal library consortia happened after 1960, while automation of library activities and services turned into a probability. According to Baathuli, Nfila & Dark-Ampem (2002), the main possible reason for the move towards library consortia was the need to share expertise on library automation. In this phase, different kinds of libraries came together and joined hands to undertake multiple types of collaborative endeavors. The main aim of forming and joining library consortia was to purchase or license expensive integrated library management systems/software. In 1967, the Online Computer Library Center (OCLC) – a computerized bibliographic database with terminals in cooperative libraries – was established, which ultimately caused the creation of several regional

library networks for resource sharing in the USA, such as NELNET, SOULNET, PALINET, etc., were primarily created to provide libraries in a certain area or state in the United States of America (USA) with access to OCLC's cooperative cataloguing resources. As contrasted to that, Research Libraries Group's RLIN (Research Libraries Information Network) succeeded in establishing a use the union catalogue of research resources as a common cataloguing tool. At the time when OCLC and RLIN developed in the USA, other consortia grew in Europe, Asia, Africa, and Australia, CERNET, ChinaNet, ChinaGBN, CSTNet in China (Tang 2001), and DELNET, INFLIBNET, MALIBNET in India, etc. consortia that are formed principally to create an integrated shared library sub-system and joint cataloguing are “WALDO (1983)”, “WISPALS (1989)”, “LOUIS (1992)”, Orbis Cascade Alliance (1993), SUNY Connect (1998)” and “MOBIUS (1998)”, etc.

In 1970, With the intention of advising and directing libraries which were intending to shape library consortiums, System Development Corporation (SDC) was hired to conduct a nationwide survey of academic library consortiums and to compile data about the programmes and services offered by academic (school, college and university) library consortiums. almost 125 academic (school, college and university) library consortia were covered in the survey report by SDC.

Later on, during the 1980s, the need for cooperative acquisition and shared cataloguing remained the same while one more tool was seeing the day of light, i.e., online database searching and retrieving, which provide faster and quicker access to indexed and abstracted information in comparison to their printed counterparts, became more popular. MEDLINE, the online version of MEDLARS, was the first and foremost computer-based information search and retrieval service. It was developed in 1971, primarily for the medical profession (Thornton 2000). In the period between the 1980s and 1990s, Even the library automation, the majority of libraries in western nations engaged in database searching and browsing apart from the bibliographical computational processing is also important. It was in the mid-1990s when the idea of collaboration/cooperation had changed completely use of new information technologies from the print environment to the digital environment (Satyanarayana, Krishna & Arora,

2004). According to Thornton in 2000 mid 1990s was the period when the transformation and migration from the print to digital environment began with the proliferation of full-text digital resources, which in turn is forcing the libraries to keep pace with the proliferating digital resources available in the marketplace. The informational hub and library centers realized that it was not possible for them to procure new products within their dwindling budgets. As such, libraries have to come up with new ideas of cooperation and collaboration to consolidate their resource base in order to maximize their financial resources (Satyanarayana et al., 2004). Publishers, suppliers, and content providers then realised that consortia-based licenses to e-resources might also benefit libraries and publishers, providing mutually beneficial agreements for both parties. (Landesman & Van Reenan, 2000). Publishers started publishing electronic journals on a trial basis, and by 1993's end., there were more than 3000 journals accessible in electronic formats (Evans 1995). Database licencing for the initial educational library consortium were funded by government incentives. The consortium-based subscription to e-resources to its member institutes are "Ohio Link (1990), The Virginia Virtual Library (VIVA) (1995), and Illinois Digital Academy Library (IDAL) (1999), etc. According to Metz (2000), the transformation from print to digital media was the only reason for the notable increase in library consortiums worldwide.

During the 1980s and 1990s, lots of articles were studied about the serial crisis or serial pricing crisis: access to e-resources versus ownership of e-resources, just in time purchasing versus just in case purchasing, library as warehouse versus the using a library as portal', etc (Miler, 2000). A significant turning point in the evolution of consortiums was the founding of the ICOLC in 1996. Throughout the years between 2000 and 2009, ICOLC enrollment rose by 56% (Turner, 2014). The consortiums created primarily to leverage purchasing power for The library's digital information sources as well as additional facilities and services are "NILRC (1973), RLDC (1996), CCLC (1998), VALE (1998), The Carolina Consortium (2004), and Wyoming Community College Library Consortium (2006). Westmoreland & Shirley (2004) and Evans (2002b) have carried out research on the historical development, growth, objectives, and current status of several

of the major academic consortia, such as TexShare (Texas), VIVA (Virginia), PALCI (Pennsylvania), Galileo (Georgia) and OhioLINK (Ohio). CARL in Colorado, IDAL in Illinois, Sailor in Maryland, MIRACAL in Missouri, CONZUL in New Zealand, CAUL in Australia, CRL in North America, NCLive in North Carolina, PORTALS in Portland, WRLC in Washington, CALICO, GAELIC, FRELICO, SEALS, CATNIP and The accessibility of electronic informational resources will make consortiums like EASEL in South Africa, CIC in South Asia, CURL in the United Kingdom, Manchester's CALIM, Britain's Concord, and New York's Metroweb Consortia much more important, she predicted, as there will be an increase in collaborative/cooperative library collections. With the same goals and driving forces—sharing library materials the most economical and effective way possible—the library consortium's offerings of product, services, activities, and capabilities are developing quickly. The three basic functions that most library consortiums perform include sharing of physical resources, giving users access to E-Resources, and INDEST-AICTE Consortium and Consortium for the UGC-INFONET. In India, it came into existence in the international scenario. Thornton (2000) investigates the effect of online resources on consortia-based subscription technological support to member institutes, including troubleshooting in addition off-campus access to E-Resources and discovery tools and services. According to Allen and Hirshon (1998), the expansion of library consortia represents the shift from organisational self-sufficiency to a collaborative survival mode, which is arguably the most significant development for academic libraries during the past ten years.

Review of Related Literature

The body of knowledge on library collaboration and consortiums is somewhat contemporary, extensive, and diversified in both quality and subject matter. National conferences and seminars on library collaboration in context of consortia were organized in India. In partnership with the Indian Library Association (ILA), ITALIS hosted a national seminar at Osmania University in March 2004 that looked into the social aspects of library consortia. On November 29 and 30, 2002, At the Indian Institute of Astrophysics (IIAB) in Bangalore, a discussion on library knowledge consortiums and digital journals was held. The seminar's main focus was on e-journal

consortiums. With the publication of "Library Consortia Management: An International Journal," the years 1996 to 2000 are seen as crucial to the development of library consortiums. The journal's internet accessibility was its standout quality. Because it reflected the importance of their readership, it was thought that library consortia were interested in expanding the accessibility of electronic material.

Mega Consortia International Coalition of Library Consortia

A significant development in the growth of academy (school, college and university) library consortia is information sharing by consortium leaders and library directors. They discovered that discussing issues and suggestions regarding the direction of their organisations and the collaboration, such as the cooperation of services to their members, was helpful. As a way to create common ground with information producers, ICOLC serves as a forum. To serve the interests and goals of its participants, it operates websites and online discussion forums. India has seen a number of studies on academic libraries consortiums. Consortia are important, and Pathak and Deshpande analyse their influence on society in 2004. It expounds mostly present consortium scenario. between university libraries, special libraries, and various technical institutions in India. Francis discussed the advantages of the library in 2005. A consortia isn't an brand-new concept. There have been cases where different libraries have deliberately joined forces for the sake of their users. It marked the infancy of library sharing, just the same as unions. Computer assisted networking become popular for resource sharing in the second step. The majority of the library's holdings were in conventional written form prior to this time. The networks created their own bibliographical databases. Through document delivery services, patrons of the cooperating libraries could obtain the necessary required informational documents from participating libraries. The idea of consortium has been brought up with the emergence of digital information resources, primarily for the purchase of digital information journals. The readers can now browse and retrieve the necessary materials because the majority of the resources purchased nowadays through the consortia and use to fulfil their informational need by the electronic resources. The late 1960s included the creation of the Ohio College Libraries Center (OCLC) as a

statewide computer network to pool resources and cut costs among 54 Ohio college libraries. Increasing growth in publication volume and expense, along with the shrinking library budget, have been the main drivers behind cooperation between libraries, particularly educational libraries. Sharing union catalogue data, storage space, collection growth, and human capital at both federal and provincial levels in the UAS has historically been a prevalent type of library collaboration. In 1990s, the web's growth presented libraries with new difficulties. During the time of print media, libraries would acquire and possess informational resource. Fair use is permitted by copyright which benefit scholarship for research, teaching and learning. The utilisation of library resources has changed in the digital age. Libraries purchase licences to utilise the content in accordance with contract law. With several participants, libraries get acquainted when a license is created. With improvements in ICT, there are more opportunities for information pooling and cooperative activities thanks to electronic publication.

Objectives of the study

- To know about Indian library consortiums
- To assess the library resources
- To know the growth of Indian library consortiums
- To know about new innovation in the progress of library consortiums

Limitation of study

This study is "A Study of Indian Library Consortiums." It is a broad topic, and its aspects are fully theoretical. In this study, only Indian Consortiums have been covered. There are a lot of consortiums around the globe, but in this research, only Indian-origin consortia were studied.

Scope and coverage

Information is taken into account as a vital source for communication and the diffusion of information in this modern era. Resource sharing between libraries is crucial to the institution's expansion and knowledge. Collaboration and content sharing in libraries fulfill the prerequisites of users' needs, and they are satisfied with the library's work.

Need of Library Consortium

Arora listed several factors supporting the development of library consortia and collaboration in 2005:

- Extensive access to E-Resources so that the participant library institution networks access E-Resources on the most favourable price and licence period of term and conditions.
- A cooperation is better positioned to address the problems related to managing, organizing and archiving the e-resources.

Research methodology

Indian Library Consortia are considered the universe of study. It is very difficult to collect data from the library consortium in India. These are UGC INFONET, INDEST, FORSA, HELINET, ERMED, CSIR, and CeRA. Data has been gathered from the respective websites to get information regarding the formation & expansion of something like the consortium. The

investigators created a criteria to assess and record the characteristics, features, and different types of services offered and the resources available via the consortiums. As a first phase in creating the criteria, comparable papers were examined. The topic's literature has been searched and reviewed to examine the consortium concept in nation. The conceptual and textual information related to the study were collected from professional journals, conferences, and articles.

Data Analysis and Interpretation

The action of filtering, converting, and modelling data in order to obtain pertinent information for decision-making is known as data analysis. To obtain usable insights from data and make choices based on that research analysis is the primary goal of data analysis

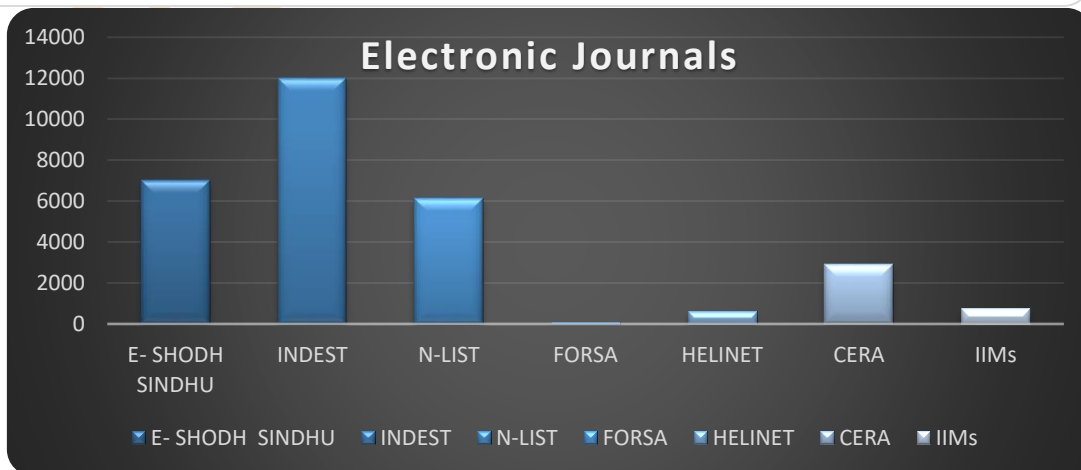
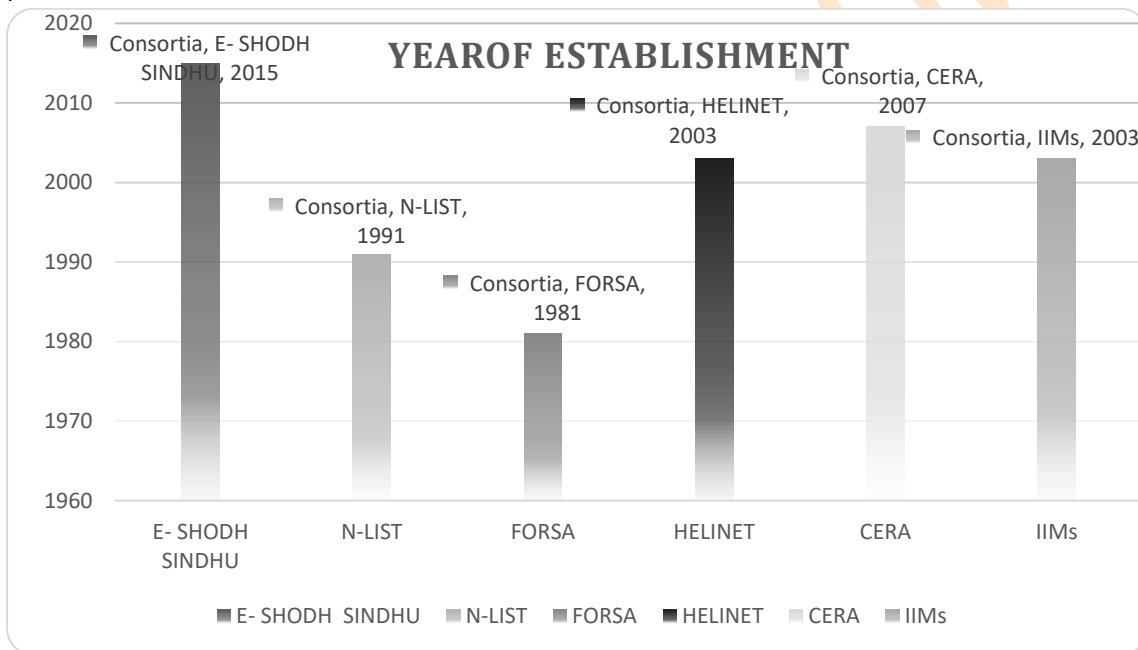


Figure No. 1: No. of Electronic information resources and Journals

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From the above chart, we can see that INDEST resources and journals as compared to other has a large number of electronic information consortiums as given in the chart.

LIST OF CONSORTIUM	ESTABLISHMENT YEAR
UGC INFONET	DECEMBER 2003
INDEST AICTE	DECEMBER 2000
N-LIST	2014
FORSA	1981
CeRA	NOVEMBER 2007
HELINET	2002
IIM'S Library Consortium	2000

Consortia's Name and URL	Year of establishment	Nam of organization providing fund	Members University/College/Institute	Head- office
UGC INFONET, INDEST-AICTE & N-LIST merged into Shodh Sindhu http://www.inflibnet.ac.in/econ It merged into e-Shodh Sindhu Consortium	2003 UGC and INFLIBNET	UGC and INFLIBNET	433 members 7500+journals	UGC INFONET INFLIBNET Centre, Infocity, Gandhinagar Gujarat
(Forum for Resource Sharing in Astronomy and Astrophysics) FORSA	1981 Raman Research Institute	Astronomical Society of India	11 Members E-books 13 Publications. Database:2	C.V.Rama n Avenue,Sada Shivnagar, Bangalore
CeRA (Consortium e-Resource in Agriculture) http://cera.iari.res.in/index.php/en	2007 ICAR	Department of Agricultural Research and Education	200+Agriculture /Animal Science University/15 Publisher	Indian Council of Agriculture Research, New Delhi
HELNET RGUHS Health Science Information Network http://www.rguhs.ac.in/helinet hostconsortium/homehelinethost.htm	2002 Rajiv Gandhi University of Health Science (RGUHS)	Ministry of Health & Family Welfare Government of India	660+Rajiv Gandhi University of Health Science 2000+ Publication	Rajiv Gandhi University of Health Science 4th "T" Block, Jayanagar, Bangalore

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ERMED http://www.ermед.in/default.aspx	AIIMS-National Medical Library, DELHI	Ministry of Health & Family Welfare	Medical colleges /Institutions including ICMR 243 Publications	National Medical Library-AIIMS Ansari Nagar, Ring Road, New Delhi
IIM'S LIBRARY CONSORTIUM Indian Institute Management http://www.iimk.ac.in/libportal/iimconsortium.php	2000 All Indian Institutions Of Management	MHRD & IIM Community	14 members IIM 1499 Publication	Vikram Sarabhai Library, IIM Ahemadabad Vastrapur, Gujarat
ICICI KNOWLEDGE PARK Now IKP http://www.ikpknowledgepark.com/	ICICI and the Govt. of A.P.	ICICI and Government of Andhra Pradesh	ICIC KP- (Knowledge Park) has 65 members	Knowledge Park Genome valley Hyderabad

Among the above list of consortia, UGC-INFONET, INDEST, and N-LIST were merged to form E-Shodh Sindhu based on the recommendation of MHRD. E-Shodh Sindhu is a premium consortium that will offer the latest in archival information resources, which include peer-reviewed journals, citations, and fact-checking resources databases covering various disciplines from a large number of publishers and aggregators. It offers services to academic institutions and also supports technical institutes. IIM consortia ensure the commonly subscribed journals and databases are available to the community for optimum utilization of resources at low cost. The consortia like UGC –INFONET, INDEST are centrally funded whereas FORSA, HELNET and IIM libraries are open consortia under a shared budget. At the same time, through Rajiv Gandhi University of Health Sciences, HELNET provides access to the electronic information sources for the many health science fields in the region of Karnataka. CeRA-Consortium is associated with agriculture libraries under ICAR (Indian Council of Agriculture Research). However, consortia like INDEST, UGC-INFONET, N-LIST, FORSA, HELNET, etc. are successfully working in India and helping the libraries expand their collections with E-Resources.

Importance of the Library Consortium

Some of the main advantages of the library collaboration include the following: Electronic resource subscriptions based on consortiums give

users access to a greater selection of materials at a significantly reduced price. Without compromising the uniqueness of any member library, it enables resource sharing across institutions. Each participating library in cooperation can facilitate scholarly study for its customers thanks to the holdings of the partnership's libraries.

- Optimal financial resource use.
- Resources for creating digital libraries.
- Beneficial for offering superior library services like CAS and SDI.
- Expense with technical and educational assistance Cooperative advancement and research in applications of ICT improves services and achieves cost savings.
- Stronger terms of utilization, archival access, and store/preservation have been made available for the digital materials that the consortium's subscribers have full rights to use according to their need.
- Having access to new digital information resources like huge online databases and services provided through the World Wide Web, remote access and the Internet allows libraries to deliver additional services.

The other advantages of academic library consortiums include cost reduction of library resources; an increase in usage of E-Resources; improved features of inter-library loan services; and effectual negotiation with the publishers (Woodsworth & Wall, 1991). The Consortium

enables participating libraries to access a multitude of electronic resources that individual libraries might not sign up by themselves. In a survey of Boston Library Consortium members, 71% stated that access to a greater variety of articles from various publishers was only possible and affordable through the consortium (2008). According to Allen and Hirshon (1998), library consortiums have the following advantages: By using consortia agreements, member libraries can share resources by interlibrary loaning existing collections or sharing the virtual union catalogue. Operational costs of member libraries can be reduced. Consortia put pressure on publishers to slow down the cost of subscription to their resources. It affects the future as to the way it will be presented, produced, disseminated, promoted, and subscribed to/purchased by libraries. Consortia also affect the issues related to pricing policies and copyright laws. The benefits of collaboration between libraries generally include better information accessibility, stretching limited resources, some gains generated by sharing results, increased service advertising to patrons, and improved working relationships among cooperating libraries (Evans 2002a). Stevens (2003) underlines advantages for consortia base purchasing that include higher quality content, economics of scale, lower costs, increased electronic access, higher stability in budget planning, and fewer individual deals within time constraints.

10. Drawbacks of Library Consortiums

The following are some downsides of consortiums:

- Journals' printed copies are nonexistent.
- Demand staff training on using electronic documents, etc.
- Cooperatives demand investing in ICT and licences.
- Copyright problems.
- Insufficient bandwidth, unstable Internet connections, and telecommunications links.
- The absence of back files and archiving.
- Users' motivations for accepting or rejecting electronically prepared publications.

Woods (1991) highlights various factors that prevent libraries from co-operating, such as higher expenses and lower remuneration; ineffective cost savings; lack of satisfaction; lack of proper administration and management; loss of self-sufficiency; clashing policies; lack of external grants; and competition between group fundraising and local deeds. Gorman and Cullen (2000) said it

is true that mainly four barriers affecting cooperative efforts: The desire for autonomy by the Consortium for the UGC-INFONET Digital Library is much greater than the number of centrally funded technical institutes served by the consortium known as INDEST-AICTE. As a result, the INDEST-AICTE Consortium's funding allotment is substantially lower than that of the UGC-INFONET Digital Library Consortium. Similarities in both the consortiums This can be attributed as a result of both consortia share/invite coordinators of each other to their participants in the International Steering Committees and Negotiation Committees.

Conclusion

The depth examination of usage, statistics revealed a persistent rise in downloads by core member institutes of the consortia. The study shows 36.33 and 23.59% annual growth in usage in the INDEST-AICTE Consortium and the UGC-INFONET Digital Library Consortium, respectively. Comparative usage statistics of consortia was analysed by measuring T test and by normalizing the usage statistics by how many journals are available to member institutes and how many members are there. Both the analyses it was observed that participants' use of electronic resources of the INDEST-AICTE Consortium is higher than the usage of E-Resources by those who are in collaboration of the UGC-INFONET Digital Library Consortium. Similarly cost avoidance and core recovery factor revealed that notional saving in addition cost recovered against total expenditure by INDEST-AICTE Consortium is higher than national savings and cost recovered by UGC-INFONET Consortium. The research output, in relation to the total number of publications of scientists and research scholars, is impacted by accessibility, availability, and convenience of using online materials. The only way is to see that transformation of knowledge in the collaborative era by working collaboratively for resource sharing. This is game changing initiative in the world of information and collaboration, Resource sharing of knowledge from various Informational institutions like libraries is possible only through a consortium.

References

1. Bansode, Sadanand Y. (2007) "Library consortia in India: Issues and prospectus.", International Journal of Scientific & Engineering Research, Vol.15,

- no.7, pp. 111-114.
2. Ghosh, Maitrayee. (2011) "Consortia and cooperation in Libraries: a review of literature.", Journal of studies in social sciences, Vol. 6 No. 1, pp. 23-30.
 3. Arora, Jagdish and Trivedi, Kruti. (2010) "UGC-INFONET Digital Library Consortium: Present Services and Future Endeavours" DESIDOC Journal of Library & Information Technology, Vol. No. 4, July, pp.709-713.
 4. Stojanovski, Jadranka and papic, Anita (2010) "INDEST-AICTE consortium: Present services and future Endeavorus, DESIDOC Journal of Library & Information Technology, Vol. 30 No. 4, pp.613-617.
 5. Haneefa, Mohamed., Aswathi Parameswaran K. (2018) "ICT Application in Academic Library Management "Library Consortia in India." Vol. 14, July, pp. 127-150.0
 6. Patil, Y.M., Birdie Christina, Bawdekar Nirupama, Barve Sunita. (2007) "Indian Consortia Models: FORSA Libraries's Experiences" PHI Learning Pvt. Ltd., pp. 342-343.
 7. Veeran Janexiu, K. and Kumar, Ravi, N.P. (2015) "Consortium For e-resources in Agriculture (Cera): A great Gateway o e-journals" Indian Journal of Information, Library & society, Vol 28, no 1-2, pp-110-116.
 8. Yernagula, Ramesh and Kelkaz P.K (2002) "Library consortia: Benefits and models of E-Journals consortia" Library review, vol 59, no. 4, pp.411-416.
 9. Bavakutty, M. and Azeez, Abdul (2006) "Library Consortia in India: Initiatives and concerns" Sreis journal of information Management, Vol. 43, No.2, pp. 177-184.
 10. Ojha, Sunil and Nitish Kumar (2017) "Library consortia in India at a glance" international Journal of Library and information science. Vol. 7, no. 3, pp. 246-254.