

Annual Report

April 1, 2015 to March 31, 2016



Information and Library Network Centre, Gandhinagar

Annual Report

(April 1, 2015 to March 31, 2016)



Information and Library Network Centre
Gandhinagar
2016

From the Director's Desk

Dr. Jagdish Arora
Director



It is my pleasant duty to present the Annual Report of the INFLIBNET Centre for the year 2015 – 2016. The year has been remarkable and eventful in terms of number and scope of additional projects and programmes, sheer volume of positive progress, their reach and impact. The detailed reports that follow this introductory provides ample evidence of such exceptional achievements that characterized agility and dedication of young team of scientists at the Centre.

During the year under report, three major projects, namely e-Shodh Sindhu, NIRF and ICSSR Data Repository were awarded to the INFLIBNET Centre. It is indeed a matter of pride and privilege that the task of operating and executing the **e-ShodhSindhu: Consortium for Higher Education e-Resources (CHEERs)**, formed by merging three existing national-level consortia namely, UGC-Infonet Digital Library Consortium, INDEST-AICTE Consortium and N-LIST is assigned to the INFLIBNET Centre. The process of negotiation of rates of subscription for all existing e-resources subscribed by the three consortia individually for the member institutions was carried out soon after the release of notification on formation of unified consortium. It was indeed a herculean task to negotiate rates of subscription for more than 40 e-resources catering to the diverse needs of various categories of institutions, i.e. colleges, universities and centrally-funded technical institutions. A detailed account on e-Shodh Sindhu and some of its major achievements are given in the report. However, larger agenda and objectives of the consortia spelled out in the report would be addressed during the year ahead.

The “ICSSR Data Service: Social Science Data Repository”, a project awarded to the INFLIBNET Centre by the ICSSR added a new dimension to the array of activities done by the Centre. Setting-up of social science data repository is culmination of signing of Memorandum of Understanding (MoU) between Indian Council of Social Science Research (ICSSR) and Ministry of Statistics and Programme Implementation (MoSPI) which, in turn, provides for setting-up of repository and hosting of NSS and ASI datasets generated by the Ministry into the repository. The first Meeting of the stakeholders for setting-up of ICSSR Data Repository was held at INFLIBNET Centre, Gandhinagar on 3rd July, 2015 wherein initial exploratory work done by the Centre on the project was demonstrated to the experts and road map for developing the repository in to a full-fledged data service was presented to the members. Plan of action to establish and launch the Repository was prepared during this meeting based on the advice of the experts. The Data Repository, designed using NADA, a open source software, hosts 33 datasets and is ready for launch.

The project on development of web-portal for the National Institutional Ranking Framework (NIRF), a prestigious initiative of the Ministry of Human Resource Development (MHRD), was awarded to the INFLIBNET Centre. The NIRF framework outlines a methodology to rank institutions of higher education across the country in different disciplines and categories. The core committee, set up by the MHRD, identified approximately 22 parameters under five major categories, namely, i) Teaching, Learning and Resources; ii) Research, Consulting and Collaborative Performance; iii) Graduation Outcomes; iv) Outreach and Inclusivity; and v) Perception.

The Centre developed web-based portal to capture data required for ranking of universities, colleges and other institutions desirous of ranking themselves in six categories, namely Engineering, Pharmacy, management, Architecture, Colleges and Universities. Besides, the Centre also created an Excel Utility to capture institutional data on various parameters offline and upload it on online Data Capturing System. The Centre also provided publications and citations data from Web of Science, Scopus and Indian Citation Index for more than 3,500 institutions who have applied for ranking themselves under NIRF. The Centre, with guidance of NBA, ranked research and teaching institutions (Category A) in Engineering, Management, Pharmacy and University. The India Ranking 2016 would be announced in the month of April 2016.

While taking new projects and schemes, it was ensured that our existing initiatives are not neglected. Shodhganga: a repository of full-text theses in Indian universities has grown by leaps and bounds during the year under report. As on 31st March, 2016, 260 universities have signed MoU on Shodhganga with the INFLIBNET Centre including 59 universities who signed the MoU during the financial year under report. Total numbers of theses deposited in the repository have grown to more than 72,000 including 35,200 theses that were uploaded during the year under report. A plagiarism detection platform is provided to eligible universities who are signatory to the MoU with the INFLIBNET Centre on Shodhganga. Urkund, one of the leading plagiarism detection software, is being provided to 143 universities under this scheme.

With active intervention of Additional Secretary and Vice Chairman, UGC, the activity of content creation continued with greater vigour and fervour under e-PG Pathshala project funded by the National Mission on Education through ICT. New features and functionalities were added to the open source Learning Management System used for hosting e-content created under the project as well as to the e-Pathshala Management System developed in-house to manage the administrative workflow as well as serve as a platform that facilitate interaction among the team members of each subject and track the work progress made by stakeholders. 67 Principal Investigators (PIs) identified for different subjects and their teams of paper coordinators and content creators contributed a large number of modules that were uploaded on to e-Pathshala LMS. As on 31st March, 2016, e-PG Pathshala hosted more than 5,635 e-texts, 1,957 videos in 724 papers and in 67 subjects involving more than 3,000 experts.

Although it is not possible to cover every project and programmes in my address, however, notable progress was made in all of them including Vidwan, SOUL software, e-Acharya, IndCat, Shibboleth-based access management system, etc.

With availability of excellent physical and ICT infrastructure, the Centre has re-committed itself to the task of imparting training to librarians and to nurture their library-related ICT-skills through training programmes, workshops and conferences. The Centre had released its Training Calendar in the

beginning of year wherein 30 training programmes were announced during the year on different library-related ICT-skills. During the year under report, 57 training programmes, workshops and seminars were organized at INFLIBNET Centre as well as in other universities and colleges in the country on topics ranging from SOUL 2.0, e-resource awareness, plagiarism detection, e-learning and content creation, creation and management of digital collections, content management system, bibliometrics and research output analysis, electronic theses and dissertations, cloud computing and virtualization, copy cataloguing, etc. These training programmes also included three National Workshops on Capacity Building Programmes for Public Library Professionals organized at the INFLIBNET Centre with funding from the National Mission on Libraries, Ministry of Culture. These programmes benefitted 6,061 library professionals and other users. A brief write-up on each of these workshops, training programmes and conferences are given in the report.

In addition, the Centre collaborated with Jawaharlal Nehru University and National Digital Library of Theses and Dissertations (NDLTD) for organizing ETD India 2015; the first International Symposium on Electronic Theses and Dissertations in India. The Symposium was organized between 4th & 6th November, 2015 at Convention Centre, Jawaharlal Nehru University, New Delhi on the theme on "Evolving Genre of ETDs for Knowledge Discovery". The main theme of the Symposium was further divided into four sub-themes, i.e. Managing ETDs, ETDs for Research & Development, Legal & Ethical Issues for ETDs and Tools & Technologies for ETDs. One of the sessions during the Symposium was devoted to Shodhganga and major activities and services by the INFLIBNET Centre related to ETDs.

The INFLIBNET Centre is privileged to work with JSTOR for organizing the JSTOR India Users Forum for six consecutive years. During the year under report, two JSTOR India Users Forum were organized for one day each at the North-Eastern Hill University and University of Kerala, Thiruvananthapuram on 6th and 9th October, 2015 respectively. Both the Forum were well-attended and highly appreciated for its content and for the presentations made by the experts.

6th University Forum was organized by the INFLIBNET Centre and Elsevier Science with Japan as partner country. The 6th University Forum focused on role of libraries in promoting research and scholarship. During the Forum, Prof. Ajit Kembhavi, Director, IUCAA and Chairman, National Steering Committee, UGC-Infonet Digital Library Consortium was felicitated for his remarkable contribution to UGC-Infonet Digital Library Consortium as well as for providing Internet connectivity to universities in the formative years of UGC-Infonet.

The Centre continued to maintain the websites of the UGC and Development of Grant Management System, e-Scholarship-Fellowship Award for the UGC. Interfaces for four scholarships / fellowships were developed during the year. Applications were invited and processed using these interfaces.

I am sure that the services of the Centre were delivered to the users in universities and colleges more efficiently and effectively during the year. The Centre is, however, open to receive suggestions and comments from the user community.



(Jagdish Arora)

Contents

From the Director's Desk	i
PART I: Introduction, Aims & Objectives, Governing Structure and Human Resources	1
1. Introduction	2
2. Mission and Vision	2
3. Aims and Objectives	3
4. Physical Infrastructure	5
5. Governance	5
6. Human Resources	6
7. Functional Group@ INFLIBNET Centre	6
Part II: Activities and Services of the INFLIBNET Centre	8
1. Automation of University Libraries	9
2. IndCat: Union Catalogue of Indian Universities	9
3. Research Projects Database	21
4. VIDWAN: Expert Database	22
5. SOUL 2.0	26
6. Human Resource Development & Consultancy	32
7. Consortia-based Subscription to E-resources	33
8. Open Access Initiatives	56
9. e-Learning and e-Content Development	67
10. Website Development & Maintenance	74
11. Shibboleth based Access Management System	76
12. Institutional Repositories Customizations and Support	76
13. ICSSR Data Service: Social Science Data Repository	77
14. National Institutional Ranking Framework (NIRF): India Ranking 2016	79
15. Revamping of the UGC Websites and Development of Grant Management System and e-SARTS	81
16. Publications	83
17. Awards, Honours and Distinctions	84
18. New Projects@INFLIBNET Centre	89
PART III: International and National Conference, Workshops, Seminars and Training Programme	91
Part IV: Infrastructure Facilities, Distinguished Visitors, Other Important Activities and Financial Status	128
1. Central Facilities	129
2. New ICT Infrastructure@INFLIBNET Centre	130
3. Academic Interaction with Universities and other Research Institutions	133
4. Other Notable Activities and Events	134
5. Distinguished Visitors	135
6. Right to Information (RTI) Act	136
7. Financial Status	136

Appendices

- Appendix I: Building Committee
- Appendix II: Governing Council
- Appendix III: Governing Board
- Appendix IV: Finance Committee
- Appendix V: Technical, Administrative and Supporting Staff
- Appendix VI: State-Wise List of the SOUL Installations
- Appendix VII: National Advisory Committee, e-Shodh Sindhu
- Appendix VIII: National Steering Committee (NSC), e-Shodh Sindhu
- Appendix IX: Negotiation Committee, e-Shodh Sindhu
- Appendix X: E-Resources Subscribed under e-Shodh Sindhu Consortium
- Appendix XI: Financial Status

PART - I

Introduction, Aims & Objectives, Governing Structure and Human Resources

1. Introduction

The Information and Library Network (INFLIBNET) Centre is an autonomous Inter-University Centre (IUC) of the University Grants Commission (UGC) located in the Infocity, Gandhinagar. Major activities and services of the Centre are geared towards modernization of academic libraries and information centres, promotion of information transfer and access, support scholarship, learning and academic pursuits. The Centre acts as a nodal agency for networking of libraries and information centres in universities, institutions of higher learning and R & D institutions in India. The Centre was established as an independent autonomous Inter-University Centre of the UGC in May 1996 and set out to be a major player for promoting scholarly communication among academicians and researchers across the country.

The technology being a driving force in the contemporary education system, the Centre has taken-up a number of initiatives for the benefit of the academic community in India. These initiatives include i) IndCat, a unified online catalogue of books, theses and journals available in major university libraries in India; ii) SOUL 2.0, state-of-the-art integrated library management software; iii) e-Shodh Sindhu for extending access to selected scholarly electronic journals and databases to eligible universities, centrally-funded technical institutions and colleges in different disciplines; iv) Shodhganga for enabling online submission of doctoral theses and dissertations by research scholars in an open access digital repository; v) Shodhgangotri for facilitating research scholars to submit approved synopsis of research proposals submitted to their universities; vi) Open Journals Access System (OJAS) to facilitate faculty and researchers in Indian universities to launch their open access journals on OJAS platform; vii) InfoPort: INFLIBNET's Subject Gateway for Indian Electronic Resources; viii) e-PG Pathshala, a project assigned to the UGC by NME-ICT, wherein e-content are being developed in 77 subjects at postgraduate level; ix) VIDWAN, a premier database of profiles of scientists and faculty members working in leading academic institutions and other R & D organisations involved in teaching and research in India; x) e-Acharya - an Integrated e-content portal: a web-based portal consisting of all e-content with funding from NME-ICT, MHRD; xi) ICSSR Data Service: Social Science Data Repository for setting up of repository and hosting of NSS and ASI datasets into the data repository; and xii) National Institutional Ranking Framework (NIRF), a project assigned by MHRD for ranking institutions of higher education across the country.

2. Mission and Vision

- » Leveraging on the latest technology, create a virtual network of people and resources in academic institutions with an aim to provide effective and efficient access to knowledge through perseverance, innovation and collaboration;
- » Provide seamless, reliable and ubiquitous access to scholarly, peer-reviewed electronic resources to the academic community in all educational institutions with a focus on services

and tools, processes and practices that support its effective use and increase value of this information;

- » Build and strengthen ICT infrastructure in educational institutions with value-added services;
- » Develop tools, techniques and procedures for secure and convenient access management enabling users to access information in electronic format from anywhere, anytime;
- » Develop resource selection guides and online tutorials for effective delivery and usage of e-resources; and
- » Facilitate creation of open access digital repositories in every educational institution for hosting educational and research content created by these institutions.

3. Aims and Objectives

The objectives of the Centre, as per the Memorandum of Association (MoA), are as follows:

- a. to promote and establish communication facilities to improve capability in information transfer and access that provide support to scholarship, learning, research and academic pursuits through cooperation and involvement of concerned agencies;
- b. to establish information and library network - a computer communication network for linking libraries and information centres in universities, deemed to be universities, colleges, UGC information centres, institutions of national importance and R&D institutions, etc. avoiding duplication of efforts;
 - » to promote and implement computerization of operations and services in the libraries and information centres of the country following uniform standards;
 - » to evolve standards and uniform guidelines in techniques, methods, procedures, computer hardware and software, services and promote their adoption in actual practice by all libraries, in order to facilitate pooling, sharing and exchange of information towards optimal use of resources and facilities;
 - » to evolve a national network interconnecting various libraries and information centres in the country and to improve capability in information handling and services;
 - » to provide reliable access to document collection of libraries by creating online union catalogue of serials, theses / dissertations, books, monographs and non-book materials (manuscripts, audio-visuals, computer data, multimedia, etc.) in various libraries in India;

-
- »» to provide access to bibliographic information sources with citations, abstracts, etc. through indigenously created databases of the Sectoral Information Centres of NISSAT, UGC Information Centres, City Networks and such others and by establishing gateways for online accessing of national and international databases held by the national and international information networks and centres, respectively;
 - »» to develop new methods and techniques for archiving of valuable information available as manuscripts and information documents in different Indian languages, in the form of digital images using high density storage media;
 - »» to optimize information resource utilization through shared cataloguing, inter-library loan service, catalogue production, collection development and thus avoiding duplication in acquisition to the extent possible;
 - »» to enable the users dispersed all over the country, irrespective of location and distance, to have access to information regarding serials, theses/dissertation, books, monographic and non-book materials by locating the sources wherever available and to obtain it through the facilities of the INFLIBNET and union catalogues of documents;
 - »» to create databases of projects, institutions, specialists, etc. for providing online information services;
 - »» to encourage co-operation among libraries, documentation centres and information centres in the country, so that the resources can be pooled for the benefit of helping the weaker resource centres by stronger ones; and
 - »» to train and develop human resources in the field of computerized library operations and networking to establish, manage and sustain INFLIBNET;
- c. to facilitate academic communication amongst scientists, engineers, social scientists, academicians, faculty, researchers and students through electronic mail, file transfer, computer/audio/video conferencing, etc;
 - d. to undertake system design and studies in the field of communications, computer networking, information handling and data management;
 - e. to establish appropriate control and monitoring system for the communication network and organize maintenance;

-
- f. to collaborate with institutions, libraries, information centres and other organizations in India and abroad in the field relevant to the objectives of the Centre;
 - g. to promote R&D and develop necessary facilities and to create technical positions for realizing the objectives of the Centre;
 - h. to generate revenue by providing consultancies and information services; and
 - i. to do all other such things as may be necessary, incidental or conducive to the attainment of all or any of the above mentioned objectives.

4. Physical Infrastructure

The Centre moved to its new institutional building constructed on land measuring 10,000 Sq. Mtrs in Infocity, Gandhinagar. The Centre is located amidst reputed institutions such as NID, DA-IICT and NIFT. The building, consisting of Administrative, Academic and Residential Blocks, is designed by internationally acclaimed architect and renowned academician Dr. Balkrishna V Doshi of Vastu-Shilpa in consultation with other experts in the field of sustainable, eco-friendly and energy-efficient building. The building is furnished tastefully by M/s Godrej. It is partially air-conditioned and partially air-cooled following tenets of a green building. The current composition of the Building committee is given in Appendix I.

5. Governance

The Centre is governed by its Governing Board and Governing Council. The Finance Committee, a subcommittee of the Governing Board, looks after the financial aspects of the Centre. Constitution and major responsibilities of these three committees are mentioned below:

5.1. Governing Council

Governing Council (GC) is an apex body of the Centre chaired by its President, ex-officio Chairman of the UGC. The Council has seven ex-officio members and three nominated members. The members of the Governing Board are also members of the Council. As such, total number of members of the Council is twenty-one. The nominated members of the Council serve for a term of 3 years. The Director, INFLIBNET is the Member-Secretary of the Council. The Council meets once in a year. The present members of the Governing Council are listed in Appendix II.

5.2. Governing Board

Governing Board (GB) manages, administers, directs and controls the affairs of the Centre as per Rules and Bye-laws of the Centre. The Governing Board is headed by a Chairperson, who is an

eminent academician in the areas of relevance to the Centre and is appointed by the President of the Council. The Governing Board has six ex-officio members and seven nominated members who are nominated by the Chairman, UGC. The Director, INFLIBNET is the Member Secretary of the Board. The Governing Board meets at least twice in a year. The current members of the Governing Board are listed in Appendix III.

5.3. Finance Committee

The Finance Committee (FC) is a sub-committee of the Governing Board and consists of seven members. It has three ex-officio members and four nominated members. The Chairman of the Governing Board is also the Chairman of the Finance Committee. The Administrative / Accounts Officer of the Centre is the Non-member Secretary of the Committee. The Finance Committee makes recommendations to the Governing Board on i) Budget proposals of the Centre; ii) Scrutiny of the Audited Accounts and replies to the annual Audited Report; iii) Approval of sanctioned and additional positions; and iv) any other matter on which the Board seeks its recommendations. The Finance Committee meets at least once a year. The minutes of the Committee, after approval by the Governing Board are forwarded to the UGC for examination, approval and release of grants to the Centre. The members of the current Finance Committee are listed in Appendix IV.

6. Human Resources

The Centre employs administrative, scientific and technical personnel for achieving its defined objectives. The technical personnel are mostly qualified in library, information and computer sciences. A list of technical, administrative and supporting staff of the Centre as on 31st March, 2016 is given in Appendix V.

7. Functional Group@ INFLIBNET Centre

The scientific and technical manpower available in the Centre are clustered into the following working groups based on functional requirements of the Centre.

- Database Management and R & D Group;
- Software R & D;
- HRD;
- E-Resource Management Group;
- Open Access R & D Group;
- e-Learning and e-Content Development;
- Web Services R & D Group;
- Access Management Group; and
- Open Source Software.

Major R&D and human resource development activities are undertaken according to the requirements of the library and academic community including students, faculty and research scholars. Major scientific and technical activities undertaken of these functional group during the period under report are given in Part II of this report.

Part - II

Activities and Services of the INFLIBNET Centre

1. Automation of University Libraries

The University Grants Commission, on recommendation of the INFLIBNET Centre, had supported 142 universities during IX Plan period and 24 universities during XI/XII Plan periods for automation of their libraries with software and training support from the INFLIBNET Centre. The total funds allocated to 24 universities for automation of their libraries during XI/XII Plan period is Rs. 195.60 lakhs including Rs. 6.50 lakhs for purchase of equipment (PCs, servers, accessories, scanner, etc.) and Rs 1.65 lakhs recurring grant for five years for each of the 24 universities. The Centre proactively helped these universities to automate their libraries.

2. IndCat: Union Catalogue of Indian Universities (<http://indcat.inflibnet.ac.in/>)

A brief description of three components of the union catalogue i.e. books, theses and serials maintained by the Centre is given below. Figure 1 depicts current interface of the IndCat.

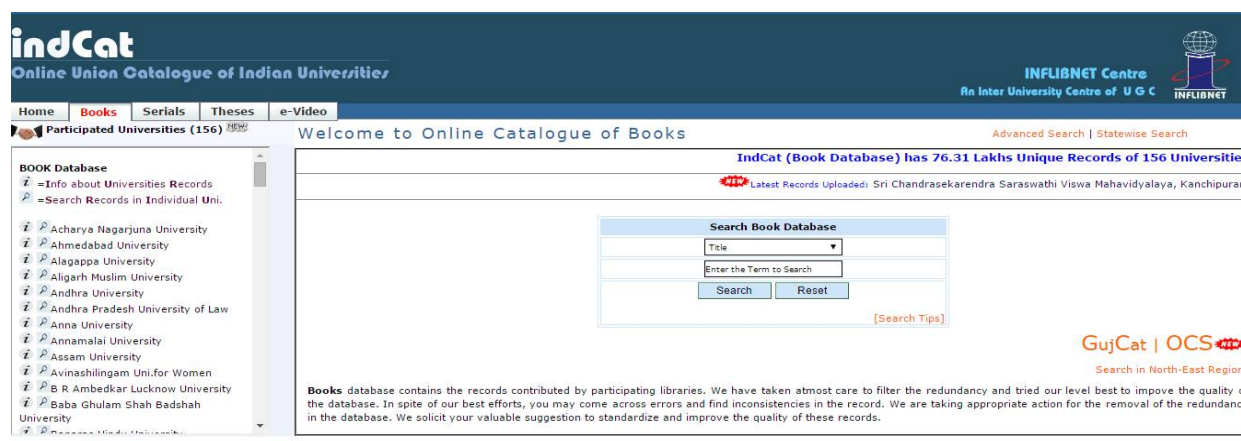


Fig. 1: Search Interface for Books, Theses, Serials & Video Databases

Figure 2 displays bibliographical details with MARC Tag

Detail	Marc View	Marc Tag view
<pre>0000000cam a2200000ua 4500 001 101758 003 INFLIBNET 008t1995 000 eng c 016 aINFLT00000101758 0410 aeng 0500 a010 020 cJNUL-110067 aJawaharlal Nehru University d13/01/2011 00:00:00 502 bPh.D cJawaharlal Nehru University d1995 260 aNew Delhi bJawaharlal Nehru University c1995 65300 aPhysical Sciences 65300 aEngineering 24510 aLabeled graphs and matrices: automation to real 1100 aDepartment of Engineering bJawaharlal Nehru University dNew Delhi 044 eIn 700 aNambiar bK K eGuide 1000 aSaroj bVandana eResearcher 3620 a1995</pre>		

Fig. 2: Bibliographical Details in MARC Format

2.1. Union Catalogue of Books

Abhishek Kumar, Scientist C (CS)

Vaishali Shah, Scientist B (LS)

Dharmesh Shah, STA (CS)

Seema Chavda, Project Officer (LS)

The Union Catalogue of Books covers bibliographic records of books contributed by the different universities in India. The centre has received 1,39,91,556 bibliographic records from 178 universities, out of that 80.68 lakhs unique records are available in IndCat Book Data. It covers bibliographic details of textual documents, reference books, conference, proceedings, monograph etc.

2.1.1. Process for Building IndCat

Process of building IndCat commences with creation of bibliographic records in participating university libraries and their receipt at the INFLIBNET Centre. Steps involved in building of IndCat database is as follows:

Step 1. INFLIBNET Centre receives bibliographic records from Indian universities in different formats, such as MS-Excel, MS-Access, Dbase / Foxpro, CDS/ISIS, WIN ISIS, MS-SQL Backup, CCF, MARC, LibSys, SOUL 2.0, etc.

Step 2. Records received in different formats are converted into Common Communication Format (CCF) (by Tag Mapping using CDS/ISIS Software).

Step 3. All records go under the process of authentication, using Union Catalogue Management System (UCMS) software for editing typographical errors in various fields such as place, publisher, edition, year of publication, etc. in addition to duplicate checking and merging of these records into Indian Catalogue IndCat.

Figure 3 depicts process of building IndCat.

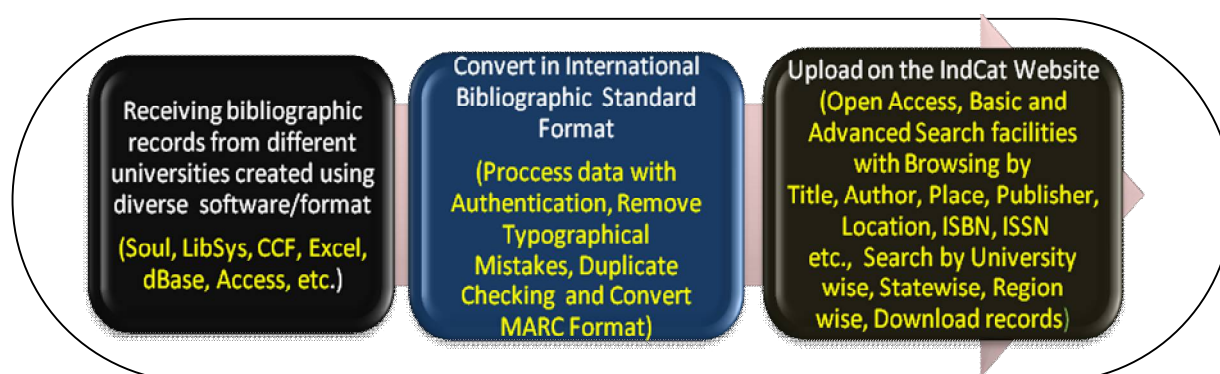


Fig. 3: Process Involved in Building IndCat

Searches can be performed on title, words in title, author, subject, ISBN, location, place and publisher in the union database of books through IndCat interface. The IndCat interface facilitates restricting the search to collections available within an individual university as well as for expanding the search to universities in a given state. By default, the interface searches all bibliographic records of documents available in IndCat for all the participating universities. The search results retrieved from the IndCat can be displayed in the following two formats:

- » **Brief:** By default, retrieved records are displayed in brief. A brief bibliographic record contains title, authors, place, publisher and year of publication.
- » **Descriptive:** A detailed descriptive record contains complete bibliographic details of a book including its location. It is a second-level display that appears when a user clicks at the brief record. The descriptive record also provides option for ILL request. Figure 4 depicts bibliographic details of searched records.

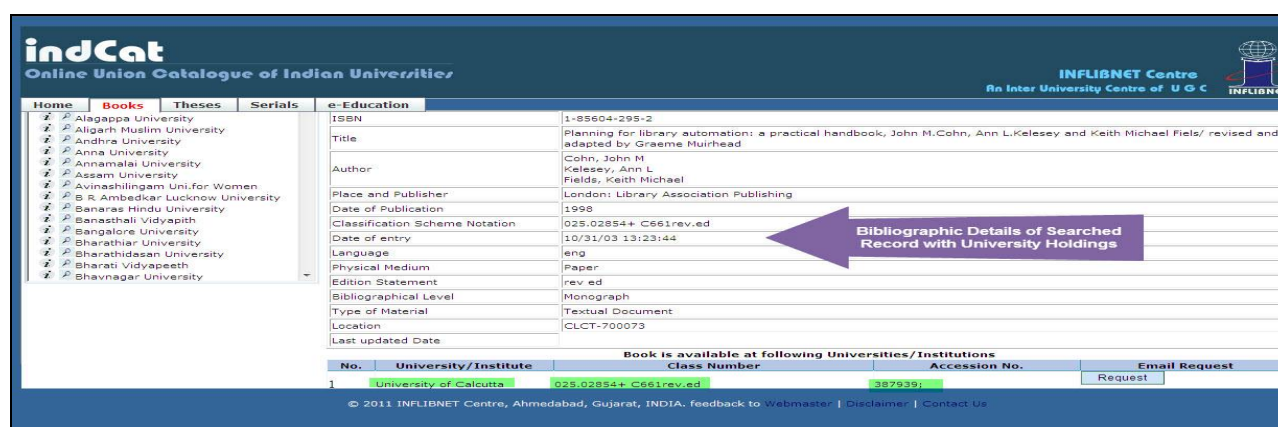


Fig. 4: Bibliographic Details of a Searched Record

2.1.2. Functions and Features of IndCat

i) Restrict Search within a University / State

Searches in Union Catalogue, by default, is conducted on the entire database containing records of documents from all universities. Users can restrict their searches to the records of documents available within their own university on different search parameters like Title, Subjects, Authors, Place, Publisher, etc.

State wise Search: User can search the book database within a State by Title, Authors, ISBN etc.

Advanced Search: Advanced search facilitates use of boolean operators i.e. AND, OR, NOT operators with different search parameters i.e. Title, Authors, Corporate Body, Place & Publisher, Year, Subjects, Notes, ISBN.

ii) Copy Cataloguing

The copy cataloguing feature of the IndCat facilitates downloading of bibliographic records in MARC21, CCF or ASCII format. The downloaded bibliographic records can be imported to any library management software compliant to MARC21 bibliographic format including SOUL 2.0. Effectively, librarians / cataloguers can copy-catalogue bibliographic records of books instead of creating a new record which is a time-consuming and cost-intensive process.

iii) Union Catalogue of Books: Subsets

The union catalogue of books has two subsets namely GujCat and NERCat that are separately designed on demand of the concerned regions:

- » The **GujCat**, a subset of IndCat, is unified online library catalogue of books available in major college/institute/university libraries within Gujarat state. GujCat contains bibliographic description, location and holding information of books available in libraries in Gujarat. A separate dedicated web-based interface is designed to provide easy-access to the merged catalogues of libraries in Gujarat. GujCat is a major source of bibliographic information that can be used for inter-library loan, collection development as well as for copy cataloguing and retro-conversion of bibliographic records within Gujarat.
- » The **NERCat**, an online catalogue of books in universities in North-Eastern Region, is another subset of IndCat. NERCat is designed and implemented to restrict searching of bibliographic records to university libraries in North-Eastern region so as to promote resource sharing amongst university libraries in North-Eastern region.

2.1.3. Bibliographical Records for Books Added during Year 2015-2016

During the period under report, the Centre has received bibliographic records of 21 universities created using different library automation software for merger in IndCat, as per the details given in Table 1:

Sl. No.	University Name	Received Records	Date	Software/ Format
1	Gujarat National Law University, Gandhinagar, Gujarat	10,173	Apr-15	Libsys (MARC)
2	Central University of Jammu, Jammu, Jammu & Kashmir	11,147	May-15	MS-Excel
3	Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal, Madhya Pradesh	71,930	Jul-15	KOHA (MARC)
4	University of Lucknow, Lucknow, Uttar	4,889	Jul-15	Soul 2.0 (MARC)

	Pradesh			
5	Dev Sanskriti Vishwavidyalaya, Haridwar, Uttarakhand	30,435	Aug-15	Soul 2.0 (MARC)
6	Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya, Kanchipuram, Tamil Nadu	35,780	Aug-15	MS-Excel
7	Space Application Centre (ISRO), Ahmedabad, Gujarat	31,563	Aug-15	Libsys (MARC)
8	The English and Foreign Languages University, Hyderabad, Telangana	1,04,966	Aug-15	NewGenlib (MARC)
9	Awadhesh Pratap Singh University, Rewa, Madhya Pradesh	44,269	Sept-15	Soul 2.0 (MARC)
10	University of Mysore, Mysuru, Karnataka	2,06,060	Sept-15	KOHA (MARC)
11	Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan, Haryana	43,467	Oct-15	MS-Excel
12	Ravenshaw University, Cuttack, Odisha	59,215	Nov-15	E-Granthalaya (MARC)
13	Jawaharlal Nehru Technological University, Hyderabad, Telangana	33,053	Nov-15	VTLS (MARC)
14	Birla Institute of Technology, Mesra, Ranchi, Jharkhand	1,44,469	Nov-15	Libsys (MARC)
15	National Law School of India University, Bangaluru, Karnataka	40,556	Dec-15	MS-Excel
16	University of Rajasthan, Jaipur, Rajasthan	1,37,945	Dec-15	Libsys (MARC)
17	Tripura University, Agartala, Tripura	488	Feb-16	KOHA (MARC)
18	Janardan Rai Nagar Rajasthan Vidyapeeth University, Udaipur, Rajasthan	853	Feb-16	Soul 2.0 (MARC)
19	Dr. Harisingh Gour Vishwavidyalaya, Sagar, Madhya Pradesh	32,516	Feb-16	MS-Excel
20	Dr. Babasaheb Ambedkar Technological University, Lonere, Maharashtra	37,900	Feb-16	MS-Excel
21	Mudra Institute of Communications Ahmedabad (MICA), Ahmedabad, Gujarat	11,521	Mar-16	WINISIS (CCF)
	Total Records Received	10,93,195		

Table 1: Details of Bibliographic Records Received from Twenty One Universities

Details of merged bibliographic records of eleven universities in IndCat using UCMS software is given below in Table 2:

Sl. No.	University Name	Received Records from different Universities	*Duplicate Records within University	#Matched Records with IndCat Book Data	+Merged Records with IndCat Book Data
1	Dravidian University, Kuppam, Andhra Pradesh	32,768	38	430	32,258
2	Central University of Jammu, Jammu, Jammu & Kashmir	11,147	132	3,769	7,243
3	Indian Institute of Advanced Studies, Shimla, Himachal Pradesh	1,36,960	25,061	24,260	87,606
4	Gujarat National Law University, Gandhinagar, Gujarat	10,173	1,845	19	8,300
5	Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya, Kanchipuram, Tamil Nadu	35,780	20,116	76	15,576
6	Dev Sanskriti Vishwavidyalaya, Haridwar, Uttarakhand	30,461	9,480	0	20,981
7	The English and Foreign Languages University, Hyderabad, Telangana	1,04,966	629	5,398	96,095
8	Space Application Centre (SAC), Ahmedabad, Gujarat	31,563	80	1,294	30,183
9	University of Mysore, Mysuru, Karnataka	2,06,060	23,848	11,936	1,10,567
10	University of Rajasthan, Jaipur, Rajasthan	1,46,588	4,193	4,370	1,26,730
11	Jawaharlal Nehru Technological University, Hyderabad, Telangana	33,053	984	2,041	28,883
	Total Records			53593	5,64,422

*Records already exist in same university i.e. multiple copies

#University's records already exist in IndCat Database, only holding information is updated

+Merged records are added to IndCat Database i.e. unique records

Table 2: Merged Bibliographic Records of Eleven Universities in Union Database (IndCat)

Details of updated bibliographic records of thirty four universities for IndCat Book Data are given in Table 3:

Sl. No.	University Name	Updated Records
1	Acharya Nagarjuna University, Guntur, Andhra Pradesh	46,298
2	Aligarh Muslim University, Aligarh, Uttar Pradesh	1,77,976
3	Assam University, Silchar, Assam	41,491
4	Birla Institute of Technology and Science, Pilani, Rajasthan	71,327
5	Chaudhary Charan Singh University, Meerut, Uttar Pradesh	21,952

6	Dr. B R Ambedkar Open University, Hyderabad, Talangana	6,297
7	Gujarat Vidyapith, Ahmedabad, Gujarat	1,21,848
8	Hemchandracharya North Gujarat University, Patan, Gujarat	40,466
9	Himachal Pradesh University, Shimla, Himachal Pradesh	32,754
10	Jamia Hamdard University, New Delhi	58,514
11	Jamia Milia Islamia, New Delhi	9,773
12	Kannur University, Kannur, Kerala	5,655
13	Mahatma Gandhi University, Kottayam, Kerala	31,968
14	Maulana Azad National Urdu University, Hyderabad, Telangana	21,042
15	Mother Teresa Women's University, Kodaikanal, Tamil Nadu	16,666
16	North Maharashtra University, Jalgaon, Maharashtra	44,402
17	Periyar University, Salem, Tamil Nadu	39,272
18	Potti Sreeramulu Telugu University, Hyderabad, Telangana	33,476
19	Rajiv Gandhi University, Itanagar, Arunachal Pradesh	15,608
20	Rashtriya Sanskrit Vidyapeetha, Tirupati, Andhra Pradesh	37,233
21	Sambalpur University, Sambalpur, Odisha	17,189
22	Sant Gadge Baba Amravati University, Amravati, Maharashtra	60,940
23	Sardar Patel University, Vallabh Vidyanagar, Gujarat	97,576
24	Shri Mata Vaishno Devi University, Jammu, Jammu & Kashmir	312
25	Sri Chandresekharendra Saraswati Viswa Mahavidyalaya, Kanchipuram, Tamil Nadu	31,144
26	Sri Sathya Sai Institute of Higher Learning, Puttaparthi, Andhra Pradesh	41,800
27	Tezpur University, Tezpur, Assam	32,160
28	Thapar University, Patiala, Punjab	38,855
29	The WB National University of Juridical Sciences, Kolkata, West Bengal	18,283
30	University of Burdwan, Burdwan, West Bengal	48,297
31	University of Hyderabad, Hyderabad, Telangana	1,21,443
32	University of Kashmir, Srinagar, Jammu & Kashmir	2,06,493
33	University of Madras, Chennai, Tamil Nadu	50,000
34	University of North Bengal, Siliguri, West Bengal	68,949

Table 3: Updated Bibliographic Records of Thirty Four Universities for Union Database (IndCat)

Table 4 given below provides holding records added to the Union Database of Books during the period under report:

Sl. No.	Details	No. of Records added During the year 2015-2016
1	Unique Records	5,64,422
2	Holding Records	53,593

Table 4: Bibliographic Records Authenticated and Merged in Union Database (IndCat)

2.1.4. Growth of the Union Catalogue of Books

Building and maintaining a union catalogue is an ongoing activity involving collaboration of all participating libraries. The Union Catalogue of Books is essentially an outcome of financial and logistic support that was extended to the participating universities by the Centre for creating bibliographic records of their library collections. With initial financial incentives backed-up with logistic support in terms of training on integrated library management software including SOUL, the union Catalogue of Books has witnessed a rapid growth. The union catalogue of books has grown from 6.5 lakh records in 1999 to 139 lakh records in 2016 as depicted in Table 5 and Figure 5 given below:

Year	Received Records (in lakhs)	Unique Records (in lakhs)
1999	6.5	2.7
2003	12	5.8
2007	82	30.3
2011	119	61.8
2013	127	73
2014	128	74
2015	131	75.7
2016	139	80.68

Table 5: Growth in No. of Bibliographic Records in IndCat from 1999 to 2016

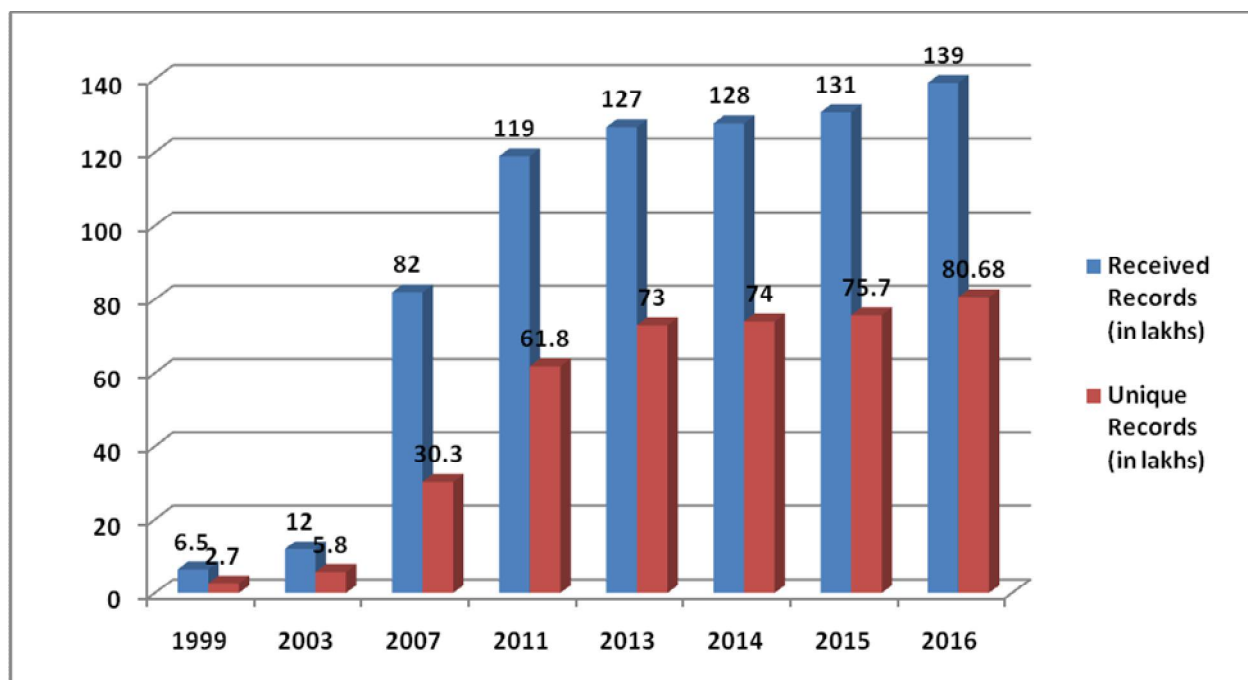


Fig. 5: Growth of Union Catalogue of Books

The union catalogue of books has bibliographic records of documents available in libraries of 178 contributing universities. Category-wise participated university list is depicted in Table 6 and Figure 6 given below:

Categories-wise University List	No. of Univ.
12 (B) / 2 (f) State Universities	110
Central Universities	23
Deemed Universities (Receiving Plan Grants from UGC)	20
Centrally Funded Technological Institute	7
2 (f) State Universities	6
Deemed Universities	4
Open University	1
Private Universities	2
Others	5
Total Participated Universities	178

Table 6: Category-wise Participated Universities

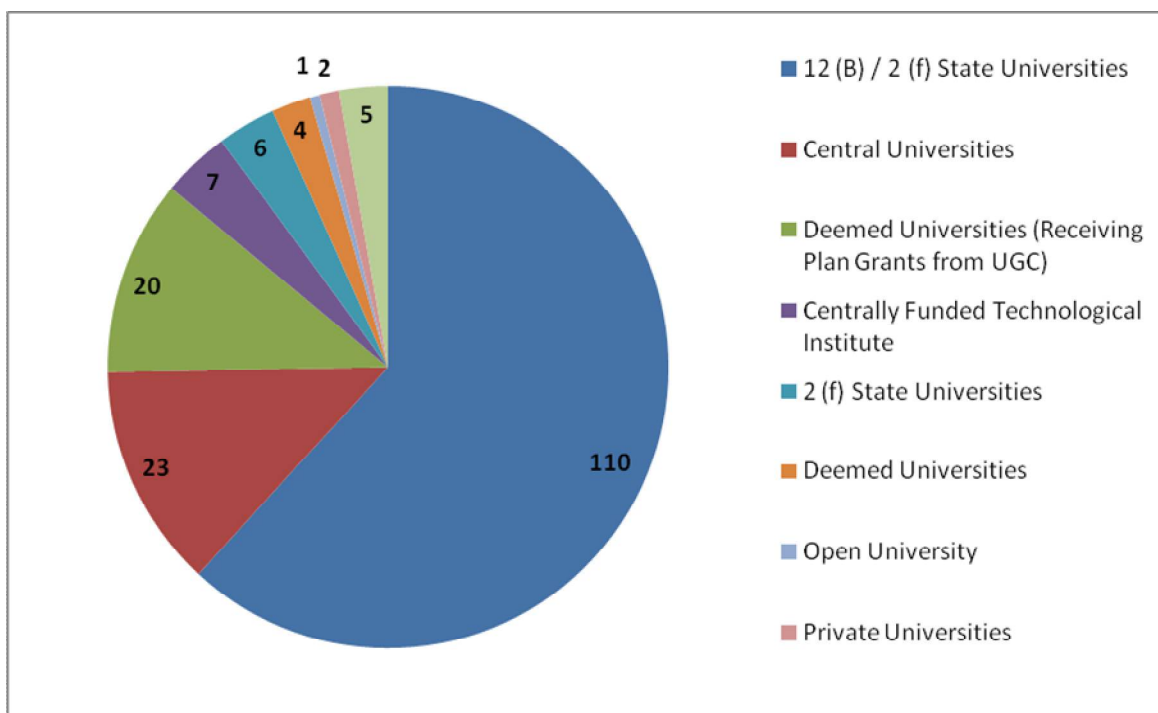


Fig. 6: Category-wise Participated Universities

2.1.5. Online Copy-Catalogue System (OCS)

The Centre has developed application software called “**Online Copy-Catalogue System**” (OCS) to promote co-operative cataloguing and avoid duplication of efforts. The interface called “Online Copy Catalogue System (OCS)” is a window-based application that facilitates libraries to interact with the Union Catalogue of Books (IndCat) and catalogue their new acquisitions online. The OCS, on one hand, facilitates libraries to search and browse bibliographic records of documents available in IndCat and download selected records directly into SOUL 2.0 or any MARC21 compliant software. The holding information for the bibliographic record being downloaded from the IndCat gets updated automatically in the process. On the other hand, the interface facilitates creation of a new record for a document that is not available in the IndCat. This new record gets saved into local integrated LMS as well as into the IndCat simultaneously. Besides, online cataloguing and copy cataloguing, the interface also facilitates bulk uploading and downloading of bibliographic records of books. More details on OCS are available at:

http://indcat.inflibnet.ac.in/includes/UserGuide_OCS.pdf

2.1.6. Major Works during Financial Year 2015-2016

- » 21 universities have contributed their bibliographic records first time for IndCat book database;
- » 11 universities bibliographic records have been checked, authenticated, converted and merged with IndCat;

-
- » 34 universities have contributed their updated bibliographic records;
 - » The Centre launched beta version of “Theses and Serials Databases” on a new platform for fast access including faceted search and filtered search on different parameters, i.e. university-wise, department-wise, subject-wise, publisher-wise, etc. and combination of these parameters. The Centre launched beta version of union catalogue on a new platform which includes all databases i.e. book, theses, serial and CEC’s Video records. Through this version, universities may update their records directly by login into system; and
 - » Features and functionalities of UCMS were further enhanced. Significant improvements were made in the process of merging of bibliographic data and process of exporting bibliographic records from CCF to MARC format with holding details i.e. university location etc.

2.2. Union Catalogue of Serials

Dinesh Ranjan Pradhan, Scientist B (LS)

The INFLIBNET Centre maintains union database of serials that provides bibliographic information of journals subscribed in various universities and maintains the information in three categories, namely Serials Holdings and Current Serials and e-journals. “Serials Holdings” provides data on library holdings, i.e. back files of journals, whereas, the “Current Serials” provides titles of the serials that are currently subscribed by the universities in print format and “e-journals” that are: i) currently subscribed by the participating universities in electronic formats; ii) journals subscribed under the e-Shodh Sindhu in electronic format; and iii) serials available in open access mode.

The Serials Database includes bibliographic information of serials (including journals, periodicals, annuals and serials) available in 223 universities / institute libraries along with its holdings information (includes available and missing volumes of the journals) in participating libraries. The serial database has over 35,248 unique titles with holdings information for 223 universities. Each bibliographic record for serials contains title, publisher, frequency, year of publication, homepage URL and subject headings along with holdings details and names of the universities.

2.3. Union Catalogue of Theses

Abhishek Kumar, Scientist C (CS)

Miteshkumar Pandya, Scientist B (LS)

Dharmesh Shah, STA (CS)

Alpa Acharya, Project Associate (LS)

The Union Catalogue of Theses consists of bibliographic records of doctoral theses submitted to the universities in India. The database contains 2,69,195 unique bibliographic records of the theses awarded by 315 Indian universities / institutions of higher learning in all disciplines. The bibliographic records of theses are contributed by participating universities. Besides, records in the database have also been collected from other reliable sources such as notification from universities, University

News and Records submitted by the individual researchers, etc. Figure 7 depicts web interface for Union Catalogue of Theses Database.

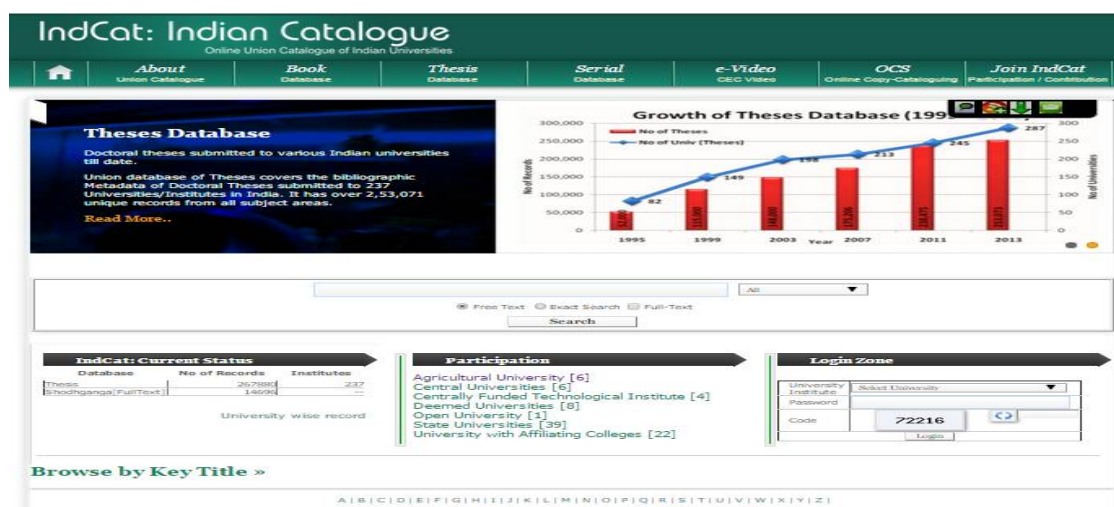


Fig. 7: Union catalogue of Thesis Database Interface

The compilation of Union Catalogue of Theses commenced in 1995 with 52,000 bibliographic records of theses from 82 universities. The database has grown to 2,69,195 records of theses as on 31st March, 2016 from 315 universities over a period of 22 years.

The Centre receives a copy of notification on award of Ph.D. theses from different universities across the country. Table 7 and Figure 8, given below depict growth of theses database from 1995 to March 2016.

Year	No. of Universities	No. of Records
1995	82	52,000
1996	95	65,000
1997	110	72,000
1998	134	90,000
1999	149	1,15,000
2000	160	1,28,000
2001	172	1,35,000
2002	189	1,42,000
2003	198	1,48,000
2004	209	1,52,000
2005	211	1,71,176
2006	213	1,75,206
2007	213	1,75,206
2008	237	2,20,206
2009	237	2,20,206

2010	237	2,37,393
2011	245	2,38,475
2012	270	2,44,927
2013	286	2,52,885
2014	298	2,64,628
2015	301	2,65,727
2016	315	2,69,195

Table 7: Growth in Number of Records in Theses Database: 1995 – 2016

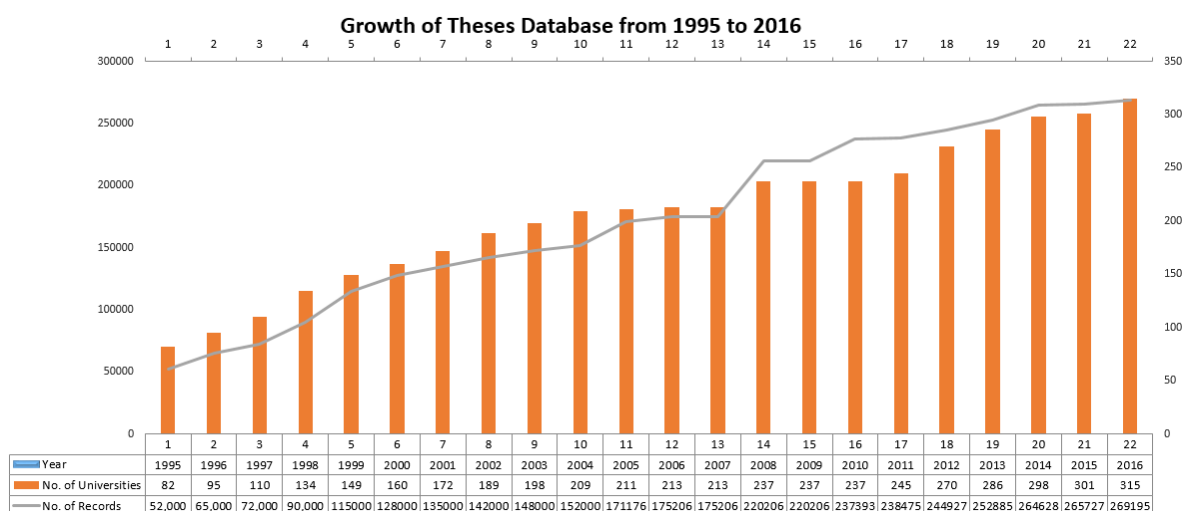


Fig. 8: Year-wise Growth of Theses Database

Theses database can be searched through IndCat interface by title, researcher, research supervisor, university, department, year of submission, keywords, etc. Bibliographic records of theses are linked to full-text records in "Shodhganga", if available. Names of universities and the number of records contributed by them to the union catalogue of theses are available at http://14.139.116.25/thesis/pdf/appendix_2015-16.pdf

3. Research Projects Database (<http://www.inflibnet.ac.in/researchproject/>)

Gaurav Prakash, Scientist B (CS)
Alpa Acharya, Project Associate (LS)
Kuldeep Matieda, Project Officer (LS)

The Research Project Database provides details of completed and ongoing projects carried out by faculty members working in universities and institutions across the country. As on 31st March 2016, 186 records were added in the database which has increased the total records in the database upto 15,451. The Centre gets project details along with the project reports in print/digital formats from the project investigators of Minor Research Projects (MRP) funded by the UGC. The softcopy and print copy of the project reports are available at the INFLIBNET Centre for walk-in users. Project

Investigators of the UGC-funded Minor Research Projects (MRP) were requested to submit softcopies and print copies of their project reports. Project Investigators, whose project reports were received, are acknowledged and their project details were added into the database available at (<http://www.inflibnet.ac.in/researchproject/>).

4. VIDWAN: Expert Database National Researcher's Network (<http://vidwan.inflibnet.ac.in>)

Kannan P, Scientist C (LS)
Abhishek Kumar, Scientist C (CS)
Mrs. Hetal Oza, Sr. Project Officer (CS)
Mr. Akshay Kumar Choudhary, Project Associate (CS)
Mr. Sanjay Kumar Pillai, Project Associate (LS)
Ms. Asha Vaghela, Project Assistant (CS)
Mr. K. Kameswaran, Project Assistant (LS)
Ms. Dipika Makwana, Project Assistant (LS)
Ms. Bhakruti Rashtrapal, Project Assistant (LS)

VIDWAN: Expert Database and National Researcher's Network is the premier database of profiles of scientists and faculty members working in leading academic institutions and other R & D organisations in India and abroad. The database provides important information about faculty and scientist such as background information, area of expertise, research activities and academic accomplishments, etc. The major objectives of this database are i) quickly provide information about experts to peers, prospective collaborators, funding agencies, policy makers and research scholars in the country; ii) to establish communication directly with the experts who possess the expertise needed by research scholars; iii) to identify peer reviewers for review of articles and research proposals; iv) to create information exchanges and networking opportunities among scientists; and v) to discover prospective collaborators for on-going research projects.

A new responsive web interface was launched during the period under report to add update profile of experts. A persistent URL and username & password was issued to each expert to edit and update their profile information. A web interface for nodal officer was developed and username and password was issued to them to update the profile information from their respective institution. The Solr based faceted search interface was incorporated to search the database on various parameters such as name, designation, area of expertise, organization, organization type, state, etc. with filter to narrow down the search. The profiles of expert also can be browsed by Web of Science Subject categories and organisation categories. As on 31st March, 2016, the database contains 19,660 profiles from more than 2,164 institutions including leading academic and R&D Organisations in India and abroad. Figure 9 depicts screenshot of VIDWAN: Expert Database website and Solr search interface.

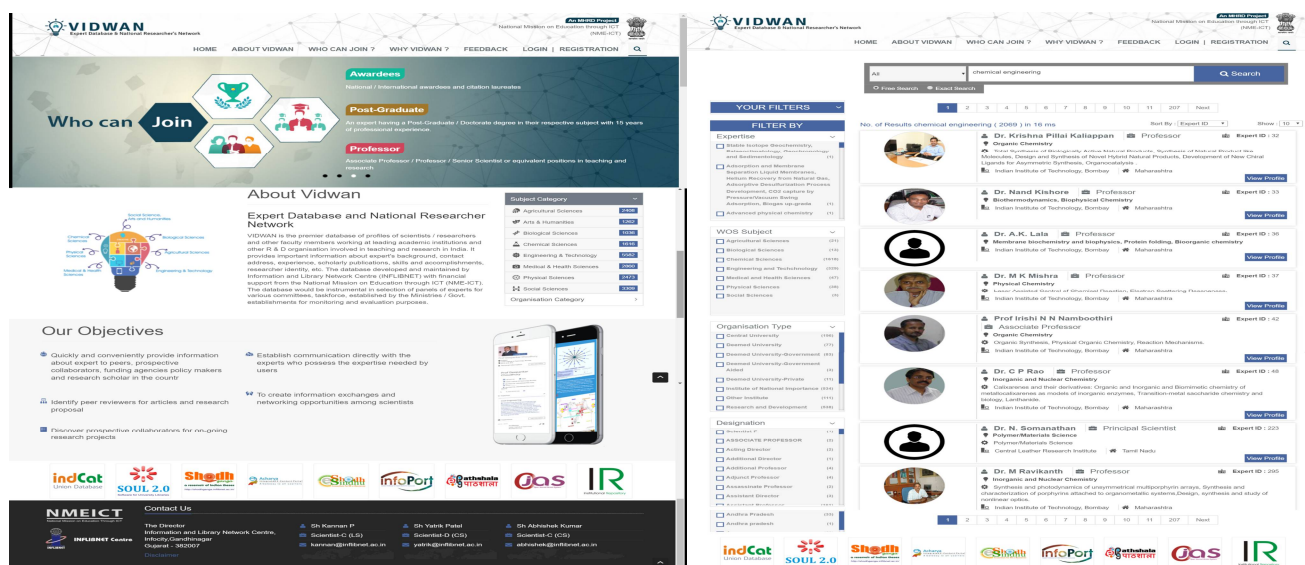


Fig. 9: VIDWAN: Expert Database@ INFLIBNET Centre

4.1. Progress Made During the Year 2015-2016

During the period under report, the Centre established contacts with 430 institutes including R&D organisations and academic institutions to nominate experts and find nodal officers to coordinate the process of collecting and updating the expert profile to the database. About 3,254 new expert profiles were added into the database and existing profiles were updated with scholarly articles and academic identities, etc. E-mail communication was sent to the existing experts to update their respective profiles and to add academic identity to automatic update of publications. Figure 10 depicts number of experts in 8 major Web of Science subject categories. Figure 11 depicts number experts and their organisation categories.

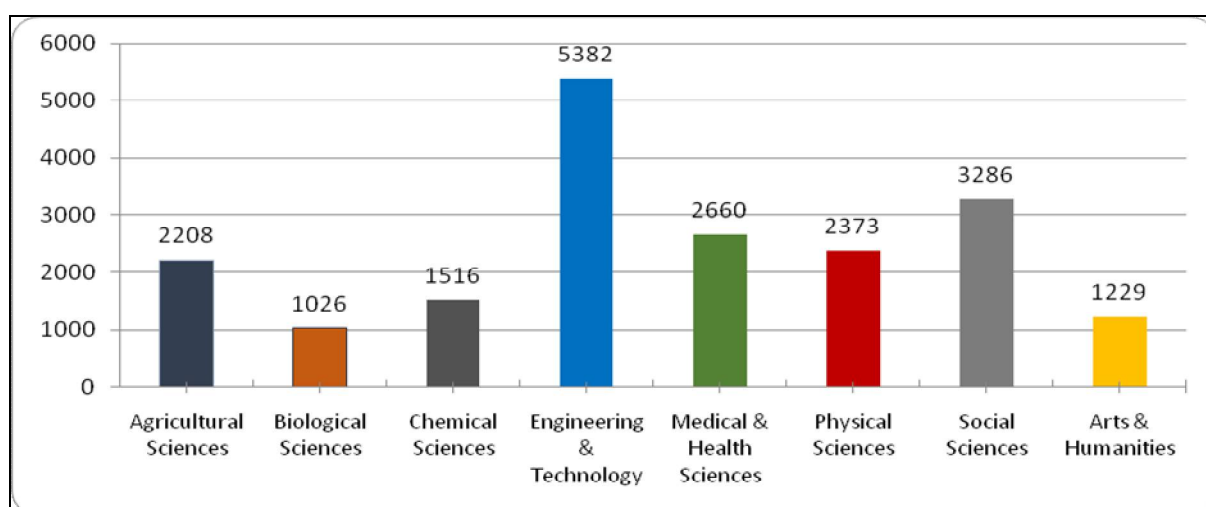


Fig. 10: Number of Experts and their Web of Science Subject Categories in VIDWAN Database

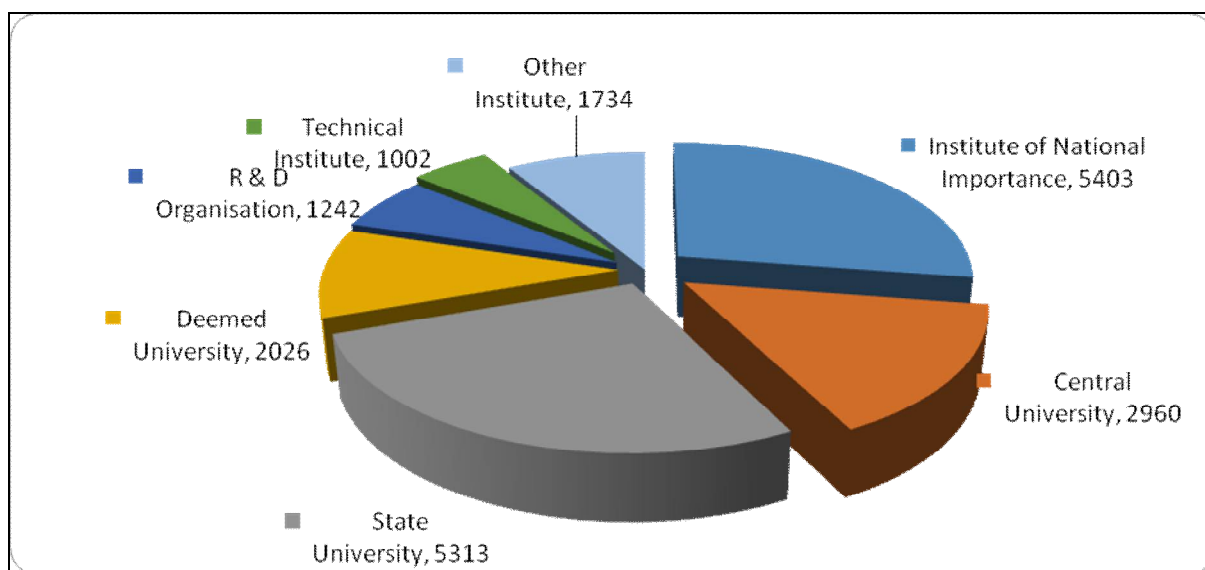


Fig. 11: Number Experts and their Organisation Categories in VIDWAN Database

4.2. Features of VIDWAN new Interface

As per the Google analytics, more than 35% users access VIDWAN database through their mobile or tab and access through mobile devices is gradually increasing. The Centre has launched new responsive and mobile friendly interface as shown in Figure 12, to enrich the user experience and to make it convenient to access the website from various devices. The new interface supports the following features:

- 1) Responsive user friendly interface to access the site from mobile, tablet as well as desktop;
- 2) Ajax based auto suggestion and asynchronous response to reduce the load on the database;
- 3) Facility to import publication in a standard format (BibTeX);
- 4) Import project works, honours and awards from the predefined CSV files;
- 5) Import publications using academic identity such as ORCID, Microsoft Academic Search ID, Google Scholar ID, Researcher ID, Scopus ID;
- 6) Data indexed using Apache Solr for fast retrieval and access;
- 7) Faceted search interface with filter to narrow down the search;
- 8) Enhance the profile display with similar experts and experts from the same organization;
- 9) Embed Co-author map from Microsoft Academic Search;
- 10) Embed Altmetric batch to display the citation, social metrics to the respective scholarly contributions; and
- 11) Export CV from the respective profile.

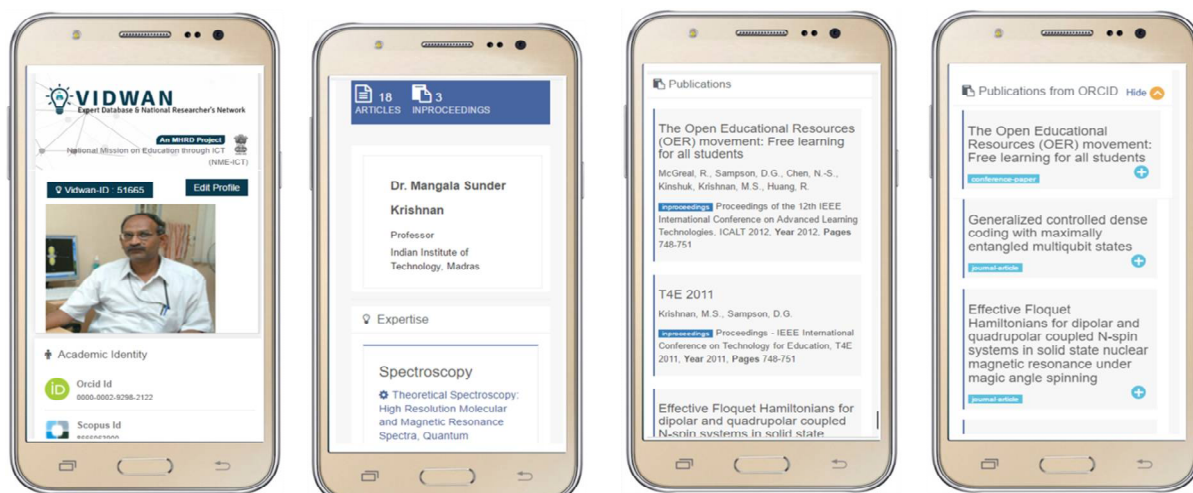


Fig. 12: New VIDWAN Interface Access through Mobile Device

4.3. VIVO: Semantic Interface

Kannan P, Scientist C (LS)

Mrs. Hetal Oza, Sr. Project Officer (CS)

The ultimate aim of this project is to populate the expert profiles in the next generation open-linked data format with VIVO: a semantic based expert profile management system. The Centre has launched the beta version of VIDWAN using customized VIVO as shown in Figure 13. The interface has the facility to import publications from the respective academic identities of Scientists and the system generates co-author network and map of science network based on the publications. The end user can view the area of expertise of organisation or the faculty/scientists through graphical representation.



Fig. 13: VIDWAN Profile using VIVO with Map of Science Network and Co-author Network

5. SOUL 2.0 (<http://www.inflibnet.ac.in/soul/>)

Yatrik Patel, Scientist D (CS)

Divyakant Vaghela, Scientist B (CS)

Swapnil Patel, Scientist B (CS)

Bhargavi Kadiya, Project Officer (CS)

Nrutik M Prajapati, Project Associate (CS)

The SOUL 2.0 (Software for University Libraries) is state-of-the-art integrated library management software designed and developed by the INFLIBNET Centre based on requirements of colleges, universities and other academic libraries. It is user-friendly software developed to work under client-server environment. The software is compliant to international standards for bibliographic formats and circulation protocols. After a comprehensive study, discussions and deliberations with the senior professionals of the country, the software was designed to automate all house-keeping operations in a library. The software is suitable for the academic libraries as well as for all kinds of other libraries. SOUL 2.0 is compliant to international standards such as MARC 21 for bibliographic format, Unicode based Universal Character Sets for multilingual bibliographic records and NCIP 2.0 and SIP 2 based protocols for RFID, electronic surveillance and control.

The SOUL 2.0 was released in January 2009 and was well received by the academic libraries in India. During the year under report, several new features were added to SOUL 2.0 as well as several minor enhancements were done in reporting and other functionalities. New updates of the software are made available through the SOUL 2.0 website at no additional cost to existing users. The software was supplied to 3,203 institutions across the country as on 31st March, 2016.

SOUL has adopted by Directorate of Libraries for their all public libraries as well as by the Department of Technical Education, Government of Gujarat. State Governments of Madhya Pradesh, Haryana and Andhra Pradesh have also adopted SOUL Software for automating their libraries.

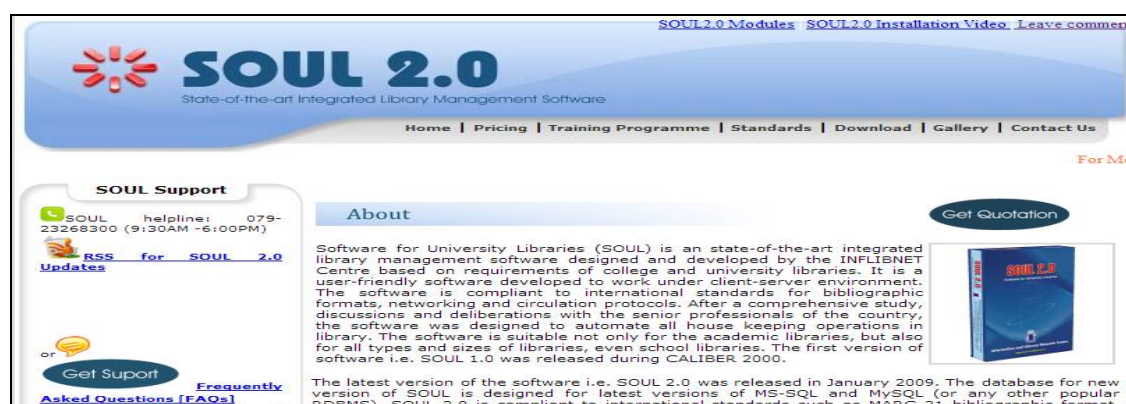


Fig. 14: Website for SOUL 2.0

A separate website shown in Figure 14 is maintained by the Centre that provides detailed information about SOUL 2.0 along with the updates of software.

Technologies: Visual Studio.Net, Microsoft SQL Server 2005, Microsoft Server Platform

5.1. Customization of SOUL 2.0, Data Conversion and Transfer

Yatrik Patel, Scientist D (CS)
Divyakant Vaghela, Scientist B (CS)
Swapnil Patel, Scientist B (CS)
Seema Chavda, Project Officer (LS)
Bhargavi Kadiya, Project Officer (CS)
Nrutik Prajapati, SOUL Technical Assistant (CS)

The Centre offers customization of the SOUL 2.0 software on payment basis as per the requirement of libraries. Under this offer, SOUL 2.0 can be customized according to the requirements of a library. The Centre has customized SOUL software for many institutes including major universities namely, Banaras Hindu University-Varanasi, Maharaja Sayajirao University-Baroda. The Centre is also providing upgrades to the institutions along with their respective customized version of software.

The Centre provides SMS Server application that facilitates user institutions to send SMS through SOUL 2.0 application using SMS Gateway on payment basis. More than 5 institutions have started using SMS Server application services provided by the INFLIBNET Centre.

Apart from this, the Centre is also converting client's existing data (from any format) to SOUL 2.0 compatible format on payment basis. During the year under report, the Centre has converted data from different format i.e. MS Excel, MS Access, MS SQL, PostgreSQL, ISO / LibSys, etc. to SOUL 2.0 compatible format. More than 1 lakh bibliographic records from 14 different institutes were processed and converted into SOUL 2.0 compatible format. The Centre also offers data conversion service to new users of SOUL, free of cost, if data volume is less than 10,000 records.

Technologies: Visual Studio.Net, Microsoft SQL Server 2005, Microsoft Office

5.2. SOUL-Web Edition

Yatrik Patel, Scientist D (CS)
Divyakant Vaghela, Scientist B (CS)
Swapnil Patel, Scientist B (CS)

The Centre is in process of developing of web-based version of SOUL based on the requirement collected from user community. The web edition of SOUL would be platform-independent that would run on any operating system (i.e. Linux, Windows). Any browser could be used as client so that user can work on any device independently e.g. desktop, laptop, mobile, tablet, etc. Moreover, SOUL web edition could be hosted on cloud platform. SOUL (Web edition) is based on Representational State Transfer (REST) protocol which relies on a stateless, client-server, cacheable

communication protocol and in virtually all cases, the HTTP protocol is used. Web-based SOUL can be configured in any language for performing housekeeping operations. During the period under report, REST based services and interfaces (alpha) for Administration, Acquisition & Circulation modules have been completed whereas development work for other modules is in progress.

Technologies: Java, JSP, MySQL, REST protocol (JAX-RS), apache tomcat

5.3. SOUL New Version (For Windows 7 and above)

Yatrik Patel, Scientist D (CS)

Divyakant Vaghela, Scientist B (CS)

Swapnil Patel, Scientist B (CS)

Bhargavi Kadiya, Project Officer (CS)

Nrutik Prajapati, Project Associate (CS)

The Centre has started migrating SOUL software on latest technologies. New version of SOUL for Windows 7 and above would be compatible with Microsoft.Net Framework 4.5 and Microsoft SQL server 2012 or later version. The software has the state-of-the-art Graphical User Interface wherein user can create or choose theme for his/her account. Users would be able to change the font size and other parameters as per their requirement for better visual and performance experience. The new version would have built-in facility of sending SMS/email for each circulation transactions along with several enhancements. The new version of SOUL would be responsive. As such, it will be compatible with touch screen laptops/tablets. During the period under report, interfaces for Administration, Circulation and Acquisition module have been developed. Development work for remaining modules and reports are in progress.

Technologies: Microsoft Visual Studio 2015, WPF, MS SQL 2014, Microsoft Platform

5.4. SOUL Software Sold and Upgraded for Existing Users

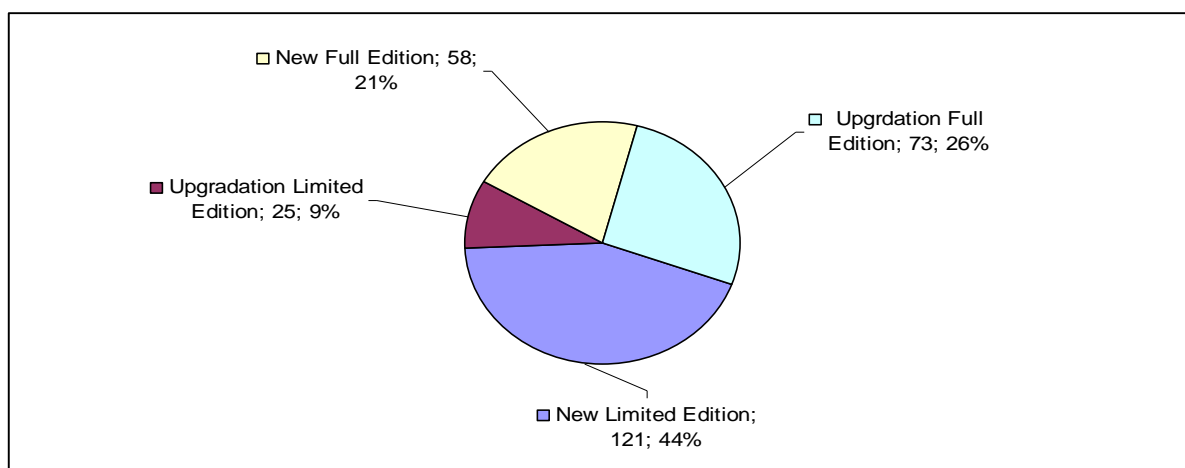


Fig. 15: SOUL 2.0 Software Sold and Upgraded for Existing Users

As depicted in Figure 15, a total number of 277 copies of SOUL Software were sold during the year under report including 179 copies that were sold out to new users and 98 copies that were offered free-of-cost to the users of SOUL 1.0. These 277 copies of SOUL Software included 146 copies of Limited Edition (including 25 copies given free) and 131 copies of Full Edition (including 73 copies given free).

5.5. SOUL Support Services

5.5.1. SOUL Support Cell at INFLIBNET Centre

SOUL Support Cell is a joint activity of Software Development Group & Human Resource Development Group. The SOUL Support Cell helps in handling queries and troubleshooting pertaining to SOUL software, its installation and usage for a user base of 3,203 across the country as per the details given in Appendix VI. The SOUL Support Cell coordinates with the SOUL users and SOUL developers for resolving queries regarding SOUL software and customization issues raised by SOUL users. The SOUL Support Cell consists of staff members from library and computer science background. The tools used for handling queries are mentioned below and depicted in Figure 16:

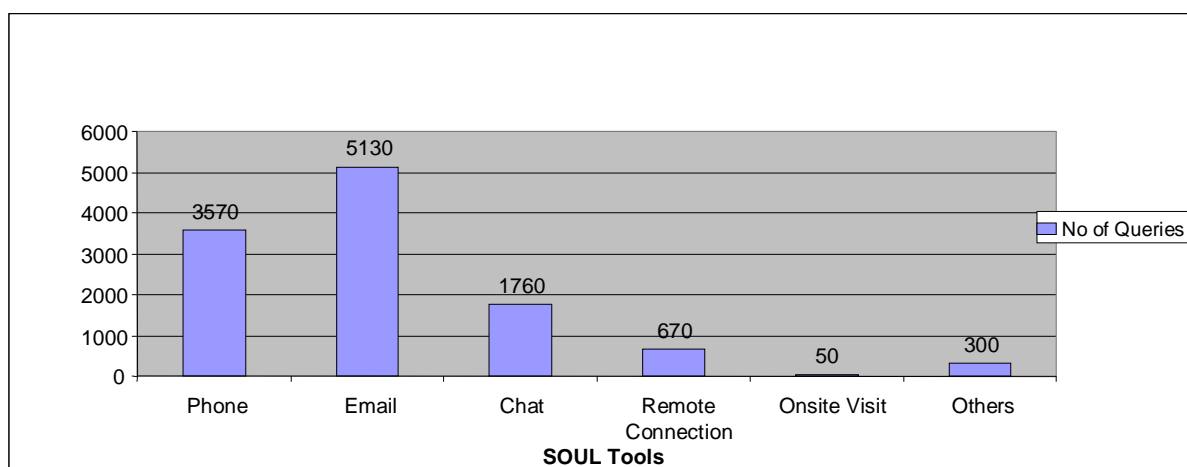


Fig. 16: SOUL Query Handled by SOUL Technical Assistants

Telephone Helpline: The Centre has a dedicated telephone line (079-23268300) for handling queries from SOUL users.

Instant Messaging: The Centre has created a Google email ID (soulhelp0007@gmail.com) to provide support to SOUL users through Gmail and Google Talk.

Remote Connection: SOUL Support Cell uses the software such as Teamviewer, ShowMyPC, etc. to remotely connect the User's SOUL server to view and solve the problem in real time. This method is used for fixing the problem when all other methods of solving the problems do not provide desired result.

Onsite Visit: Besides all above methods of solving queries, SOUL Support staff also visits the Institutes of SOUL users in case every other method could not resolve the problem and also if user wants SOUL Technicians to install and upgrade the SOUL at their Institute.

FAQs: FAQs (Frequently Asked Questions) was developed based on prolonged experience of SOUL Technicians. FAQs are written with screenshot and step-wise solution to the queries that are being asked frequently. (www.inflibnet.ac.in/soul/faq.htm)

SQMs: The Centre has developed a new software called “Soul Query Management System (SQMs)” that helps to keep track of problems and queries from all active user of SOUL Software. This software helps to serve the users more efficiently by keeping record of the queries, its status and solution offered, which can also help to solve queries from other users.

Documentation and Updates: Users can download flow charts for every SOUL 2.0 module and e-book version of User Manual to learn the operations on their own from the INFLIBNET Centre’s website. User can also download SOUL 2.0 Demo Version (up to 500 entries) and can practice on SOUL 2.0. Besides, minor updates of SOUL 2.0 can also be downloaded from the website free-of-cost which facilitates users to keep their SOUL2.0 software updated.

5.5.2. SOUL Regional Support Services

The Centre has appointed eight SOUL Coordinators in different geographical regions of the country to coordinate the activities of SOUL promotion and maintenance. Each SOUL Coordinator employs two to three technical assistants so as to provide proactive support to the SOUL users in their respective regions. Besides, the INFLIBNET Centre coordinates activity of maintenance and promotion of SOUL Software in the state of Gujarat and Rajasthan with help of Soul Technical Assistants. SOUL Coordinators are responsible for providing maintenance support to the existing users as well as for promoting the software to the new users. Names and contact details of the SOUL coordinators are given below in Table 8.

Name	Address/Phone No. / Email/ State
Prof. C. P. Vashishth	Delhi, Uttaranchal & UP
	28-B, Pocket ‘A’ MIG Flat Ashok Vihar, Phase III Delhi – 110 052 Ph. No. : 011-25774507 (O) 011-27112721 (R) Email : cpv_36@yahoo.co.in
Dr. Sanjay Singh	North Eastern Region- I
	Dept of Library and Information Science Guahati University, Guwahati- 781014, Assam Mob. : 09435040402 Email: sksgu1@gmail.com

Mr Lalchatuana Ralte	North Eastern Region-II
	Librarian Govt. Hrangbana College, Aizawl, Mizoram- 796007 Ph No: 09436355362 Email : librarian5923@rediffmail.com
Dr. Dharamraj Kalyanrao Veer	Maharashtra & Goa-I
	University Librarian Dr. Babasaheb Ambedkar Marathwada University Aurangabad University Campus, Aurangabad – 431004, Maharashtra Mob.: 09423958150 Email: dk.veer@rediffmail.com
Mrs. Nalini A Raja	Maharashtra & Goa-II
	302, Hari-Kripa, L.T.Road, Borivali (W) Mumbai - 400 092, Maharashtra Mob.:09920790757 E-mail:nalini99@gmail.com
Mr. Rakesh Kumar Khare	M.P. & Chhattisgarh
	Govt. M.L.B. Girls PG (Auto) College Bhopal- 462002, Madhya Pradesh Mob. : 099265 35452 Email: orakesh16@yahoo.co.in
Mr. J. Laxma Reddy	A.P., Karnataka, Pondicherry and Kerala
	Lecturer in Library Science Nagarjuna Government College (A) Nalagonda– 508 001, Andhra Pradesh Mob. : 099081 15333 Email: clicngc@gmail.com
Mr. Biswajit Bhattacharya	West Bengal & Odisha
	Librarian Bidhan Chandra College Asansol, Pin-713304, West Bengal Mob. :09735737381 Email: biswajit.asn@gmail.com and soulhelpeast@gmail.com
Mr. H G Hosamani	Gujarat and Rajasthan
	Scientist C (LS) And his Team of the SOUL Support Cell INFLIBNET Centre, Infocity, Gandhinagar -382007, Gujarat Ph. No. : 079-23268300 E-mail: soulhelp0007@gmail.com

Table 8: Names of SOUL Coordinators with their Contact Address

6. Human Resource Development & Consultancy

H G Hosamani, Scientist C (LS)

Hema Cholin, STO (LS)

All Technical Staff Members

One of the important objectives of the Centre is to impart training in the use of ICT to library and information science professionals working in university and college libraries. So far, 676 programmes include annual conventions, training programmes, workshops and seminars focusing on the library automation, networking, e-resource awareness, theses repositories, institutional repositories, etc. have been conducted benefiting 55, 721 participants. INFLIBNET Regional Training Programmes for Library Automation (IRTPLA) and User Awareness Programmes on eresources, Shodhganga and plagiarism detection software were conducted across the country in collaboration with the universities and colleges. National and International Conventions called PLANNER in North-eastern regions and CALIBER in various states of India are being organized bi-annually as part of the human resource development activities. The Centre has also conducted a total no. of 124 Training Programmes on SOUL Installation and Operations for Libraries so far. Brief reports on every training programme organized during the period under report are given in Part III National Conference, Workshops, Seminars and Training Programme of this report. The Table 9 given below provides no. of human resources development programmes conducted across the country and no. of participants who benefitted from these programmes during the year under report.

Sl. No.	Name of the Programme	Programmes	Total Participants
1	ETD India 2015	1	400
2	SOUL 2.0 Training Programme at INFLIBNET Centre	6	113
3	Onsite / In-House /Regional Training Programme on SOUL 2.0	2	50
4	Specialized Training Programmes and National Workshops	22	578
5	User Awareness Programmes on UGC-Infonet Digital Library Consortium and N-LIST	6	1135
6	User Awareness Programme on Shodhganga and Plagiarism DetectionSoftware	11	3205
7	E-Content Development under e-PG Pathshala	5	59
8	Attachment Training Programme	1	1
9	JSTOR India User's Forum	2	420
10	UGC-Infonet Digital Library Consortium University Forum	1	100
	Total	57	6,061

Table 9: Conferences/Training programmes/ Workshops/Seminars conducted by INFLIBNET Centre

7. Consortia-based Subscription to E-resources

The INFLIBNET Centre has set-up two separate consortia, namely UGC-Infonet Digital Library Consortium and its college component, “National Library and Information Services infrastructure for Scholarly Contents (N-LIST)” to extend access to e-resources to universities and colleges respectively. Two separate consortia were established not only to cater to the diverse needs of two sets of institutions, namely universities and colleges, but also to satisfy the requirements of different economic models. A brief description of the two consortia is given below.

7.1. UGC-Infonet Digital Library Consortium

Jagdish Arora, Director
Ashok Kumar Rai, Scientist D (CS)
Kruti Trivedi, Scientist B (LS)
Dinesh Ranjan Pradhan, Scientist B (LS)
Saroja Kumar Panda, STA (LS)

The UGC-Infonet Digital Library Consortium was launched by Dr. A.P.J. Abdul Kalam, the then President of India in December 2003. The UGC-Infonet Digital Library Consortium provides current as well as archival access to more than 8,500+ core and peer-reviewed journals and 11 bibliographic databases from 28 publishers including commercial publishers, scholarly societies, university presses and aggregators in different disciplines. The programme was implemented in a phased manner. During the year 2015, 215 member institutions including 14 National Law Schools/ Universities and IUCs of the UGC, were being provided differential access to subscribed e-resources. These e-resources cover almost all subject disciplines including arts, humanities, social sciences, physical sciences, chemical sciences, life sciences, computer sciences, mathematics and statistics, etc. The programme is wholly funded by the UGC and executed by the INFLIBNET Centre. The Centre has also initiated Inter-Library Loan (ILL) through JGate Plus. The JGate Plus provides article-level access to all articles published in journals subscribed by the UGC-Infonet Digital Library Consortium as well as content in journals subscribed by 26 university libraries designated as ILL Centres of the INFLIBNET Centre.

The programme was subsumed into a new Consortium formed by MHRD named e-Shodh Sindhu: Consortium for Higher Education Electronic Resources vide MHRD Notification No. F.No.16-23/2014-TEL dated 1st December, 2015 and the access to the existing resources are being provided to the universities under the new consortium from January/April 2016 onwards. The details of e-Shodh Sindhu are given in 7.2.

A separate website is maintained for the UGC-Infonet Digital Library Consortium as shown in Figure 17.

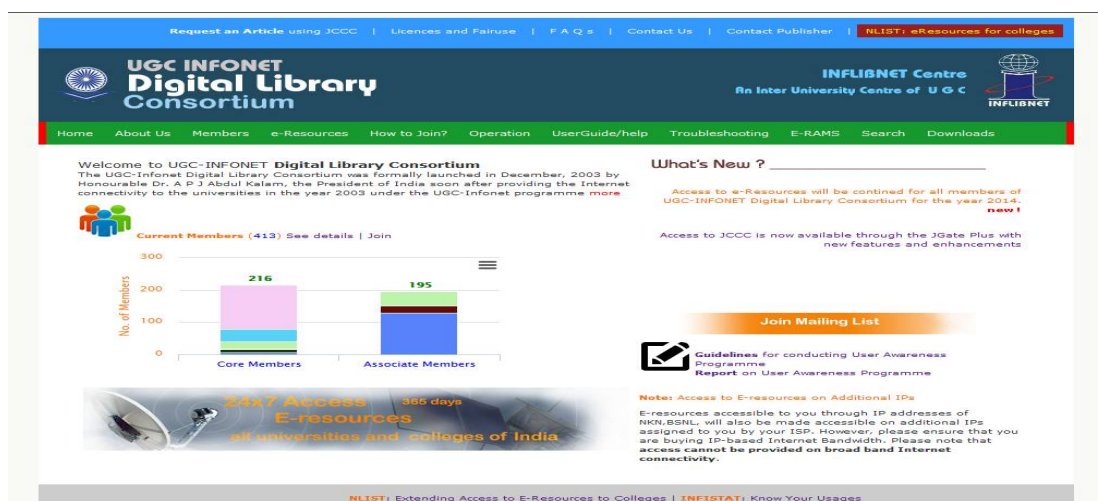


Fig. 17: Website of the UGC-Infonet Digital Library Consortium

The UGC-Infonet Digital Library Consortium was operated by the Centre under the guidance of a National Steering Committee (NSC) constituted by the UGC. The Negotiation Committee was constituted as per the UGC Guidelines on UGC-Infonet Digital Library Consortium for negotiating the subscription rates of e-resources.

7.1.1. Current Status

The Consortium offered access to more than 8,500 peer reviewed electronic journals and 11 bibliographic databases from 28 major publishers and aggregators. The access of the journals included current issues as well as 10 years back files (from 1997 in most cases) and from volume 1 onwards in some cases (American Chemical Society, American Physical Society, Institute of Physics and JSTOR). The service was offered to 195 universities and 14 national law schools/universities as core members under different phases.

7.1.1.1. Associate Membership Programme

The resources subscribed under the UGC-INFONET Digital Library Consortium were made available on subscription basis to private universities and other institutions under the "Associate Membership Programme". Under the scheme, private universities and other researcher institutions could enrol themselves as "Associate member" and subscribe to resources of their choice available under the Consortium. The rates of subscription were same as applicable to Consortium for its core members. Associate members were charged an annual membership of Rs. 5,000.00. The subscription of e-resources was subject to the approval of respective publishers. As on 31st March 2016, 214 universities and other institutions had enrolled themselves as associate members and were subscribing to different sets of resources.

7.1.2. Usage of E-Resources

Most publishers maintain detailed usage statistics for resources made accessible to universities by them. Most publishers provide COUNTER compliant usage statistics, which is an International standard for comparison of usage available through various platforms. The usage statistics from various publishers' website are downloaded on regular intervals and made accessible to the member universities on INFLIBNET website through an interface called InfiStats. Universities with low usage of e-resources are requested to optimize their usage.

Table 10 reflects the total full-text downloads for the e-journals subscribed under the Consortium. The usage for Elsevier-Sciencedirect is highest followed by JSTOR and Springer.

Sl. No.	Publishers	Total Downloads
1	Elsevier	71,07,887
2	JSTOR	28,74,067
3	SpringerLink	22,58,005
4	ACS	17,62,283
5	Wiley	14,89,268
6	RSC	10,33,403
7	TandF	7,99,670
8	OUP	4,56,755
9	APS	2,99,152
10	IOP	2,66,151
11	AIP	2,65,938
12	Nature	1,48,973
13	Emerald	1,16,024
14	PM	1,06,596
15	CUP	85,279
16	AR	83,829
17	SIAM	26,482
18	Portland	21,187
19	Pr. Euclid	6,353
E-journals		192,07,302

Table 10: Publisher wise Usage from 2015

The year-wise total number of full-text downloads for e-journals during last five years is given below in Figure 17. The Figure clearly shows that there is an overall increase in the number of downloads over the period of 2011 to 2015.

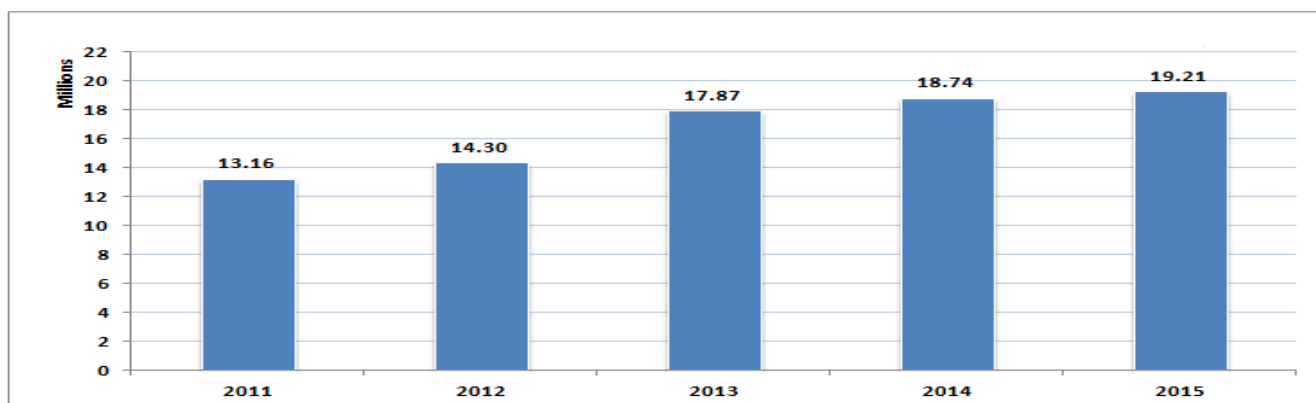


Fig. 17: Year-wise total full-text downloads (2011 - 2015)

The usage statistics of bibliographic databases measured in terms of searches is given below in Table 11 and Figure 18. The usage statistics for SciFinder is the highest followed by MathScinet, JGate Plus and WOS.

Sl. No.	Publishers	Total Searches
1	SciFinder	8,12,717
2	MathSci	4,40,039
3	JGate Plus	3,00,616
4	WOS	2,50,733
Databases		18,04,105

Table 11: Publisher wise Usage for Databases for 2015

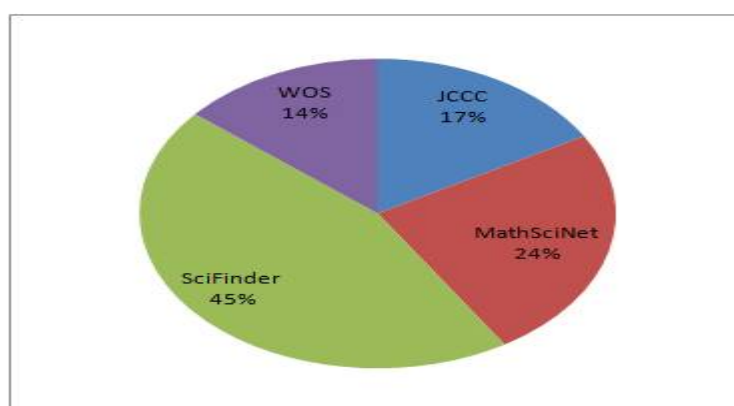


Fig. 18: Usage for Databases for the year 2015

7.1.5. Economics of UGC-Infonet Digital Library Consortium

7.1.5.1. Annual Increase in Rates of Subscription

In general, there is 10% to 15% annual increase in subscription rate of resources. However, Consortium has negotiated the rates of increase in price of the e-resources and fixed the price cap within 3-5% annually.

7.1.5.2. Intensity of Usage: Cost Recovery

“Cost Recovery” and “Average cost of article per download” can be used effectively to judge cost effectiveness of e-resources. These two factors reflect the intensity and frequency of usage of e-resources by member institutions in a Consortium.

The cost recovery factor is calculated by multiplying number of articles downloaded with the cost of a single article, if it is purchased directly from the publishers in the “pay-per-view model” or brought through ILL from any document delivery service. According to ALPSP survey, 78% of publishers surveyed offer pay-per-view or individual article purchase options. In the pay-per-view model, the cost of articles varies from publisher to publisher and average cost is \$30 per article. Assuming that if the electronic resources were not available through the Consortium, articles downloaded from these resources by the member institutions would have been sourced on inter-library loan / document delivery services at a cost of US \$ 15.00 per article (Average cost of article taken from a study conducted by the American Research Libraries).

Based on the no. of downloads from every resource, total amount of Rs. 13,956.40 millions has been recovered as against the total cost incurred of Rs. 1,627.22 millions with Rs. 12,329.18 millions as the cost of articles downloaded in excess as shown in Figure 19.

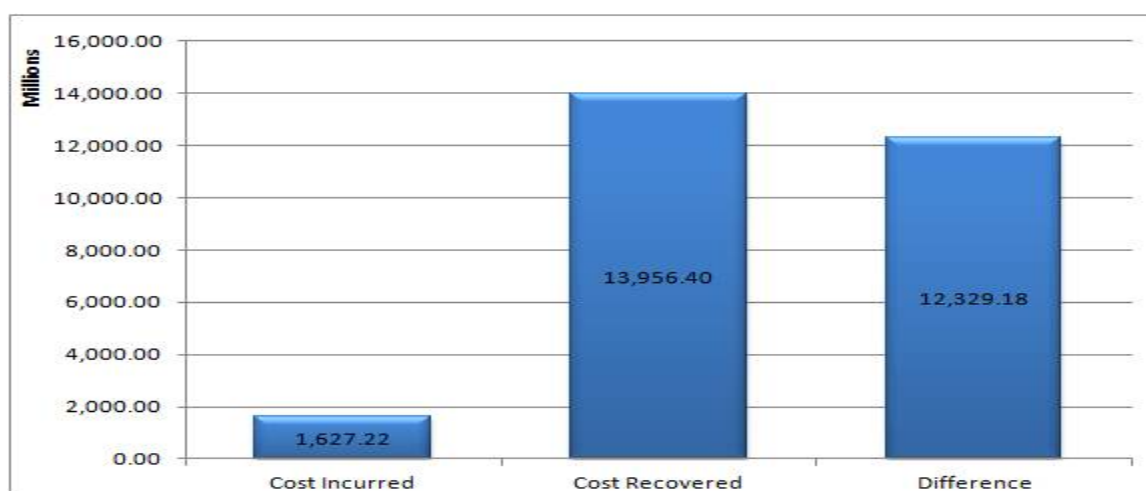


Fig. 19: Total Cost Recovery during 2015

The total cost recovery factor is calculated excluding the cost for EPW, ISID, HeinOnline, Manupatra and Westlaw for which standard usage statistics is not available. The cost recovery factor for each resource is shown in Figure 20, that reflects that the cost recovery factor for Elsevier is highest followed by JSTOR & Springer.

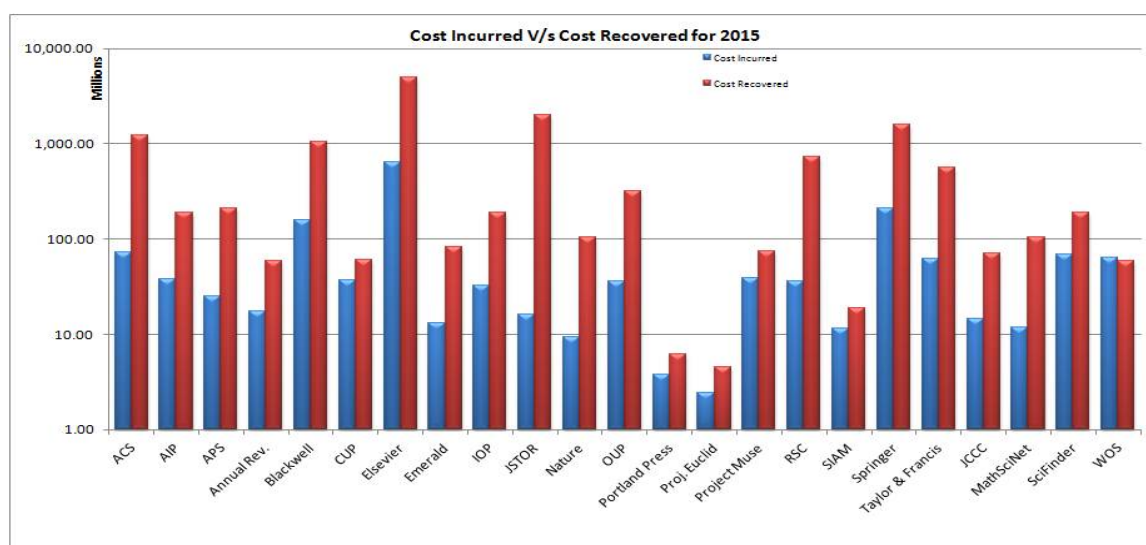


Fig. 20: Publisher-wise Cost Recovery during 2015

7.1.5.3. Average Cost of an Article / Bibliographic Record

The average cost per download represents average cost of each access event to a full-text article and is calculated by dividing subscription cost of a resource by the number of articles downloaded.

The Table 12 and Figure 21, given below, provide the cost per download of an article. The cost per download is lowest for JSTOR (US\$ 0.09) and highest for SIAM (US \$12.93), whereas the Consortium average is US\$1.17.

Sl. No.	E-Resource	Average cost per Download (in US\$)
1	SIAM	6.58
2	Portland Press	6.45
3	CUP	6.44
4	Project Euclid	5.66
5	Project Muse	5.47
6	Annual Review	3.07
7	AIP	2.12
8	IOP	1.82
9	Emerald	1.68
10	Blackwell	1.58
11	Springer	1.39
12	Elsevier	1.36
13	APS	1.26
14	OUP	1.18
15	Taylor & Francis	1.17

16	Nature	0.94
17	ACS	0.61
18	RSC	0.52
19	JSTOR	0.08
	Consortium Average	1.17

Table 12: Publisher-wise Average Cost of an Article

Table 13 given below provides the average cost of a search in bibliographic databases.

Sl. No.	Bibliographic Database	Average cost per Search (in US\$)
1.	WOS	3.77
2.	SciFinder Scholar	1.28
3.	JGate Plus	0.73
4.	MathSciNet (AMS)	0.40

Table 13: Average Cost of Bibliographic Database

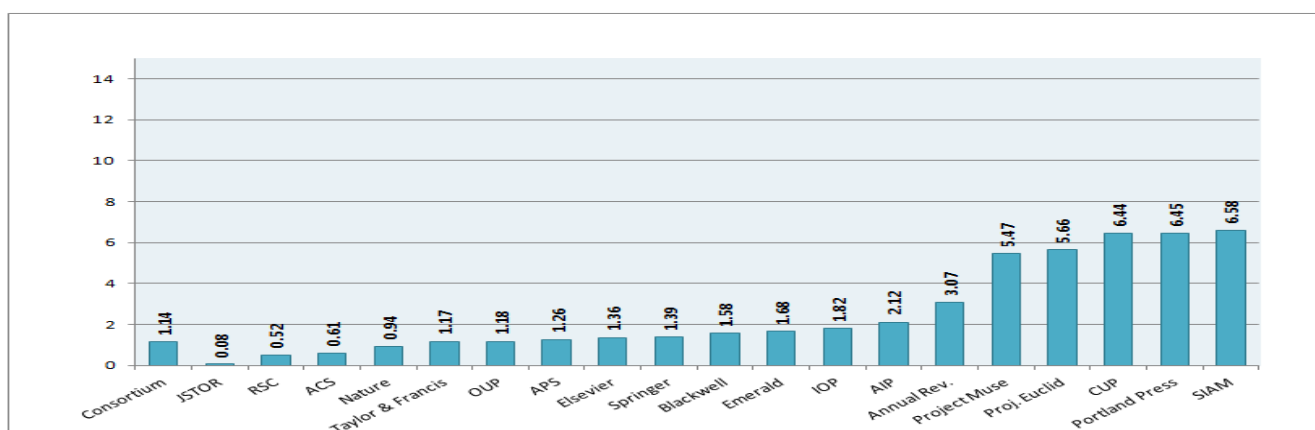


Fig. 21: Average Cost of an Article (in USD) for Consortium during the Year 2015

7.1.6. Document Delivery through J-Gate Plus@UGC-INFONET

The J-Gate Plus@UGC-Infonet is virtual library of journals literature created as a customized e-journal articles access gateway and database solution for the UGC-Infonet Digital Library Consortium. It provides article level access to e-journals subscribed under the Consortium as well as e-journals subscribed by 26 university libraries designated as ILL Centres of the INFLIBNET Centre. It acts as a gateway to search 19,500+ journals including 5,506 open access journals, 8,500+ journals subscribed by the Consortium and 4,800+ journals subscribed by the universities designated as ILL Centres. The J-Gate Plus interface facilitates triggering of e-mail request for articles that are not accessible online and are available only in universities designated as ILL Centres.

During the period under report, 859 ILL requests were received from member universities to the INFLIBNET Centre out of which 781 requests were fulfilled. Details of numbers of article requests received from member universities are given below in Table 14:

Sl. No.	University Name	DDR-DU	DDR-F	DDR-P	DDR-UF	Total
1	Annamalai University Library	7	115	0	8	130
2	Dr. B.R. Ambedkar Memorial Library - Acharya Nagarjuna University	1	84	0	0	85
3	Tata Institute of Social Sciences	1	57	0	2	60
4	Guru Jambheshwar University of Science & Technology	2	44	0	0	46
5	Swami Ramanand Teerth Marathwada University	0	35	0	0	35
6	Kannur University	2	24	0	3	29
7	Jiwaji University Gwalior	3	25	0	0	28
8	Mohanlal Sukhadia University	1	24	0	0	25
9	Banasthali University	2	21	0	2	25
10	Manonmaniam Sundaranar University	1	20	1	1	23
11	Berhampur University	0	20	0	0	21
12	Barkatullah University	2	18	0	0	20
13	Periyar University	0	14	0	3	17
14	South Asian University	6	11	0	0	17
15	Bharati Vidyapeeth	1	12	0	2	15
16	Central University of Kerala	0	8	0	5	13
17	Punjabi University	0	12	0	0	12
18	Rajiv Gandhi University	1	11	0	0	12
19	Bhavnagar University	1	11	0	0	12
20	Dayalbagh Educational Institute	0	7	0	5	12
21	Karnatak University	1	10	0	0	11
22	Central University of Kashmir	4	7	0	0	11
23	Solapur University	0	10	0	0	10
24	Maulana Azad National Urdu University	0	9	0	0	9
25	Others (Remaining 64 Universities)	3	172	0	7	181
	Total Requested	39	781	1	38	859

\$DDR-DU: Document Delivery Request-Delay,
+DDR-P: Document Delivery Request - Pending,

*DDR-F: Document Delivery Request – Fulfilled
#DDR-UF: Document Delivery Request – Unfulfilled

Table 14: Document Delivery Requests made by Different Universities

During the period under report, a total number of 3427 requests were received by the 26 ILL Centres and by the INFLIBNET from all the member universities, out of which 1877 were fulfilled as per the details given below in Table 15:

Sl. No.	University Name	DDR-DU	DDR-F	DDR-P	DDR-UF	Total	% of Fulfilled
1	Aligarh Muslim University	7	42	0	29	78	53.85
2	Annamalai University	0	19	2	9	30	63.33
3	Assam University	0	0	3	0	3	0.00
4	Banaras Hindu University	1	103	0	1	105	98.10
5	Banasthali University	14	181	0	15	210	86.19
6	Bangalore University	0	1	107	0	108	0.93
7	Birla Institute of Technology and Science	0	33	121	9	163	20.25
8	Jadavpur University	0	7	0	2	9	77.78
9	Jawaharlal Nehru University	0	0	115	0	115	0.00
10	Kurukshetra University	0	0	17	0	17	0.00
11	Mangalore University	0	0	65	0	65	0.00
12	North Eastern Hill University	0	0	69	0	69	0.00
13	Pondicherry University	4	37	49	26	116	31.90
14	Pt. Ravishankar Maharaj Shukla University	0	10	0	2	12	83.33
15	Punjab University	0	0	0	2	2	0.00
16	Punjabi University	0	0	0	2	2	0.00
17	Rashttrasant Tukodji Maharaj University	0	0	4	0	4	0.00
18	Sardar Patel University	0	4	6	1	11	36.36
19	Tata Institute of Social Science	4	63	0	41	108	58.33
20	The Maharaja Sayajirao University	1	5	0	71	77	6.49
21	University of Calcutta	0	19	0	326	345	5.51
22	University of Delhi	0	21	0	21	42	50.00
23	University of Hyderabad	45	463	0	77	585	79.15
24	University of Madras	0	0	7	0	7	0.00
25	University of Pune	16	88	0	178	282	31.21
26	University of Rajasthan	0	0	2	1	3	0.00
27	INFLIBNET Centre	39	781	1	38	859	90.92
	Total	131	1,877	568	851	3,427	54.77

\$DDR-DU: Document Delivery Request-Delay,
+DDR-P: Document Delivery Request - Pending,

*DDR-F: Document Delivery Request – Fulfilled
#DDR-UF: Document Delivery Request – Unfulfilled

Table 15: Document Delivery Requests Received by 26 ILL Centres and INFLIBNET Centre

Figure 22 depicts comparison between DDR-Fulfilled and total number of DDR received by each ILL Centre.

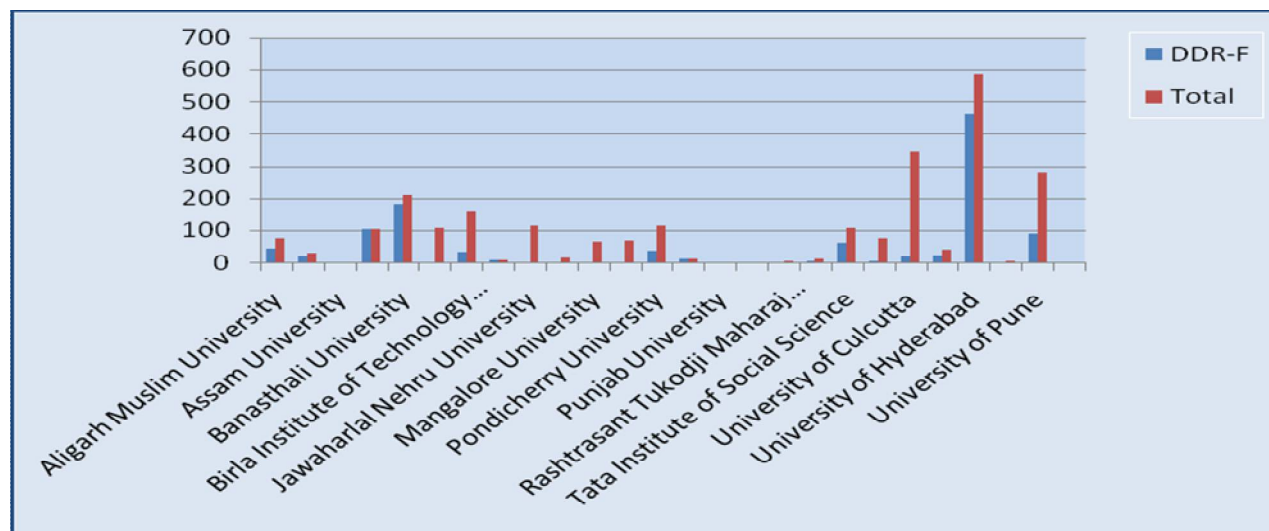


Fig. 22: Document Delivery Requests Received (DDR-R) Vs Full-filled (DDR-F) by 26 ILL Centres

7.2. e-Shodh Sindhu: Consortium for Higher Education Electronic Resources

Jagdish Arora, Director
 Ashok Kumar Rai, Scientist D (CS)
 Kruti Trivedi, Scientist B (LS)
 Dinesh Ranjan Pradhan, Scientist B (LS)
 Saroja Kumar Panda, STA (LS)
 Roma Yogesh Asnani, STA (LS)

The MHRD vide their letter No F.No.4-35/2012-U.1A (Pt.) dated 24th September 2012 constituted an Expert Committee on Library Consortium with an aim to survey the current scenario of Government-funded library consortia in India and explore the possibilities of joint negotiations and collaborative services amongst various consortia. The survey report on Govt.-funded library consortia carried out by the INFLIBNET Centre revealed that there is more than 65.71% duplication of resources amongst various Government-funded consortia. Moreover, there is 14.81% duplication in the number of resources that are being subscribed by three MHRD-funded consortia and 33.33% among two MHRD-funded consortia, i.e. UGC-Infonet Digital Library Consortium and INDEST-AICTE Consortium. Moreover, resources that are not duplicated are being either subscribed by individual libraries or are being cross-subscribed through N-LIST project. Considering these fact, the report submitted by the Expert Committee to the Ministry recommended that there would be a huge advantage in bringing the three consortia funded by the Ministry of HRD under one umbrella. Based on the recommendations of the Expert Committee, formation of e-Shodh Sindhu was notified vide F.No.16-23/2014-TEL dated 1st December 2015 merging three consortia initiatives, namely UGC-INFONET Digital Library Consortium, N-LIST and INDEST-AICTE Consortium.

A separate website is maintained for the e-Shodh Sindhu as shown in Figure 23.

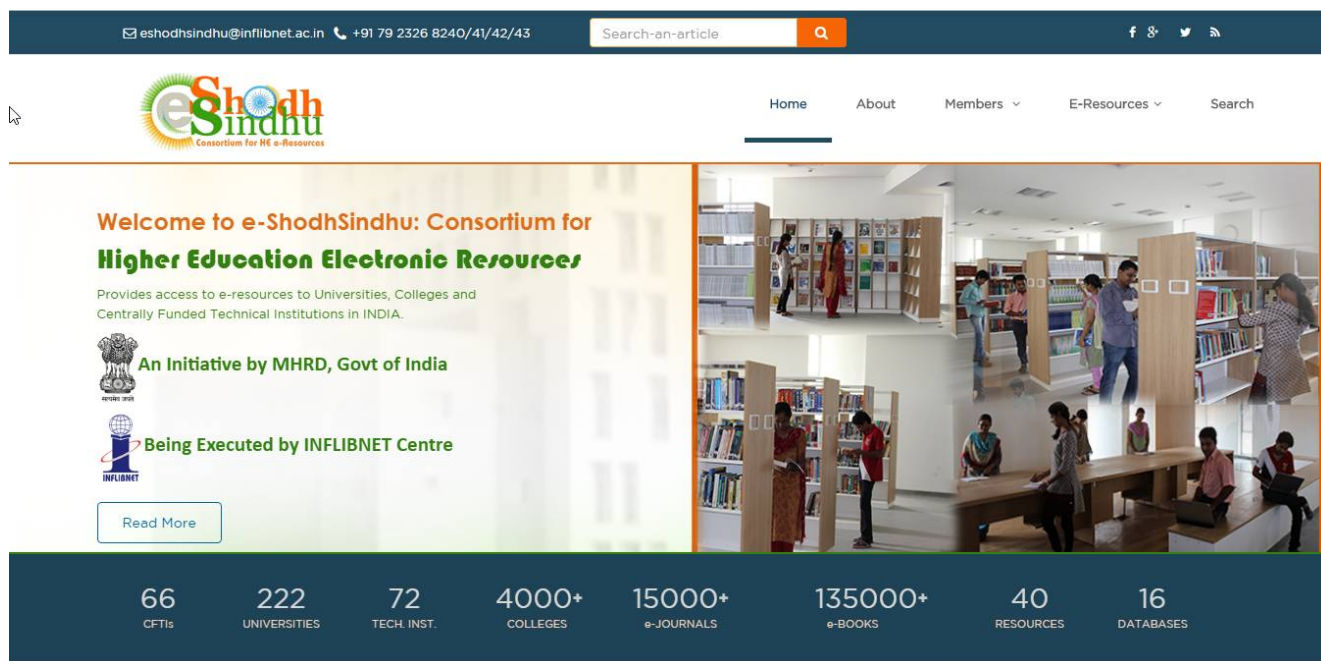


Fig. 23: Website of e-Shodh Sindhu

7.2.1. Objectives

The main objectives of the e-Shodh Sindhu: Consortia for Higher Education E-Resources is to provide access to qualitative electronic resources including full-text, bibliographic and factual databases to academic institutions at a lower rates of subscription. The major aims and objectives of the e-Shodh Sindhu are as follows:

- Setting-up e-Shodh Sindhu: Consortia for Higher Education E-Resources by augmenting and strengthening activities and services offered by three MHRD-funded Consortia;
- Develop a formidable collection of e-journals, e-journal archives and e-books on perpetual access basis;
- Monitor and promote usage of e-resources in member universities, colleges and technical institutions in India through awareness and training programmes;
- Provide access to subscription-based scholarly information (e-books and e-journals) to all educational institutions;
- Provide access to scholarly content available in open access through subject portals and subject gateways;
- Bridge digital divide and move towards an information-rich society;

-
- Provide access to selected e-resources to additional institutions including open universities and MHRD-funded institutions that are not covered under existing consortia;
 - Take-up additional activities and services that require collaborative platform and are not being performed by existing Consortia; and
 - Moving towards developing a National Electronic Library with electronic journals and electronic books as its major building blocks.

7.2.2. Governance

The MHRD has constituted the National Advisory Committee for e-Shodh Sindhu to advise and guide the Consortium on rates negotiated by it as well as on collaborative services between MHRD-funded institutions. The e-Shodh Sindhu is being operated by the INFLIBNET Centre, Gandhinagar under the overall guidance of a National Steering Committee that guides and steers the activities of the Consortium. The National Steering Committee is responsible for operational aspects of the Consortium. The Committee decides on e-resources to be subscribed from various publishers for numbers beneficiary institutions. The Negotiation Committee is responsible for negotiating the rates of subscriptions of e-resources under Consortium.

7.2.2.1. National Advisory Committee: The MHRD has constituted the National Advisory Committee for e-Shodh Sindhu to advise and guide the Consortium on rates negotiated by it as well as on collaborative services between MHRD-funded institutions. The current composition of the National Advisory Committee is given in Appendix VII.

7.2.2.2. National Steering Committee: e-Shodh Sindhu is being operated by the INFLIBNET Centre under the overall guidance of a National Steering Committee that guides and steers the activities of the Consortium. The National Steering Committee is responsible for operational aspects of the Consortium. The Committee decides on e-resources to be subscribed from various publishers and numbers and names of beneficiary institutions. The current composition of the National Steering Committee (NSC) is given in Appendix VIII.

7.2.2.3. Negotiation Committee: The Negotiation Committee is constituted by the MHRD for negotiating rates of subscription to e-resources. The current composition of the Negotiation Committee (NC) is given in Appendix IX.

7.2.3. Current Status

The e-Shodh Sindhu Consortium is offering access to more than 15000 full-text journals from 25 publishers, 5 bibliographic databases, 2 legal databases, 4 factual databases and one standards database to 356 institutions. The access to the e-resources is provided to various categories of

institutions like CFTIs, Central Universities, 12(B) Universities, National Law Schools / Universities and IUCs of the UGC that were earlier part of the INDEST-AICTE Consortium and UGC-Infonet Digital Library Consortium during the year 2015. The Consortium also provides access to three e-resources (ASCE, ASME, IEEE-ASPP) to 94 AICTE funded institutions (including 22 Universities/department of Universities) with the funding from the AICTE. The list of Institutions with the number of e-resources available to each institute is available at <http://www.inflibnet.ac.in/ess/member.php>. The details of the resources subscribed under the Consortium are available in Appendix X.

Sl. No.	Category	No. of Institutions
1	IITs & IISc	16
2	NITs, ISM, SLIET & NERIST	23
3	IIMs	13
4	IISERs	5
5	IIITs, IIST, NITIE, NIFFT and NITTRs	9
6	12 (B) State Universities	135
7	Central Universities	40
8	Deemed Universities (UGC funded)	22
9	National Law Schools / Universities	15
10	IUCs of UGC	6
11	AICTE Funded Engineering Colleges	72
	Total	356

Table 16: List of Institutions covered under e-ShodhSindhu

7.2.4. Major Benefits of e-Shodh Sindhu

7.2.4.1. Increase in Content Accessible to Each Category of Institutions

Total number of unique journal titles subscribed under e-Shodh Sindhu increased from 11,064 to 11,719 (5.9% increase) with substantial increase in access to journals for each category of institutions as mentioned below in Table 17:

Categories of Institutions	No. of Journal Titles		% of Increase in No. of Journals
	2015	2016 (eSS)	
Universities	7,847	8,481	8.1%
IITs	4,277	7,949	85.9%
New IITs	494	3,904	690.3%
NITs*	504	3,713	636.7%
IISERs	460	3,884	744.3%
IIITs	1,470	4,416	200.4%
IIMs	6,034	9,607	59.2%
NITTRs	166	2,764	1565.1%
NIFFT	1,426	4,192	194.0%

* Including SLIET, ISM and NERIST

Table 17: Increase in Content Accessible to Each Category of Institutions

7.2.4.2. Print / Core-Independent Subscription

Two publishers, namely Oxford University Press and Emerald have offered print-independent subscription to their entire collections of 298 and 262 journals respectively for universities and for all 65 CFTIs. The CFTIs / universities can drop their print / core subscription for OUP and Emerald.

7.2.4.3. Rates of Subscription Freezed at 2015 Level

Several publishers including, ACM Digital Library, IEEE/IEL Online (Category I Institutions), ASME, ASCE, IoP, Annual Reviews, Elsevier Science, Nature, Springer, Wiley, AIP, CUP, Taylor & Francis, etc. have offered their e-journals on the rates applicable in 2015 without increase in annual subscription rates.

7.2.4.4. Decrease in Rates of Subscription for Increased Number of Institutions

Some publishers have brought down their rates of subscription with increase in number of subscribing institutions. Such publishers include: ABI / Inform, EPW, Web of Science, etc.

7.2.4.5. Access to e-resources to Centrally-Funded Technical Institutions at Rates Applicable to Universities

Project Muse, SIAM and Project Euclid have agreed to provide access to their respective e-resources to CFTIs at rates applicable to universities.

7.2.4.6. Applicability of TDS without Increase in Rates of Subscription

All publishers, including university presses, scholarly societies and not-for-profit publishers have agreed for TDS deduction without increase in subscription rates. It essentially means that 10 to

11% of total payments made to the publishers will be recovered as tax from the publishers that was not applicable for INDEST part of expenditure.

7.2.4.7. Total Savings by eSS and Member Institutions

Total savings by the eSS and member institutions is Rs. 30.55 crores which includes savings on no-increase in rates of subscription and discontinuation of print subscription to OUP and Emerald journals by the member institutions.

7.3. N-LIST (National Library and Information Services Infrastructure for Scholarly Content)

The Project entitled "National Library and Information Services Infrastructure for Scholarly Content (N-LIST)", graduated as a regular scheme of UGC under UGC-INFONET Digital Library Consortium as college component, is merged into e-Shodh Sindhu: Consortia for Higher Education E-Resources. Earlier, the project was jointly executed by the UGC-INFONET Digital Library Consortium, INFLIBNET Centre and the INDEST-AICTE Consortium, IIT Delhi, with financial support from the Ministry of Human Resource Development under its National Mission on Education through ICT. The N-LIST project, using a highly innovative access model, provides access to 6,318 e-journals and 1,39,309 e-books to all Govt. Govt.-aided as well as non-aided colleges through a proxy server installed at the INFLIBNET Centre. Electronic resources subscribed under N-LIST project covers all relevant areas taught in colleges such as arts & humanities, social sciences, physical and chemical sciences, life sciences, computer sciences, political sciences, library and information science, law, business, mathematics, statistics, etc.

A separate website is maintained for the National Library and Information Services Infrastructure for Scholarly Content (N-LIST) as shown in Figure 24.

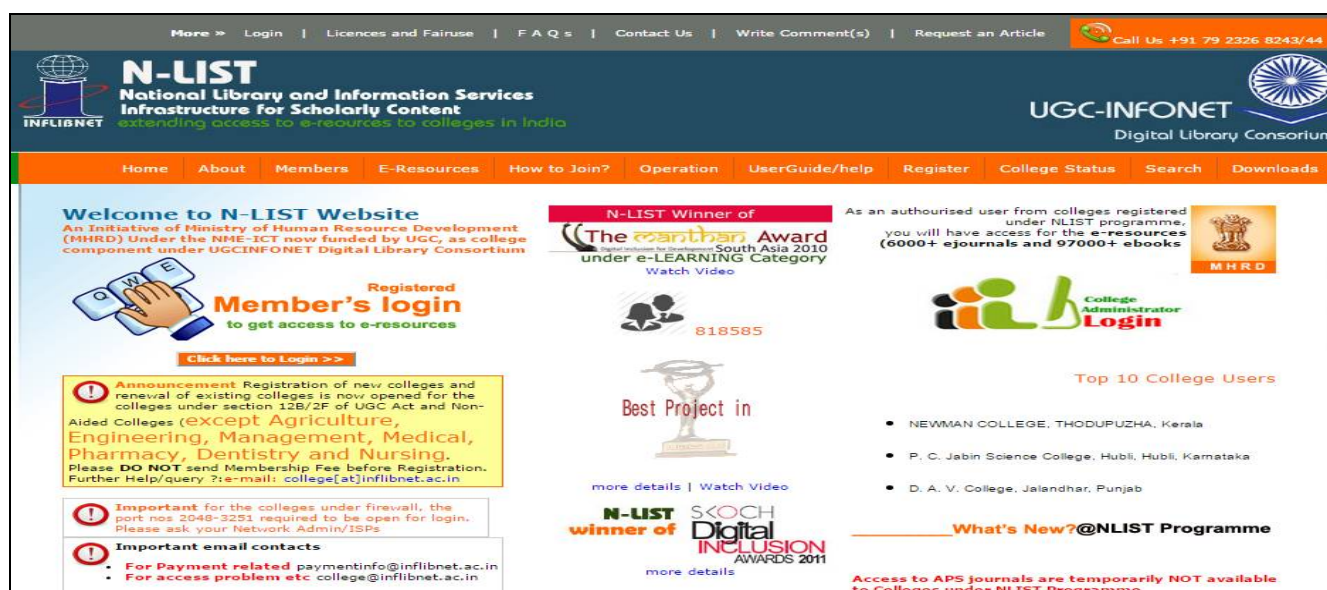


Fig. 24: Website of the National Library and Information Services Infrastructure for Scholarly Content (N-LIST)

7.3.1. Current Status

The N-LIST Programme has registered a total number of 5,107 colleges as on March 31, 2016 including 3,816 eligible colleges that are already getting access to resources subscribed under the N-LIST programme. Log-in IDs and passwords have been issued to more than 8,63,650 faculty members, students and researchers after obtaining list of authorized users from these 3,816 registered colleges. Group login ID and passwords have also been issued to colleges awaiting list of actual users. Efforts are being made to enrol more colleges through advertisement in newspaper as well as by organizing training and orientation programmes through affiliating universities and regional offices of the UGC.

7.3.2. Number of Colleges

Figure 25 given below depicts year-wise number of colleges who joined the N-LIST Programme during the year 2010 to 2016. The number of colleges that have joined the N-LIST Programme has increased persistently from 2010 to 2015. However, due to revised membership eligibility criteria, there has been slight decrease in total number of enrolled colleges by the end of March 2016.

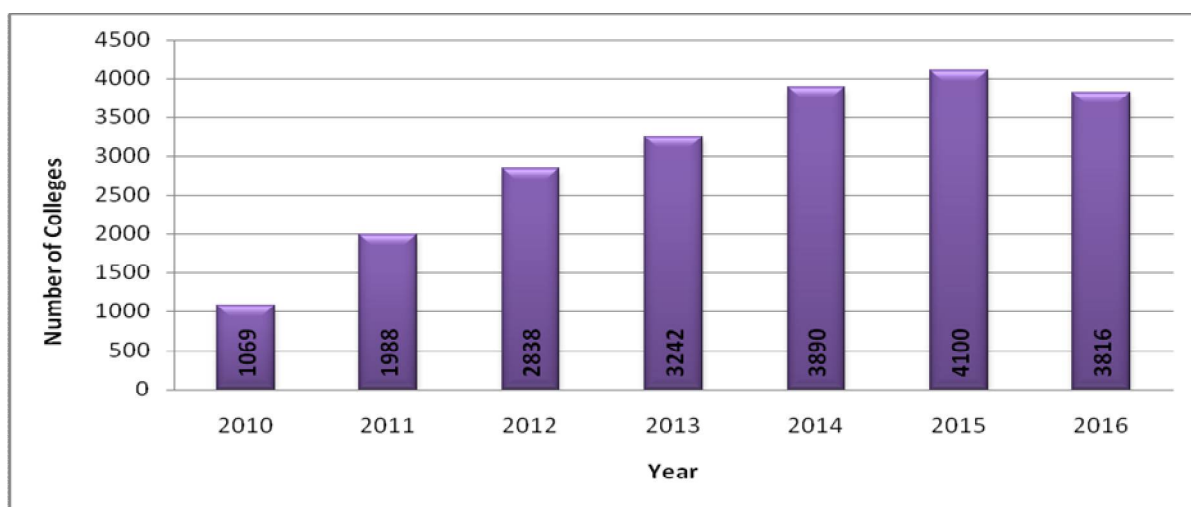


Fig. 25: Year-wise Registration of Colleges

7.3.3. Electronic Resources Subscribed under the N-LIST Programme

7.3.3.1. Full-text Electronic Resources

Full-text electronic resources contain complete articles along with their bibliographic details. The N-LIST programme subscribes to full-text e-resources from scholarly societies, commercial publishers and aggregators like American Institute of Physics, American Physical Society, Oxford University Press, Royal Society of Chemistry, Cambridge University Press, H W Wilson, etc. All full-text resources subscribed under the N-LIST programme contain electronic journals as revealed in the Table 18 given below.

Sl. No.	E-resources	Publishing Country	No. of Journals	Back files from
1	American Institute of Physics	USA	18	Ten yrs.
2	Annual Reviews	USA	33	Ten yrs.
3	Cambridge University Press	UK	224	Ten yrs.
4	Economic and Political Weekly (EPW)	India	1	1966+
5	Indian Journals	India	186	2007+
6	Institute of Physics	UK	46	Vol. 1+
7	JSTOR	USA	2500	Vol. 1+
8	Oxford University Press	UK	206	1996+
9	Royal Society of Chemistry	UK	29	Ten yrs.
10	H. W. Wilson	USA	3,075	1982+
	Total		6,318	

Table 18: Full-text Electronic Resources

7.3.3.2. Electronic Books

Electronic books are either subscribed on annual subscription basis as in case of Ebrary or are purchased on one-time payment and perpetual access basis as in case of all remaining publishers listed below. Total number of electronic books purchased for colleges under N-LIST programme exceeds 1,39,309 as revealed below in the Table 19.

Sl. No	E-book Name	Available Books	Purchased Books
1	Ebrary	1,25,000+	1,25,000+
2	Cambridge Books Online	13,966	1,800
3	EBSCO Host-Net Library	4,436	936
4	Hindustan Book Agency	65	65
5	Institute of South East Asian Studies(ISEAS) Books	382	382
6	Oxford Scholarship Online	6,577	1,402
7	Springer eBooks	50,208	2,300
8	Taylor & Francis eBooks	40,000+	1,800
9	Myilibrary-McGraw Hill	2,50,000	1,124
10	Sage Publication eBooks	2,700	1,000
11	Open Access (Net Library)		3,500
	Total	4,93,334	1,39,309

Table 19: Electronic Books

7.3.4. Implementation Methodology

E-resources subscribed under UGC-INFONET Digital Library Consortium are being made accessible to universities on their respective Ips. However, since most of the colleges registered under the N-LIST Programme do not have static IP addresses, access to e-resources based on IP filtering cannot be implemented for colleges. Moreover, most of the publishers were reluctant to handle authentication of large number of users from thousands of colleges who had to be given freedom to enrol themselves for the N-LIST Programme at anytime during the year.

As such, the INFLIBNET Centre has implemented EZ-Proxy from OCLC for authenticating registered colleges. Individual users from colleges can directly access and download articles from journals and chapters from books directly from publisher's website once they are duly authenticated as authorized users through the authentication mechanism deployed at the INFLIBNET Centre.

7.3.5. Cost-effectiveness of the N-LIST Programme

The cost-effectiveness of N-LIST programme can be judged by factors such as number of beneficiary colleges, full-time potential users in these colleges, cost of e-resources subscribed and expenditure on e-resources per college and per potential user. The N-LIST programme is a cost-effective proposition because of large number of colleges with larger number of potential users and potential for growth. These factors are discussed below in detail.

7.3.6. Analysis of Usage

It is important to ensure that the resources offered to the colleges are being used optimally and steps are taken to promote usage of e-resources wherever required. A brief analysis of usage of e-resources by the beneficiary college is given below.

7.3.6.1. Publisher-wise Usage of E-journals

Figure 26, given below, shows number of articles downloaded by the users from different publishers during the financial year 2015-2016. It can be observed that JSTOR is highly used resource followed by Indian Journals and H. W. Wilson. The usage of EPW could not be analysed due to lack of usage data from the publishers.

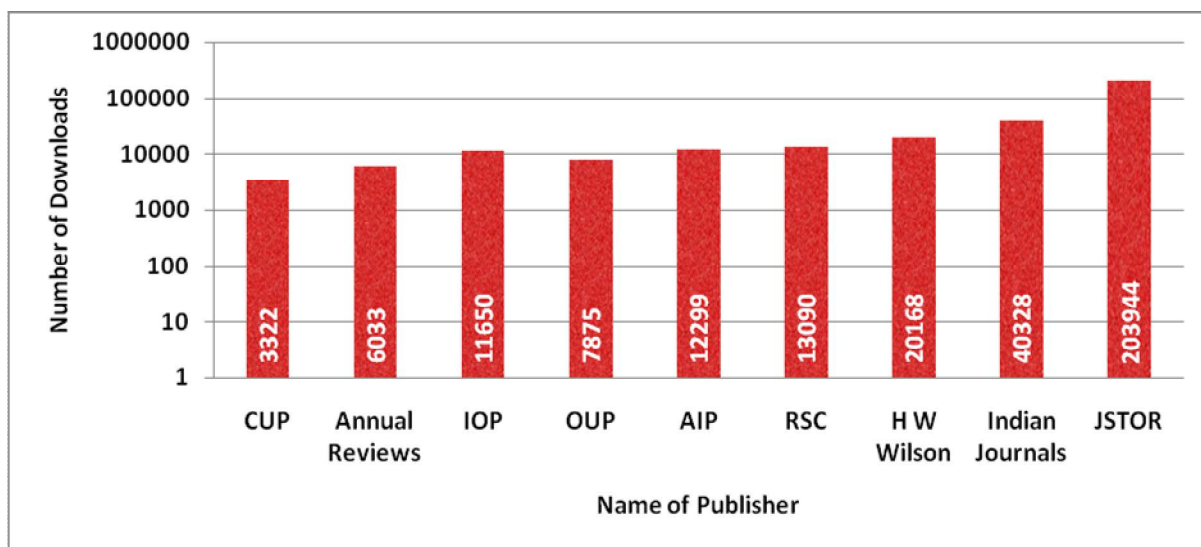


Fig.26: Publisher-wise Usage of E-Journals 2015-2016

7.3.6.2. Publisher-wise Usage of E-Books

Figure 27, given below, shows publisher-wise usage of ebooks during the financial year 2015-2016. It can be observed that Ebrary is highly used resource followed by McGraw Hill-MyiLibrary and Springer e-books.

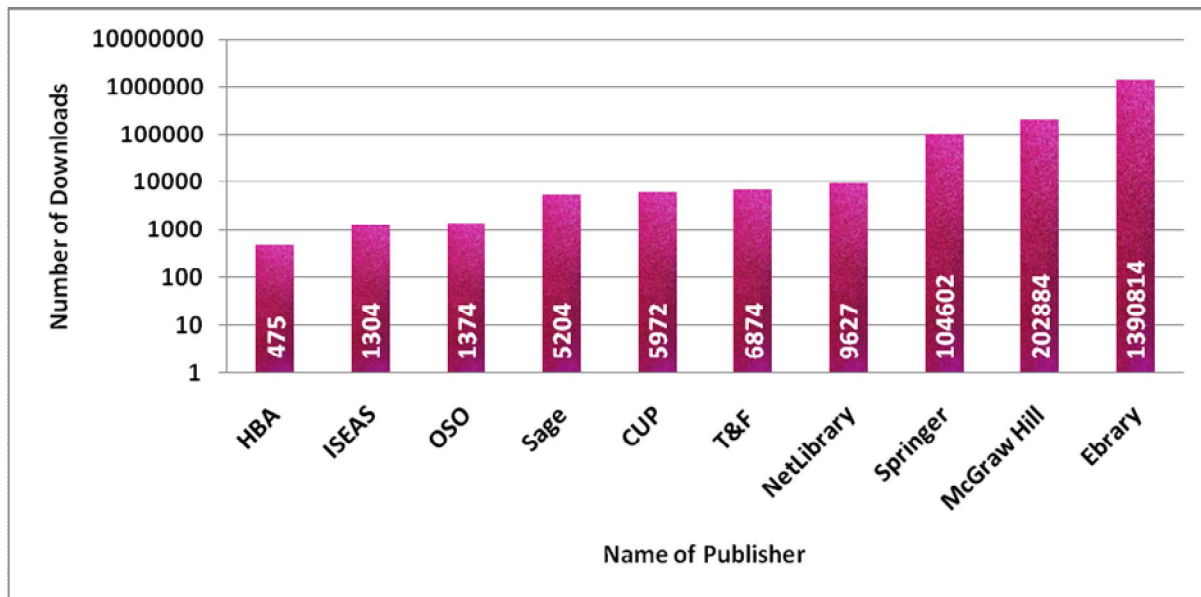


Fig.27: Publisher-wise Usage of E-Books 2015-2016

7.3.6.3. Month-wise Usage of E-Resources

Figure 28 given below reflects month-wise usage of e-journals and e-books for the period April 2015 to March 2016.

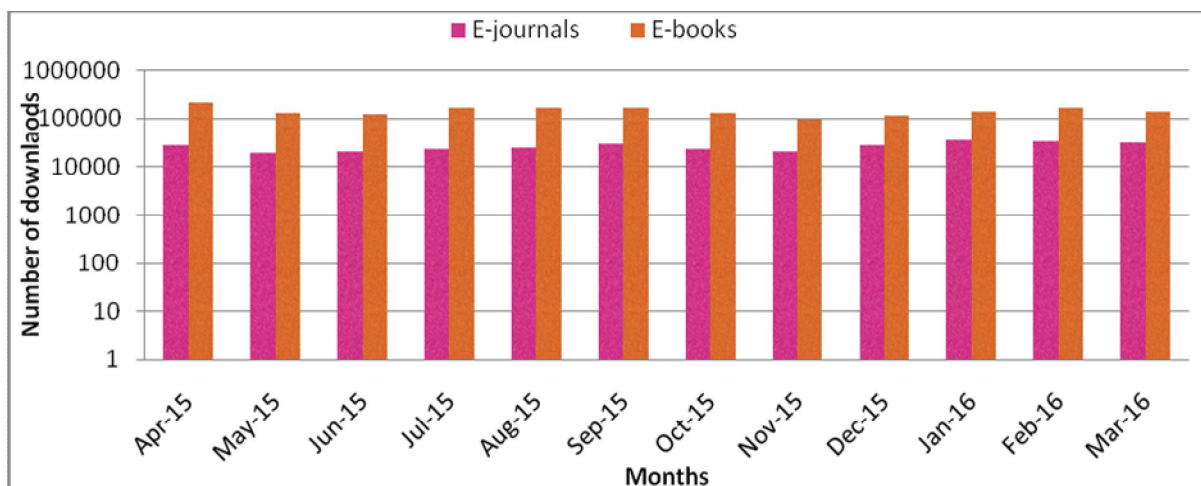


Fig.28: Month-wise Usage of E-resources for 2015-2016

7.3.6.4. Month-wise Unique Visitors

Since the access of e-resources is provided through a proxy server set-up at the INFLIBNET Centre, it is difficult to analyse usage of e-resources by a given college. The Centre is using AW stats, a powerful open source tool that generates statistics from the local proxy server. The Centre has used this tool to naugur log files of N-LIST Proxy Server. Figure 29 shows month-wise unique visitors to N-LIST resources. The graph shows average 13,952 monthly users from 3,816 member colleges.

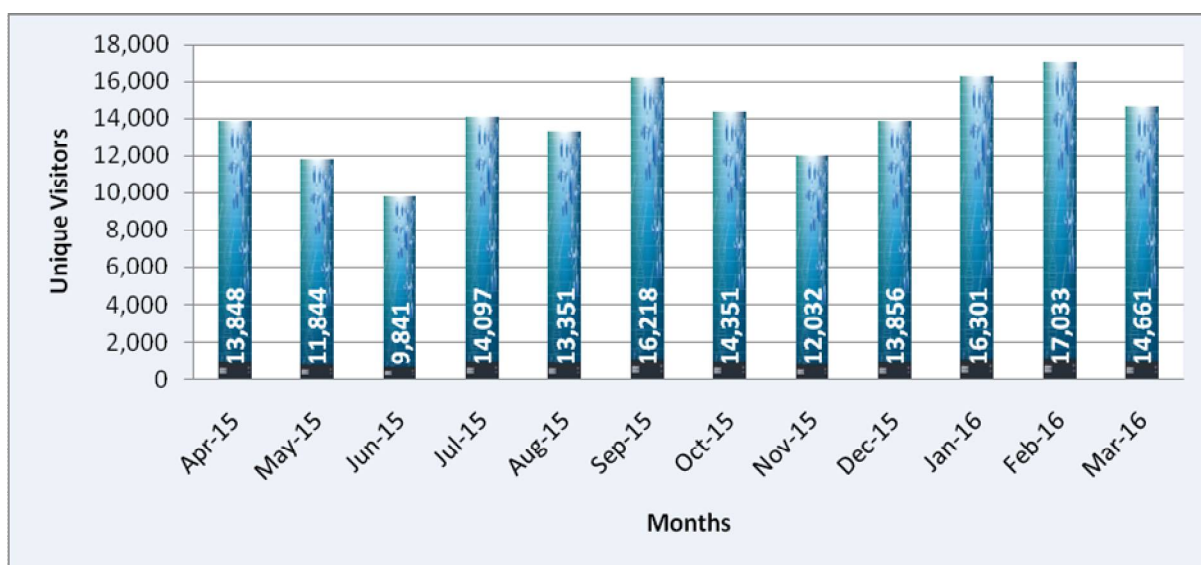


Fig. 29: Month-wise Unique Visitors of the N-LIST Programme 2015 –2016

7.3.6.5. Month-wise Pages Viewed

A total number of 90,09,884 pages were viewed by the users in member colleges from the subscribed e-resources. Figure 30 depicts month-wise number of pages viewed by the users in member colleges.

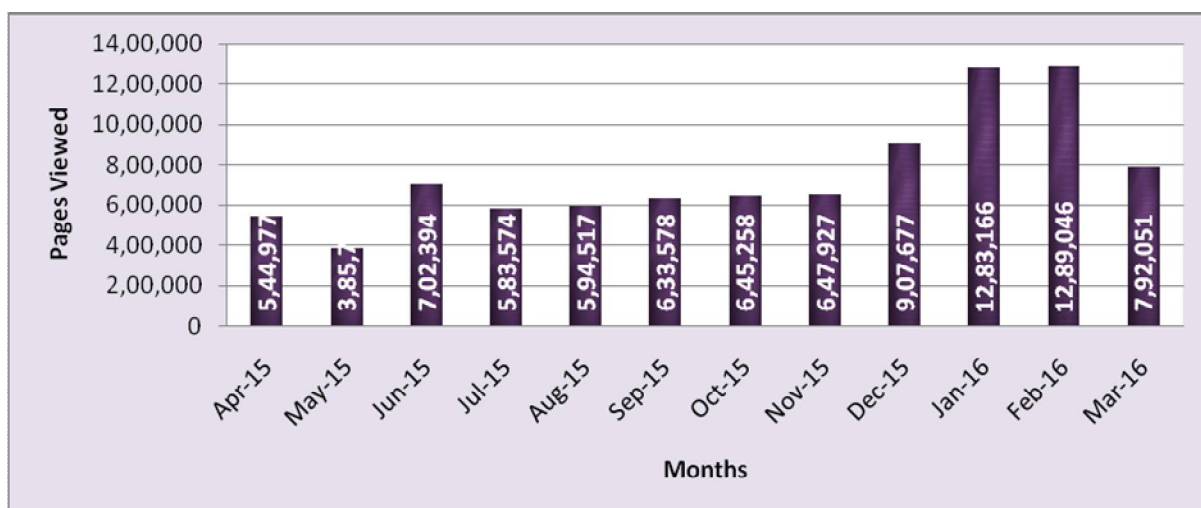


Fig. 30: Month-wise Pages Viewed 2015 -2016

7.3.7. Economics of N-LIST Programme

Cost recovery, cost avoidance and (lower) rates of subscription are factors that determine economic viability and cost-effectiveness of consortia-based subscription to e-resources. These factors are discussed below briefly.

7.3.7.1. Cost Recovery

The recovery of cost incurred on e-resources subscribed through the N-LIST Programme can be judged in terms of intensity of use of resources. The cost recovery is calculated on the presumption that if the electronic resources were not available through the N-LIST programme, articles downloaded from these resources by the member colleges would have been sourced on inter-library loan or through document delivery services at a cost of US \$ 15.00 per article. (Average cost of article taken from a study conducted by the American Research Libraries (ARL). As is evident from the Figure 31 given below that the N-LIST Programme has recovered the cost incurred on subscription to all e-resources.

The total cost that has been recovered for the year 2015 amounts to Rs. 176.92 crores as against the total expenditure of Rs. 8.45 crores with Rs. 168.48 crores as the cost of articles downloaded in excess.

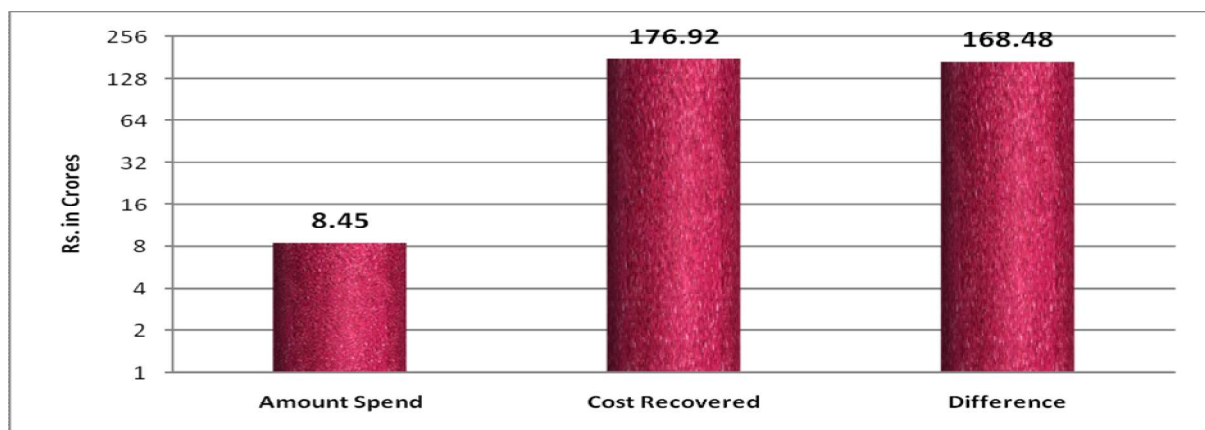


Fig.31: Cost Recovery Factor of e-Journals Subscribed under the N-LIST Programme for 2015

7.3.7.2. Lower Rates of Subscription

The N-LIST Programme has used a highly innovative pricing model for subscription to e-resources wherein one subscription (equivalent to one subscription paid for a university in the UGC-Infonet Digital Library Consortium) is paid for a set of 200 colleges given the fact that extending the prevalent pricing models to college would have been highly expensive, unaffordable and impractical for the college component of the N-LIST Programme. As such, a total number of 20 subscriptions (on prorated basis) were paid for 3,816 colleges during the financial year under report.

7.3.7.3. Cost Avoidance

Cost avoidance is calculated in terms of difference in cost paid by the N-LIST programme for colleges and list price of e-resources including e-journals and e-books. Figure 32 given below shows that there is a notional savings of Rs. 11,139.64 crores considering the fact that the same sets of resources on list price would have cost Rs. 11,152.67 crores as against Rs. 13.02 crores spent under the N-LIST programme for the year 2015.

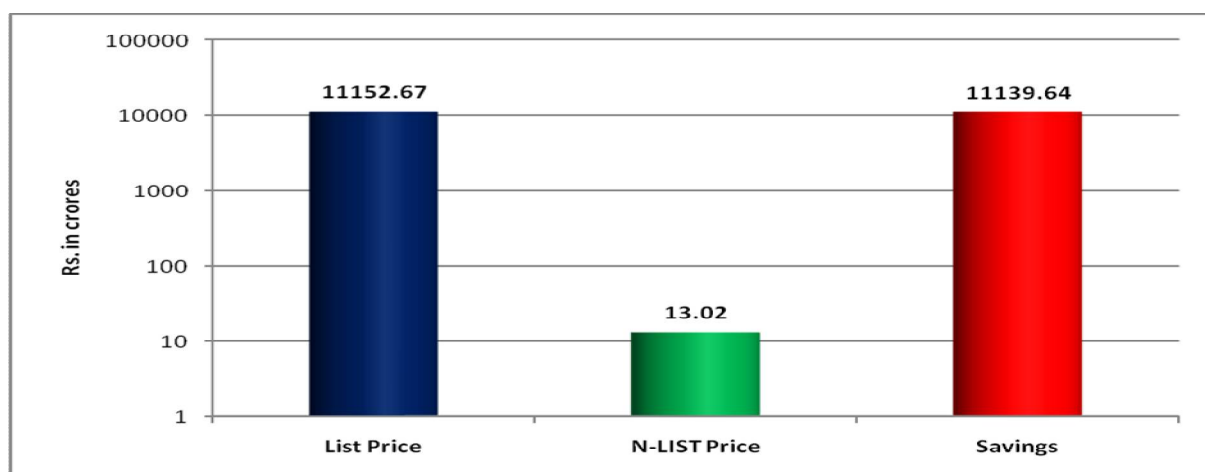


Fig. 32: Cost Avoidance 2015

7.3.7.4. Annual Increase in Rates of Subscription

Annual increase in rates of subscription is restricted from 0 to 5% as against the usual increase in price of e-resources from 10 to 15%.

7.3.8. Average Cost of E-resources Subscribed under the N-LIST Programme

7.2.8.1. Average Cost of Journals per College

The N-LIST programme subscribes to a total number of 6,318 electronic journals for its member colleges. The cost of subscription to e-resources comes down with increase in number of colleges as given in Table 20. As such, average cost of a single journal per college computes to Rs. 2.61 in the year 2015 when only 3,816 colleges were enrolled for the scheme.

Name of E-resources	No. of Colleges	No. Resources	Price per College per Title in Rs.
AIP	2,000	18	270.38
AR	3,816	33	37.16
CUP	3,816	224	8.49
EPW	3,816	1	935.53
Indian Journals	3,816	186	8.66
IOP	2,000	46	41.68
JSTOR	3,816	2,500	0.63
OUP	3,816	206	8.24
RSC	2,000	29	106.55
HW Wilson	3,816	3,075	0.77
Total	3,816	6,318	2.61

Table 20: Average Cost of Journals per College

7.3.8.2. Average Cost of E-books

Most of the e-books under the N-LIST programme is purchased for all existing 3,816 colleges on “one-time purchase and perpetual access basis” except Ebrary which is subscribed on annual subscription basis as given in Table 21. Average cost per book per college varies from Rs. 0.05 in case of Ebrary to Rs. 2.54 in case of Hindustan ebooks.

Name of E-resources	No. of Colleges	No. Resources	Price per College per Title in Rs.
Ebrary	3,816	1,25,000	0.05
OSO ebook	3,816	1,402	0.78
Springer ebook	3,816	2,300	1.78
T&F Ebook	3,816	1,800	1.37
CUP ebook	3,816	1,800	0.58
Hindustan ebooks	3,816	65	2.54
ISEAS ebooks	3,816	382	2.47
Sage ebook	3,816	1,000	1.25
Total	3,816	1,33,749	0.13

Table 21: Average Cost of E-books per College per Title

7.3.9. Honours and Awards

The N-LIST Programme was honoured with three awards in the years 2010 and 2011, namely i) Jury Choice Award e-INDIA 2010; ii) The Manthan South Asia Award 2010 in Digital Learning Category for the year 2010; and iii) Skoch Digital Inclusion Awards 2011 in Technology in Education Category for the N-LIST project.

8. Open Access Initiatives

The current system of scholarly communication inhibits rather than promote access to scholarly information at a time when technology can enable vast improvement in access, speed of publication and save the cost of publication. The present model of publishing is essentially a monopoly of publishers that is driven by the need to publish rather than the need for more information. The open access has emerged as a promising alternative to the current model of scholarly publishing that provides free access to scientific information to its users. The open access publishing model offers access to full-text of journals free of charge to the user through well-organized and professionally-managed web interfaces. The essential premise of open access movement is that the scientific community and society in general benefits from the open exchange of ideas and information unaffected and unencumbered from the limitations of subscription costs, licensing arrangements and copyright inherent to the traditional model of commercial journal publishing. Open access journals and institutional repositories are two routes of open access publishing system.

Open-access journals are considered as “golden route” for providing access to peer-reviewed journal literature in electronic format free-of-charge without any restriction of access. Institutional repositories considered as “green route” to open access publishing, are being set-up in research institutions with anticipation that the faculty and researchers would submit their preprints or post-

prints of articles that are either accepted for publication or already published in traditional printed journals.

The open access initiatives at the INFLIBNET Centre are working towards spread of open access movement in universities and institutions of higher learning. The Centre continued all the initiatives that were started in the previous years. These initiatives as described below:

8.1. Open Journal Access System (OJAS) (<http://www.inflibnet.ac.in/ojs/>)

Gaurav Prakash, Scientist B (CS)

Mohit Kumar, STA (CS)

The INFLIBNET Centre has installed and configured Open Journal System (OJS), open source software for electronic publishing of the journals, to facilitate hosting of electronic version of journals into open access mode with all processes of submission, peer-reviewing, editing, layout designing and publishing built into it. The initiative encourages universities and institutions that are publishing journals in print format to use the platform for hosting electronic version of their journals free-of-cost on servers at the INFLIBNET Centre. The initiative also encourages faculty in universities to start their own open access journals using this platform.

During the period under report, INFLIBNET Centre received six new requests for hosting journals on OJAS platform out of which five were rejected and one journal was selected for hosting on OJAS Platform.

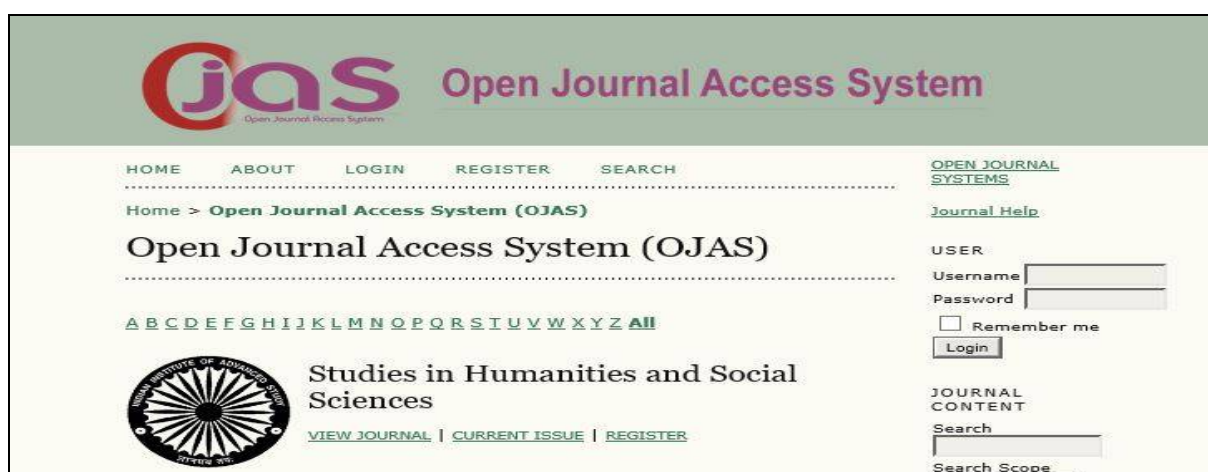


Fig. 33: Open Journal Access System (OJAS)

Figure 33 depicts screenshot of Open Journal Access System (OJAS) interface. The following seventeen journals are currently hosted on OJAS:

- » Studies in Humanities and Social Sciences, published by Indian Institute of Advanced Study, Shimla;

-
- »» Journal of Literature, Culture and Media Studies, published by Nagaland Central University, Nagaland;
 - »» Assam University Journal of Science & Technology on “Biological and Environmental Sciences” and “Physical Sciences and Technology”, published by Assam University Press, Silchar;
 - »» ICSSR Journal of Indian Psychological Abstracts and Reviews, published by ICSSR, New Delhi;
 - »» ICSSR Journal of Abstracts and Reviews (Economics), published by ICSSR, New Delhi;
 - »» ICSSR Journal of Abstracts and Reviews (Geography), published by ICSSR, New Delhi;
 - »» ICSSR Journal of Abstracts and Reviews (Political Science), published by ICSSR, New Delhi;
 - »» ICSSR Journal of Abstracts and Reviews (Sociology and Social Anthropology), Published by ICSSR, New Delhi;
 - »» Management Convergence, published by Mizoram University, Aizwal, Mizoram;
 - »» International Journal of Farm Sciences, published by SADHNA, Dr. Y S Parmar, University of Horticulture & Forestry, Nauni, Solan;
 - »» Karnataka Journal of Agriculture Sciences, published by Karnataka Agriculture University, Dharwad, Karnataka;
 - »» Management Insight, published by School of Management Sciences, Varanasi
 - »» Purushashtra – A Journal of Management Ethics and Spirituality, published by School of Management Sciences, Varanasi;
 - »» Journal of Knowledge Consortium of Gujarat (Humanities), published by Knowledge Consortium of Gujarat, Gandhinagar;
 - »» Trends in Information Management (TRIM), published by University of Kashmir, Srinagar;
 - »» The Indian Journal of Animal Reproduction, published by Department of Animal Reproduction, Gynaecology & Obstetrics, Madras Veterinary College, Chennai; and
 - »» Margins, published by Department of English, Gauhati University, Guwahati.

8.2. Shodhganga: A Reservoir of Indian Theses & Dissertations (<http://shodhganga.inflibnet.ac.in>)

Jagdish Arora, Director
 Manoj Kumar K., Scientist D (CS)
 Yatrik Patel, Scientist D (CS)
 Swapnil Patel, Scientist B (CS)
 Suboohi Siddiqui, STO (LS)
 Archita Muchhadia, Project Officer (LS)
 Kuldeep Mateida, Project Officer (LS)
 Neha Jain, Project Assistant (LS)

Shodhganga is a digital repository set-up for submission of electronic versions of theses and dissertations by students / research scholars in universities in India and make them available in open access to the world-wide academic community in response to the UGC Notification (Minimum

Standards & Procedure for Award of M.Phil. / Ph.D Degree, Regulation, 2009) where-in the responsibility of maintaining the digital repository of Electronic Theses and Dissertations (ETDs) is assigned to the INFLIBNET Centre. Shodhganga is set-up using Dspace, an open source software, that uses internationally recognized protocols and interoperability standards. The repository provides a platform to research scholars in universities to deposit, re-use and share their theses and dissertations. Figure 34 depicts the home page of Shodhganga website.

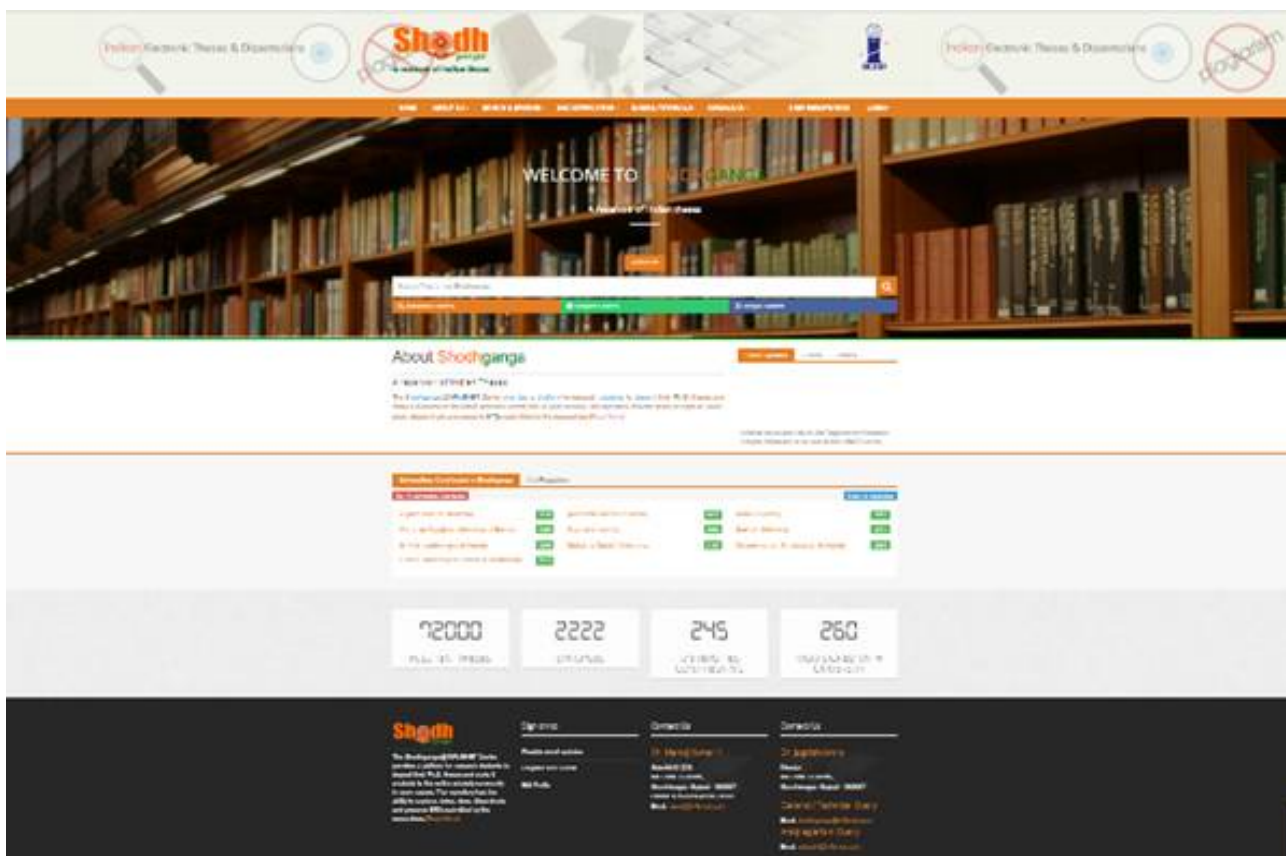


Fig.34: Shodhganga Website

Organisation of theses in Shodhganga reflects the academic structure of every university in the country which offers Ph.D. programme to facilitate the scholars to submit their theses in the respective Department / Centre / College of their Universities. Ingestion interface of Dspace was customized to meet the specific requirements and make the process of submission easy. The customized ingestion interface is simple to use and involves lesser number of steps in comparison to default submission interface of Dspace. The interface facilitates submission of theses either by university administrators, university representatives or researchers. The interface also facilitates self-registration of scholars wherein the user gets e-mail alerts and notifications at different stages of workflow. The Shodhganga website provides information that is helpful to the researchers, research supervisors and university authorities with regard to ETDs including their responsibilities, access policies, submission process, metadata structure, tutorial, manual, etc.

Besides default search and browse options provided by the Dspace, a subject search interface is embedded into Shodhganga based on GIPP (Global Institutional Profile Project). Major classification using 6 main subject categories at the first level, 28 subject categories at the second level to support subject-wise browse and search. The major six subject categories are Arts and Humanities, Clinical, Pre-Clinical and Health, Engineering and Technology, Life Sciences, Physical Sciences and Social Sciences. The search can be extended to micro-level for more precision on the subject domain by using LCSH (Library of Congress Subject Heading List). Figure 35 depicts subject search interface of Shodhganga.

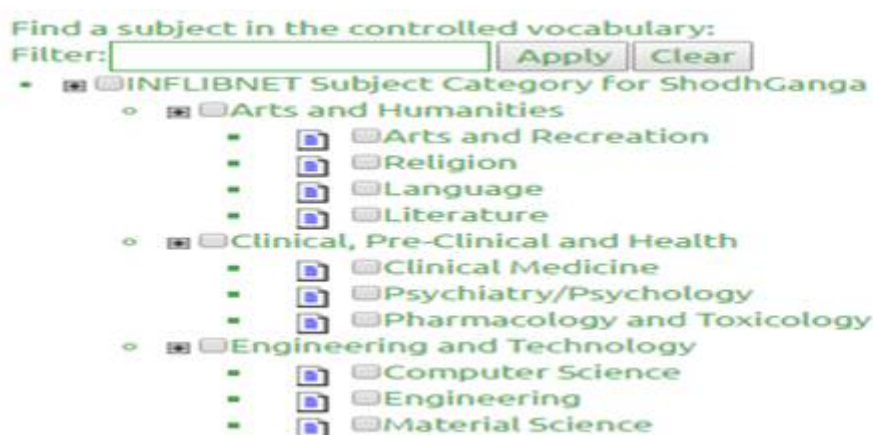


Fig. 35: Subject Search Interface of Shodhganga

Considering the fact that the process of adaptation of the UGC Notification may take time for universities, research students are encouraged to submit electronic version of their Ph.D. theses into the Shodhganga on voluntary basis. Once the submission of theses is mandated by a university, process of submission of theses can be monitored by respective universities so as to ensure that correct and final versions of all the theses from a given university are submitted into the Repository.

Universities are signing MoU with INFLIBNET Centre for granting non-exclusive rights to host their ETDs in Shodhganga. Moreover, students from different universities are also submitting electronic version of their theses into the repository on voluntary basis. As on 31st March 2016, researchers from 245 universities have submitted their theses into the repository. 260 universities have signed MoU with the INFLIBNET Centre, 59 universities who signed the MoU on Shodhganga with INFLIBNET Centre during the year under report are available at http://shodhganga.inflibnet.ac.in/annual_report/mou2015_2016.pdf. Many universities without signing MoU have also started contributing their theses into Shodhganga repository as per the UGC Notification. A list of 60 such universities who contributed soft copies of their theses into Shodhganga without signing MoU is available at http://shodhganga.inflibnet.ac.in/annual_report/contributing_wo_mou.pdf. Total number of theses submitted into the repository has grown to 72,000. Figure 36 depicts year-wise theses submission into Shodhganga. Figure 37 depicts Month-wise submissions into Shodhganga during the period of report.



Fig. 36: Year-wise Theses Submission into Shodhganga

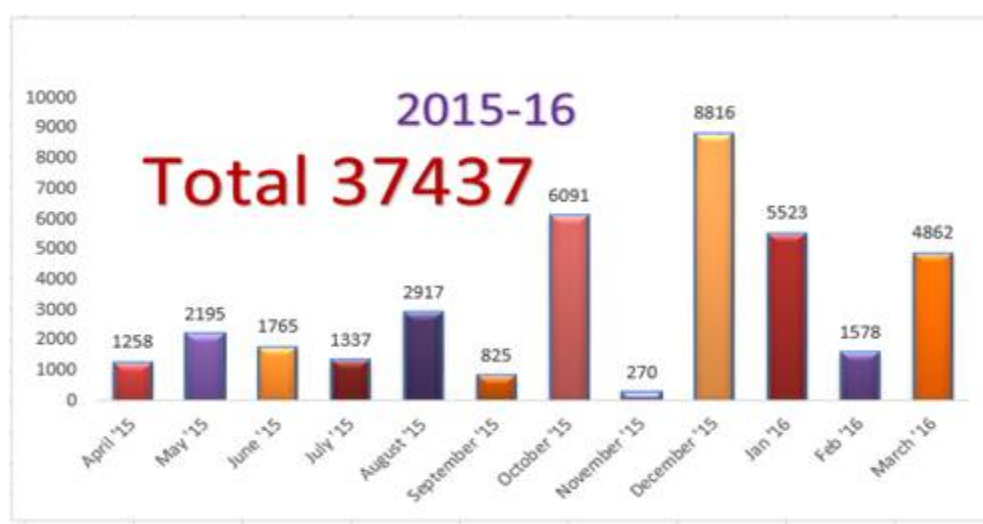


Fig 37: Month-wise Theses Submission into Shodhganga

8.2.1. Incentives to Universities for Signing MoU on Shodhganga with INFLIBNET Centre

On recommendation of the INFLIBNET Centre, UGC had constituted a Committee to recommend modalities and criteria for allocation of funds to universities that have signed MoU with INFLIBNET Centre on Shodhganga. Based on the recommendations of the Committee, the UGC has launched a new scheme for universities signatory to the MoU on Shodhganga with INFLIBNET Centre. The scheme provides for the following incentives to the universities:

- Funds for digitization of back lists of theses available in universities;
- Funds for setting-up of ETD Laboratory in eligible universities; and
- Extending access to plagiarism detection software package in member universities.

The scheme and the recommendation of the committee were approved by the UGC. Eligible Universities are asked to fill-in a questionnaire to assess their requirement of funds as per the criteria

laid down by the committee. Accordingly, 70 universities that are signatory to MoU with INFLIBNET Centre on Shodhganga and were eligible for receipt of financial assistance from UGC, have received funds from UGC for setting up of ETD lab and digitisation of old theses. UGC has sanctioned Rs.09.71 crores (apprx.) grant and released funds to these 70 universities. In addition, INFLIBNET has recommended Rs 1.60 Cr in 2013-14 for 9 universities and Rs 2.69 Cr in 2014-15 for 17 Universities. As such, total amount of Rs 14.00 Cr is recommended for 96 eligible Universities till 31st March 2016 are available at http://shodhganga.inflibnet.ac.in/annual_report/etd_fund.pdf and Rs 4.29 Cr is still awaited to be sanctioned and released by the UGC.

2.3 Subscription to URKUND: a Plagiarism Detection Software

INFLIBNET Centre provides access to URKUND: a plagiarism detection software to universities that are covered under sections 12(B)/2f of the UGC Act and have signed MoU on Shodhganga with INFLIBNET Centre and are eligible for funding from UGC. 143 eligible universities have been provided the software, list is available at http://shodhganga.inflibnet.ac.in/annual_report/urkund.pdf and a total no. of 25,496 theses checked for plagiarism using URKUND Software. Figure 38 depicts month-wise submissions of plagiarism checked in URKUND from August 2015 to March 2016.

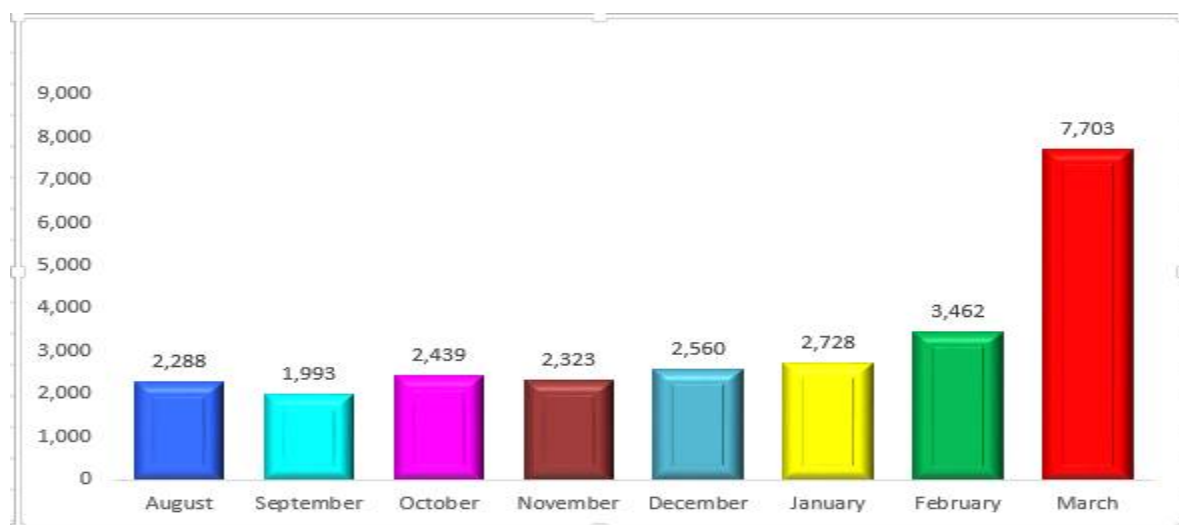


Fig. 38: Submissions in URKUND

8.2.2. Usage Statistics

INFLIBNET regularly monitors the usage of theses for improvement in service. General statistical summary for Shodhganga including page views, theses views, department views, university views and website views are shown below in Figure 39. The portal and services are shifted to new server with higher storage capacity and moved to INFLIBNET's own data centre in October 2015. The usage has considerably increased with hosting of repository on more robust infrastructure. Detailed usage statistics for last five months (i.e. November 2015 to March 16) is given below in Table 22.

Views	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Total
Page Views (Bitstream)	22,77,506	139,10,951	196,17,620	212,68,791	229,18,406	799,93,274
Theses Views (Item)	2,29,409	13,52,384	17,21,225	17,15,494	20,46,762	70,65,274
Department/Colleges/Centre Views (Collection)	64,155	3,28,397	4,61,782	4,41,342	4,70,072	17,65,748
University Views (Community)	37,977	1,86,546	2,12,542	2,46,287	2,25,034	9,08,386
Searches Performed	1,55,973	5,71,534	8,36,018	7,59,072	9,64,474	32,87,071

Table 22: Month-wise Usage Statistics

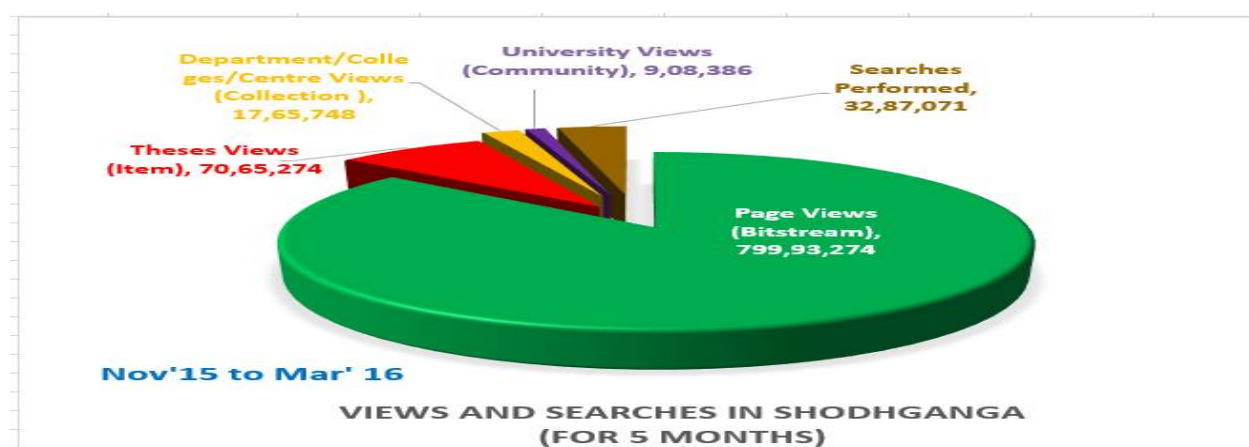


Fig. 39: Shodhganga General Statistical Summary

Average number of page views per day in last five months is 5,29,757, average number of theses views per day is 46,790, average number of department views per day is 11,694 and average number of university views per day is 6,016.

The Top 10 theses that are viewed highest number of times with title, naugural, guide and university along with their handle URL is given below in Table 23.

Sl. No.	10 Top Viewed Theses with Title and Handle No.	No. of Views
1	Women freedom fighters in Tamil Nadu http://shodhganga.inflibnet.ac.in/handle/10603/14211	16,590
2	History of English literature in Pre-Post Independence India: a critical evaluation http://shodhganga.inflibnet.ac.in/handle/10603/4901	15,018
3	Political and administrative ideas of Manu and Kautilya: a comparative study http://shodhganga.inflibnet.ac.in/handle/10603/4285	14,591

4	Role of merchant banking in managing public issues: an empirical study with special reference to post 1997 era http://shodhganga.inflibnet.ac.in/handle/10603/3566	12,877
5	A comparative study of nationalized and private banks with reference to customer relation management http://shodhganga.inflibnet.ac.in/handle/10603/2350	11,717
6	Thematic patterns in the novels of Amitav Ghosh http://shodhganga.inflibnet.ac.in/handle/10603/7898	11,565
7	A comparative study of life insurance Corporation of India and private life insurance companies in India http://shodhganga.inflibnet.ac.in/handle/10603/3519	10,685
8	Customer acceptance of Internet shopping in India: impact of shopping orientations, knowledge and security http://shodhganga.inflibnet.ac.in/handle/10603/2695	10,684
9	Discretionary powers of the governor under the constitution of India http://shodhganga.inflibnet.ac.in/handle/10603/3695	10,387
10	Domain specific ontology based semantic knowledge representation for efficient intelligent information retrieval http://shodhganga.inflibnet.ac.in/handle/10603/4506	8,956

Table 23: List of Top 10 Theses viewed till 31st March, 2016

8.2.3. Analysis of Visitors to Shodhganga using Google Analytics

Google Analytics API service is activated for Shodhganga for monitoring the users' statistics and their visit. The analysis of visitors to Shodhganga reveals that 65% users are new users during the period under report. The new visitors and returned visitors are shown in Figure 40.



Fig. 40: Visitors to Shodhganga

Though 83.5% of the users are from India and remaining 16.5% users of Shodhganga are from other countries as shown in Figure 41. Major foreign users are from United States of America, China, Japan, Germany, South Korea and UK. No. of visitors from top ten countries are given below in Figure 42.

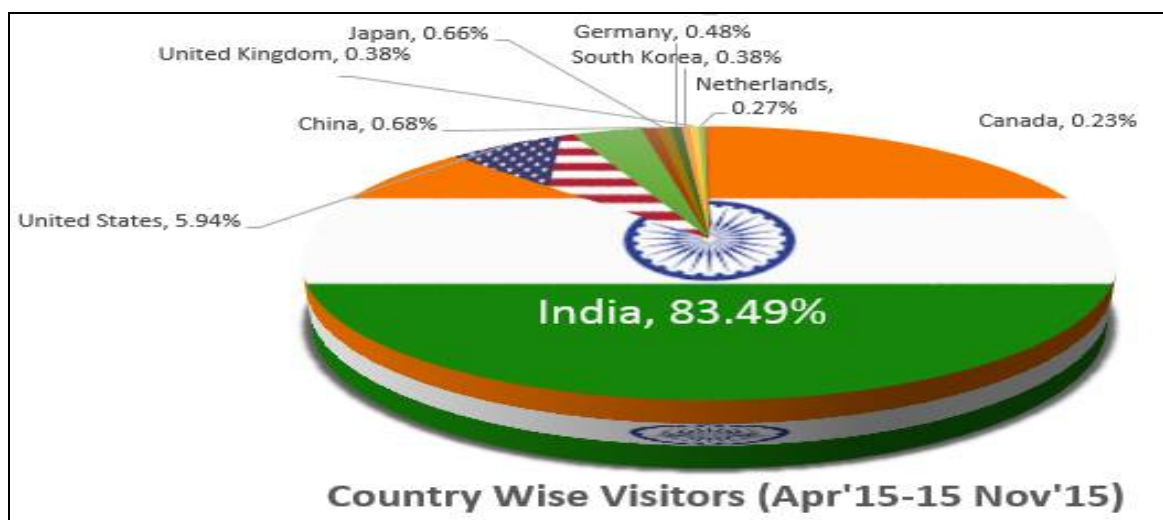


Fig 41: Country-Wise Visitors to Shodhganga

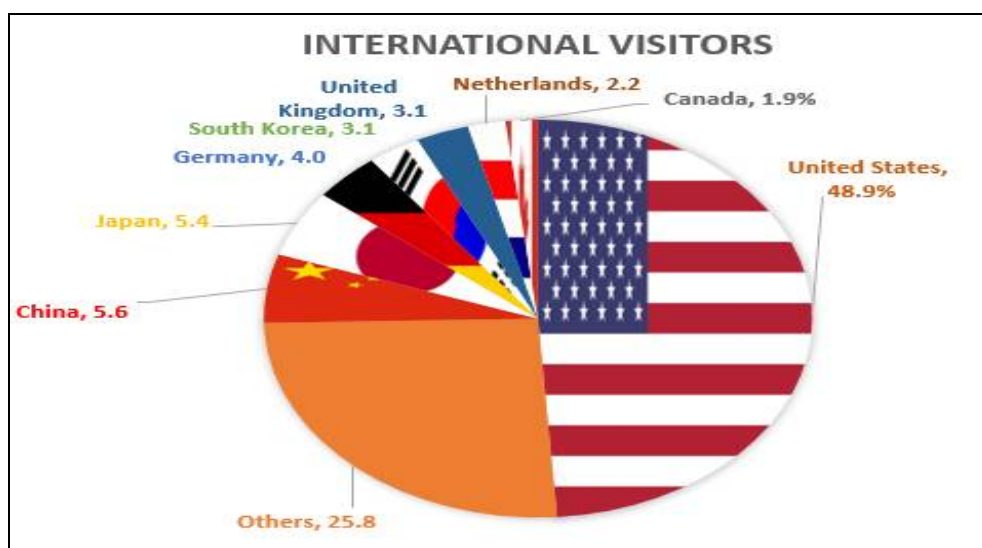


Fig. 42: International Visitors

State-wise analysis is also done to understand the demographically distribution of users. Gujarat state stands first with 17.74%, followed by Tamil Nadu with 13.36% then Maharashtra with 12.79% and so on. States like Karnataka, Delhi, Uttar Pradesh, Kerala, Rajasthan, West Bengal and Telangana are also viewing the content regularly. Figure 43 depicts data on visitors to Shodhganga from major states in India.

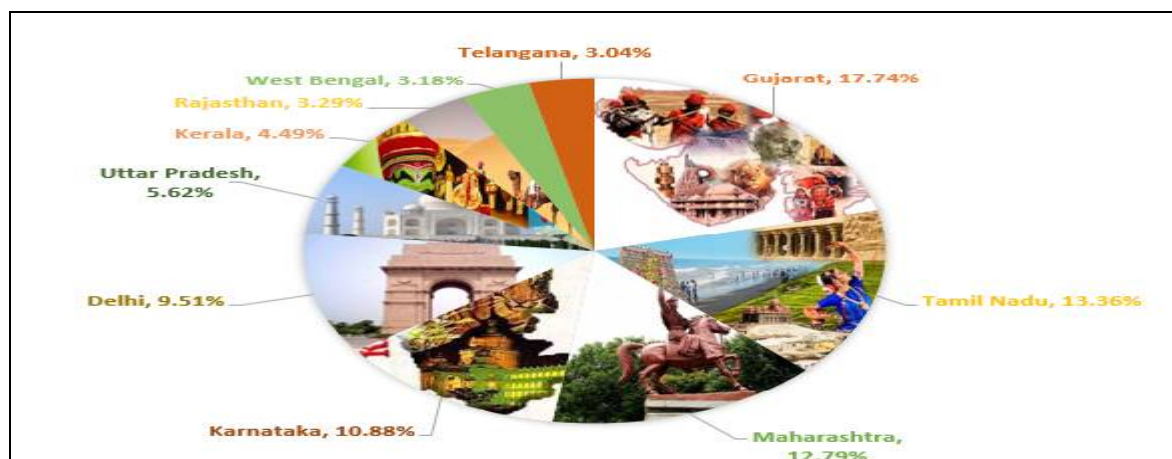


Fig. 43: Indian Visitors of Shodhganga from Major States

8.2.4 CFTIS Joined Shodhganga

The Ministry of Human Resource Development directed all CFTIs (Centrally funded Technical Institutes, i.e. IITs, IIMs, NITs etc.) to join Shodhganga. As Such, 13 CFTIs have signed MoU with INFLIBNET Centre and have started uploading their theses into Shodhganga. List of CFTIs signed MoU is available at http://shodhganga.inflibnet.ac.in/annual_report/cfti_mou.pdf.

8.3. Shodhgangotri: A Repository of Synopses submitted to Indian Universities for Registration in Ph.D. Programme (<http://shodhgangotri.inflibnet.ac.in/>)

Under this new initiative, research scholars / research supervisors in universities could deposit an electronic version of approved synopsis submitted by research scholars to the universities for registering themselves under the Ph.D. programme. Synopsis in Shodhgangotri would later be mapped to full-text thesis in Shodhganga. As such, once the full-text thesis is submitted for a synopsis, a link from synopsis in Shodhgangotri to the full-text theses in Shodhganga will be provided. During the year under report, 49 universities contributed their synopses into shodhgangotri and 2222 approved synopses were submitted into the repository.

8.4. InfoPort: A Subject Gateway to Indian Scholarly Internet Resources (<http://infoport.inflibnet.ac.in/>)

Yatrik Patel, Scientist D (CS)
 Swapnil Patel, Scientist B (CS)
 Roma Yogesh Asnani, STA (LS)

INFOPORT: INFLIBNET Subject Gateway for Indian Electronic Resources is designed to facilitate registering of an Internet resource into the portal and extending its access to users. INFOPORT supports browsing of Internet resources by Dewey Decimal Classification (DDC) Scheme. The main functional parts of INFOPORT are:

- Dewey Decimal Classification (DDC) Search;
- Search Cloud;
- Free-Text Search;
- Alphabetical Search;
- Resource Type Search; and
- Intute Search

During the year under report, number of features and functionalities of subject gateway were enhanced based on feedback from users and populated with additional Internet resource. The interface is populated with more than 1,760 e-resources.

9. e-Learning and e-Content Development

9.1. e-PG Pathshala (<http://epgp.inflibnet.ac.in/>)

Jagdish Arora, Director
 Abhishek Kumar, Scientist C (CS)
 Kannan P., Scientist B (LS)
 Shweta Brahmbhatt, Project Officer (CS)
 Atul Patel, Project Assistant (LS)

e-PG Pathshala is an initiative of the MHRD under its National Mission on Education through ICT (NME-ICT) being executed by the UGC. The development & maintenance of portal and administrative responsibilities are assigned to INFLIBNET Centre. The content and its quality being the key component of education system, high quality, curriculum-based, interactive e-content in 77 subjects across all disciplines of social sciences, arts, fine arts and humanities, natural & mathematical sciences, linguistics and languages are being developed by the subject experts working in universities and other R & D institutes across the country. Every subject has a team consisting of principal investigator, paper coordinators, content writers, content reviewers and multimedia team. A dedicated portal named e-PG Pathshala (<http://epgp.inflibnet.ac.in/>), hosts the content in open access. A screenshot of e-PG Pathshala portal is shown in Figure 45.



Fig. 45: Website of e-PG Pathshala

The UGC has constituted a Standing Committee for e-PG Pathshala under the Chairmanship of Prof. M. Anandkrishnan, Chairman, Governing Board, IIT Kanpur for e-content creation to monitor and coordinate the activity of content creation in a most effective and efficient manner.

9.1.1. e-PG Pathshala Portal

Figure 46 depicts the home page of e-PG Pathshala displays all subjects along with relevant information such as team, syllabus, usage statistics and quiz for each subject.

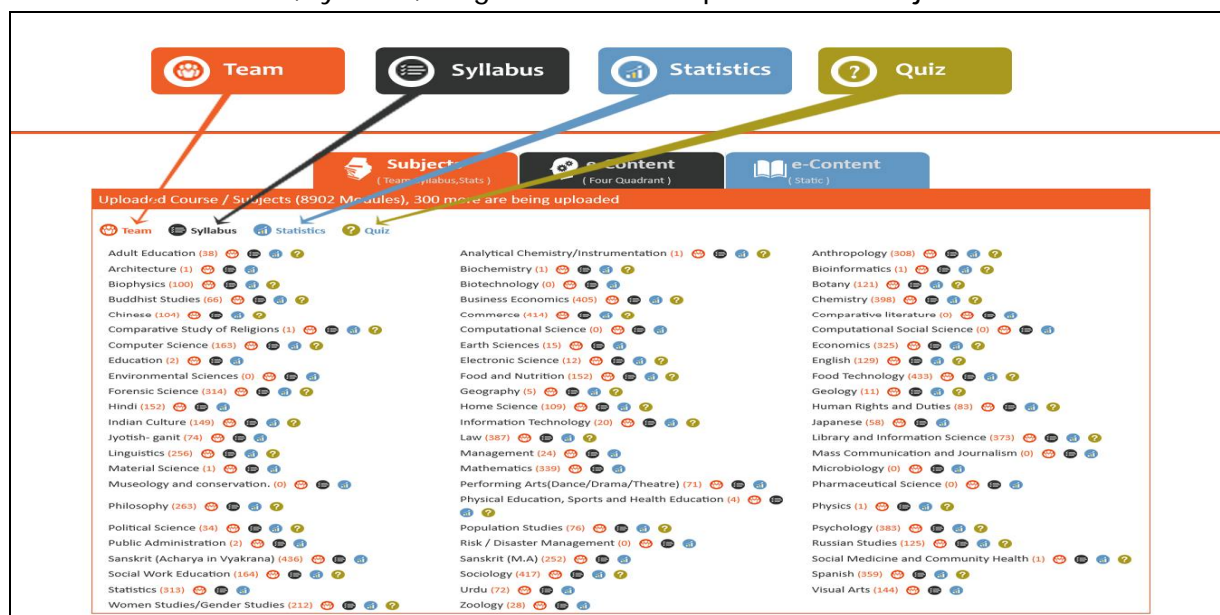


Fig. 46: Subjects uploaded on the portal along with its Team, Syllabus, Usage Statistics and Quiz

On clicking of any given subject the list of papers covers under that subject is displayed as shown in Figure 47. Click on any paper to select modules available under it.

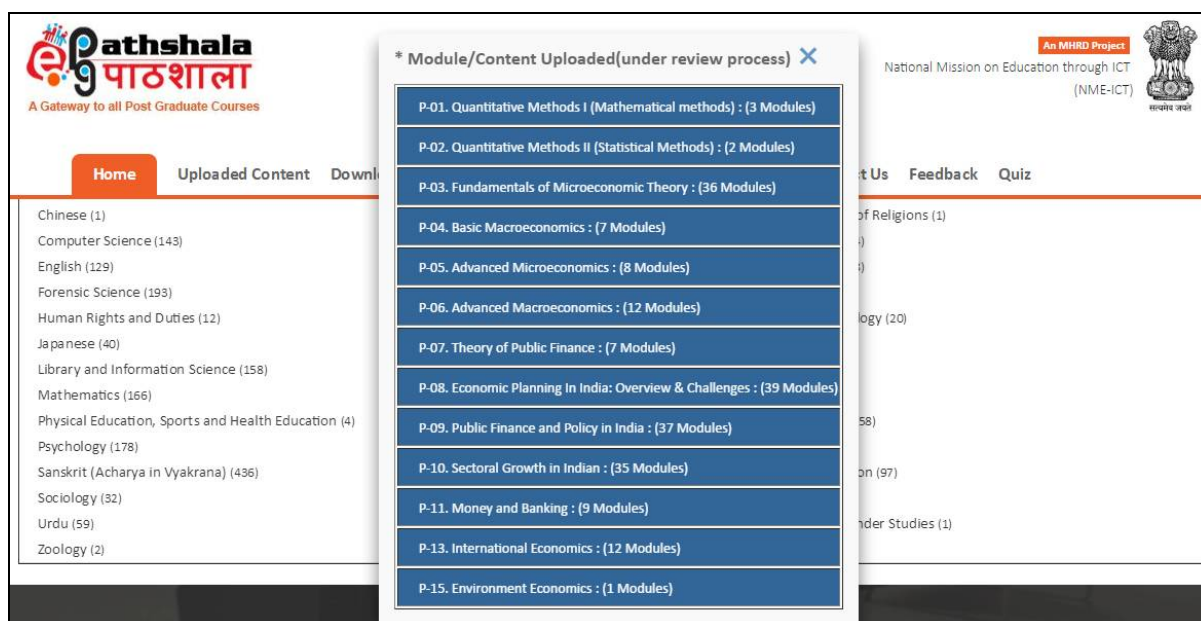


Fig. 47: List of Papers uploaded under the Subject

Each modules consists of four quadrants that are displayed under four different tabs, namely e-Text, Self-Learning, Learn more and Self- Assessment as shown in Figure 48.

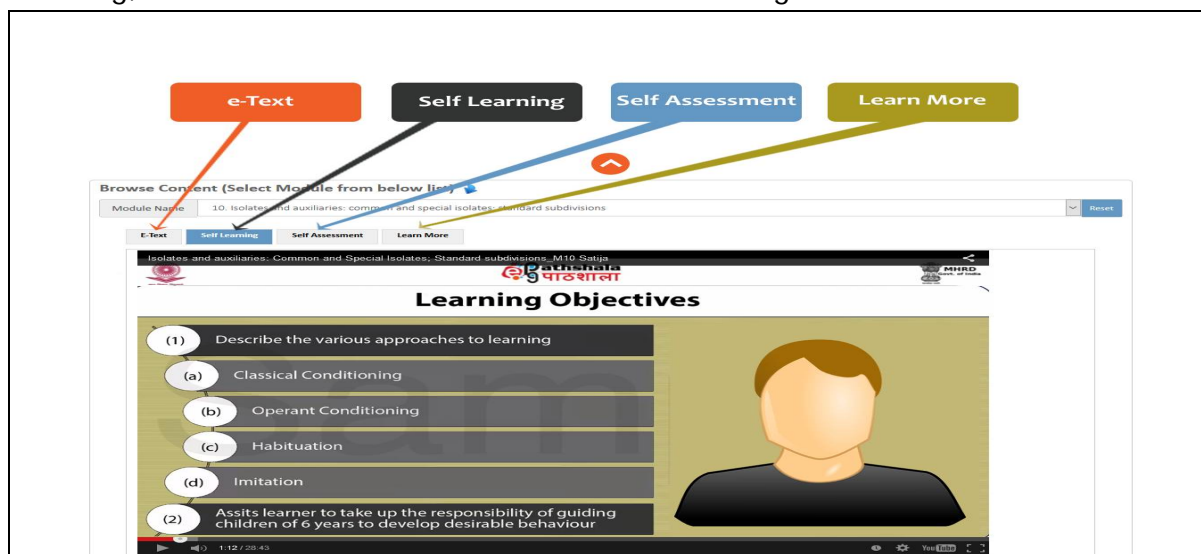


Fig. 48: Four Quadrants of the Module

9.1.2. e-PG Pathshala Management System (e-PMS)

The e-PMS provides a platform to all stakeholders of e-content development team to interact with each other and display current status of development for each subject, as shown in Figure 49. The system provides the following major features:

- Profile creation of each team members;
- Management of paper/syllabus creation and assignment of topics to respective team members of each paper;
- Updation of work progress made for each module;
- Report generation; and
- Link to Minutes of Meetings (Standing Committee and Sub Committee of e-PGP) and other important documents.

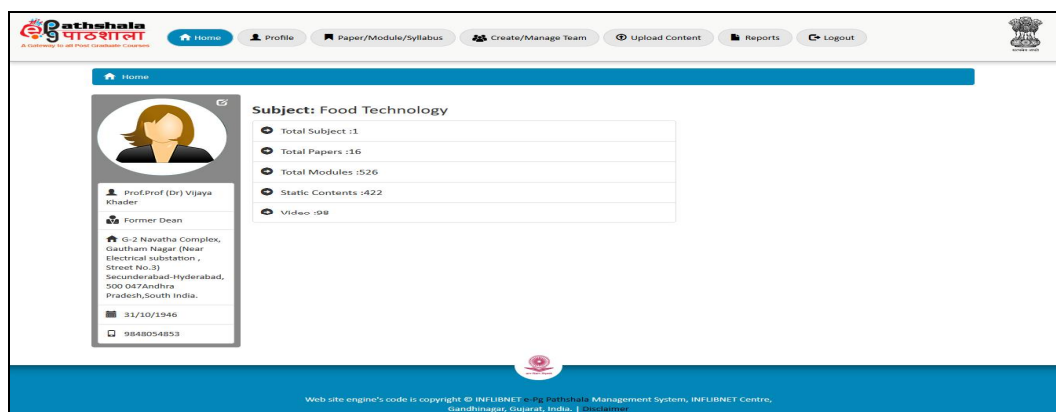


Fig. 49: e-PG Pathshala Management System (e-PMS)

9.1.3. Content Development

During the year under report, progress made under e-PG Pathshala is given in Table 24.

Sl. No.	Work	Progress
1	No. of Pis who contributed content (partial)	67
2	No. of papers for which content is being developed	724
3	No. of static content uploaded on server	5635
4	No. of video / self-learning uploaded	1957
5	No. of institute / universities involved	40
6	No. of academic experts	3000+

Table 24: Details of Content Development under e-PG Pathshala

9.2. e-Acharya: Integrated e-Content Portal (<http://content.inflibnet.ac.in/> or <http://eacharya.inflibnet.ac.in>)

Jagdish Arora, Director
Yatrik Patel, Scientist D (CS)
Abhishek Kumar, Scientist C (CS)
Shweta Brahmabhatt, Project Officer (CS)
Vikram Rathore, Project Officer (LS)
Darshan Modi, Project Associate (CS)
Parth Viroja, Project Associate (CS)
Sonal Vaghela, Project Associate (LS)
Rajeshri Makwana, Project Associate (LS)
Priya Varu, Project Associate (CS)

e-Acharya is an integrated e-content portal developed by the INFLIBNET Centre that consists of all e-content developed with funding from the National Mission of Education through ICT. There are more than 70 projects on e-content under NME-ICT that are at various stage of development in various subject disciplines (science, arts, engineering, social science, etc.) through various institutes/universities/colleges in India. A screenshot of e-Acharya: Integrated e-Content Portal is shown in Figure 50.



Fig. 50: Website of e-Acharya: Integrated e-Content Portal

The portal provides facility to search and browse all e-content hosted on the portal by title, institute, subject, syllabus, etc. wherein a learner can easily retrieve and access the desired material including audio/video multimedia enriched learning material, textual material, etc. from different projects through a single interface.

9.2.1. Features of Search Result

As shown in Figure 51, search result can be browsed by a learner using a number of filter i.e. document type, target learners, institute-wise, project-wise, etc. Moreover, a user can save hi/her search results into "Learner's Corner /My Account" for future use. Mobile app for the e-Acharya is under preparation and syllabus-based access to content available under e-Acharya is in an advanced stage of development.

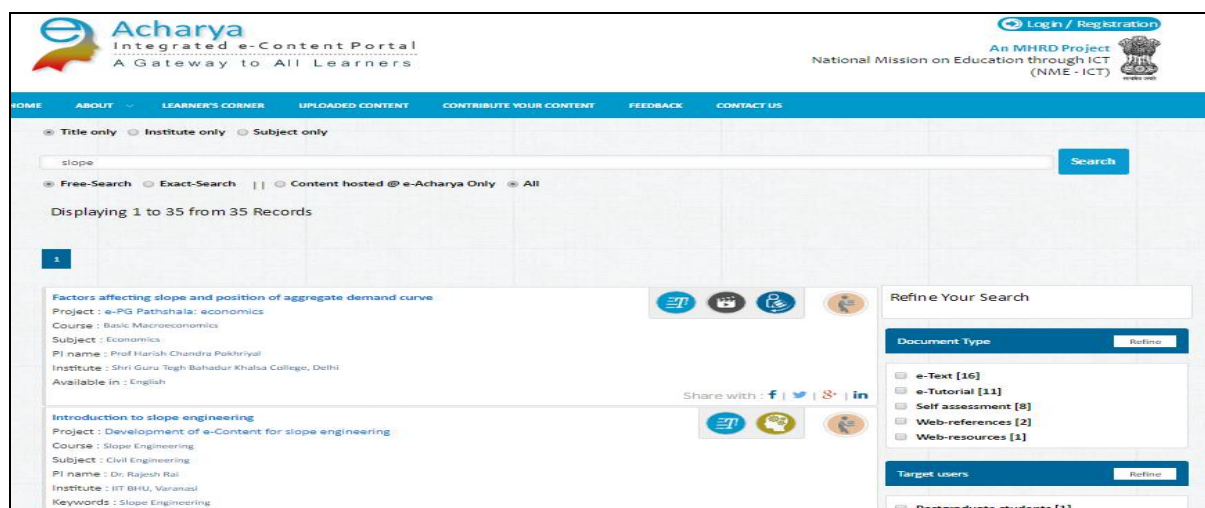


Fig. 51: Screenshot of Search Result

The Centre has acquired content from more than 30 principal investigators who have developed content with funding from NME-ICT given as mentioned in Table 25.

Project	Anchor / Host Institute
Content generation for e-Learning on open source VLSI and embedded system	NIST, Berhampur
Creation of e-contents on fermentation technology	IIT Gandhinagar and Christ College, Rajkot
Design and development of interactive e-content for the subject digital image processing and machine vision	IIT BHU, Varanasi
Design and development of next generation e-content for software reuse design patterns and frameworks	IIT BHU, Varanasi
Developing ICT based pedagogical practices for management accounting	IIT Gandhinagar and Christ College, Rajkot
Developing the e-content for training and development modules for managerial and non-managerial personnel	Indian School of Mines, Dhanbad
Development of e-content for fashion design and technology	NIFT Chennai
Development of e-content for slope engineering	IIT BHU, Varanasi
Development of e-content for under-graduate student in science in the area of chemical process industries	N V Patel College of Pure and Applied Sciences, Vallabh Vidyanagar
Development of e-content in physical education for undergraduate courses	Aligarh Muslim University, Aligarh
Development of e-content on ancient Indian metallurgy and modern process metallurgy	IIT BHU, Varanasi
Development of e-contents for foundation course on pharmaceutical microbiology	IIT Gandhinagar and Saurashtra University
Development of e-contents on foundation course on analytical biochemistry and separation techniques	IIT Gandhinagar and Christ College, Rajkot
Learning by doing (LBD) based course content development in area of CSE and ECE	IIIT Hyderabad
Mathematical sciences without walls	Institute of Mathematical Science, Chennai
Next generation e-content for high performance computing	IIT BHU, Varanasi
Next generation e-content for numerical methods and its applications	NIT Patna
Production of courseware e-content development, video programmes and learning object repositories on climate change	Anna University, Chennai
Quantum and nano-computing virtual centre	Dayalbagh Educational Institute, Dayalbagh, Agra
UG course content in cultural education, rural development, proficiency in Indian music, drawing and painting, journalism and mass communication	Dayalbagh Educational Institute, Dayalbagh, Agra

Vocational courses e-Enabled with delivery through ICT and conversion to regional languages	Dayalbagh Educational Institute, Dayalbagh, Agra
e-Book on material science and engineering	IIT Kanpur
e-Content and video in the area of manufacturing technology for UG and PG students and Industry area	IIT BHU, Varanasi
e-Content development for the course family and community resource management	M S University of Baroda
e-Content development of marketing management	Maharaja Krishnakumarsinhji Bhavnagar University, Bhavnagar
e-Content for under and post graduate courses in English language and literature	Maharaja Krishnakumarsinhji Bhavnagar University, Bhavnagar
e-Content for undergraduate students of science in graduate programmes	IIT Gandhinagar and Navrachna University
e-Content for video processing	IIT BHU, Varanasi
e-Content for zoology experiments	V P and RPTP Science College, Vallabh Vidyanagar
e-Content generation and delivery management for student-Centric learning	NIT Warangal
e-Content generation for adult and non-formal education program	M S University of Baroda
e-Content on theory and practice of literary translation	IIT Gandhinagar and N V Patel College of Pure and Applied Sciences, Vallabh Vidyanagar
e-Course development in economics	Annamalai University, Tamilnadu

Table 25: Contents developed by Pis

9.2.2. Content Acquisition and Hosting

During the year under report, progress made in content acquisition and hosting under e-Acharya is given below in Table 26.

Sl. No.	Format	No.
1	e-Text	13,231
2	Video	30,255
3	Quizzes	3,164
4	Learn More	6,367

Table 26: Details of Content Development under e-Acharya

10. Website Development & Maintenance

The Centre uses web technology to provide organized and structured access to its services and resources to the academic community through the Centre's Website as well as through websites of its individual services and products. The Centre's Website is designed to work as an integrated interface for all services and resources accessible to the academic community in the universities and colleges. The Web Development team has especially been set-up for designing innovative web-based interfaces for effective and efficient delivery of services using the latest web-based tools and technologies. The Group undertakes all activities related to selection, organisation and presentation of services and resources in a meaningful way for the benefit of the user community.

Technology Used:

Development Tools: PHP, HTML, DTML, JSP, JavaScript

Database: MySQL Server, Postgres SQL Server and MS SQL Server

Operating Systems: Red Hat Linux Enterprise Server 4.0, Fedora 8.0/9.0

Open Source Software: phpChat, MediaWiki, phpBB, Dspace and WordPress

10.1. INFLIBNET Centre's Main Website (<http://www.inflibnet.ac.in/>)

Ashok Kumar Rai, Scientist D (CS)

The Centre maintains comprehensive Website in English and Hindi as shown in Figure 52. Several new additions were made to the new version of the Institute's website. A technology called "Real Simple Syndication (RSS)" is used to facilitate users and bloggers to harvest recent updates from the Centre's website. Web 2.0 features and functionalities, including Wiki, Blog, Chat and Discussion Forum, RSS feed, etc. were incorporated in the Website. The new website of the Centre has the following main features:

- »» Powerful search and browse interface;
- »» Dynamic calendar;
- »» Recent and new events;
- »» Download forms and documents;
- »» Online feedback mechanism;
- »» Mailing list, video gallery, webmail, etc.;
- »» Latest news, jobs, tenders, etc.; and
- »» Wiki, weblog, RSS feeds and online chat.



Fig. 52: INFLIBNET's Website

10.2. Intranet (<http://172.16.16.11/intranet/>; for INFLIBNET Staff Only)

A separate Intranet website is maintained for the internal staff of the Centre as shown in Figure 53. The website provides detailed information to scientists and staff of the Centre fulfil their following requirement:

- » Rules and regulations of the Centre;
- » MoA;
- » All circulars;
- » All types of forms in fillable pdf format;
- » Committees and their constitutions;
- » List of holidays; and
- » Presentations on various activities and services of the Centre.

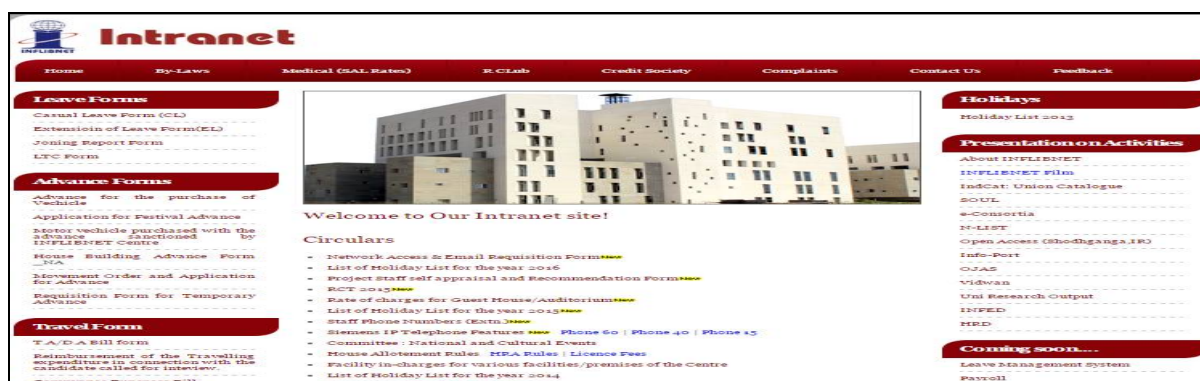


Fig. 53: INTRANET Website

10.3. Implementation of Web 2.0 Technologies at the Centre

The INFLIBNET Centre has entered into the world of Web 2.0 and Library 2.0 with implementation of interactive and collaborative technological tools. All the Web 2.0 tools used are open source

software. Web 2.0 / Library 2.0 technologies implemented at INFLIBNET Centre includes Chat (<http://www.inflibnet.ac.in/chat/>), Blogs (<http://www.inflibnet.ac.in/blog/>), Wiki (<http://www.inflibnet.ac.in/wiki/>), Streaming Media and Social Network (<http://in.youtube.com/inflibnet>), RSS Feeds Aggregation Service (<http://www.inflibnet.ac.in/feed/>), Library Toolbar, etc.

11. Shibboleth based Access Management System (<http://parichay.inflibnet.ac.in/>)

Jagdish Arora, Director
Yatrik Patel, Scientist D (CS)
Ashok Kumar Rai, Scientist D (CS)
Raja V., Scientist B (CS)

The INFLIBNET Access Management Federation (INFED) is designed to protect the privacy of users while giving both service providers and user organisations sufficient assurance that requirements such as licenses and acceptable use policies can be enforced. The Shibboleth architecture chosen for the INFED is designed to protect user privacy. However, the measures it provides can only be effective if they are used and respected by user organisations, identity providers and service providers.

The federation and its website (parichay.inflibnet.ac.in) has been created with all documentation. Identity provider has been created for N-LIST user and has been successfully tested with few publishers. At present it has been tested with a handful of service providers and available in production mode. INFLIBNET access management federation has also joined eduGAIN. The existing version / platform have been upgraded and a large number of institutions are expected to join soon.

12. Institutional Repositories Customizations and Support

Yatrik Patel, Scientist D (CS)
Swapnil Patel, Scientist B (CS)
Divyakant Vaghela, Scientist B (CS)
Vijay Shrimali, STA (CS)

The INFLIBNET Centre is assisting institutions of higher learning in the process of creation and maintenance of institutional repositories. The Centre is using self-developed expertise in open source software like Dspace, Linux, Perl, Java, Apache Tomcat, Apache Ant, Apache Maven and Postgresql. Under this initiative, the Centre has installed, configured, customized and hosted institutional repository for various institutions.

During the year under report, the Centre has started Repository Support Group to provide proactive help and support to the various institutes. The Centre has provided support to the institutions given below in Table 27.

Sl. No.	Name of Institutions	Services Subscribed
1	ARAI, Pune	Maintenance (Version Upgraded, Customization, Backup, Statistics Generated)
2	IUCAA, Pune	Installation, Customization (Version Upgraded, Customization, Handle Services, Cron Setup)
3	Ganpat University, Mehsana	Hosting (Service Renewed)
4	Doon University, Dehradun	Installation, Customization
5	CHARUSAT, Changa	Installation, Customization (Installation Completed)

Table 27: Institutions and Services Provided by the INFLIBNET Centre

Besides, the Centre also provides proactive help and support to many national and international institutions over phone and via remote login to setup their repositories.

This group is also responsible to support and maintain INFLIBNET Centre's Institutional Repositories as well as other open access initiatives like Shodhganga and Shodhgangotri.

13. ICSSR Data Service: Social Science Data Repository

Jagdish Arora, Director
Yatrik Patel, Scientist D (CS)
Divyakant Vaghela, Scientist B (CS)
Swapnil Patel, Scientist B (CS)
Hitesh Solanki, Scientist B (CS)
Mitesh Pandya, Scientist B (LS)
Pallab Pradhan, Scientist B (LS)
Mitisha Vaidya, Project Officer (CS)
Gaurav Gond, Project Associate (CS)
Vaibhavi Chavda, Project Assistant (CS)
Tareef Husain, Project Officer (Statistics)
Tulsi Bhasker Punjani, Project Assistant (Statistics)

The project on "ICSSR Data Service: Social Science Data Repository" was assigned to the INFLIBNET Centre by the ICSSR. The decision for setting-up of social science data repository is culmination of signing of Memorandum of Understanding (MoU) between Indian Council of Social Science Research (ICSSR) and Ministry of Statistics and Programme Implementation (MoSPI) that provides for setting up of repository and hosting of NSS and ASI datasets into the data repository.

The ICSSR Data Service is designed to host comprehensive set of statistical datasets in social sciences including datasets generated by large-scale government surveys, i.e. National Sample Survey (NSS) conducted by the National Sample Survey Office (NSSO) and Annual Survey of Industries (ASI) conducted by Industrial Wing of the Central Statistics Office (CSO). Subsequently,

scope of the repository would be expanded to include datasets from all social science institutes under ICSSR's direct purview as well as other Government organizations.

The ICSSR Data Service is designed to provide seamless, integrated access and support to meet the requirements of academic researchers as well as policymakers who heavily rely on high-quality authentic social and economic data in their decision making process. The ICSSR Data Service hosts extracted and transformed data along with raw data in the data repository with necessary metadata and documentation for the benefit of researchers.

Besides hosting unit-level datasets, the ICSSR Data Service also provides access to secondary datasets derived from the unit-level datasets and its visualization on selected variables. Training materials and guidance to meet the needs of data users, owners and creators is also offered through this platform. Users can explore collection of datasets accompanied with user guides and supporting materials using search interface of the ICSSR Data Service. The repository for ICSSR Data Service, available at icssrdataservices.in, has already set-up with 33 data sets received from MoSPI.

13.1. Data ETL (Extract-Transform-Load) Process

The Centre is receiving datasets in Nesstar format and extracts in TSV (Tab Separated Value) and transforming in SPSS and STATA format using Nesstar publisher which can be used for analysis. All the data formats for each dataset are being kept on the ICSSR Dataservice website.

13.2. Data Analytic Tool

The Centre is also developing an R based tool enabling users to analyse the survey data online. R is a language and environment for statistical computing and graphics. R language provides a wide variety of statistical techniques like cross tabulation, linear and nonlinear modelling, classical statistical tests, classification, clustering and many others. This tool will provide facility to analyse the data and user will also be able to export the result in TSV, CSV or MS EXCEL format. It provides features for data visualization through bar charts, line and scatter diagrams, pie charts, stacked charts, histogram, etc. as well as visualization of geo-coded data on digital maps.

13.3. Dataset Add/Update Interface

The Centre has explored various data repository software like CKAN, DKAN, Data Verse and NADA. Amongst them, NADA (National Data Archive) – open source data repository software found suitable for ICSSR Data Repository which was developed by IHSN (International Household Survey Network).

NADA uses Data Documentation Initiative (DDI) metadata standard for describing datasets with facility to import the existing datasets available in DDI format. The Centre has created interface by

which user can directly create a new dataset along with metadata fields and they can also update the metadata fields of existing datasets.

14. National Institutional Ranking Framework (NIRF): India Ranking 2016

Jagdish Arora, Director
 Yatrik Patel, Scientist D (CS)
 Abhishek Kumar, Scientist C (CS)
 Divyakant Vaghela, Scientist B (CS)
 Swapnil Patel, Scientist B (CS)
 Kruti Trivedi, Scientist B (LS)
 Hitesh Solanki, Scientist B (CS)
 Pallab Pradhan, Scientist B (LS)
 Raja V, Scientist B (CS)
 Dharmesh Shah, STA (CS)
 Ankur Parikh, Office Assistant
 Surbhi Mistry, Sr. Project Officer (CS)
 Bhargavi Kadiya, Project Officer (CS)
 Vinothine K, Project Officer (CS)
 Pallavi, Project Officer (LS)
 Chinkit Suthar, Project Assoicate (CS)
 Kinjal Solanki, Project Assoicate (CS)
 Kunal Shah, Project Assoicate (CS)
 Kumar Gaurav, Project Assoicate (LS)
 Deepti Pandey, Project Assoicate (LS)
 Santosh Sen, Project Assoicate (LS)
 Jay Vora, Project Assistant (CS)

Development of Web-portal for the National Institutional Ranking Framework (NIRF), a prestigious initiative of the Ministry of Human Resource Development (MHRD) was awarded to the INFLIBNET Centre. The framework outlines a methodology to rank institutions across the country in different disciplines and categories. The core committee, set up by the MHRD, identified following parameters under five major categories as mentioned in below Table 28:

Teaching, Learning and Resources (TLR)	Research Productivity, Impact and IPR (RPII)
Faculty Student Ratio - Permanent Faculty (FSR)	Combined Metric for Publications (PU)
Faculty Student Ratio - Visiting Faculty (FSR)	Combined Metric for Citations (CI)
Metric for Faculty with Ph.D. and Experience (FOE)	Intellectual Property Right and Patents (IPR)
Metric for Library, Studio & Laboratory Facilities (LL)	% of Collaborative Publications and Patents (CP)
Metric for Sports and Extra Curricular Facilities	Footprint of Projects and Professional Practice

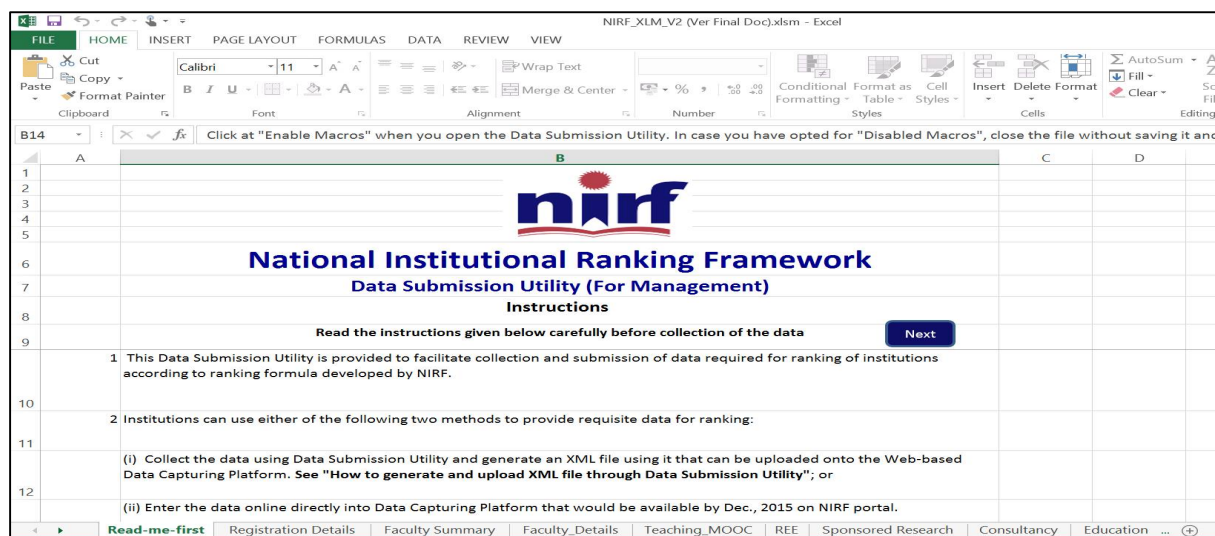


Fig.55: XL Utility for Data Capturing System

The Centre also provided publications and citations data from Web of Science, Scopus and Indian Citation Index for more than 3,500 institutions who have applied for ranking themselves under NIRF. The Centre, with guidance of NBA, ranked research and teaching institutions (Category A) in Engineering, Management, Pharmacy and University). The India Ranking 2016 is being announced in the month of April 2016.

15. Revamping of the UGC Websites and Development of Grant Management System and e-Scholarship-Fellowship Award Registration Tracking System (e-SARTS)

The University Grants Commission has given the responsibility for development and maintenance of website of the UGC as well as for automation of its various schemes, Grant Management System and e-Scholarship-Fellowship Award Registration Tracking System (e-SARTS). The project was awarded to the INFLIBNET Centre in the month of May 2011. The Centre has set-up a dedicated server for the UGC website and schemes which is co-located at the Data Centre of the BSNL, Ahmedabad. So far, the Centre has developed interfaces for the following schemes:

- **Maulana Azad National Fellowship for Minority Students:** Online applications were invited for this scheme for the years 2015-17. 6,626 applications were received and processed.
- **Rajiv Gandhi National Fellowship for SC Candidates:** 6,742 candidates have applied for the Scholarship for the years 2015-17. Online applications were received and processed.
- **Post-Graduate Indira Gandhi Scholarship for Single Girl Child:** Online applications were invited for this scheme for the year 2015-16. 5,502 applications were received and processed.
- **Post-Graduate Merit Scholarship for University Rank Holder:** Online applications were invited for this scheme for the year 2015-16. 3,004 applications were received and processed.

-
- **Post Doctoral Fellowship to SC/ST Candidates:** 1,409 candidates have applied for the years 2015-17. Online applications were received and processed.
 - **Post Graduate Scholarship for Professional Courses for SC/ST Candidates:** Online applications were invited for this scheme for the year 2015-16. 6,859 applications were received and processed.
 - **Post-Doctoral Fellowship to Women Candidates:** 2,011 candidates have applied for the years 2015-17. Online applications were received and processed for further necessary action by the UGC.
 - **Research Awards:** Online applications were invited for this scheme for the years 2016-18. 455 applications were received and processed.
 - **Raman Fellowship for Post-Doctoral Research for Indian Scholars in USA:** Online applications were invited for this scheme for the year 2015-16. 345 applications were received and processed.
 - **Emeritus Fellowship:** Online applications were invited for this scheme for the years 2015-17. 498 applications were received and processed.
 - **Rajiv Gandhi National Fellowship for Students with Disabilities:** 441 candidates have applied for the years 2015-17. Online applications were received and processed for further necessary action by the UGC.
 - **Dr. S. Radharkrishnan Post-Doctoral Fellowship in Humanities and Social Sciences (Including Languages):** Online applications were invited for this scheme for the years 2015-17. 1606 applications were received and processed.
 - **Special Assistance Programme (SAP-DRS Phase-I):** Online applications were invited for this scheme for the year 2015. 53 applications were received and processed.
 - **Swami Vivekananda Single Girl Child Scholarship for Research in Social Sciences:** Online applications were invited for this scheme for the years 2015-17. 75 applications were received and processed.
 - **Special Scholarship Scheme for North-Eastern Region:** Online applications were invited for this scheme for the year 2015-16. 46,897 applications were received and processed.
 - **National Fellowship for OBC Candidate:** Online applications were invited for this scheme for the years 2015-17. 8,946 applications were received and processed.

-
- **Minor Research Project for UGC Regional Office:** Online applications were invited for this scheme for the year 2015-16. 16,130 applications were received and processed.
 - **National Fellowship for Higher Education of ST Students:** Online applications were invited for this scheme for the years 2015-17. 2,182 applications were received and processed.

16. Publications

The INFLIBNET Centre has two major publications i.e. Quarterly Newsletter and Annual Report. Both the publications were brought out and distributed to the academic community of the country. The copies of the newsletters and annual reports downloadable in PDF format are available at the "Publications" on INFLIBNET website at <http://www.inflibnet.ac.in/publication/>. The copies of Annual Reports, PLANNER and CALIBER proceedings are also available through the Institutional Repository (IR) in PDF format. The course materials of various training programmes and workshops, lecture notes, presentations and newspaper clippings are also available in the IR of the Centre at <http://ir.inflibnet.ac.in>. List of publications including articles, published conference proceedings, user guides and manuals published by scientists and staff of the Centre is given below:

16.1 Papers Published in Journals, Newsletters and Conference Proceedings

- i) Pradhan, Pallab. Altmetrics: Measuring the broader impact of scientific research. INFLIBNET Newsletter, 22(2), 14-24, 2015.
- ii) Kannan, P. Academic identity: An Overview. INFLIBNET Newsletter, 22(3), 25-30, 2015.
- iii) Kannan, P. Semantic-based researcher profile management system: Case study on VIVO. INFLIBNET Newsletter, 22(4), 22-30, 2015.
- iv) Kumar, Abhishek and Raja, V. Ranking model for Indian higher educational institutions through NIRF. INFLIBNET Newsletter, 23(1), 20-46, 2016
- v) Mesariya, Priyanka, Madia, Nidhi and Kumar, Abhishek. Document ranking using customizes vector method – A review. International Journal of Computer Science and Mobile Computing, 5 (3), 287-290, 2016.
- vi) Pandya, Miteshkumar. Libraries on cloud: A step towards green society. PEARL – A Journal of Library and Information Science, 9 (3), 147-151, 2015.

-
- vii) Oza, Nimesh D and Pandya, Miteshkumar. Integrating Library of Congress Subject Heading to IndCat's Theses Database: A Case Study. *PEARL – A Journal of Library and Information Science*, 10(1), 68-77, 2016.
 - viii) Pradhan, Pallab. Altmetrics: An alternative view-point to assess scholarly research impact. *International Journal of Information Dissemination and Technology*, 5 (2), 123-130, 2015.
 - ix) Majhi, Sabitri, Chirgun, Umakanti, Maharana, Bulu and Panda, Saroja Kumar. YouTube as a source for learning of Web 2.0. *Indian Journal of Library and Information Science*, 10(1), 27-33, 2016.
 - x) Panda, Saroja Kumar and Kannan, P. Vidwan – A subject expert database and national researcher's network in India: An overview. *International Journal of Information Dissemination and Technology*, 6(1), 5-9, 2016.
 - xi) Panda, Saroja Kumar. Open access initiatives and its impact on scientific communities: a review of INFLIBNET Centre. *International Journal of Research*, 3 (1), 181-189, 2016.
 - xii) Panda, Saroja Kumar. Shodhganga – a national level open access ETD repository of Indian electronic theses: current status and discussions. *Library Hi Tech News*, 33(1), 23-26, 2016.
 - xiii) Modi, Darshan. Quality control in video streaming. *International Research Journal of Engineering and Technology (IRJET)*, 2 (6), 1228-1231, 2015

17. Awards, Honours and Distinctions

17.1. Dr. Jagdish Arora, Director

Dr. Jagdish Arora was awarded DLA Professional Excellence Award for his distinguished contributions in the field of library and information science for the year 2015 by the Delhi Library Association (DLA). The award was presented to him during 78th Foundation Day on DLA, on 10th March 2016 at Ranganathan Bhawan, New Delhi. He delivered 10th Prof. K. A. Isaac Commemoration Annual Lecture on 9th October, 2015 for the year 2015 organized by the Kerala Library Association at the Department of Library and Information Science, University of Kerala, Thiruvananthapuram.

Dr. Arora was appointed as the National Coordinator of e-Shodh Sindhu: Consortium for Higher Education Electronic Resources launched by the Ministry of Human Resource Development by merging three consortia namely UGC-INFONET-Digital Library Consortium, INDEST-AICTE Consortium and National Library and Information Services Infrastructure for Scholarly Content (NLIST). As the National Coordinator of eSS, he is also Convener of the National Steering Committee, National Negotiation Committee and Resource Selection Committee of e-ShodhSindhu.

He was appointed as a member of the Project Review and Supervising Group (PRSG) of the National Digital Library (NDL) project and attended its first meeting organized in Kolkata on 9th September, 2015. He continued to be the member of the Standing Committee its sub-committee on e-PG Pathshala. Dr. Arora continued to be a member of the Finance Committee and Court of the Central University of Gujarat. He continued as member of the Editorial Board of the DESIDOC Journal of Information Technology.

Dr. Arora was appointed as a Member of the Implementation Core Committee, National Institution Ranking Framework (NIRF), and attended its Meetings held at the National Accreditation Board, New Delhi during the year under report. He was co-opted as a member to attend the Meetings of the Expert Committee formed by the Chairman, UGC for developing National Institutional Ranking Framework (NIRF) for Universities and Colleges wherein he was requested to make a presentation on "Ranking of Indian Universities" developed by the INFLIBNET Centre based on bibliometric parameters.

He was nominated a Member of the Advisory Committee for Setting up Data Centre at the ICSSR, New Delhi. As Chairman of the Indian Library Advisory Board of the Royal Society of Chemistry, Dr. Arora attended its 2nd Meeting organized in Pune on 12th August, 2015.

He was invited as Member of the Board of Studies, Dept. of Library and Information Science of Aligarh Muslim University, Aligarh, UP as well as Member of the School Board, School of Information Science and Technology, Babasaheb Bhimrao Ambedkar University, Lucknow, UP for the years 2015 to 2017.

During the year under report, Dr. Arora delivered the following keynote, inaugural or invited addresses at various seminars, workshops and training programmes:

- i) "Services and Activities of INFLIBNET Centre (Keynote address)" during the National Seminar on "Multidimensional Information Sources and Services: Challenges, Issues & Perspectives" on 6th March 2016 at Era Medical College & Hospital, Lucknow.
- ii) "Capacity Building Programme for Public Libraries in India at INFLIBNET Centre (invited talk)" during the International Public Libraries Conference, 2016: Inspiring and Repositioning Public Libraries in India: Technology, Content and Services, 7th and 8th March, 2016 at India International Centre, Delhi.
- iii) "Ten Technologies the Librarian Should Know to Contribute and Strengthen their Institutions: Keynote address", during inaugural session of the 11th Annual Meet and Workshop of INDEST-AICTE Consortium, 29th to 30th April, 2015, IISER Mohali.

-
- iv) "Ranking of Indian Universities: Invited talk" during the 89th Annual General Meet of Association of Indian Universities (AIU): National Seminar on Promotion of Excellence in Higher Education held at Lovely Professional University, Phagwara, Punjab, 23rd to 25th May, 2015.
 - v) "Ten Most Recent Technologies for Librarians (Keynote address)" in the National Conference on Emerging Trend of Libraries: Making a Difference in Knowledge Era (NCETL-2015) held on 8th and 9th August, 2015 at Maharaja Krishnakumarsinhji Bhavnagar University, Bhavnagar.
 - vi) "Ranking of Indian Universities developed by the INFLIBNET Centre: Invited talk" during 2nd Library Appreciation Day organized by the Royal Society of Chemistry held in Pune on 13th August, 2015.
 - vii) "Next Generation Libraries: Changing Roles of Libraries in Promoting Research and Innovation (Keynote address)" during the International Conference on LIS (ICLIS – 2015) on "Challenges for Information Professionals and LIS Services in the 21st Century", organized by the Sri Lanka Library Association to mark its 55th anniversary held in Galadari Hotel, Colombo, Sri Lanka on 17th and 18th Sept., 2015.
 - viii) "Ranking of Indian Universities (Invited talk)" during UGC-INFLIBNET Elsevier's 6th University Forum held in New Delhi on 24th Sept., 2015.

17.2. Mr. Manoj Kumar K., Scientist D (CS)

Mr. Manoj Kumar K was invited to deliver talks on Shodhganga, Plagiarism detection software, INFLIBNET activities and services in the following for workshops / training programmes:

- i) Research Orientation Programme organised by Academic Development and Research Cell, Nirma University, Ahmedabad on 4th July, 2015.
- ii) Workshop on Plagiarism and Reference Management Tools organized by AIIMS, New Delhi on 6th August 2015.
- iii) National Seminar on Ethics and Plagiarism in Academic Research organized by DST, GUJCOST and Dept of Pharmacy, M S University, Baroda on 24th August 2015.
- iv) Librarian's Day 2015 and Seminar on Library as a Learning Space – Role and Relevance of Libraries in the Future organized by ADINET in collaboration with INFLIBNET Centre, Gandhinagar and Nirma University at Nirma University, Ahmedabad on 22nd August, 2015.
- v) Workshop on Inspire Internship Science Camp organised by ARIBAS, Anand on 30th November, 2015.

vi) IASLIC 30th All India Conference, 2015 at Gujarat University, Ahmedabad on 28th December, 2015.

vii) ICSSR Sponsored Training Programme on “Research Methodology in Social Science” organised by Gujarat Vidyapith Mahadev Desai Gramsewa Mahavidyalaya, Randheja on 3rd March, 2016.

He was invited as a Chief Guest for valedictory session on UGC Sponsored National Workshop on ‘R Language and LaTeX’ organised by Department of Computer Science, Gujarat Vidyapith and St. Xavier’s College, Ahmedabad on 20th February 2016.

17.3. Mr. Yatrik Patel, Scientist D (CS)

Mr. Yatrik Patel was invited to deliver talks in the following workshops / training programmes:

i) ‘Creating Digital Library using Dspace’ invited lecture during Workshop on Dspace: A Step Towards Digitisation of Library organised by Internal Quality Assurance Cell (IQAC) of Ashok & Rita Patel Institute of Integrated Study & Research in Biotechnology and Allied Science (ARIBAS), Vallabh Vidyanagar from 24th to 25th April, 2015.

ii) “Research Data Management & Libraries” invited talk during Indian Librarian Appreciation Day organised by Royal Society of Chemistry at Radisson Blu, Pune on 14th August 2015.

iii) “Use of e-Resources” invited lecture during Faculty Development Programme at Knowledge Consortium of Gujarat, Ahmedabad on 18th September, 2015 and 16th October, 2015.

17.4. Mr. H G Hosamani, Scientist C (LS)

Mr. H G Hosamani was invited as keynote speaker for the UGC sponsored two-day National Conference on Emerging Technologies and Innovations in College Library Services at Art’s College, Bamkhede, Nandurbar, Maharashtra from 27th to 28th August, 2015.

17.5. Mr. Abhishek Kumar, Scientist C (CS)

As Coordinator for the e-PG Pathshala, Mr. Abhishek Kumar attended all the meetings of Standing Committee and Sub-Committee, e-PG Pathshala. He was invited to attend meeting on “National Digital Library” conducted by IIT Khargpur. He represented NIRF on behalf of INFLIBNET Centre as co-PI of the project and attended Meetings of the Implementation Core Committee of the National Institutional of Ranking Framework (NIRF) held at National Board of Accreditation, New Delhi.

Mr. Abhishek Kumar was an invited speaker on the topic of Content creation and management for the following workshops / training programmes:

- i) Workshop on Development Designing and Implementation of Library Portals, Sardar Patel Institute of Public Administration (SPIPA), Ahmedabad, 23rd to 25th June, 2015.
- ii) UGC sponsored 16th Short-term Course on E-Content Development and E-Learning, Sardar Patel University, Vallabh Vidyanagar, 17th to 22nd August, 2015.
- iii) UGC-sponsored Short-term Course on E-Content Development/ E-Learning, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, 7th to 12th September, 2015 (Webinar).
- iv) Workshop on e-Content Development on the subject 'Management', Maharaja Agrasen University, Solan, 13th September, 2015 (through Video Conferencing).

17.6. Mr. Kanan P., Scientist C (LS)

Mr. Kannan P was invited to deliver a lecture on 'e-Learning in Indian Higher Education' at Nadar Mahajana Sangam S. Vellaichamy Nadar College, Madurai on 9th February, 2016 during the Library Week Celebration.

17.7. Mr. Swapnil Patel, Scientist B (CS)

Mr. Swapnil Patel was invited for practical session of Installation of Dspace and Understanding Dspace basic Customization during Workshop on Dspace: A step towards digitisation of library organised by Internal Quality Assurance Cell (IQAC) of Ashok & Rita Patel Institute of Integrated Study & Research in Biotechnology and Allied Science (ARIBAS), Vallabh Vidyanagar from 24th to 25th April, 2015.

Mr. Patel was invited to attend a meeting on designing policy framework for the Repository of RIE Ajmer. He delivered a lecture on Institutional Repository using Dspace on 20th August, 2015 in PAC Programme "Promotion of ICT by Developing the Institutional Repository of RIE Ajmer", NCERT at Regional Institute of Education, Ajmer from 20th to 21st August, 2015.

17.8. Ms. Kruti Trivedi, Scientist B (LS)

Ms. Kruti Trivedi was invited to deliver a lecture on Gateway to E-resources through INFLIBNET Centre during PhD Coursework for Science Faculty/Students at Hemchandracharya North Gujarat University, Patan on 11th June 2015.

17.9. Mr. Miteshkumar Pandya, Scientist B (LS)

Mr. Miteshkumar Pandya was invited to deliver lectures on 'Joomla CMS & Installation and Configuration of Joomla' on 23rd June, 2015 and 'Structure and Planning of Website Development using Joomla' & 'Content Creation and Multilingual Website Designing' on 24th June, 2015 during Workshop on Development Designing and Implementation of Library Portals from 23rd to 25th June, 2015 at Sardar Patel Institute of Public Administration (SPIPA), Ahmedabad.

17.10. Mr. Hiteshkumar Solanki, Scientist B (CS)

Mr. Hiteshkumar Solanki was invited for practical session of Understanding Dspace and Submission Workflow and Backup-Restore and Import-Export in Dspace during Workshop on Dspace: A Step toward Digitisation of Library organized by Internal Quality Assurance Cell (IQAC) of Ashok & Rita Patel Institute of Integrated Study & Research in Biotechnology and Allied Science (ARIBAS), Vallabh Vidyanagar from 24th to 25th April, 2015.

17.11. Mr. Vijaykumar Shrimali, STA (CS)

Mr. Vijaykumar Shrimali delivered a lecture on Repository Policy Framework on 21st August, 2015 in PAC Programme on "Promotion of ICT by Developing the Institutional Repository of RIE Ajmer", NCERT at Regional Institute of Education, Ajmer from 20th & 21st August, 2015.

18. New Projects@INFLIBNET Centre

18.1. e-Shodh Sindhu: Consortium for Higher Education Electronic Resources

Based on the recommendation of an Expert Committee, the MHRD has formed e-Shodh Sindhu merging three consortia initiatives, namely UGC-INFONET Digital Library Consortium, N-LIST and INDEST-AICTE Consortium. The e-Shodh Sindhu provides current as well as archival access to more than 15,000 core and peer-reviewed journals and a number of bibliographic, citation and factual databases in different disciplines from a large number of publishers and aggregators to its member institutions including centrally-funded technical institutions, universities and colleges that are covered under 12(B) and 2(f) Sections of the UGC Act. The E-Shodh Sindhu is described in detail at 7.2.

18.2. ICSSR Data Service: Social Science Data Repository

The project on "ICSSR Data Service: Social Science Data Repository" is culmination of signing of Memorandum of Understanding (MoU) between Indian Council of Social Science Research (ICSSR) and Ministry of Statistics and Programme Implementation (MoSPI) that provides for setting-up setting up of repository and hosting of NSS and ASI datasets into the data repository. The Project

on ICSSR Data Service: Social Science Data Repository assigned to the INFLIBNET Centre is described in detail at 13.

18.3. National Institutional Ranking Framework (NIRF): India Ranking 2016

Development of Web-portal for the National Institutional Ranking Framework (NIRF), a prestigious initiative of the Ministry of Human Resource Development (MHRD) was awarded to the INFLIBNET Centre. The framework outlines a methodology to rank institutions across the country in different disciplines and categories. The portal would provide the facility to view the ranking result on parameters defined in the framework. The National Institutional Ranking Framework (NIRF): India Ranking 2016 is described in detail at 14.

18.4. Website Development for Mahatma Gandhi Central University of Bihar and Central University of Haryana

Mahatma Gandhi Central University of Bihar and Central University of Haryana assigned the task of developing and hosting the website of their Universities. Both websites are maintained by the Centre. Apart from websites, the Centre has developed platform for "Online Job Portal" for MGCU.

PART – III

International, National Conference, Workshops, Seminars and Training Programme

1. ETD 2015: 18th International Symposium on Electronic Theses and Dissertations

ETD 2015: 18th International Symposium on Electronic Theses and Dissertations was organized by Central Library, Jawaharlal Nehru University in collaboration with NDLT, USA and INFLIBNET Centre, Gandhinagar from 4th to 6th November, 2015 at Convention Centre, Jawaharlal Nehru University, New Delhi on the theme “Evolving Genre of ETDs for Knowledge Discovery”. The main theme of the Symposium was divided into four sub-themes i.e. Managing ETDs, ETDs for Research & Development, Legal & Ethical Issues for ETDs and Tools & Technologies for ETDs.

Dr. Ramesh C. Gaur, Chair, ETD 2015 welcomed the dignitaries and guests and introduced the journey of the ETD and theme of the symposium. He informed that there are around 400 national and international participants from different countries. Dr. Jagdish Arora, Director, INFLIBNET elaborated on Shodhganga and different other initiatives of the Centre with regard to ETD including provision made for providing access to plagiarism detection software. Prof. Prasenjit Sen, Rector II, JNU talked about the initiatives of JNU with regard to theme. Mr. Al-Amin Yusuph, Adviser (Communication and Information) for South Asia, UNESCO discussed about the UNESCO's efforts in this regard. Mr. Pawan Agarwal, Joint Secretary, Government of India, one of the pioneers of the ETD movement in India, discussed about early efforts of the UGC. Prof. Gail M McMillan, Director, Scholarly Communication and Professor, University Libraries, Virginia Tech, USA delivered keynote address. Prof. Edward A Fox, Chairman & Executive Director, NDLT delivered inspiring and motivating Video message. Dr. Parveen Babbar, Deputy Librarian, JNU extended a warm vote of thanks.



Fig. 56: Dr. Ramesh C. Gaur, University Librarian and Chair, ETD India 2015, Prof. Prasenjit Sen, Rector-II, JNU, Dr. Jagdish Arora, Director, INFLIBNET Centre, Mr. Pawan Agarwal, Joint Secretary, Government of India, Mr. Al-Amin Yusuph, Adviser (Communication and Information) for South Asia, UNESCO, Prof. Gail M McMillan, Director, Scholarly Communication and Professor, University Libraries, Virginia Tech, USA Releasing Conference Proceedings and CD during the Symposium

The Symposium was divided theme-wise into three Sections i.e. A, B & C and were conducted at three different venues simultaneously i.e. Session A in the Lecture Hall –I, Session B in the

Auditorium Hall and Session C in the Lecture Hall-II. There were 6 pre-conference workshops namely, i) ETD for Beginners; ii) Lifecycle Management Best Practices in ETD; iii) Trends & Opportunities in Retrospective Digitization and Publishing of Theses and Dissertations; iv) Exploring the Terrain of Qualitative Research; v) ORCID (Open Researcher & Contributor ID); and vi) Panel Discussion on Impact of ORCID for the scholarly Infrastructure in India and Digital Archiving of ETDs using FEDORA. The conference also had two plenary sessions, 18 theme papers, 60 presentations in 15 different technical sessions followed by 3 panel discussions and a valedictory function.

There were 3 special sessions on different topics such as National Digital Library of India, Shodhganga and ETDs in South Asian Universities, etc. A special session was devoted for disabled persons on reaching the unreached through ETDs. Mr. Manoj Kumar presented the special session on Shodhganga. He discussed the social, academic, financial and technical aspects of Shodhganga. He further elaborated on submission interface developed by INFLIBNET for submission of thesis. He also highlighted the evolution, policy, work flow, standards and format, implementation strategy adopted by INFLIBNET Centre to enhance Shodhganga as a national portal along with incentives given to universities for digitisation of the backlist of theses, funds for setting-up of ETD Lab and access to a plagiarism detection software. Shodhganga session had other eminent speakers such as Dr. Samyankta Ravi, Pondicherry University, Dr. Laila Abraham, M.G. University and Dr. S.S. Devika, Shankara University. The session was coordinated by Dr. Nabi Hasan, Deputy Librarian, IIT Delhi and chaired by Mr. Hussein Suleman, University of Cape Town, South Africa. The presentation followed by success story of ETD of Pondicherry University presented by Dr. Samyuktha Ravi. She mentioned about issues and challenges faced initially and strategies adapted to resolve them. She emphasized that all the universities should come forward and contribute to ETD@INFLIBNET Centre. Dr. Laila Abraham presented the current status of ETD of her university. Dr. S. S. Devika, in her talk mentioned about lack of awareness she initially faced in digitization work and the support she got from INFLIBNET Centre. The session ended with a question answer session.

The Valedictory Session was presided over by Dr. Ramesh C Gaur, Chair, ETD 2015. The session started with the special acknowledgement to the Chief Guests Prof. P.B. Mangla, Former Dean and Head of Department, University of Delhi, Dr. R. K. Chadha, Additional Secretary, Parliament of India, Dr. Jagdish Arora, Director, INFLIBNET Centre, Dr. Joan Lippnicott, NDLTD, USA and Dr. Nabi Hasan, IIT Delhi. More than 400 librarians, information officers, communication officers, ETD experts, media professionals and other invitees from India and other countries including over 50 specialists from outside India attended the Conference.

2. Training Programmes on Installation and Implementation of the SOUL Software at INFLIBNET Centre

The INFLIBNET Centre provides Orientation Training Programme on Installation and Implementation of the SOUL Software. The programme is specially designed for imparting training to new users of SOUL software. The morning sessions of the programme are devoted to theoretical

lectures and demonstrations, while the afternoon sessions are completely earmarked for “hands-on” practice. The “hands-on” practical sessions are conducted in well-equipped computer laboratory under the guidance of trained staff members of the Centre. The course content of the programme is designed to cover the following topics:

- M) INFLIBNET: Major Activities and Services
- ii) SOUL – Administration and Overview
- iii) SOUL – Catalogue Module
- iv) SOUL – Acquisition Module
- M) SOUL – Circulation Module
- vi) SOUL – Serials Control Module
- M) SOUL- OPAC, WebOPAC, Installation and Backup

Generally, two participants from every user institution of SOUL software are invited to join this training programme, one each with computer and library science background. As on 31st March 2016, total no. of 124 such training programmes were organized at the Centre. During the period under report, 6 training programmes were organized to impart training to 113 participants from different institutions as shown in Table 29 given below.

Sl. No.	Name of Training Programmes	Period	No. of Participants
1	119 th Training Programme on SOUL 2.0	13 th – 18 th April, 2015	22
2	120 th Training Programme on SOUL 2.0	1 st – 6 th June, 2015	17
3	121 th Training Programme on SOUL 2.0	3 rd - 8 th August, 2015	22
4	122 th Training Programme on SOUL 2.0	12 th -17 th October, 2015	09
5	123 th Training Programme on SOUL 2.0	07 th -12 th December, 2015	22
6	124 th Training Programme on SOUL 2.0	16 th -21 st February, 2015	21
	Total		113

Table 29: SOUL Training Programmes Organized at the INFLIBNET Centre during 2015-16

3. SOUL 2.0 In-House/ Regional Training Programme

3.1. Special Training Programme on SOUL 2.0 for September 2014 Flood-affected Colleges in Kashmir, University of Kashmir, Srinagar, 31st August-5th September, 2015

Special Training Programme on SOUL 2.0 for September 2014 Flood-affected Colleges in Kashmir was organized by University of Kashmir in collaboration with INFLIBNET Centre, Gandhinagar at Allama Iqbal Library, University of Kashmir, Srinagar from 31st August to 5th September 2015. The main aim of the programme was to install and troubleshoot SOUL 2.0 Library management

software. Dr. Abdul Majid Baba, University Librarian and Mr. Ghulam Jeelani Shah, Jr. Professional Assistant from Allama Iqbal Library coordinated the programme. Mr. Vijaykumar Shrimali, STA (CS) and Ms. Nabila Shaikh, Project Officer (CS) from INFLIBNET Centre along with Mr. Ghulam Jeelani Shah, Jr. Professional Assistant from Allama Iqbal Library visited flood-affected colleges and restored their software & database and helped them to re-automate their libraries from scratch using SOUL 2.0 software. The Team from INFLIBNET Centre visited ten colleges including six colleges that were flood-affected, three colleges that upgraded their SOUL to SOUL 2.0 and one college that purchased SOUL 2.0 software recently. Beside site visits, one-day training programme was arranged on 'SOUL 2.0 Overview' for all flood-affected colleges at Allama Iqbal Library. 18 participants including library staff members of the flood-affected colleges participated in the programme.

3.2. Three-day In-House Training Programme on SOUL 2.0, Gujarat Vidhyapith, Ahmedabad, 16th-18th March, 2016

Three-day In-House Training Programme of SOUL 2.0 was organized by Gujarat Vidyapith, Ahmedabad in collaboration with INFLIBNET Centre, Gandhinagar at Gujarat Vidyapith Library, Ahmedabad from 16th to 18th March, 2016. Mrs. Pagnya Pathak, Librarian coordinated the programme. During the technical sessions, Mr. H G Hosamani, Scientist C (LS), Mrs. Vaishali Shah, Scientist B (LS) and Mrs. Hema Cholin, STO (LS) demonstrated functioning of various modules of SOUL Software including Administration, Catalogue, Serial Control, Acquisition and Circulation. Mr. Vijaykumar Shrimali, STA (CS) and Ms. Nabila Sheikh, Project Officer (CS), INFLIBNET Centre were resource persons in practical sessions. 32 participants attended the programme. Mrs. Pagnya Pathak extended a warm vote of thanks at the end of the programme.

4. Specialized Training Programmes and National Workshops

4.1. Two-day Workshop on Ethical Issues & Use of Anti-Plagiarism Software for Research Integrity, INFLIBNET Centre, Gandhinagar, 29th-30th April, 2015

The INFLIBNET Centre organized two-day National Workshop on Ethical Issues & Use of Anti-Plagiarism Software for Research Integrity from 29th to 30th April, 2015 at INFLIBNET Centre, Gandhinagar. The aim of the Workshop was to articulate academic research integrity and intended to inculcate the responsible conduct of ethical research using anti-plagiarism checking and other reference tools and citation styles. Mr. Manoj Kumar K., Scientist D (CS) coordinated the programme and welcomed the guests and participants and briefed about the objectives of the programme. Prof. R. Nagaraj, Director, DA-IICT, Gandhinagar inaugurated the programme by lighting the ceremonial lamp along with of Dr. Jagdish Joshi, Offtg. Director, UGC-Human Resource Development Centre, Gujarat University, Mr. Manoj Kumar K., Scientist D (CS) and Mr. H G Hosamani, Scientist C (LS), INFLIBNET Centre. In his Inaugural address, Prof. R. Nagaraj spoke about anti-plagiarism issues and suggested that anti-plagiarism should be part of the modern curriculum

design. Dr. Jagdish Joshi elaborated on relevance of qualitative academic writing and publications. Dr. Shailesh Yagnik, Head, Library & Information Services, MICA, Ahmedabad emphasised on the importance of ethics in research. Mr. Manoj Kumar delivered keynote address and briefly mentioned current status of Shodhganga and importance of anti-plagiarism for research integrity.

23 participants including LIS professionals and research scholars attended the programme. Ms. Subooi Siddiqui, STO (LS), INFLIBNET Centre extended a warm vote of thanks at the end of the inaugural session. Details of lectures delivered by experts during the training programme are listed in Table 30:

Topics	Name of Expert and Institution
Qualitative Academic Writing and Publications	Dr. Jagdish Joshi, Director, Academic Staff College, Ahmedabad
Ethics in Research	Dr. Shailesh Yagnik, Head, Library & Information Services, MICA, Ahmedabad
Anti-Plagiarism Tools for Quality of Research	Mr. Manoj Kumar K, Scientist D (CS), INFLIBNET Centre
Use of Reference Management Tools (Mendeley, Zotero etc.)	Mr. Mitesh Pandya, Scientist B (LS), INFLIBNET Centre
Statistical Tools for Research Data Analysis	Mr. Hitesh Solanki, Scientist B (CS), INFLIBNET Centre
Assessing and Evaluating Research Performance using Bibliometric Indicators	Ms. Kruti Trivedi, Scientist B (LS), INFLIBNET Centre

Table 30: Lectures Delivered by Experts during Workshop of Issues & Use of Anti-Plagiarism Software for Research Integrity

4.2. Three-Day Workshop on e-Learning: Content Creation and Hosting Using Moodle, INFLIBNET Centre, Gandhinagar, 6th-8th May, 2015

The INFLIBNET Centre organized three-day Workshop on e-Learning: Content Creation and Hosting Using Moodle from 6th to 8th May, 2015 at INFLIBNET Centre, Gandhinagar. Mr. Abhishek Kumar, Scientist C (CS) and Coordinator of the Workshop, welcomed the participants and gave an overview of the Workshop. Dr. Jagdish Arora, Director, INFLIBNET Centre inaugurated the programme. The aim of the Workshop was to provide exhaustive information on e-learning, electronic content creation and hosting of electronic content using Moodle Learning Management System (LMS). Details of lectures delivered by experts of the INFLIBNET Centre during the Workshop are given in Table 31:

Topics	Name of Expert
e-Content Projects in India and Integrated e-Content Portal	Mr. Yatrik Patel, Scientist D (CS)
Tools, Technique and Standards to Create e-Content and Moodle System Administration	Mr. Kannan P., Scientist C (LS)
e-Learning (LMS & MOOCs); Moodle Installation & Basic Configuration; and Moodle Course Administration & Course Building	Mr. Abhishek Kumar, Scientist C (CS)

Table 31: Lectures Delivered by Experts during Workshop of e-Learning: Content Creation and Hosting Using Moodle

Mr. Abhishek Kumar, Scientist C (CS), Mr. Hitesh Solanki, Scientist B (CS), Mrs. Shweta Brahmabhatt, Project Officer (CS) and Mr. Darshan Modi, Project Associate (CS) were resource persons in practical sessions of the training programme. The certificates of participation were distributed at the end of programme. 11 participants including LIS professionals and research scholars attended the programme. Mr. H. G. Hosamani, Scientist C (LS) extended a warm vote of thanks at the end of the Workshop.

4.3. National Workshop on Creation and Management of Digital Collections using Dspace, INFLIBNET Centre, Gandhinagar, 11th -15th May, 2015

The INFLIBNET Centre organized National Workshop on Creation and Management of Digital Collection using Dspace from 11th to 15th May, 2015. The Workshop was inaugurated by Dr. Jagdish Arora, Director, INFLIBNET Centre. This Workshop aimed at equipping the participants with skills for developing and managing their own digital collection and for creating awareness on new developments in the field of library and information science like managing information sources in digital environment, building institutional repositories, networking and social media, management of e-resources with theoretical lectures and hands-on training by experts. 11 library and computer professionals participated in the Workshop.

Mr. Manoj Kumar K., Scientist D (CS), Mr. Kannan P., Scientist C (LS), Mr. Swapnil Patel, Mr. Divyakant Vaghela, Mr. Gaurav Prakash & Mr. Hiteshkumar Solanki, Scientists B (CS), Mr. Miteshkumar Pandya, Scientist B (LS), Mr. Vijay Shrimali, STA (CS) and Mr. Nirav Rana, Project Associate (CS) from INFLIBNET Centre and Dr. T. S. Kumbar, Librarian, IIT Gandhinagar served as resource persons for the Workshop. Dr. Jagdish Arora, Director INFLIBNET Centre presided over the valedictory function and distributed certificates to participants. Mr. Yatrik Patel, Scientist D (CS), Mr. H. G. Hosamani, Scientist C (LS) and Mr. Swapnil Patel, Scientist B (CS) coordinated the Workshop.

4.4. Three-Day National Workshop on Content Management System Using Joomla, INFLIBNET Centre, Gandhinagar, 20th-22nd May, 2015

The INFLIBNET Centre organized three-day National Workshop on Content Management using Joomla from 21st to 23rd May, 2015 at INFLIBNET Centre. Mr. Miteshkumar Pandya, Scientist B (LS) welcomed the participants and gave an overview of the Workshop. The Workshop was inaugurated by Mr. Manoj Kumar K., Scientist D (CS), INFLIBNET Centre. The aim of the Workshop was to provide extensive training on installation, configuration, creation of menus and content as well as changing the themes and creating multi-lingual websites using Joomla Content Management System. Details of lectures delivered by experts of the INFLIBNET Centre during the Workshop are given in Table 32:

Topics	Name of Expert
Joomla Overview	Mr. Ashok Kumar Rai, Scientist D (CS)
Joomla Installation and Basic Configuration on Windows; Structure and Planning of Website Development and Introduction to Control Panel of Joomla; and Modules, Components & Menu Configuration and Content Creation, Multilingual Website Designing	Mr. Miteshkumar Pandya, Scientist B (LS)
Joomla Installation and Basic Configuration on Linux; and User Access Control, User Forum and E-mail Configuration, Template Management	Mr. Kannan P., Scientist C (LS)
Hosting, Backup and Restore	Mr. Dharmesh Shah, STA (CS)

Table 32: Lectures Delivered by Experts during Workshop of Content Management System Using Joomla

Mr. Miteshkumar Pandya, Scientist B (LS), Mr. Kuldeep Mateida, Project Officer (LS), Mr. Sanjaykumar Pillai, Project Associate (LS) and Mr. Darshan Modi, Project Associate (CS) were resource persons in practical sessions of the Workshop. 9 participants including LIS professionals and research scholars attended the programme. Mr. Manoj Kumar K., Scientist D (CS), INFLIBNET Centre presided over the valedictory function and distributed certificates to participants. Mr. Miteshkumar Pandya, Scientist B (LS) and Mr. H. G. Hosamani, Scientist C (LS) coordinated the Workshop.

4.5. Three-day National Workshop on Bibliometrics and Research Output Analysis, Cochin University of Science & Technology, Kochi, 28th-30th May, 2015

Three-day National Workshop on Bibliometrics and Research Output Analysis was organized by Cochin University of Science & Technology in collaboration with INFLIBNET Centre from 28th to 30th May, 2015 at University Library, CUSAT, Kochi. Prof. (Dr.) Poullose Jacob, Pro Vice-Chancellor,

CUSAT inaugurated the programme. Prof. I. K. Ravichandra Rao, PES Institute of Technology, Bengaluru delivered keynote address. In his keynote address, he explained importance of statistical and quantitative analysis of information storage, access and retrieval. He also highlighted the different statistical tools and methods for analysing research outcomes or the productivity of Institutions. Dr. David Peter, Registrar and Dr. Zakkaria, Member Syndicate also participated in the inaugural function. More than 55 participants attended the programme.

The technical sessions of the Workshop started with presentations of Prof. I. K. Ravichandra Rao on overview of bibliometrics, bibliometrics elements, laws and mathematical foundation of bibliometrics / Scientometrics. Prof. A. Vijayakumar, Department of Mathematics, CUSAT elaborated on scientometrics indicators for academic purpose. Ms. Kruti Trivedi, Scientist B (LS), INFLIBNET Centre elaborated on use of Web of Science for data extracting followed by 'hands-on' session. She also spoke about bibliometric indicators & mapping of research using open source software. Mr. Hiteshkumar Solanki, Scientist B (CS) and Ms. Kruti Trivedi, Scientist B (LS), INFLIBNET Centre demonstrated BibExcel and VOS Viewer tools and techniques followed by hand-on session. Dr. Jagdish Arora, Director, INFLIBNET Centre delivered a talk on bibliometric indicators and rankings of university based on bibliometric parameters.

The Valedictory Session was presided over by prof. Inder Vir Malhan, Professor, Central University of Himachal Pradesh. He stressed upon the importance of UGC's Performance based Appraisal system (PBAS) for academic community, how it effects the ranking of an institution as well as individuals. Prof Malhan distributed the certificates to the participants.

4.6. One-Day Workshop on Copy Cataloguing, INFLIBNET Centre, Gandhinagar, 6th June, 2015

The INFLIBNET Centre organized one-day Workshop on Copy Cataloguing on 6th June, 2015 at INFLIBNET Centre, Gandhinagar. The aim of the training programme was to provide extensive training on installation, configuration as well as on workflow of the OCS (Online Copy Catalogue System). Mr. Miteshkumar Pandya, Scientist B (LS) demonstrated IndCat and made presentation on bibliographic standards, copy cataloguing, its tools & techniques. He also gave an overview of OCS: Work flow and creation of records, installation and its basic configuration. Mr. Subodh Bajpai, SOUL Project Assistant (LS) was resource person in practical session of the training programme. 19 Library Professionals from Gujarat attended the Workshop.

4.7. Advanced Training on Bibliometrics & Research Output Analysis, INFLIBNET Centre, Gandhinagar, 15th- 20th June, 2015

The INFLIBNET Centre organized Advanced Training Programme on Bibliometrics and Research Output Analysis from 15th to 20th June, 2015 at INFLIBNET Centre, Gandhinagar. Mr. Manoj Kumar K., Scientist D (CS) lighted the ceremonial lamp along with Mr. H. G. Hosamani, Scientist C (LS) and Ms. Kruti Trivedi, Scientist B (LS), INFLIBNET Centre during the inaugural function. The aim of the

training programme was to impart training on bibliometric methods, performance indicators and tools & techniques of bibliometric analysis and mapping. Details of lectures delivered by the experts during the training programme are given in Table 33:

Topics	Name of Expert and Institution
Performance Indicators; Indicators and Mapping of Research; and Bibexcel : Tools and Techniques	Ms. Kruti Trivedi, Scientist B (LS), INFLIBNET Centre
VOS Viewer : Tools and Techniques	Ms. Kruti Trivedi, Scientist B (LS) & Mr. Hiteshkumar Solanki, Scientist B (CS), INFLIBNET Centre
Web of Science	Ms. Sujana Karri, Analyst Business Development, Thomson Reuters
Sci 2: Tools and Techniques	Mr. Hitesh Kumar, Scientist B (CS), INFLIBNET Centre
Overview of Bibliometrics and Bibliometrics Elements and Laws; Science Indicators and Growth of Literature	Prof. I K Ravichandra Rao, Professor, PES Institute of Technology
Altmetrics	Mr. Pallab Pradhan, Scientist B (LS), INFLIBNET Centre
Indicators and Mapping of Research; Histogram	Dr. P. Dastidar, Director, Ministry of Earth Sciences
Bibliometric Indicators and Rankings of University	Mr. Abhishek Kumar, Scientist C (CS), INFLIBNET Centre

Table 33: Lectures Delivered by Experts during Advanced Training on Bibliometrics & Research Output Analysis

Mr. Hiteshkumar Solanki, Scientist B (CS), Ms. Kruti Trivedi and Mr. Pallab Pradhan, Scientists B (LS), Mr. Saroja Kumar Panda & Mrs. Roma Yogesh Asnani, STA (LS) were resource persons in practical sessions of the training programme. The certificates of participation were distributed at the end of programme. 16 participants including LIS professionals and research scholars attended the programme. Mr. H. G. Hosamani, Scientist C (LS) extended a warm vote of thanks to participants, faculty and publishers.

4.8. Three-day Workshop on Drupal Advanced CMS using Drupal, INFLIBNET Centre, Gandhinagar, 15th-17th July, 2015

Three-day Workshop on Advanced CMS using Drupal was organized at INFLIBNET Centre, Gandhinagar from 15th to 17th July, 2015. Mr. Kannan P, Scientist C (LS) coordinator of the Workshop, welcomed the participants and gave an overview of the three-day Workshop. Dr. Jagdish Arora, Director inaugurated the Workshop. In his inaugural address, he emphasized on the importance of website for an organisation and the role of library professionals to deliver effective services to the

patron through World Wide Web. Mr. H G Hosamani, Scientist C (LS), INFLIBNET Centre extended a warm vote of thanks. The Workshop covered introduction to website design and development, overview of Drupal and its features, installation, theme configuration, module configuration, content development, backup and restore, etc.

Mr. Manoj Kumar K, Mr. Ashok Kumar Rai, Scientists D (CS), Mr. Kannan P, Scientist C (LS), Mr. Swapnil Patel, Scientist B (CS), Mr. Miteshkumar Pandya, Scientist B (LS) and Mr. Dharmesh A Shah, STA (CS), INFLIBNET Centre served as resource persons for theory and practice sessions. 18 participants attended the Workshop including library science and computer science professionals from academic and research institutes.

4.9. Five-day National Workshop on Cloud Computing, Virtualization and Network Management, INFLIBNET Centre, Gandhinagar, 20th-24th July, 2015

Five-day National Workshop on Cloud Computing, Virtualization and Network Management was organized at the INFLIBNET Centre, Gandhinagar from 20th to 24th July, 2015. Dr. R K Chadha, Additional Secretary, Parliament of India inaugurated the Workshop. The purpose of the Workshop was to impart in-depth knowledge of the network architecture, design, management, concept of virtualization, its benefits and uses, concept of cloud computing and its applications. It also provided a platform to gain “hands-on” experience on cloud computing and network management. Mr. Gaurav Prakash, Scientist B (CS) extended a warm vote of thanks at the end of the inaugural programme. Theoretical and practical sessions on various concepts related to cloud computing are given in Table 34:

Topics	Name of Expert and Institution
Basic Networking Concepts	Mr. Manoj Kumar K, Scientist D (CS), INFLIBNET Centre
Networking Protocols & Commands; Virtualization Using Virtual Box and Introduction to Cloud Computing	Mr. Gaurav Prakash, Scientist B (CS), INFLIBNET Centre
Network Design and Planning	Mr. Ishit Khakhkhar, CCNA, Dimension Data (CISCO Gold Partner)
IP Addressing and its Implementation to meet Network Requirement and Introduction and Implementation of WLAN	Dr. Atul M Gonsai, Associate Professor, Saurashtra University, Rajkot
Network and Cloud Security and Debugging of Network using Wireshark	Prof. Bhushan H. Trivedi, GLS University, Ahmedabad
Configure, Verify and Troubleshoot Switches & Router	Mr. Amit, CISCO Engineer
Introduction of Virtualization Technology and Cloud Services and its Application	Mr. Yatrik Patel, Scientist D (CS), INFLIBNET Centre

Virtualization Using VMWare	Mr. Jinesh Dhruva, V M Ware Professional
Google Apps – A case study of Cloud Computing	Mr. Kannan, Scientist C (LS), INFLIBNET Centre

Table 34: Lectures Delivered by Experts during National Workshop on Cloud Computing, Virtualization and Network Management

Mr. Gaurav Prakash, Scientist B (CS) and Mr. Rahul Mehta, Project Assistant (CS), INFLIBNET Centre were resource persons in practical sessions of the training programme. The certificates of participation were distributed to the participants at the end of programme. 12 participants attended the programme. Mr. Manoj Kumar K., Scientist D (CS) and Mr. Gaurav Prakash, Scientist B (CS) coordinated the programme.

4.10. Three-day Training Programme on E-resources Management, INFLIBNET Centre, Gandhinagar, 12th-14th August, 2015

Three-day Training Programme on E-Resources Management was organized at INFLIBNET Centre, Gandhinagar from 12th to 14th August 2015. Mr. Dinesh Ranjan Pradhan, Scientist B (LS), Coordinator of the Workshop, welcomed the participants and gave an overview of the three-day Workshop. Dr. Jagdish Arora, Director inaugurated the Workshop. Mr. H G Hosamani, Scientist C (LS) extended a warm vote of thanks at the end of inaugural session. Three-day training programme covered introduction to e-resources management and its life cycle, e-resources search and discovery services by Dr. T S Kumbar, Librarian, IIT Gandhinagar. Dr. Jagdish Arora delivered a lecture on e-books and its purchase and access models in libraries. Dr. Shailesh Yagnik, Librarian, MICA, Ahmedabad described various subscription model for e-books and methods of evaluation of e-resources. Mr. Kannan P, Scientist C (LS), Mr. Dinesh Ranjan Pradhan, Scientist B (LS), Mr. Mitesh Kumar Pandya, Scientist B (LS), Mr. Pallab Pradhan, Scientist B (LS) and Mr. Saroja Kumar Panda, STA (LS), INFLIBNET Centre were resource persons for theoretical and practical sessions on CORAL: e-resources management software. 7 participants from various academic and research institutes attended the Workshop.

4.11. Three-day National Workshop on Creation of IR using Open Source Software, INFLIBNET Centre, Gandhinagar, 26th-28th August, 2015

Three-day National Workshop on Creation of IR using Open Source Software was organized at INFLIBNET Centre, Gandhinagar from 26th to 28th August, 2015. The aim of the Workshop was to spread awareness about the open source software and their appropriate use for library services. The Workshop imparted knowledge on three most widely used OSS in library field i.e. Dspace, Greenstone Digital Library Software (GSDL) and Eprints. Dr. Jagdish Arora, Director, INFLIBNET Centre inaugurated the Workshop. Mr. Gaurav Prakash, Scientist B (CS) extended a warm vote of thanks at the end of the inaugural programme. 9 participants attended the programme. Theoretical and practical sessions on different aspects of creation of IR using OSS are given in Table 35:

Topics	Name of Expert and Institution
Overview of IR Software, their Features and Functionality	Mr. Manoj Kumar K, Scientist D (CS), INFLIBNET Centre
Introduction of Dspace, Greenstone and Eprints	Mr. Abhishek Kumar, Scientist C (CS), INFLIBNET Centre
Introduction to Linux, Ubuntu/CentOS and understanding Ubuntu file system layout, creation of user and group and basic commands	Mr. Gaurav Prakash, Scientist B (CS), INFLIBNET Centre
Hosting of Institution Repository	Mr. Divyakant Vaghela, Scientist B (CS), INFLIBNET Centre
Creation of IR using Eprints	Dr. Atul M Gonsai, Associate Professor, Saurashtra University, Rajkot
Practical session on establishing IR using Dspace (installation demonstration) and Dspace Administration and Submissions	Mr. Swapnil Patel, Scientist B (CS), INFLIBNET Centre
Creation of IR using Greenstone	Dr. Nishtha Anilkumar, Librarian, PRL , Ahmedabad
Experience of establishing IR – Case study of Shodhganga implementation	Mr. Manoj Kumar K, Scientist D (CS), INFLIBNET Centre

Table 35: Lectures Delivered by Experts during National Workshop on Creation of IR using Open Source Software

4.12. Twenty One-day Advanced Training Programme on ICT for Libraries, INFLIBNET Centre, Gandhinagar, 7th-27th September, 2015

Twenty One-day Advanced Training Programme on ICT Applications for Libraries was organized for the benefit of LIS professionals at INFLIBNET Centre, Gandhinagar from 7th to 27th September, 2015. Dr. Jagdish Arora, Director, INFLIBNET Centre inaugurated the programme. The objective of programme was to provide an exposure on latest ICT applications to LIS professionals and to impart 'hands-on' training in ICT applications in a single programme including ILMS software, RFID, Dspace, Joomla, Drupal, Coral, Google apps, e-Learning, Altmetrics and networks & cloud computing for resource sharing. The contents covered under this course were as follows:

- New generation ILMS software
- Changing role of librarianship
- Creation and managing digital library using open source software
- Creation and managing institutional repository
- Web technology
- Networks & cloud computing
- Knowledge discovery tools and techniques
- Inter personnel skills for LIS professionals

- Capacity building on library automation and digital library
- Managing and licensing of e-resources
- Use of anti-plagiarism software
- RFID Technology
- E-learning management system
- Information literacy
- Emerging trends in LIS

Dr. T S Kumbar, Librarian, IIT, Gandhinagar, Dr. Shailesh Yagnik, Librarian, MICA, Ahmedabad, Dr. Lalitha Poluru, Librarian, Department of Pharmacy, Nirma University, Ahmedabad, Dr. M Kognuramath, Prof & Head, DLIS, Central University of Gujarat, Gandhinagar, Mr. Dhaval Kochar, Rapid Radio Pvt Ltd, Ahmedabad were invited as external resources persons along with scientific and technical staff of the INFLIBNET Centre. 8 Participants attended the programme. Mr. H G Hosamani, Scientist C (LS) coordinated the programme.

4.13. Three-day National Workshop on VIVO Profile Management System and Discovery, INFLIBNET Centre, Gandhinagar, 26th - 28th November, 2015

Three-day National Workshop on VIVO Profile Management System and Discovery was organized at the INFLIBNET Centre, Gandhinagar from 26th to 28th November, 2015. The Workshop covered introduction to website design and development, overview of semantic web and its application, installation and configuration of VIVO in Windows, content creation on people and organizations, import publications from various external sources, backup and restore, etc. Mr. Kannan P, Scientist C (LS) welcomed the participants during inaugural session. Mr. Manoj Kumar K, Scientist D (CS) inaugurated the Workshop. In his inaugural address, he stated the benefits of profile management system and its impact on the academic and R&D organization. Mr. H G Hosamani, Scientist C (LS) extended a warm vote of thanks at the end of the inaugural session. Presentations and live demonstrations given by experts of the INFLIBNET Centre during the theoretical sessions on concepts of VIVO Profile Management, System and Discovery are given in Table 36:

Topics	Name of Expert and Institution
INFLIBNET :Activities and Services	Mr. Yatrik Patel, Scientist D (CS)
Introduction and Overview of Semantic Web Technology	Mr. Manoj Kumar K., Scientist C (CS)
VIVO Overview	Mr. Kannan P., Scientist C (LS)
Level I: VIVO Installation and Basic Configuration	Mr. Raja V., Scientist B (CS)
Academic Identity: Overview	Mr. Yatrik Patel, Scientist D (CS)
Level 2: Understanding of Admin Features	Mr. Kannan P., Scientist C (LS)
Level 2: Content Creation for the People and Organization	Mr. Gaurav Prakash, Scientist B (CS)

Level 3: Publications import including Co-Author Network and Map of Science.	Mr. Miteshkumar Pandya, Scientist B (LS)
Level 3: Backup & Restore for Existing VIVO environment.	Mr. Raja V., Scientist B (CS)

Table 36: Lectures Delivered by Experts during National Workshop on VIVO Profile Management System and Discovery

Mrs. Hetal Oza, Sr. Project Officer (CS), Mr. Akshay Kumar Choudhary, Project Assistant (CS), Ms. Dipika Makwana and Ms. Bhakruti Rastrapal, Project Assistant (LS) from INFLIBNET Centre were resource persons in practical session. 10 participants attended the workshop including librarian, information scientists and IT professionals from academic and research institutes.

4.14. 1st Five-day National Workshop on Capacity Building Programme of the National Mission on Libraries for Public Library Personnel, INFLIBNET Centre, Gandhinagar, 14th- 18th December, 2015

Five-day National Workshop on Capacity Building Programme of the National Mission on Libraries for Public Library Personnel was organized at INFLIBNET Centre, Gandhinagar from 14th to 18th December, 2015. Mr. H G Hosamani, Scientist C (LS), Mr. Kannan P, Scientist C (LS) and Mr. Miteshkumar Pandya, Scientist B (LS), INFLIBNET Centre coordinated the programme. Mr. Kannan P, Scientist C (LS) welcomed the participants during inaugural session. Dr. Arun Chakraborty, Mission Director, NML & Director General, RRLF inaugurated the programme. Mr. H G Hosamani, Scientist C (LS) extended a warm vote of thanks. 39 participants attended the programme. Lecture delivered during the National Workshop on Capacity Building Programme of National Mission on Libraries for Public Library Personnel are given in Table 37:

Topics	Name of Expert and Institution
National Mission on Libraries : An Overview	Dr Arun Kumar Chakarborty, Director General, RRRLF, Mission Director, NML
Open Source Tools for Libraries	Mr. Manoj Kumar K, Scientist D (CS), INFLIBNET Centre
Library Automation: Overview	Dr. Jagdish Arora, Director, INFLIBNET Centre
Library Automation : Acquisition-Koha	Mr. Miteshkumar Pandya, Scientist B (LS), INFLIBNET Centre
Multilingual information representation through Unicode for Indic Scripts	Mr. Miteshkumar Pandya , Scientist B (LS), INFLIBNET Centre
Understanding Modern Library Standards MARC and Dublin Core	Mr. Abhishek Kumar, Scientist C (CS), INFLIBNET Centre
Library Automation: Cataloguing and OPAC (Koha)	Mr. H G Hosamani, Scientist C(LS), INFLIBNET Centre

Changing Roles of Public Libraries and Community Based Information Services	Dr. Parthasarathi Mukhopadhyay, Head, Kalyani University
Library Automation: Circulation (Koha)	Mr. H G Hosamani, Scientist C(LS), INFLIBNET Centre
Emerging Trends for Libraries in Context of Public Libraries	Dr Usha Munshi, IIPA, Delhi
Introduction to e- resources and discovery tools	Mr. Dinesh Pradhan, Scientist B(LS), INFLIBNET Centre
Standards and formats for digitization	Mr. Manoj Kumar K., Scientist D (CS), INFLIBNET Centre
Digitization process and hands on practice	Mr. Pallab Pradhan, Scientist B (LS), INFLIBNET Centre
Effective communication skill	Dr. T S Kumbar, Librarian, IIT Gandhinagar
Library services for specially abled persons	Prof. Muttayya Koganuramath, Head, SLIS, Central University of Gujarat, Gandhinagar
Use of social media and other Web 2.0 tools for Libraries	Ms. Kruti Trivedi, Scientist B (LS), INFLIBNET Centre

Table 37: Lectures Delivered by Experts during Workshop on Capacity Building Programme of the National Mission on Libraries for Public Library Personnel

4.15. Two-day Advanced Training Programme on Shodhganga, INFLIBNET Centre, Gandhinagar, 21st-22nd December, 2015

Two-day Advanced Training Programme on Shodhganga was organized at INFLIBNET Centre, Gandhinagar from 21st to 22nd December 2015. Mr. Manoj Kumar K, Scientist D (CS), Coordinator of the Workshop, welcomed the participants during the naugural session and gave an overview of the two days training programme. Dr. Jagdish Arora, Director inaugurated the programme. Mr. H G Hosamani, Scientist C (LS) extended a warm vote of thanks. Lecture delivered during the Advanced Training Programme on Shodhganga are given in Table 38.

Topics	Name of Expert and Institution
Institutional repositories & IPR issues	Dr. T S Kumbar, Librarian IIT, Gandhinagar
Shodhganga and deterring plagiarism in research outputs in indian universities	Mr. Manoj Kumar K., Scientist D(CS), INFLIBNET Centre
Standards and formats for digitisation & academic identity an overview	Mr. Kannan P., Scientist C (LS), INFLIBNET Centre
Introduction: Dspace and building IR	Mr. Swapnil Patel, Scientist B (CS), INFLIBNET Centre
Anti-plagiarism tools and services: hands on for URKUND	Mrs. Suboohi Siddiqui, STO (LS), INFLIBNET Centre

Table 38: Lectures Delivered by Experts during Advanced Training Programme on Shodhganga

Mrs. Archita Muchhadia and Mr. Kuldeep Mateida, Project Officers (LS), Mr. Rahul Mehta, Project Assistant (CS), Mr. Monika Shroff and Ms. Neha Jain, Project Assistant (LS) from INFLIBNET Centre were resource persons for practical sessions. 15 participants from various academic and research institutes attended the Workshop. Certificates of participation were distributed to the participants at the end of the programme.

4.16. Workshop on “Big and Open Data – Evolving Data Science Standards & Citation Attribution Practices”, Indian National Science Academy, New Delhi, 5th -6th November, 2015

Workshop on “Big and Open Data – Evolving Data Science Standards & Citation Attribution Practices” organized by Indian Institute of Public Administration in collaboration with International Council for Science-Committee on Data for Science & Technology, Indian National Science Academy, Department of Science & Technology, Department of Electronics and Information Technology, MCIT, Department of Biotechnology, Ministry of Earth Sciences and ICSSR, DRDO, NIC & INFLIBNET Centre as knowledge partners at the Indian National Science Academy, New Delhi from 5th to 6th November, 2015. The aim of the Workshop was to take a stock of what is being done in the data citation area, the existing culture of data sharing and citation practices along with needs and interests of the respective disciplinary areas and domains. More than 200 participants attended the programme. The Workshop was divided into two sub-themes i.e. Data science, technology, research and applications: developments in the Indian context and data management, sharing and services: current & future role of data stakeholders.

Dr. Jagdish Arora, Director, INFLIBNET Centre made a presentation on ICSSR Data Service: Social Science Data Repository during the Workshop. Dr. Usha Mujoo Munshi, Librarian, IIPA coordinated the Workshop. Mr. Pallab Pradhan and Mr. Miteshkumar Pandya, Scientists B (LS), INFLIBNET Centre were rapporteurs for several sessions during the Workshop.

4.17. Five-day National Workshop on Digital Content Creation and Management using Dspace, IPS Academy, Indore, 4th -8th January, 2016

Five-day National Workshop on Digital Content Creation and Management using Dspace was organized by IPS Academy in collaboration with INFLIBNET Centre, Gandhinagar at Institute of Library Science, IPS Academy, Indore from 4th to 8th January, 2016. Dr. Ashutosh Mishra, Vice-Chancellor, Devi Ahilya Vishwavidyalaya inaugurated the programme with lighting of traditional lamp in presence of Dr. Sonal Singh, HOD, DLIS, Vikram University, Dr. Achal Choudhary, President, Dr. M. L. Sharma, Director, Institute of Science & Laboratory Education, Dr. Sangeeta Paliwal, HOD, Institute of Library Science and Organizing Secretary of the Workshop, IPS Academy, Mr. Swapnil Patel, Scientist B (CS) and Mr. Vijaykumar Shrimali, STA (CS), INFLIBNET Centre.

Dr. Ashutosh Mishra, in his presidential address, appreciated to IPS Academy, Indore for organising such kind of Workshop for library professionals. Dr. Sonal Singh appreciated the efforts of

organizing secretary of the Workshop. She opined that printed books are still important in this digitized world. Dr. Achal Choudhary stated that research should be undertaken on the reasons for decrease in the usage of library. Dr. M. L. Sharma mentioned that library science department is working under science discipline in IPS Academy essentially to underline its importance and contribution in research and development.

In the Technical Sessions, Mr. Swapnil Patel elaborated the activities and services of INFLIBNET Centre. Mr. Swapnil Patel and Mr. Vijaykumar Shrimali delivered detailed lectures on Dspace. Dr. Sonal Singh delivered a lecture on "Library automation and latest trends in ICT". Mr. Neeraj Mehta and Mr. Sourabh Jain, Assistant Professors, Institute of Engineering & Science, IPS Academy took theoretical and practical session on Linux. Mr. Santosh C. Huglabali, Librarian, Nagindas Khandwana College, Mumbai delivered a lecture on "Digitization and digital preservation: Issues and Challenges" and "Metadata standards for Digital Content". Dr. Sangeeta Paliwal, HOD, Institute of Library Science, IPS Academy delivered a lecture on "Reference management tools and new arrival display tool."

Dr. V.P. Khare, Professor and Head, DLIS, Bundelkhand University, Jhansi was the Chief Guest of the programme during the valedictory function. Dr. Sonal Singh, HOD, DLIS, Vikram University was Chief Speaker of the programme. Dr. M. L. Sharma, Director, Institute of Science and Laboratory Education, IPS Academy complemented the organizers for the Workshop. Dr. Sangeeta Paliwal, extended a warm vote of thanks. 39 participants attended the Workshop.

4.18. 2nd Five-day National Workshop on Capacity Building Programme of National Mission on Libraries for Public Library Personnel, INFLIBNET Centre, Gandhinagar, 18th-22nd January, 2016

Five-day National Workshop on Capacity Building Programme of National Mission on Libraries for Public Library Personnel was organized at INFLIBNET Centre, Gandhinagar from 18th to 22nd January, 2016. Mr. H G Hosamani, Scientist C (LS), Mr. Kannan P, Scientist C (LS) and Mr. Miteshkumar Pandya, Scientist B (LS), INFLIBNET Centre coordinated the programme. Dr. Jagdish Arora, Director inaugurated the programme. 33 participants attended the programme. Theoretical and practical sessions covered during the National Workshop on Capacity Building Programme given in Table 39:

Topics	Name of Expert and Institution
National Mission on Libraries : An Overview	Mr. Manoj Kumar K, Scientist D (CS), INFLIBNET Centre
Library Automation: Overview and Open Source Tools for Libraries	Mr. Abhishek Kumar, Scientist C (CS), INFLIBNET Centre
Library Automation : Acquisition (Koha)	Mr. Miteshkumar Pandya, Scientist B (LS),

	INFLIBNET Centre
Emerging Trends for Libraries in Context of Public Libraries	Prof. Dinesh K Gupta, Associate Professor, Vardhaman Mahaveer Open University
Understanding Modern Library Standards MARC and Dublin Core	Mr. Dinesh R Pradhan, Scientist B (LS), INFLIBNET Centre
Library Automation: Cataloguing, Circulation and OPAC (Koha)	Mr. H G Hosamani, Scientist C (LS), INFLIBNET Centre
Multilingual information representation through Unicode for Indic Scripts	Mr. Yatrik Patel, Scientist D (CS), INFLIBNET Centre
Standards and formats for digitization, digitization process and hands on practice	Mr. Manoj Kumar, Scientist D (CS), INFLIBNET Centre
Use of social media and other web 2.0 tools for libraries	Ms. Kruti Trivedi, Scientist B (LS), INFLIBNET Centre
Changing roles of public libraries and community based information services	Dr. Parthasarathi Mukhopadhyay, Head, DLIS, Kalyani University
Introduction to e-resources and discovery tools	Mr. Pallab Pradhan, Scientist B (LS), INFLIBNET Centre
Koha: advanced cataloguing	Dr. Parthasarathi Mukhopadhyay, Head, DLIS, Kalyani University
Library services for specially abled persons	Dr. Sewa Singh, Retd. Professor, Gurunanak Dev University
Effective communication skill	Dr. T S Kumbar, Librarian, IIT Gandhinagar

Table 39: Lectures Delivered by Experts during Workshop on Capacity Building Programme of the National Mission on Libraries for Public Library Personnel

4.19. Three-day Advanced Training Programme on Configuration and Management of Digital Library using Dspace, INFLIBNET Centre, Gandhinagar, 27th-29th January, 2016

The INFLIBNET Centre organized three-day advanced Training Programme on Configuration and Management of Digital Library using Dspace from 27th to 29th January, 2016. Mr. Yatrik Patel, Scientist D (CS), Mr. H G Hosamani, Scientist C (LS) and Mr. Swapnil Patel, Scientist B (CS) coordinated the Workshop. This Workshop addressed various advanced issues related to customization and management of Dspace for existing Dspace users who may need more insights, and in-depth knowledge on how to further enhance the usage, its maintenance and customization, with theoretical lectures and hands-on training by experts. Three library and computer professionals participated in the Workshop. Mr. Yatrik Patel, Scientist D (CS), Mr. Swapnil Patel, Scientists B (CS) and Mr. Vijay Shrimali, STA (CS) from INFLIBNET Centre served as resource persons for the Workshop.

4.20. 3rd Five-day National Workshop on Capacity Building Programme of National Mission on Libraries for Public Library Personnel, INFLIBNET Centre, Gandhinagar, 15th-19th February, 2016

Five-day National Workshop on Capacity Building Programme of National Mission on Libraries for Public Library Personnel was organized at INFLIBNET Centre, Gandhinagar from 15th to 19th February, 2016. Mr. H G Hosamani, Scientist C (LS), Mr. Kannan P, Scientist C (LS) and Mr. Miteshkumar Pandya, Scientist B (LS), INFLIBNET Centre coordinated the programme. Six participants from Public Libraries of Goa participated in the programme. Theoretical and practical sessions covered during the National Workshop on Capacity Building Programme given in in Table 40:

Topics	Name of Expert and Institution
National Mission on Libraries : An Overview	Mr. Manoj Kumar K, Scientist D (CS), INFLIBNET Centre
Library Automation: Overview and Open Source Tools for Libraries	Mr. Abhishek Kumar, Scientist C (CS), INFLIBNET Centre
Library Automation : Acquisition (Koha)	Mr. Miteshkumar Pandya, Scientist B (LS), INFLIBNET Centre
Emerging Trends for Libraries in Context of Public Libraries	Video Tutorial
Understanding Modern Library Standards MARC and Dublin Core	Mr. Dinesh R Pradhan, Scientist B (LS), INFLIBNET Centre
Cataloguing, Circulation and OPAC (Koha)	Mr. H G Hosamani, Scientist C (LS), INFLIBNET Centre
Multilingual information representation through Unicode for Indic Scripts	Mr. Yatrik Patel, Scientist D (CS), INFLIBNET Centre
Standards and formats for digitization, digitization process and hands on practice	Mr. Manoj Kumar, Scientist D (CS), INFLIBNET Centre
Use of social media and other web 2.0 tools for libraries	Ms. Kruti Trivedi, Scientist B (LS), INFLIBNET Centre
Changing roles of public libraries and community based information services	Video Tutorial
Introduction to e-resources and Discovery Tools	Mr. Pallab Pradhan, Scientist B (LS), INFLIBNET Centre
Library services for specially abled persons	Prof. Muttayya Koganuramath, Head, SLIS, Central University of Gujarat
Effective communication skill	Mr. Manoj Kumar, Scientist D (CS), INFLIBNET Centre

Table 40: Lectures Delivered by Experts during Workshop on Capacity Building Programme of the National Mission on Libraries for Public Library Personnel

4.21. Two-day National Workshop on Research Methodology and Academic Writing, INFLIBNET Centre, Gandhinagar, 22nd-23rd February, 2016

Two-day National Workshop on Research Methodology and Academic Writing was organized at INFLIBNET Centre, Gandhinagar from 22nd to 23rd February 2016. Mr. Manoj Kumar K, Scientist D (CS) coordinated the Workshop and welcomed the participants. He gave an overview of the programme. Mr. Arindam Das, Director, NIFT Gandhinagar inaugurated the Workshop with lighting of traditional lamp in presence of Dr. Jagdish Joshi, Offtg. Director, UGC-Human Resource Development Centre, Gujarat University, Mr. Manoj Kumar K., Scientist D (CS) and Mr. H G Hosamani, Scientist C (LS), INFLIBNET Centre. In his Inaugural address, he spoke about methodologies for research conducted in the field of fashion designing and various writing skills. Mr. H G Hosamani extended a warm vote of thanks at the end of the inaugural session. 23 participants including LIS professionals and research scholars attended the programme. Details of lectures delivered by experts during the training programme are given in Table 41:

Topics	Name of Expert and Institution
Qualitative Academic Writing and Publications	Dr. Jagdish Joshi, UGC-Human Resource Dev. Centre, Gujarat University
Shodhganga and Deterring Plagiarism in Research Outputs and e-Resources for Research	Mr. Manoj Kumar K., Scientist D(CS), INFLIBNET Centre
Research Methodology & Planning of Research	Dr. Vijayalaxmi Chari, Ex. Director, School of Commerce, Gujarat University
Ethics in Research	Dr. Nikhil A. Gokhale, Associate Director, RK University, Rajkot
Use of Reference Management Tools and Writing of Research Report	Mr. Miteshkumar Pandya, Scientist B (LS), INFLIBNET Centre
Assessing and Evaluating Research Performance using Bibliometric Indicators	Ms. Kruti Trivedi, Scientist B (LS), INFLIBNET Centre
Statistical Methods for Research Data Analysis using SPSS	Mr. Hiteshkumar Solanki, Scientist B (CS), INFLIBNET Centre
Anti-Plagiarism Tools for Quality of Research	Ms. Suboohi Siddiqui, STO (LS), INFLIBNET Centre

Table 41: Lectures Delivered by Experts during National Workshop on Research Methodology and Academic Writing

4.22. Two-day National Workshop on Ethical Issues and Use of Anti-Plagiarism for Research Integrity, INFLIBNET Centre, Gandhinagar, 21st -22nd March, 2016

Two-day National Workshop on Ethical Issues and Use of Anti-Plagiarism for Research Integrity was organized at INFLIBNET Centre, Gandhinagar from 21st to 22nd March, 2016. Mr. Manoj Kumar K, Scientist D (CS) coordinated the Workshop. He welcomed the participants and gave an overview of the programme. Dr. Savita R. Gandhi, Head, Rollwala Computer Centre, Gujarat University, Ahmedabad inaugurated the Workshop. In her Inaugural address, she spoke about methodologies for research and planning of research with use of anti-plagiarism tools. Mr. H G Hosamani, Scientist C (LS) extended a warm vote of thanks at the end of the inaugural session. 12 participants including LIS professionals from North-East region and research scholars attended the programme. Details of lectures delivered by experts during the training programme are given in Table 42:

Topics	Name of Expert and Institution
Research Methodology and Planning of Research	Dr. Savita R. Gandhi, HOD, Rollwala Computer Centre, Gujarat University
Anti-Plagiarism Tools for Quality of Research	Mr. Manoj Kumar K., Scientist D (CS) and Ms. Suboohi Siddiqui, STO (LS), INFLIBNET Centre
Qualitative Academic Writing and Publications	Dr. Jagdish Joshi, UGC-Human Resource Dev. Centre, Gujarat University
Ethics in Research	Dr. Nikhil A. Gokhale, Associate Director, RK University, Rajkot
Statistical Methods for Research Data Analysis using SPSS	Dr. Raju Chaudhary, Associate Professor, Dept. of Statistics, MG Science Institute, Ahmedabad
Use of Reference Management Tools and Writing of Research Report	Mr. Miteshkumar Pandya, Scientist B (LS), INFLIBNET Centre
Assessing and Evaluating Research Performance using Bibliometric Indicators	Ms. Kruti Trivedi, Scientist B (LS), INFLIBNET Centre

Table 42: Lectures Delivered by Experts during National Workshop on Ethical Issues and Use of Anti-Plagiarism for Research Integrity

5. User Awareness Programmes on UGC-Infonet Digital Library Consortium and N-LIST

5.1. One-day User Awareness Programme on Access to E-resources under N-LIST, Swami Ramanand Teerth Marathwada University, Nanded, Maharashtra, 22nd May, 2015

One-day User Awareness Programme on Access to E-resources under N-LIST Programme was organized by Swami Ramanand Teerth Marathwada University, Nanded, Maharashtra in

collaboration with INFLIBNET Centre on 22nd May 2015 at Senate Hall, SRTM University, Nanded. It was a unique User Awareness Programme that was organized for the first time in the region with an objective to encourage affiliated colleges of the University to avail the facility of e-resources through N-LIST programme, a college component of UGC-INFONET Digital Library Consortium. It was noted that 89 colleges affiliated to SRTM University are already subscribing to e-resources through N-LIST programme and making use of e-resources for academic purpose. Dr. J. N. Kulkarni, University Librarian I/C and Co-ordinator of the programme, welcomed the guests and participants and gave an introductory speech and pointed out objectives and benefits of the programme. Prof. D. B. Panaskar, Director, Board of College & University Development inaugurated the programme. In his inaugural speech, he discussed the need of e-resources in research. Mr. B. B. Patil, Registrar and Dr. Ravi Sarode, Controller of Examinations were Chief Guest of the programme. Mr. Ashok Kumar Rai, Scientist D (CS), INFLIBNET Centre briefly elaborated the theme of the programme with special reference to access of e-resources for the benefits of students as well as teachers and researchers.

In valedictory session, Dr. V. N. Laturkar, Director, Internal Quality Assurance Cell (IQAC), SRTM University was the Chief Guest. She highlighted the role of librarians in increasing use of e-resources. Dr. R. D. Kale, Senior Library Assistant extended a warm vote of thanks. Mr. R. G. Dharmapurikar, Information Scientist was the Master of Ceremony. More than 80 participants including principals and librarians from affiliated colleges attended the programme. Certificates of participation were distributed to the participants at the end of the programme.

5.2. User Awareness Programme on Access to E-resources under N-LIST, Maharana Pratap P.G. College, Gorakhpur, 10th July, 2015

User Awareness Programme on Access to E-resources under N-LIST was organized by Maharana Pratap P. G. College, Gorakhpur in collaboration with INFLIBNET Centre on 10th July, 2015. Dr. Shubhranshu Shekhar Singh, Lecturer, Department of Defence & Strategic Studies coordinated the programme and welcomed the guests and participants. Prof. Ram Achal Singh, Former Vice-Chancellor and Chairman U.P. Higher Education Services Commission, Allahabad inaugurated the programme. In his inaugural address, he said that Maharana Pratap PG College is having collections of more than 1 lakh books, 8,000 international research journals and 4,500 theses. He also appreciated that the college is associated with N-LIST programme that provides online access to e-journals and e-books for the benefit of teachers and students of the college.

Mr. Ashok Kumar Rai, Scientist D (CS) was resource person from INFLIBNET Centre. He made a detailed presentation on N-LIST programme. Prof. Ajay Kumar Gupta, Deen Dayal Upadhyaya Gorakhpur University, in his address, stated that computer literacy has already achieved its goal and without computer literacy, expansion of knowledge was confined. He also highlighted that development of computers and current technologies in higher education is must in current scenario. Mr. Himanshu Bhushan Varma and Mr. Shiv Prasad Sharma, Genda Singh Sugarcane Breeding & Research Institute, Seorahi, Kushinagar presented and their views and opinions during the inaugural

session. Prof. U. P. Singh, Former Vice-Chancellor was Chief Guest during valedictory session. He emphasised that image of any reputed institutes are totally depend on their faculty members, laboratories and library. The library fulfils requirement of its used collections, based on its usage ICT technologies and knowledgeable manpower. Dr. Pradeep Kumar Rao, Principal extended a warm vote of thanks. More than 40 participants including principals, librarians and faculty members from various colleges of Uttar Pradesh attended the programme.

5.3. User Awareness Programme on Access to E-resources under UGC-Infonet Digital Library Consortium, Central University of Kerala, Kasaragod, 7th August, 2015

User Awareness Programme on Access to E-resources under UGC-Infonet Digital library Consortium was organized by Central University of Kerala in collaboration with the INFLIBNET Centre, Gandhinagar on 7th August 2015 at Central University Auditorium, Central University of Kerala, Kasaragod. Dr. P. Senthilkumaran, Deputy Librarian coordinated the programme and delivered the welcome address. He also spoke about the importance and purpose of this programme and highlighted the problems and issues faced by faculty members, research scholars and students of the university in accessing e-resources.

Prof. (Dr.) G. Gopa Kumar, Vice-Chancellor inaugurated the programme. In his inaugural address, he appreciated the initiatives taken by the library for organizing such kind of programmes in collaboration with INFLIBNET Centre, Gandhinagar for the faculty members, research scholars, students and library professionals. He also emphasized that the need of such training programmes in the changing scenario of publications trends and users' attitudes. He said that the user's expectations from the Libraries are increasing day-by-day since the libraries are becoming more and more digital that is consider as a major threat by traditional librarians. He said that there is a greater need to find out as to how the library services can become better? How can we remain effective in the present day scenario? He further said that libraries of the future would only be serving e-books, databases and new innovative library services and programmes.

Mr. Ashok Kumar Rai, Scientist D (CS) was resource person from the INFLIBNET Centre. He made a detailed presentation on current status and new programmes taken by the UGC-Infonet Digital Library Consortium for the universities. He elaborated the activities and services of INFLIBNET Centre. He said that INFLIBNET Centre will extend all possible additional e-resources to the university such as Science Direct, Project Muse and RSC to meet the increasing requirement of its users. Representatives of Elsevier, Oxford University Press, Springer, Balani Infotech (APS, ACS, Project muse, SIAM), Wiley Blackwell, Taylor & Francis, Informatics India Ltd (Jgate Plus) attended the programme and made presentations on their respective information products. Dr. Shivarama Rao, Assistant Librarian concluded the session and extended a warm vote of thanks to all the participants and guests. 155 participants attended the programme. Students and faculty members interacted with the publishers during all the sessions.

5.4. User Awareness Programme on Access to E-resources under UGC-Infonet Digital Library Consortium, Vishva Bharati University, Shantiniketan, 24th-25th August, 2015

User Awareness Programme on Access to E-resources under UGC-Infonet Digital Library Consortium was organized by Vishva Bharati University, Shantiniketan in collaboration with INFLIBNET Centre, Gandhinagar from 24th to 25th August 2015 at Central Library, Vishva Bharati University, Shantiniketan. The main aim of the programme was to promote the usage of e-resources as well as to provide a platform for discussions on issues related to e-resources. Dr. V. K. Thomas, University Librarian coordinated the programme and welcomed the guests and participants. In his welcome address, he elaborated on the dire need of conducting user awareness programmes on library resources. He emphasized on publicity of resources and the need for outreaching to the users. He appreciated the innovative ideas of Dr. Jagdish Arora and congratulated him for his accomplishments. Prof. Sushanta Dattagupta, Hon'ble Vice-Chancellor inaugurated the programme by lighting the lamp along with Dr. Jagdish Arora, Director, INFLIBNET Centre, Prof. Sudhendu Mandal and Dr. V. K. Thomas, University Librarian, Vishva Bharati University. In his inaugural speech, he welcomed the gathering and conveyed his special thanks to Dr. Arora, Prof. Mandal and Dr. Thomas for their initiatives. He talked about the complex and widespread nature of Vishva Bharati libraries in Santiniketan, Sriniketan and Kolkata (Granthana Vibhaga) and networking for better delivery of resources. Dr. Jagdish Arora drew a brief sketch of INFLIBNET and highlighted existing and new activities and services of the INFLIBNET Centre like Shodhganga, Shodhgangotri, e-PG Pathshala, e-Acharya, OJAS, Institutional Repository, Vidwan, SOUL Cloud Version, etc. Dr V. K. Thomas elaborately talked about the Library's effort in promoting e-resources through variety of outreach and awareness programmes and through IT-enabled applications. 91 participants including 33 faculty members, 14 library professionals and 44 research scholars participated in the programme.

Dr Jagdish Arora, Director, INFLIBNET Centre also met the staff of the Vishva Bharati Library Network at Central Library on 24th August, 2015 and made a presentation on Ten Technologies that the Librarians should know to contribute and strengthen their Institutions.

Representatives of Oxford University Press, Elsevier, Wiley Blackwell, Balani Infotech (APS, ACS, Project muse, SIAM), Springer, Informatics India Ltd (Jgate Plus), Thomson Reuters made presentations on their respective information products. There was a live demo of Urkund (anti-plagiarism software) through video conferencing by e-Galatics team from Pune.

Prof. Swapan Kumar Datta, Pro Vice-Chancellor presided over the valedictory function. He spoke about the benefits of e-resources and urged for their maximum utilization. Dr. Nimai Chand Saha, Deputy Librarian extended a warm vote of thanks. Certificates of participation were distributed to the participants at the end of the programme. The participants suggested for organizing such programmes Bhavan-wise or Department-wise. Some of the participants suggested that more time should be allocated for EndNote and Web of Science in future programmes.

5.5. User Awareness Programme on Access to E-resources under UGC-Infonet Digital Library Consortium, University of Kalyani, Kalyani, 28th September, 2015

Two-day User Awareness Programme on Access to E-resources under UGC-Infonet Digital Library Consortium was organized by University of Kalyani in collaboration with INFLIBNET Centre, Gandhinagar on 28th September, 2015 at Vidyasagar Sabhagriha, University of Kalyani, Kalyani. Mr. Mriganka Mandal, Librarian coordinated the programme and welcomed the guests, dignitaries and participants. Dr. Rattan Lal Hangloo, Hon'ble Vice-Chancellor inaugurated the programme. In his inaugural address, he emphasized on optimal utilization of e-resources provided by the consortium. Prof. Gautum Pal, Dean, Faculty Council for P.G. Studies in Science presided over the inaugural programme. In his address, he emphasized for the need of such types of awareness programme which results in increase in usage of e-resources. Prof. Pijushkanti Panigrahi, Dean, Faculty Council of P.G. Studies in Education, Journalism and Library Science, University of Calcutta was the Chief Guest of the inaugural programme. In his address, he highlighted the features of UGC-INFONET Digital Library Consortium. Mr. Ashok Kumar Rai, Scientist D (CS), INFLIBNET Centre delivered the keynote address. Dr. Asitabha Das, Librarian extended a warm vote of thanks. 269 participants including faculty members, research scholars and students and librarians from University of Kalyani and colleges affiliated to the University of Kalyani participated in the programme.

Mr. Ashok Kumar Rai, Scientist D (CS) was resource person from INFLIBNET Centre. He delivered a lecture on e- resources made accessible to the academic community under the UGC-Infonet Digital Library Consortium. The representatives of the publishers including Oxford University Press, Wiley Blackwell, Elsevier, Annual Reviews, Thomson Reuters, Springer, Taylor & Francis, Balani Infotech (APS, ACS, Project muse, SIAM) and Informatics India Ltd. (Jgate Plus) attended the programme and made presentations on their respective information products. Faculty members, research scholars and students were given opportunity to interact and communicate with the publishers during all the sessions.

During the valedictory session, Prof. Sumit Mukherjee, Dean, Faculty Council for P.G. Studies in Arts & Commerce was the Chairman. Prof. Manas Kumar Sanyal, Dean, Faculty Council for P.G. Studies in Engineering Technology & Management was the Chief Guest. Dr. Sk. Mukhbul Islam, Dean of Students Welfare, Dr. Parth Sarathi Mukherjee, Head, DLIS, Mr. Mriganka Mandal, Librarian, Dr. Asitabha Das, Librarian, Mrs. Dipa Roy, Assistant Librarian, University of Kalyani and Mr. Ashok Kumar Rai, Scientist D (CS), INFLIBNET Centre were the Guests of Honours during the session. Certificate of participations were distributed to all the participants. Mrs. Dipa Roy, Assistant Librarian extended a warm vote of thanks at the end of the programme.

5.6. One-day User Awareness Programme on Access to E-resources under UGC-Infonet Digital Library Consortium, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, 9th October, 2015

User Awareness Programme on Access to E-resources under UGC-Infonet Digital Library Consortium was organized by Dr. Babasaheb Ambedkar Marathwada University Library in collaboration with INFLIBNET Centre, Gandhinagar at Dr. Babasaheb Ambedkar Marathwada University, Aurangabad on 9th October 2015 for the benefit of the researchers, students, faculty and librarians of the affiliated colleges and nearby institutes. Dr. D. K. Veer, University Librarian and Coordinator of the programme welcomed guests and participants. Prof B. A. Chopade, Hon'ble Vice-Chancellor, inaugurated the programme. In his inaugural speech, he highlighted the significance of access to scholarly publications and role of libraries in enhancing the quality of research. He also appreciated and lauded the research productivity of the university departments and also emphasized the need of library professionals in updating themselves with concepts and tools of e-resource management and digital library. Mr. Ashok Kumar Rai, Scientist D (CS), INFLIBNET Centre delivered Keynote address. He stressed upon the role of INFLIBNET Centre in networking and sharing the knowledge amongst the universities all over the country. He also mentioned about various initiatives of the INFLIBNET such as Library Automation, Union Catalogue of Books, Theses, Serials (IndCat), manpower training and capacity development programmes for the university libraries, e-PG Pathshala, Vidwan Database, etc. He also elaborated on UGC Infonet Digital Library Consortium and N-LIST programme.

Prof. M. D. Shirsat, Registrar and Chief Guest highlighted the need of extensive use of e-resources i.e. e-journals, e-books and also appreciated the work of INFLIBNET Centre. Representatives of Thomson Reuters, Oxford University Press, Cambridge University Press, Wiley India made presentation on their respective products. Dr. D. K. Veer, University Librarian extended a warm vote of thanks at the end of the programme. More than 500 participants including faculty members and research scholars participated in the programme and interacted with INFLIBNET Centre's resource person and representatives of publishers and content service providers.

6. User Awareness Programme on Shodhganga and Anti-Plagiarism Software

6.1. Northern Region Training Programme on URKUND: A Plagiarism Detection Tool, Jawaharlal Nehru University, New Delhi, 21st September, 2015

Northern Region Training Programme on URKUND: A Plagiarism Detection Tool was organized by Jawaharlal Nehru University in collaboration with INFLIBNET Centre, Gandhinagar on 21st September 2015 at SSS-I Auditorium, Jawaharlal Nehru University, New Delhi. Dr. Ramesh C Gaur, University Librarian coordinated the programme and welcomed the guests and participants. Dr. Gaur provided an overview of the training programme along with other related information such as role of plagiarism detection tools, various tools available, UGC notification for e-theses, etc. He also

informed the participants about various Research Support Services provided by the Central Library, JNU. Prof. Prasenjit Sen, Rector-II inaugurated the programme. In his inaugural address, he focused on seriousness of plagiarism in academia and measures to avoid it. Mr. Manoj Kumar K, Scientist D (CS), INFLIBNET Centre elaborated about Shodhganga and Shodhgangotri. Mr. James Bennett, URKUND, Sweden made a presentation on URKUND. He gave an overview of URKUND, process of creation of accounts, report generation and report evaluation. It was followed by lively discussions. The enthusiastic participants asked number of queries to Mr. Manoj Kumar K and Mr. James Bennett during the interactive session. Mr. Manoj agreed to the audience regarding many issues related to URKUND that need adaptation to meet local needs and promised requisite action.

150 participants including research scholars, faculty members, library professionals from various universities and Institutions in Punjab, Haryana, U.P., Uttarakhand and Delhi NCR participated in the programme. Besides, research scholars and library staff from JNU also attended the programme. Dr. Ramesh C Gaur extended a warm vote of thanks to the participants at the end of the programme.

6.2. Southern Region Training Programme on URKUND: A Plagiarism Detection Tool, Anna University, Chennai, 22nd September, 2015

Southern Region Training Programme on URKUND: A Plagiarism Detection Tool was organized by Anna University in collaboration with INFLIBNET Centre, Gandhinagar on 22nd September 2015 at TAG Auditorium, CEG Campus, Anna University, Chennai. The programme started with university anthem. Prof. N. Rajendran, Director, University Library delivered welcome address to the guests and participants. Dr. S. Sathikh, Former Vice-Chancellor, Madras University and President of MALIBNET, Chennai inaugurated the programme. In his inaugural address, he emphasized that before using the tools for checking plagiarism, researchers should be honest and sincere in their work. He compared the honesty of having fast on the days of Eid similar to being honest while giving citations and references. Only the person doing fast can ensure that he is following it honestly and religiously, likewise only a researcher can ensure the content of his article are referred properly. Even supervisor may not know the full source of the content. Prof. Dr. S. Ganesan, Registrar, Anna University presided over the programme. Mr. Manoj Kumar K, Scientist D (CS), INFLIBNET Centre gave an overview of the programme and elaborated about Shodhganga and Shodhgangotri. Mr. James Bennett, URKUND, Sweden made a presentation on URKUND. He presented an overview of URKUND, process of creation of accounts, report generation and report evaluation. The university felicitated resource persons on behalf of the University. Dr. G Krishnamoorthy, University Librarian coordinated the programme and extended a warm vote of thanks at the end of the programme. He also highlighted the importance of such programme for institutions to initiate and deter the plagiarised content from academic publications while creating the content. The programme received overwhelming response from research scholars and faculty members. Around 325 participants including research scholars, librarians and faculty member from Kerala, Karnataka,

Andhra and Tamil Nadu and research supervisors and officers of engineering colleges affiliated to Anna University participated in the programme.

6.3. Eastern Region Training Programme on URKUND: A Plagiarism Detection Tool, Rabindra Bharti University, Kolkata, 23rd September, 2015

Eastern Region Training Programme on URKUND: A Plagiarism Detection Tool was organized by Rabindra Bharati University in collaboration with INFLIBNET Centre, Gandhinagar on 23rd September 2015 at Kabi Janani Sharada Kakshya, Rabindra Bharti University, Kolkata. Mr. Debdatta Roy, Registrar (Acting) delivered welcome address. Prof. Sabyasachi Basu Ray Chaudhury, Vice-Chancellor, Rabindra Bharati University expressed happiness to initiate the programme for eastern region in a university which is established in the birth place of Rabindranath Tagore. Prof. Suranjan Das, Vice-Chancellor, Jadavpur University and Former Vice-Chancellor, University of Calcutta inaugurated the programme. In his inaugural address, he defined plagiarism in different ways which appears in academic publications. He also cautioned that research scholars while may unknowingly commit plagiarism. He gave different example of plagiarism which he noticed during his academic tenure. While plagiarism detection tools can be used for English based content, researcher should be extremely alert while conducting research in regional languages such as Bengali, Assamese, etc.

Mr. Manoj Kumar K, Scientist D (CS) was resource person from INFLIBNET Centre. In his special address, he acknowledged the privilege of having two eminent VCs for the programme during inaugural function. He also thanked University and organizers for creating such an enthusiasm among the research community regarding plagiarism and related issues. Mr. James Bennett, URKUND, Sweden made detailed presentation on using URKUND and Mr. Prakash from eGalatics, Pune explained different ways of getting access to URKUND. 200 participants including faculty members and research scholars from University of Kolkata, University of Kalyani, Jadavpur University and North-Eastern University such as Gauhati University, etc. attended the programme. Mr. Debdatta Roy, Registrar (Acting) extended a warm vote of thanks at the end of the programme. Mr. Sudeep Mitra, Information Scientist, Rabindra Bharati University coordinated the programme.

6.4. Western Region Training Programme on URKUND: A Plagiarism Detection Tool, Gujarat University, Ahmedabad, 24th September, 2015

Western Region Training Programme on URKUND: A Plagiarism Detection Tool was organized by Gujarat University in collaboration with INFLIBNET Centre, Gandhinagar on 24th September 2015 at Senate Hall, Gujarat University, Ahmedabad. Dr. M. N. Patel, Vice-Chancellor inaugurated the programme. He welcomed and appreciated overwhelming response from academic and research community for the Programme. He emphasized the importance of plagiarism detection tool such as URKUND for improving quality of research in India. He also admired valuable support of INFLIBNET Centre in organizing the programme and for giving opportunity to Gujarat University for hosting such programme.

Mr. Manoj Kumar K. Scientist D (CS) was resource person from INFLIBNET Centre. He made a detailed presentation on various activities of INFLIBNET Centre and importance of plagiarism detection tools in academic and research activities. Mr. James Bennett, URKUND, Sweden demonstrated detailed features and functionalities of URKUND tool. More than 550 participants including faculty members, directors, heads, principals, research staff and research scholars from various universities and institutions of western region participated in the programme. There was an interactive session to discuss the queries of participants, faculty members and students. Dr. Yogesh Parekh, University Librarian coordinated the programme and extended a warm vote of thanks at the end of the programme.

6.5. One-day User Awareness Programme on Shodhganga and URKUND: A Plagiarism Detection Tool, Pondicherry University, Puducherry, 28th October, 2015

One-day User Awareness Programme on Shodhganga and URKUND: A Plagiarism Detection Tool was organized by Ananda Rangapillai Library, Pondicherry University in collaboration with INFLIBNET Centre at J.N. Auditorium, Pondicherry University, Puducherry on 28th October, 2015. Dr. R. Samyuktha, University Librarian and Coordinator of the programme welcomed the guests and participants. Dr. Anisa B. Khan, Vice-Chancellor (I/C) inaugurated the programme. Mr. Manoj Kumar K., Scientist D (CS), INFLIBNET Centre gave a presentation and live demonstration on Shodhganga and URKUND. The session was highly interactive with a number of questions from the audience and relevant response from the speaker. Mr. Olirvel Z., Computer/Information Scientist extended a warm vote of thanks. Around 540 participants attended the programme. Certificates of participation were distributed to the participants at the end of the programme.

6.6. One-day User Awareness Programme on Shodhganga and URKUND: A Plagiarism Detection Tool, University of Madras, Chennai, 29th October, 2015

One-day User Awareness Programme on Shodhganga and URKUND: A Plagiarism Detection Tool was organized by University of Madras in collaboration with INFLIBNET Centre at University of Madras, Chennai on 29th October, 2015. Dr. K. Kaliyaperumal, University Librarian (I/C) and Coordinator of the programme welcomed the guests and participants. Prof. R. Thandavan, Hon'ble Vice-Chancellor inaugurated the programme in presence of Dr. P. David Jawahar, Registrar, Dr. S. Thirumagan, Controller of the Examination, Prof. R. Sahadevan, Director & Head, Department of Mathematics and Prof. A. Amudhavalli, Member Syndicate, University of Madras and Mr. Manoj Kumar K., Scientist D (CS), INFLIBNET Centre. Mr. Manoj Kumar explained different types of plagiarisms and their legal consequences. He gave a live demonstration on URKUND: a plagiarism detection tool. He also explained the possible ways to avoid plagiarism while writing a research document. More than 320 participants including faculty, research supervisors of the university and its affiliated institutions and research scholars attended the programme. Dr. K. Kaliyaperumal, University Librarian (I/C) extended a warm vote of thanks at the end of the programme. Certificates of participation were distributed to the participants at the end of the programme.

6.7. One-day User Awareness Programme on Shodhganga and URKUND: A Plagiarism Detection Tool, University of Calicut, Calicut, 30th October 2015

One-day User Awareness Programme on Shodhganga and URKUND: A Plagiarism Detection Tool was organized by University of Calicut in collaboration with INFLIBNET Centre at EMS Seminar Complex, University of Calicut, Calicut on 30th October 2015. Dr. T.A. Abdul Azeez, University Librarian-In-Charge and Coordinator of the programme welcomed the guests and participants. Dr. Abdul Majeed T. A., Registrar, University of Calicut presided over the function. Dr. M. K. Abdul Khader, Hon'ble Vice-Chancellor inaugurated the programme in presence of Dr. T. M. Vasudevan, Dean, Faculty of Humanities and Dr. Santhosh Nampy, Director of Research, University of Calicut and Mr. Manoj Kumar K. Scientist D (CS), INFLIBNET Centre. Mr. Manoj Kumar gave a presentation and live demonstration on Shodhganga and URKUND. About 290 participants including faculty members, research scholars, students and library professionals attended the programme. Dr. Muhammed Salih T. K., Information Scientist, extended a warm vote of thanks at the end of the programme. Certificates of participation were distributed to the participants at the end of the programme.

6.8. One-day User Awareness Programme on Shodhganga and URKUND: A Plagiarism Detection Tool, Bharathidasan University, Tiruchirappalli, 6th November 2015

One-day User Awareness Programme on Shodhganga and URKUND: A Plagiarism Detection Tool was organized by Bharathidasan University in collaboration with INFLIBNET Centre at Department of Library & Information Science, Bharathidasan University, Tiruchirappalli on 6th November, 2015. Dr. S. Srinivasa Ragavan, HOD, DLIS and Coordinator of the programme welcomed guests and participants. Dr. V. M. Muthukumar, Hon'ble Vice-Chancellor, Bharathidasan University inaugurated the programme. In his inaugural address, he stated that Bharathidasan University is one of the prominent member and contributor to the Tamil Nadu University Library Network and University Library has always been proactive in acquiring the newer facilities and resources for the benefit of faculty and students. He also emphasized that it is imperative for faculty and researcher to make a regular practice to keep themselves updated with latest knowledge and skills. He also stated that research should be relevant and useful to the society. Further, he added that the participants who took part in the Workshop should share their knowledge on Electronic Thesis and Dissertation databases with their respective institutions and prompt them to join this initiative.

Mr. Kannan, Scientist C (LS), INFLIBNET Centre delivered keynote address and made a presentation on Shodhganga and URKUND. He discussed various features and benefits of Shodhganga repository and emphasized the need of research for submitting theses of the university into the repository. He also explained about URKUND plagiarism detection software and its benefits for the academic community to improve the quality of research output. He also demonstrated various services and activities of INFLIBNET Centre. Dr. B. Jeyapragash, Assistant Professor, DLIS extended a warm vote of thanks. Around 220 participants from university departments, affiliated colleges and institutions

across the state and neighbouring states attended the programme. Certificates of participation were distributed to the participants at the end of the programme.

6.9. One-day User Awareness Programme on Shodhganga and URKUND: A Plagiarism Detection Tool, Bharathiar University, Coimbatore, 28th January, 2016

One-day User Awareness Programme on Shodhganga and URKUND: A Plagiarism Detection Tool was organized by Arignar Anna Central Library, Bharathiar University in collaboration with INFLIBNET Centre, Gandhinagar at Nachimuthu Seminar Hall, Bharathiar University, Coimbatore on 28th January, 2016. Dr. N. Thirunavakkarasu, Assistant Librarian and Coordinator of the programme welcomed the guests and participants. Dr. R. Sarangapani, University Librarian and Convenor of the programme spoke about the university library and importance & purpose of this Workshop. He highlighted the problems and issues faced by faculty and research scholars and students of the university in accessing e-resources. Dr. K.G. Senthilvasan, Registrar inaugurated the programme. In his inaugural address, Dr. Senthilvasan appreciated the initiatives taken by the library for organizing such kind of workshops in collaboration with INFLIBNET Centre for faculty members, research scholars and library professionals. He also emphasized the need of such programmes in rapidly changing scenario. He said that the expectations from the libraries are increasing day by day since the libraries are having more and more digital content. He further said that the libraries of the future would increasingly consist of e-Books, e-Journals, databases and new innovative library services and programmes. Dr. P. Kamalakannan, Member, VC Committee presided over the function. Mr. Manoj Kumar K, Scientist D (CS), INFLIBNET Centre delivered the keynote address. He explained current status and new programmes taken by the INFLIBNET Centre for the universities. He elaborated on the activities and services of INFLIBNET Centre. Mr. V. Rajendran, Assistant Librarian extended a warm vote of thanks to all participants and guests at the end of the programme. Around 170 participants attended the programme. Research scholars and faculty members interacted with the expert from INFLIBNET Centre during all the sessions.

6.10. One-day User Awareness Programme on Shodhganga and URKUND: A Plagiarism Detection Tool, Madurai Kamaraj University, Madurai, 29th January, 2016

One-day User Awareness Programme on Shodhganga and URKUND: A Plagiarism Detection Tool was organized by Madurai Kamaraj University in collaboration with INFLIBNET Centre, Gandhinagar at Madurai Kamaraj University, Madurai on 29th January, 2016. Dr. B. Suresh, University Librarian welcomed the guests and participants. He gave brief overview of Shodhganga and plagiarism detection tool. Dr. A. Muthumanickam, Registrar I/C inaugurated the programme. Mr. Manoj Kumar K., Scientist D (CS), INFLIBNET Centre made a detailed presentation on Shodhganga, Shodhgangotri and URKUND: a plagiarism detection tool. He demonstrated the process of uploading theses into Shodhganga and checking chapters of a thesis for plagiarism using URKUND. He also presented the statistical data on Shodhganga and requested the university to upload their

thesis into Shodhganga. Around 320 participants including faculty members and research scholars from affiliated colleges attended the programme.

6.11. One-day User Awareness Programme on Shodhganga and URKUND: A Plagiarism Detection Tool, Panjab University, Chandigarh, 10th February, 2016

One-day User Awareness Programme on Shodhganga and URKUND: A Plagiarism Detection Tool was organized by A C Joshi Library, Panjab University in collaboration with INFLIBNET Centre, Gandhinagar at ICSSR Auditorium, Panjab University, Chandigarh on 10th February, 2016. Dr. Raj Kumar, University Librarian and Coordinator of the programme welcomed guests and participants. Prof. O P Katare, Director, Research Promotion Cell inaugurated the programme. In his inaugural address, he spoke about importance of submitting the theses in Shodhganga. He said that the Panjab University will proactively complete the process of digitisation of theses within three months. Mr. Manoj Kumar K., Scientist D (CS), INFLIBNET Centre made a detailed presentation on Shodhganga, Shodhgangotri and URKUND: a plagiarism detection tool. He demonstrated the process of uploading theses into Shodhganga and checking chapters of a thesis for plagiarism using URKUND. He also presented the statistical data on Shodhganga project and requested the university to upload their theses into Shodhganga. Dr. Rashmi Yadav, Deputy Librarian extended a warm vote of thanks. Around 120 participants including faculty members and research scholars from affiliated colleges attended the programme.

7. E-Content Development under e-PG Pathshala

7.1. Workshop on e-Content Development for the Subject 'Food Technology', INFLIBNET Centre, Gandhinagar, 10th-12th July, 2015

Workshop on e-Content Development for the Subject 'Food Technology' was organized at INFLIBNET Centre, Gandhinagar from 10th to 12th July 2015. Prof. Vijaya Khader, Principal Investigator, Food Technology, e-PG Pathshala welcomed all the stakeholders/team members. Prof. Khader presented the progress made in the subject 'Food Technology' including overall status of all papers. Mr. Abhishek Kumar, Scientist C (CS), INFLIBNET Centre presented status of modules uploaded in e-PG Pathshala and provided guidance to paper coordinators for video recording. Three representatives of the Event Production Company were present for multimedia recording. Prof. P. N. Raju, Prof. Dibyakant Seth and Prof. K. K. Dash, Paper Coordinators for the Subject 'Food Technology' made presentations on their papers to showcase progress made by them as well as timeline to complete the task of content creation. The audio-video recording of the module for the Subject 'Food Technology' was done by Paper Coordinators.

7.2. Workshop for Video Recording of e-Content Development for the Paper 'Library Use and User Studies', Event Production Company, New Delhi, 17th-20th August, 2015

Workshop for video recording for the paper 'Library Use and User Studies' was organized at Event Production Company, New Delhi from 17th to 20th August, 2015. The Workshop was the part of e-content development activities under e-PG Pathshala Project funded by the MHRD under its National Mission on Education through ICT (NME-ICT). The purpose of the Workshop was to assess the progress of e-content development, review the modules and voice recording of self-learn script by the content writers. More than 12 participants attended the Workshop and self-learn script was recorded for the respective modules and was duly incorporated in powerpoint presentation. Mr. Kannan P., Scientist C (LS), INFLIBNET Centre coordinated the Workshop with the support of Multimedia Team, Event Production Company, New Delhi.

7.3. Workshop on e-Content Development for the Paper 'Information Storage and Retrieval', Documentation Research and Training Centre (DRTC), Bengaluru, 30th August- 1st September, 2015

Workshop on e-content development for the paper 'Information Storage and Retrieval' was organized by INFLIBNET Centre, Gandhinagar at Documentation Research and Training Centre, Bengaluru from 30th August to 1st September, 2015. The Workshop was the part of e-content development activities of e-PG Pathshala Project funded by MHRD under its National Mission on Education through ICT (NME-ICT). The purpose of the Workshop was to evaluate the progress of e-content development for the paper Information Storage and Retrieval, review the modules developed by content writers and record voice narration for the respective module. 10 participants attended the Workshop including Prof. Devika P Madalli, Professor, DRTC and Paper Coordinator, Dr. Biswanath Dutta, Assistant Professor, DRTC, Prof. Lalitha Aswath, Professor, Bangalore University, Dr. N S Harinarayana, Associate Professor, University of Mysore, Dr. Rama Patanaik, Librarian, IIM, Bangalore, Dr. Ishwara Bhat, Rtd. Librarian, BITS, Pilani and Prof. S. L. Sangam, Rtd. Professor & UGC Emeritus Fellow, Karnatak University, Dharwad. Voice narration of the individual content writers for the respective module were recorded and incorporated in the powerpoint presentation. Mr. Kannan P, Scientist C (LS), INFLIBNET Centre coordinated the Workshop with the support of Multimedia Team, Code & Pixels, Hyderabad.

7.4. Meeting of the Stake-holders of the Papers 'Women's Studies/Gender Studies' and 'Food Technology', BHU Guest Room, Varanasi, 10th-11th October, 2015

The INFLIBNET Centre organized a Meeting for the Stake-holders of the Papers 'Women's Studies/Gender Studies' and 'Food Technology' from Varanasi on 10th to 11th October, 2015 at BHU Guest Room, Varanasi. Mr. Abhishek Kumar, Scientist C (CS), INFLIBNET Centre attended the meeting to demonstrate / guide the content writers about creation of self-learning module. Representatives of the Nexzenpro Media Technologies, facilitated studio to record the modules being developed under 'Women's Studies/Gender Studies' and 'Food Technology'.

7.5. Workshop for Video recording of e-Content Development for the Paper 'Knowledge Organisation and Processing: Cataloguing, Digital Library and Special and Research Library', Bharathidasan University, Tiruchirapalli, 30th November- 2nd December, 2015

The INFLIBNET Centre organized Workshop for video recording of e-content development for the paper 'Knowledge Organisation and Processing: Cataloguing, Digital Library and Special and Research Library' at Bharathidasan University, Tiruchirapalli from 30th November to 2nd December, 2015. The programme was the part of e-content development activities of e-PG Pathshala Project funded by the MHRD under its National Mission on Education through ICT (NME-ICT). The purpose of the programme was to review the modules and voice recording of self-learn script by the content writers. 7 participants were invited for the video recording and self-learn script was recorded for the respective modules for incorporating them into power point presentation. Mr. Kannan P, Scientist C (LS) coordinated the video recording as the INFLIBNET Centre representative with the support of Multimedia Team, Department of Educational Technology, Bharathidasan University, Tiruchirapalli.

8. Attachment Training Programme for Practicing Library Professionals, INFLIBNET Centre, Gandhinagar, 18th May- 17th June, 2015

The Centre organized Attachment Training Programmes (ATP) from 18th May- 17th June, 2015 at INFLIBNET Centre, Gandhinagar where-in working library professionals from university/institutions availed the training from experienced INFLIBNET staff. The objective of ATP is to train the LIS professionals on ICT applications in libraries at various levels from basic to advance. Mrs. Ashadeep Rawat, Library & Information Assistant, Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, New Delhi took the benefit of ATP at all the four levels.

9. JSTOR India User's Forum 2014

9.1. JSTOR India User's Forum, North Eastern Hill University, Shillong, 6th October 2015

The JSTOR, in collaboration with INFLIBNET Centre, Gandhinagar and North-Eastern Hill University, Shillong organized JSTOR India User's Forum at Multi-Use Convention Hall, North-Eastern Hill University on the 6th October 2015. The forum is a collaborative effort to enhance the awareness and optimal use of digital content provided by JSTOR across Indian universities which are members of the UGC-INFONET Digital Library Consortium. Dr. F. R. Sumer, Acting University Librarian welcomed the invitees and participants. Prof. B. Mishra, Dean, School of Economics, Management and Information Sciences, NEHU inaugurated the forum. In his inaugural address, Prof. Mishra expressed his deep appreciation for the efforts jointly put in by JSTOR and INFLIBNET Centre in bringing the event to North-Eastern Hill University, and added that it was indeed a privilege for the University and the participants to have such eminent resource persons in the field of library and information science on a single platform.

Mr. John Lenahan, Associate Vice President JSTOR | Portico made a presentation on “JSTOR Future Direction” and “Usage Analysis and Impact on Collection Development”. Dr. Jagdish Arora, Director, INFLIBNET Centre made presentation on “Ranking of Indian Universities: An INFLIBNET Initiative” and Dr. R. K Chadha, Former Additional Secretary, Parliament Library, presented “Changing Landscape of Library and Information Services”. The presentations not only provided the audience with ample opportunities to know more about the e-resources provided by JSTOR but they also highlighted ways in which usage, analysis and discovery services would impact library resources and acquisition decisions. Presentations by experts were followed with lively and stimulating interactions between the participants and the speakers.

The highlight of the forum was the handing over of perpetual user access licenses of selected JSTOR e-books collection by Mr. John Lenahan, Associate Vice President JSTOR | Portico to Prof. B. Mishra, Dean, School of Economics, Management and Information Science, NEHU as a token of appreciation to North-Eastern Hill University for hosting the JSTOR Forum. More than 270 participants including students, research scholars and faculty of the University, librarians from colleges and other institutions located in Shillong and from other parts of the region. Dr. Lalhmachhuana, Documentation Officer, NEHU Central Library extended a warm vote of thanks on behalf of the host institution and the joint organizers at the end of the programme .

9.2. JSTOR India User’s Forum, University of Kerala, Trivandrum, 9th October 2015

The JSTOR, in collaboration with INFLIBNET Centre, Gandhinagar and University of Kerala, Trivandrum organized JSTOR India User’s Forum at the University Senate Chamber, University of Kerala on 9th October 2015. Dr. H. Majeed, Assistant Librarian, University of Kerala coordinated the forum. Mr. A. Hamsa, Deputy Librarian-In-Charge, University of Kerala welcomed invitees and participants. Dr. N. Veeramanikandan, Hon’ble Pro-Vice Chancellor, University of Kerala inaugurated the programme. Dr. Jagdish Arora, Director INFLIBNET Centre delivered presidential address. Dr. Varghese P.O., Member Syndicate, University of Kerala expressed his felicitation.

Mr. John Lenahan, Associate Vice President, JSTOR, discussed the “Future Direction of JSTOR” and also spoke on the usage analysis and impact on collection development. Mr. P. Jayarajan, Library Advisor, Thunchath Ezhuthachan Malayalam University shared his views on the “Digital Content: A Way to Reach the Unreached”. Dr. Jagdish Arora, Director, INFLIBNET Centre spoke on the “Ranking of Indian Universities: An INFLIBNET Initiative”. Dr. P. K. Suresh Kumar, Assistant Librarian, University of Kerala extended a warm vote of thanks. Mr. John Lenahan, the Vice President of JSTOR handed over the agreement of free e-books contributed by JSTOR to Dr. Mohammed Basheer, Registrar, University of Kerala. More than 150 participants including students, research scholars and faculty members of the university, librarians from colleges and other institutions located in Trivandrum.

10. UGC-INFONET University Forum, New Delhi, 24th September, 2015

The 6th UGC-Infonet University Forum was organized by the INFLIBNET Centre in collaboration with the Elsevier Science at Radisson Blu Plaza Hotel, New Delhi on 24th September 2015. This year INFLIBNET & Elsevier University Forum had Japan as a partner country for the 6th University Forum. The agenda of 6th University Forum was built around the objective of “Leading the Way in Research & Scholarship”. Dr. Jagdish Arora, Director, INFLIBNET Centre shared the new initiative on developing India-specific ranking of Indian Universities based on four parameters. Dr. Youngsuk “YS” Chi, Chairman, Elsevier shared an exciting view on the existing but most important potential strengths of Japan – India collaboration in research. He also talked about “Prioritizing education, promoting collaboration & increasing visibility” and how Elsevier is currently playing and will continue to play a significant role to support the university system in these areas. Dr. Arora and Dr. Youngsuk Chi felicitated Prof. Ajit Kembhavi, Director, IUCAA for his remarkable contribution to UGC Infonet Digital Library Consortium over the years. Prof. Toshiaki Makabe, Vice-President, Keio University In-Charge of Research shared a thought provoking presentation on “Today & tomorrow in research & education at Keio University”. Prof. Masato Miwa, University Research Administrator, Kyushu University spoke on the research strategy around Institutional analysis & role of research administrator was quite insightful and had a lot of takeaway points for all the participants at the event.

Dr. Deepika Bhaskar, Director & Coordinator, Centre for Science Education & Communication, University of Delhi elaborated on initiatives undertaken at the University not only at the post graduate level but also at the under-graduate level. The participants were excited to learn about the research outcomes in terms of research papers & patents from the undergraduate level research level projects in the University.

Mr. Lim Kok Keng, Managing Director-Asia Pacific, Elsevier Research Solutions shared in his presentation, how Elsevier is working with the universities globally & supporting research, education & internationalization through Elsevier’s various tools & services. Mr. Vikas Madan, Account Manager, Elsevier Research Solutions shared his view on usage patterns at the universities. He thanked the library community for their cooperation in Elsevier’s efforts to reach out to their user community. Ms. Kylie Chiew, Regional Solution Sales Director, Research Management, Elsevier Research Solutions had a very interactive session with participants through case studies on globalization of research & enhancing international collaboration and how Elsevier is supporting universities in this objective through its research intelligence tool “SciVal”. Mr. Derrick Duncombe, Market Development Manager, APAC-Scopus & Engineering Village, Elsevier Research Solutions shared in his presentation, how Elsevier is supporting universities in enhancing their research workflow with Scopus. More than 100 participants including vice-chancellors, information professionals and other key stakeholders from academic institutions as well as from Government Planning and Policy departments participated in the programme.

Part – IV

Infrastructure Facilities, Distinguished Visitors, Other Important Activities and Financial Status

1. Central Facilities

1.1. Library (<http://www.inflibnet.ac.in/library/>)

The INFLIBNET Centre has a specialized library with unique collection on library and information science, computer science, communication and information technology. The library is fully computerized using SOUL 2.0 integrated library management software. The library has around 2000 documents including books, journals and magazines. Besides, the Centre, as the coordinating agency for the Consortium, gets complementary access 15,000 full-text journals from 25 publishers, 5 bibliographic databases, 2 legal databases, 4 factual databases and one standards database subscribed under e-Shodh Sindhu. The collection of the library is available online through the web OPAC at <http://www.inflibnet.ac.in/library/>. Figure 57 shows library of the INFLIBNET Centre.



Fig. 57: INFLIBNET Centre's Library

The INFLIBNET Library plays a vital role in the collection development and dissemination of scientific and technical information to meet the present and future needs of the Centre. The Library maintains databases of i) participants who have attended various training programmes at INFLIBNET Centre; ii) Institutions having SOUL installations; and iii) Universities and its contact details including e-mail and website addresses. These databases are accessible through the INFLIBNET Website.

1.1.1. Library Services

The library provides following services to its users:

- Reference Service
- Document Delivery Service
- Current Awareness Service
- Inter Library Loan Service
- Electronic Information Service
- Reprographic Service

1.1.2. Access to Online Database

The Centre subscribes to web edition of the Ulrich's International Periodical Directory, a web-based bibliographic database of periodicals that is being used for authentication of bibliographic records in union catalogues and for other activities. The database accessible on INFLIBNET's Ips is also accessible to visiting users. Besides, the Centre, as executing and monitoring agency for the e-Shodh Sindhu has access to all e-journals, e-books and bibliographic database subscribed under this programme.

1.2. IR @ INFLIBNET (<http://ir.inflibnet.ac.in>)

The Centre has established an institutional repository called IR@INFLIBNET using Dspace, open source software accessible at <http://ir.inflibnet.ac.in>. The papers published in the proceedings of the CALIBER and PLANNER, are uploaded into the repository. The Repository also includes course materials, newspaper clippings, etc. The repository has 1,489 full-text articles.

1.3. Institutional Members

The Centre has institutional membership of following national and international organizations:

- American Library Association (ALA)
- National Information Standards Organization (NISO)
- Indian Library Association (ILA)
- Indian Association of Special Libraries and Information Centres (IASLIC)
- ADINET (Ahmedabad Library Network)
- British Library, Ahmedabad

2. ICT Infrastructure@INFLIBNET Centre

The INFLIBNET Centre designed and planned the ICT infrastructure for its building based on the requirements of its scientists and staff. M/s Progility Technologies Pvt. Ltd. (formally M/s Siemens Enterprise Communication) was selected for supplying and installing all IT-related solutions and components as well as for integration of passive and active low-voltage infrastructure solution for the new building of the Centre at Infocity, Gandhinagar.

2.1. Computer Network & Infrastructure

The Centre maintains basic infrastructural facilities such as Computer Laboratories and Data Centre to support its all essential computing activities. Important IT infrastructural facilities available at the Centre are as follows:

2.1.1. PCs, Laptops and Servers

The main objective of the Centre is to provide proactive help to the universities in library automation and to mediate resource sharing amongst them. Computing and network infrastructure are the main assets of the Centre. The Centre has added more PCs, Laptops, gadgets and other equipment with high configuration in 2015-2016 for the staff and users with a total no. of 168 PCs and 29 laptops for scientists, project staff, walk-in user's facilities for researchers, training laboratories, ETD lab., etc.

The Centre earlier had four servers for hosting its services including two IBM x3500 1U servers for web services and two IBM x3660 5U servers for its research & development activities. In addition, one HP Blade Server Enclosure C3000 was procured from HP along with eight ProLiant BL460c servers in 2009 for different services of the Centre such as Web services, INFLIBNET website, Shodhganga, OJAS, N-LIST, N-LIST Proxy Server, InfoPort, e-PG Pathshala, IndCat, DNS server, Intranet server, UGC website, e-SARTS and other important services. With addition projects, schemes and increased in volume of data, the Centre has again procured IBM Blade Centre S chassis with six blades and data storage to host mirror sites at INFLIBNET Centre as well as at the BSNL Hosting Services.

During the year under report, Centre has purchased five high end DELL PowerEdge R630 servers for e-Acharya, ICSSR Data Repository, Vidwan, e-PG Pathshala, Shodhganga, and UGC Website. Centre has also purchased 12TB Storage DELL PowerVault for the e-Acharya.

2.1.2. Campus-LAN and Internet Connectivity

The Centre provides most of its services through Internet on 24*7*365 basis. The network infrastructure is one of the most important components to provide efficient and effective services to the remote and local academic users. The Centre has upgraded network infrastructure that connects all its offices and laboratories with National Knowledge Network (NKN) that provides 1 Gbps MPLS (Multi Protocol Layer Switching) connectivity to all universities in India. The bandwidth is currently used within a limit of 100-150 Mbps, but it can be increased on demand based on bandwidth intensive applications upto 1 Gbps. INFLIBNET Centre is having two Internet connections, i.e. one from NKN and other from BSNL for standby purpose. This gives redundancy to Internet links which is essential in an organisation which is striving towards Tier 3 Data Centre. Access to e-resources is enabled on all sets of IP addresses used by the Centre. STM (Synchronous Transfer Mode) equipment at Centre is connected through Optical Fiber to Gandhinagar node of NKN on ring topology. This gives redundancy of NKN links and the architecture of the NKN is enabled to reach all universities with minimum hops.

As on now, the network is running over managed L3 switches and managed L2 switches with 40 Gbps ready network with structured cabling, rack, I/Os, jack panels, etc. Dedicated firewall appliance is purchased with subscription to anti-virus, anti-spam and intrusion detection system. PCs

and laptops used in the Centre are protected against attack and other vulnerability by Gateway level-filtering and intrusion detection system using Fortinet UTM. User-level antivirus protection is also enabled for end-user protection. On an average, the INFLIBNET Website and the national union databases attract more than 15,000 visitors per month.

2.2. Integration of Data Centre and other IT services

Data Centre established at INFLIBNET Centre is having most robust setup and less prone to failures and also to host mission critical servers and computer systems, with fully redundant subsystems. All components are fully fault-tolerant including uplinks, storage, chillers, HVAC systems, servers etc. The INFLIBNET Centre uses HP Blade System C 3000 Enclosure for hosting Web Services, INFLIBNET website, Shodhganga, OJAS, N-LIST, InfoPort, e-PG Pathshala, IndCat, DNS server, Intranet server, etc. IBM Blade Centre S chassis is used for Web co-location services at BSNL, which host mirror sites of INFLIBNET Centre for the services such as UGC website, N-LIST Proxy Server, Online UGC Scholarship scheme and other important services.

Building Management System (BMS) integrates the mechanical and electrical equipment used for various services such as ventilation, lighting, power system, fire system and security system. INFLIBNET Centre uses HVAC (Heating, Ventilation and Air Conditioning) for indoor environmental comfort based on the principle of thermodynamics, fluid mechanics and heat transfer, ensuring maximum levels of efficiency and economy. INFLIBNET Centre uses Honeywell Trend for the BMS Solutions. The INFLIBNET Centre is using Smart Visitor Management Software for storing data and generating a gate-pass for visitors.

26 CCTV cameras from M/s. Honeywell are deployed for Surveillance System including PTZ security cameras allow controlling the pan, tilt and zooming operations of the camera lens remotely or through programming, box type's cameras and dome type cameras. All cameras are IP-based, advanced and PoE (Power on Ethernet) enabled. Telephony services in the Centre are established using IP telephony system in the Local Area Network itself which is based on Internet Protocol phones. A dedicated ISDN PRI line is used for Video Conferencing Facility with high definition resolution camera with codec, multipoint control unit and HD LCD/LED TV for display. Public Addressing System (PAS) is in place for playing soothing music in the background in the premises of a building to give pleasant ambiance for working professionals. The entire building is divided into various zones and zone-wise announcement is also possible with centralized control. Boardroom is equipped with facilities which can be controlled with a wireless touchpad/iPad. A well-equipped auditorium with seating capacity of 380 people equipped with professional sound system with an advanced dynamic mixer is available with state-of-art mic preamps with DSP with 100 presets including reverb, chorus, flanger, delay, pitch shifter and various multi effects with at least 12 channels for audio devices like mics (i.e. collar, hand-help, audio mike, cordless and vocal instrumental), laptop, CD/DVD player or music instruments, media players, etc. The mixer is connected with sufficient amplifiers for Base (Woofers), FOH (Front of the House), surround

speakers, crossover amplifier for balancing the gain of audio and stage monitor speaker with plug and play facility. The entire campus is equipped with Wi-Fi hotspots.

2.11. Training Lab

The Centre conducts training programmes including SOUL training programme on regular basis. A Training Laboratory with 42 PCs has been set-up with projection system and other equipment for this purpose. All PCs in the Laboratory are connected to the Centre's LAN which is connected to the Internet. All PCs are set-up in dual operating system mode, i.e. Windows and Linux. All the PCs and network equipment are backed-up with Uninterrupted Power Supply (UPS).

2.3. SOUL Support Centre

The SOUL software, developed by the Centre, has more than 3,203 installations. SOUL Support Cell that is equipped with 5 PCs, scanner and printer. A facility has been created to provide support to the users of the SOUL Software with dedicated telephone line, fax and manpower special earmarked for this purpose.

2.4. Walk-in User's Facilities for Researchers

The Centre has 16 Internet-enabled all-in-one PCs with Wi-Fi earmarked for students, scholars and faculty from neighbouring institutions for accessing e-resources subscribed under the e-Shodh Sindhu. The license agreements signed with the publishers of e-resources provides for access to e-resources for "walk-in" users. More than 450 users availed this facility during the period under report.

3. Academic Interaction with Universities and other Research Institutions

Although the Centre receives a large number of applications from engineering colleges in Gujarat and neighbouring states for training at the INFLIBNET, the Centre selects limited student trainees. Many students had undergone practical training at the INFLIBNET Centre during the year under report. Facilities are also extended to the library science students from Gujarat University, Ahmedabad to avail library internship at the Centre. Details of no. of students and their institution are given below in Table 43.

Sl. No.	Name of the Institute	Degree	No. of students
1	Gujarat University, Ahmedabad	M.L.I.Sc	6
2	LDRP Institute of Technology and Research, Gandhinagar	B.E.	3
3	Silver Oak College of Engineering and Technology, Ahmedabad	B.E. & M.E.	4
4	Birla Institute of Technology and Science, Pilani	B.E.	1
5	Malaviya National institute of Technology, Jaipur	B.Tech	1

6	LD College of Engineering, Ahmedabad	B.E.	1
7	Government Engineering College, Modasa	B.E.	1

Table 43: Details of No. of Students/Trainees and their Institution

4. Other Notable Activities and Events

4.1. Independence Day



Fig. 58: Independence Day

The INFLIBNET Centre celebrated 69th Independence Day on Saturday, 15th August 2015. The National Flag was hoisted by Mr. Manoj Kumar K., Scientist D (CS), INFLIBNET Centre. Mr. Manoj Kumar addressed the staff members and their families regarding the activities of the Centre. A number of games were organized for staff and their children during the event and prizes were distributed to the winners of the games.

4.2. Navratri

The INFLIBNET Centre celebrated Garba festival with great enthusiasm. The Garba night was organized for its employees and their families on 14th October 2015. The function started with the Durga Puja and everyone from the campus, staff member and their families participated. The employees and their families turned out in their best traditional attire. Dr. Jagdish Arora, Director, INFLIBNET Centre distributed the prizes for the best dance performers, best-dressed persons and children. The function concluded with the ceremonial dinner.

4.3. Republic Day

The INFLIBNET Centre celebrated 69th Republic Day on 26th January 2016 at INFLIBNET Centre, Infocity, Gandhinagar. The National Flag was hoisted by Dr. Jagdish Arora, Director, INFLIBNET Centre. Dr. Arora addressed the staff members and their families about the activities of the Centre. A number of games were organized for staff and their children during the event and prizes were distributed to the winners of the games.



Fig. 59: Republic Day

5. Visitors

The following dignitaries visited the Centre during the year under report.

Prof. R. Nagaraj, Director, DA-IICT, Gandhinagar
Dr. Jagdish Joshi, Offtg. Director, UGC-HRD Centre, Gujarat University, Ahmedabad
Dr. Shailesh Yagnik, Head, Library and Information Services, MICA, Ahmedabad
Prof. I. K. Ravichandra Rao, Professor, PES Institute of Technology, Bengaluru
Dr. P. Dastidar, Director, Ministry of Earth Sciences, New Delhi
Prof. Sukhadeo K. Thorat, Chairman, ICSSR, New Delhi
Mr. P C Mohanan, Deputy Director General, MoSPI, New Delhi
Dr. C. Rammanohar Reddy, Editor, EPW, Mumbai
Mr. J R Majumdar, Deputy Director, MoSPI, New Delhi
Dr. G. K. Manjunath, Chief Librarian, IGIDR, Mumbai
Dr. R Nagaraj, Professor, IGIDR, Mumbai
Dr. Niti Mehta, Professor, SPIESR, Ahmedabad
Dr. Chandrashekhar S, Associate Professor, IGIDR, Mumbai
Dr. Keshab Das, Professor, GIDR, Ahmedabad
Ms. Kanchan Vasudev, I/C Documentation Officer, ICSSR, New Delhi
Dr. R K Chadha, Former Additional Secretary, Parliament of India, New Delhi
Dr. Arun Kumar Chakarborty, Director General, RRRLF, Mission Director, NML, Kolkata
Dr. Parthasarathi Mukhopadhyay, Head, DLIS, Kalyani University, Kalyani
Dr. Usha Munshi, Librarian, IIPA, Delhi
Mr. Pradeep Kaul, Sr. Consultant, NMEICT/MHRD, New Delhi

Prof. Mangala Sunder, Professor, IIT Madras, Chennai

Prof. Uma Kanjilal, Professor, DLIS, IGNOU, New Delhi

Mr. Arindam Das, Director, NIFT Gandhinagar

Prof. Dinesh K Gupta, Associate Professor, Vardhaman Mahaveer Open University, Kota

Dr. Sewa Singh, Retd. Professor, Gurunanak Dev University, Amritsar

Dr. Nikhil A. Gokhale, Associate Director, RK University, Rajkot

Dr. Vijaylaxmi Chari, Ex. Director, School of Commerce, Gujarat University

Dr. Raju Chaudhary, Associate Professor, Dept. of Statistics, MG Science Institute, Ahmedabad

Students and faculty members of Master of Computer Application, LDRP Institute of Technology and Research, Gandhinagar visited INFLIBNET Centre for their educational tour on 9th March, 2016

6. Right to Information (RTI) Act

In order to promote transparency and accountability in the working of public authority and to empower the citizens to secure access to information under control of each public authority, the Government of India has brought out "the Right to Information Act, 2005". In accordance with the provisions of section 4(1) (b) of this Act, the INFLIBNET has put information and guidance of the stakeholders and the general public and hosted the same on the website of the Centre at <http://www.inflibnet.ac.in>. In terms of section 5(2) of the Right to Information Act 2005, the Director of the INFLIBNET Centre has been designated as Appellate Authority / Nodal Officer for all matters concerning to the Centre. The detailed information about RTI and responsible officers appointed for are available on the Centre's website at <http://www.inflibnet.ac.in>.

7. Financial Status

The Audited Annual Accounts of INFLIBNET Centre for the financial year 2015-2016 is given in the Appendix XI.

Appendices

**Building Committee
(As on 31st March 2016)****Prof. S K Khanna (Chairman)**

Chief Advisor
Sharda University
Plot No. 32-34, Knowledge Park III
Greater Noida

Dr. M. N. Patel

Vice-Chancellor
Gujarat University
Navrangpura
Ahmedabad

Dr. Jagdish Arora

Director
INFLIBNET Centre
Infocity, Gandhinagar

Prof. Dhirendra Pal Singh

Director
NAAC
Bangalore

Dr. R K Chadha

Former Additional Secretary
Lok Sabha, New Delhi

Mr. Rajeev Kathpalia

Vastu-Shilpa Consultants
"Sangath" Thaltej Road
Ahmedabad

Mr. Y P Pathak

Executive Engineer, DGM
GSRDC Ltd,
Government of Gujarat

Mr. Manoj Kumar K

Scientist-D (CS)
INFLIBNET Centre
Infocity, Gandhinagar

Mr. Harish Chandra (Convener)

Admn. Officer
INFLIBNET Centre
Infocity, Gandhinagar

**Governing Council
(As on 31st March 2016)**

Ex. Officio Members**Prof. Ved Prakash**

President,
Governing Council & Chairman
University Grants Commission
Bahadur Shah Zafar Marg, New Delhi

Dr. H Devaraj

Vice-Chairman
University Grants Commission
Bahadur Shah Zafar Marg,
New Delhi

Prof. Anil D Sahasrabudhe

Chairman
All India Council for Technical Education
7th Floor, Chanderlok Building
Janpath, New Delhi

Dr. Girish Sahni

Director General & Secretary, DSR
CSIR, Anusandhan Bhawan
2, Rafi Marg, New Delhi

Prof. S K Thorat

Chairman
Indian Council of Social Science Research
JNU Institutional Area, New Delhi

Dr. Arun Kumar Chakraborty

Director General
National Library,
Belvedr, Kolkatta

Dr. Jagdish Arora

Director
INFLIBNET Centre
Infocity, Gandhinagar

Nominated Members**Prof. Sachidananda Mohanty**

Vice-Chancellor
Central University of Orissa,
Landiguda, Koraput

Dr. V G Talawar (till January, 2016)

Vice-Chancellor
University of Mysore
Crawford Market
Mysore

Dr. Rajbir Singh (till January, 2016)

Director
Consortium for Educational Communication
IUAC (NSC) Campus, Aruna Asaf Ali Marg
New Delhi

**All Members of the Governing Board are also
member of the Governing Council**

**Governing Board
(As on 31st March 2016)**

Ex. Officio Members**Prof. N Mukunda (till February, 2016)**

Chairman, GB, INFLIBNET
Indian Academy of Sciences
Bangalore

Dr. H Devaraj

Vice-Chairman
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi

Prof. (Dr.) Jaspal Singh Sandhu

Secretary
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi

Prof. S A Bari

Vice-Chancellor
Central University of Gujarat
Sector 30, Gandhinagar

Prof (Dr.) Avinash S Pant

Member Secretary (Actg.)
All India Council for Technical Education
7th Floor, Chanderlok Building
Janpath, New Delhi

Dr. Jagdish Arora (Member Secretary)

Director
INFLIBNET Centre
Infocity, Gandhinagar

Nominated Members**Prof. Sunaina Singh**

Vice Chancellor
English and Foreign Languages University
Osmania University Campus, Hyderabad

Prof. S B Ray Chaudhury

Vice-Chancellor
Rabindra Bharati University
Emerald Bower Campus
56-A, B T Road, Kolkata

Prof. Shivaji Rao S Kadam

Vice-Chancellor
Bharati Vidyapeeth
Bharati Vidyapeeth Bhavan
Lal Bahadur Shastri Marg, Pune

Dr. R K Chadha

Former Additional Secretary
Lok Sabha, New Delhi

Prof. Karmeshu

Dean
Computer System & Sciences
Jawaharlal Nehru University
New Mehrauli Road, New Delhi

Dr. Nandini Mukherjee

Head, IT
Jadavpur University
188, Raja S C Mallick Road
Jadavpur, Kolkata

Prof. Ajit Kembhavi (till January, 2016)

Director
Inter-University Centre for Astronomy and
Astrophysics (IUCAA), Pune

**Finance Committee
(As on 31st March 2016)**

Ex. Officio Members**Prof. N Mukunda (till February, 2016)**

Chairman, GB, INFLIBNET Centre
Indian Academy of Sciences
Bangalore

Prof. (Dr.) Jaspal Singh Sandhu

Secretary
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi

Dr. Jitendra Kumar Tripathi

Jt. Secretary (Fin.)
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi

Dr. (Mrs.) Manju Singh

Jt. Secretary
University Grants Commission
Bahadurshah Zafar Marg
New Delhi

Nominated Member**Dr. R K Chadha**

Former Additional Secretary
Lok Sabha, New Delhi

Dr. Jagdish Arora

Director
INFLIBNET Centre
Infocity, Gandhinagar

Mr. Yatrik Patel

Scientist-D (CS)
INFLIBNET Centre
Infocity, Gandhinagar

Mr. Harish Chandra

Admn. Officer
INFLIBNET Centre
Infocity, Gandhinagar
(Admn./Accounts Officer)
(Non-Member Secretary)

**Technical, Administrative and Supporting Staff
(As on 31st March 2016)**

Scientific & Technical Staff

Sl. No.	Name of the employee	Designation
1.	Dr. Jagdish Arora	Director
2.	Mr. Manoj Kumar K.	Scientist-D (CS)
3.	Mr. Ashok Kumar Rai	Scientist-D (CS)
4.	Mr. Yatrik R. Patel	Scientist-D (CS)
5.	Mr. H. G. Hosamani	Scientist-C (LS)
6.	Mr. Kannan P.	Scientist-C (LS)
7.	Mr. Abhishek Kumar	Scientist-C (CS)
8.	Mr. Swapnil P. Patel	Scientist-B (CS)
9.	Mr. Divyakant Vaghela	Scientist-B (CS)
10.	Mr. Gaurav Prakash	Scientist-B (CS)
11.	Mrs. Vaishali A. Shah	Scientist-B (LS)
12.	Ms. Kruti J. Trivedi	Scientist-B (LS)
13.	Mr. Dinesh Ranjan Pradhan	Scientist-B (LS)
14.	Mr. Mitesh Pandya	Scientist-B (LS)
15.	Mr. Hitesh H. Solanki	Scientist-B (CS)
16.	Mr. Pallab Pradhan	Scientist-B(LS) (from 01.04.2015)
17.	Mr. Raja V	Scientist B (CS) (from 14.09.2015)
18.	Mrs. Hema Cholin	S.T.O – I (LS)
19.	Ms. Suboohi Siddiqui	S.T.O.-I (LS)
20.	Mr. Saroja Kumar Panda	STA (LS)
21.	Mr. Dharmeshkumar A. Shah	STA (CS)
22.	Mr. Mohit Kumar	STA (CS)
23.	Mr. Vijaykumar M Shrimali	STA (CS)
24.	Mrs. Roma Yogesh Asnani	STA (LS)
Administrative & Support Staff		
25.	Mr. Harish Chandra	Administrative Officer
26.	Mrs. S. M. Munshi	Section Officer
27.	Mr. Sanjay R. Shah	Office Assistant-II
28.	Mrs. Yamini J. Dave	Office Assistant-II
29.	Mrs. R. B. Pendharkar	Office Assistant-II
30.	Mr. Ankur B. Parikh	Office Assistant-II
31.	Mr. Devang Roy	Office Assistant-II
32.	Mr. Vyomesh P. Machchhar	Accounts Consultant (on Contractual

		Basis)
33.	Mr. Shyam T. Yadav	Assistant
34.	Mr. Vinod B. Dantani	Helper
35.	Mr. Bakul M. Parmar	Lab Attendant
Contractual Staff in Management and Statistics area		
1.	Ms. Priti Sharma	Project Officer (Management)
2.	Mr. Tareef Husain	Project Officer (Statistics)
3.	Ms. Tulsi Bhasker Punjani	Project Assistant (Statistics)
Contractual Staff in Computer Science		
1	Ms. Surbhi Sumit Mistry	Senior Project Officer
2	Mr. Abhishek Kumar Anand	Project Officer
3	Ms. Swati Bhatnagar	Project Officer
4.	Ms. Nabila Shaikh	Project Officer
5.	Ms. Bhargavi A. Kadiya	Project Officer
6.	Mrs. Shweta N. Brahmbhatt	Project Officer
7.	Mr. Swyamprakash Rajput	Project Officer
8.	Mr. Piyush Kumar	Project Officer
9.	Ms. Mitisha Sanjivbhai Vaidya	Project Officer
10.	Ms. Vinothine K.	Project Officer
11.	Mr. Nanitya Tiwari	Project Officer
12.	Mr. Nrutik M. Prajapati	Project Associate
13.	Mr. Shrikant Kumar	Project Associate
14.	Mr. Darshankumar Dashrathlal Modi	Project Associate
15.	Mr. Tejaskumar Upendrabhai Kadiya	Project Associate
16.	Mr. Prashant Kumar	Project Associate
17.	Ms. Priya Ratanshi Varu	Project Associate
18.	Mr. Gaurav Kumar Gond	Project Associate
19.	Mr. Krunal Gopaldas Shah	Project Associate
20.	Ms. Kinjal Rajeshkumar Solanki	Project Associate
21.	Mr. Harsh Hareshbhai Raval	Project Associate
22.	Mr. Chinkit Dineshchandra Suthar	Project Associate
23.	Ms. Ankita Gordhanbhai Prajapati	Project Assistant
24.	Mr. Jay Alkeshkumar Vora	Project Assistant
25.	Mr. Rahulkumar N. Panchal	Project Assistant
26.	Mr. Vivek Singh	Project Assistant
27.	Mr. Kumar Gaurav	Project Assistant
28.	Ms. Vaibhavi Bhupendrabhai Chavda	Project Assistant

Contractual Staff in Library Science		
1.	Mr. Kamlesh S. Vegad	Project Officer
2.	Ms. Seema S. Chavda	Project Officer
3.	Ms. Archita M. Muchhadia	Project Officer
4.	Mr. Vikram Singh Rathore	Project Officer
5.	Mr. Kuldeep Matieda	Project Officer
6.	Ms. Alpa Acharya	Project Associate
7.	Ms. Sonal D. Vaghela	Project Associate
8.	Ms. Rajeshri J. Makwana	Project Associate
9.	Mr. Sanjay Kumar Pillai	Project Associate
10.	Mr. Santosh Kumar Sen	Project Associate
11.	Ms. Deepti Sandeep Pandey	Project Associate
12.	Mr. Kumar Gaurav	Project Associate
13.	Ms. Neha V. Jain	Project Assistant
14.	Ms. Bhakruti N. Rashtrapal	Project Assistant
15.	Ms. Dipika M. Makwana	Project Assistant
16.	Mr. Subodh Kumar Bajpai	Project Assistant
17.	Mr. Atul V. Patel	Project Assistant
18.	Ms. Roshni Shambhubhai Yadav	Project Assistant
19.	Ms. Divyababen Shaileshbhai Vyas	Project Assistant

State-Wise List of the SOUL Installations

Sl. No.	Name of the State	Installation	1 st April, 15 to 31 st March, 16	Total
1	Andhra Pradesh & Telangana	258	13	271
2	Assam	55	12	67
3	Bihar	14	0	14
4	Chhattisgarh	30	2	32
5	Daman	2	0	2
6	Goa	3	0	3
7	Gujarat	850	35	885
8	Haryana	86	15	101
9	Himachal Pradesh	59	6	65
10	Jammu & Kashmir	69	1	70
11	Jharkhand	7	1	8
12	Karnataka	31	0	31
13	Kerala	130	0	130
14	Madhya Pradesh	229	16	245
15	Maharashtra	407	23	430
16	Meghalaya	3	0	3
17	Mizoram	21	5	26
18	Nagaland	00	4	4
19	Nepal	3	0	3
20	New Delhi	38	0	38
21	North Eastern States (Free of Cost)	276	20	296
22	Odisha	9	1	10
23	Punjab	122	3	125
24	Rajasthan	58	1	59
25	Tamil Nadu	30	0	34
26	Uttar Pradesh	86	10	96
27	Uttaranchal	19	0	19
28	West Bengal	125	11	136
	Total	3,024	179	3,203

**National Advisory Committee, e-Shodh Sindhu
(As on 31st March 2016)**

Vinay Sheel Oberoi (Chairman)

Secretary (HE)
Ministry of Human Resource Development
Shastri Bhawan, New Delhi

Mr. R. Subrahmanyam (Convener)

Additional Secretary (TE)
MHRD & Mission Director, NMEICT
Shastri Bhawan, New Delhi

Ms. Ishita Roy

Joint Secretary (HE)
Ministry of Human Resource Development
Shastri Bhawan, New Delhi

Mr. Shashi Prakash Goyal

Joint Secretary (TEL)
Ministry of Human Resource Development
Shastri Bhawan, New Delhi

Ms. Darshana M Dabral

JS & FA
Ministry of Human Resource Development
Shastri Bhawan, New Delhi

Prof. Ved Prakash

Chairman
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi

Prof. Anil D Sahasrabudhe

Chairman
All India Council for Technical Education
7th Floor, Chanderlok Building
Janpath, New Delhi

Adviser (Higher Education)

NITI Aayog
Sansad Marg, New Delhi

Prof. B D Gupta

National Coordinator
INDEST-AICTE Consortium
Indian Institute of Technology, Delhi
Hauz Khas, New Delhi

Prof. Asoke Kumar Sen

Dean
Dept. of Physics
Assam University, Silchar

Prof. Karmeshu

Dean
Computer System & Sciences
Jawaharlal Nehru University (JNU), New Delhi

Dr. R K Chadha

Former Additional Secretary
Lok Sabha Secretariat, New Delhi

Dr. Ramesh Gaur

Librarian
Jawaharlal Nehru University (JNU)
New Delhi

Prof. V. Ramgopal Rao

Director
Indian Institute of Technology, Delhi
Hauz Khas, New Delhi

Prof. N Sathyamurthy

Director
IISER, Mohali
SAS Nagar, Manauli

Prof. Devang V Khakhar

Director
Indian Institute of Technology, Bombay
Powai, Mumbai

Prof. Appa Rao Podile

Vice-Chancellor
University of Hyderabad
Gachibowli, Hyderabad

Prof. Sheo Kumar Pandey

Vice Chancellor
Pt. Ravishankar Shukla University
Amanaka G.E.Road, Raipur

Prof. Sandeep Sancheti

President, Manipal University
Jaipur-Ajmer Expressway, Jaipur

Dr. Partha Pratim Chakrabarti

Director
Indian Institute of Technology, Kharagpur

Prof. P P Das

Professor, Dept of Computer Science
Indian Institute of Technology, Kharagpur

Mr. Maneesh Garg,

Joint Secretary (SE-I)
Department of SEL
Ministry of Human Resource Development
Shastri Bhawan, New Delhi

Prof. Huzar Saran

Professor
Dept of Computer Science and Engineering
Indian Institute of Technology, Delhi
Hauz Khas, New Delhi

Prof. I V Malhan

HOD, DLIS
Central University of Himachal Pradesh
Kangra, Himachal Pradesh

Dr. Jagdish Arora (Convener)

Director
INFLIBNET Centre
Infocity, Gandhinagar

**National Steering Committee (NSC), e-Shodh Sindhu
(As on 31st March 2016)**

Ex. Officio Members

Dr. Partha Pratim Chakrabarti (Chairman)

Director
Indian Institute of Technology, Kharagpur

Prof. B D Gupta

National Coordinator
INDEST-AICTE Consortium
Indian Institute of Technology, Delhi
Hauz Khas, New Delhi

Dr. G Mahesh

Coordinator
National Knowledge Resource Consortium
(CSIR and DST)
NISCAIR, Satsang Vihar Marg, New Delhi

Dr. D.D. Lal

Coordinator
DelCON (DBT)
Manesar, Gurgaon

Mr. Ashok Kumar

Associate Director
DESIDOC,
Metcalf House, New Delhi
(Coordinator, DRDO Consortium)

Prof (Dr.) Avinash S Pant

Member Secretary (Actg.)
All India Council for Technical Education
Janpath, New Delhi

Dr. (Mrs.) Manju Singh

Jt. Secretary
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi

Shri Shashi Prakash Goyal

Joint Secretary (TEL)
Ministry of Human Resource Development
Shastri Bhawan, New Delhi

Dr. Jagdish Arora (Convener)

Director
INFLIBNET Centre
Infocity, Gandhinagar

Members:

Prof. Sri Krishna Srivastava

Vice-Chancellor
North Eastern Hill University
Umshing Mawkynroh, Shillong

Dr. Sanjay V. Deshmukh

Vice-Chancellor
University of Mumbai
Santacruz East, Mumbai

Dr. Ananad A. Samuel

Vice-Chancellor
VIT University
Near Katpadi Road, Vellore

Prof. M. Aslam

Vice-Chancellor
Indira Gandhi National Open University (IGNOU)
Maidan Garhi, New Delhi

Prof. (Dr.) R. Venkata Rao

Vice-Chancellor
National Law School of India University
Nagarbhavi, Bangalore

Prof. Bhaskar Ramamurthi

Director
Indian Institute of Technology, Madras
IIT P.O., Chennai

Dr. Srinivasan Sundarrajan

Director
National Institute of Technology Karnataka,
Surathkal, Mangalore

Dr. Krishna N. Ganesh

Director
IISER, Pune
Pashan, Pune

Dr. Saibal Chattopadhyay

Director
Indian Institute of Management, Calcutta
Joka, Kolkata

Prof. R. Gnanamoorthy

Director
IIIT Kancheepuram
Nellikuppam, Chennai

Prof. N.C. Shivaprakash

Director
Indian Institute of Science, Bangalore
C V Raman Ave, Bengaluru

Prof. Gautam Biswas

Director
Indian Institute of Technology, Guwahati
Amingaon, North Guwahati

**Negotiation Committee, e-Shodh Sindhu
(As on 31st March 2016)**

Prof. Ajit Kembhavi (Chairman)

Former Director
Inter-University Centre for
Astronomy and Astrophysics (IUCAA)
Ganeshkhind, Pune

Prof. B D Gupta

Chairman
Advisory Committee for the Library
Indian Institute of Technology Delhi
Hauz Khas, New Delhi

Dr. Jagdish Arora (Convener)

Director
INFLIBNET Centre
Infocity, Gandhinagar

Prof. Anurag Kumar

Director
Indian Institute of Science, Bangalore
C V Raman Ave, Bengaluru

Prof. Ashoke Kumar Sen

Dean, Department of Physics
Assam University
Silchar

Prof. S K Pandey

Vice Chancellor
Pt. Ravishankar Shukla University
Amanaka G.E.Road, Raipur

Dr. R K Chadha

Former Additional Secretary
Lok Sabha, New Delhi

Dr. D.D. Lal

Coordinator
DelCON (DBT)
Manesar, Gurgaon

Mr. G Mahesh

Coordinator, CSIR E-journal Consortium
NISCAIR, Satsang Vihar Marg, New Delhi

Dr. R S Rana,

Senior Scientist and I/C
Coordinator,
Consortium for e-Resources in Agriculture
(CeRA), New Delhi

E-Resources Subscribed under e-Shodh Sindhu

Sl. No.	Resource Name	Universities	CFTIs	Total	No. of Titles
1	ABI INFORM Complete		29	29	5400
2	ACM Digital Library		51	51	140
3	American Chemical Society	125		125	50
4	American Institute of Physics	117	8	125	20
5	Annual Reviews	111	34	145	43
6	ASCE		39	39	36
7	ASME		45	45	29
8	Cambridge University Press	130		130	224
9	Economic & Political Weekly	198	65	263	1
10	Emerald Journals	98	41	139	133/298
11	IEL/IEEE ASPP-POP		46	46	192/166
12	Institute of Physics	117		117	46
13	JSTOR	161	65	226	2500+
14	Nature	95	65	160	1
15	OSA Infobase		8	8	17
16	Oxford Univ Press	125	65	190	262
17	Portland Press	58		58	5
18	Project Euclid	58		58	39
19	Project Muse	109	34	143	600+
20	Royal Society of Chemistry	111		111	26
21	ScienceDirect	75	50	125	1000+
22	SIAM	55	21	76	16
23	Springer	167	12	179	1400+
24	Taylor & Francis	135		135	1072
25	Wiley	120		120	908

Databases		
Bibliographic Database		
1	ISID	All
2	JGate + JCCC	263
3	MathSciNet	85
4	SciFinder	60
5	Web of Science	165
Legal Database		
1	Manupatra	21
2	Westlaw India	19
Factual Database		
1	CAPITALINE	20
2	CRISIL Research	20
3	Euromonitor	19
4	INSIGHT	13
Standard		
1	ASTM Standard	39

Finance and Accounts

Some of the financial expenditure reflecting INFLIBNET activities over the last three years are given below. The Audited Accounts of the Financial Year 2015-2016 are given on the following pages.

	(Rupees in Lakhs)		
	2013-2014	2014-2015	2015-2016
Expenditures			
Capital	20.14	88.50	33.42
Operational/Administrative	436.32	484.41	519.18
Training Courses & Conference	4.26	12.95	31.79
Networking	3.00	3.96	2.82
UGC-INFONET	2.47	-	-
E-Subscription	11,728.27	18,723.35	14,075.11
Shodhganga (ETD)	64.99	31.50	54.35
E-Content (e-Pg Pathshala)	66.65	64.87	833.63
E-Shodh Sindhu	-	-	6,880.20
Grants in Aid received from UGC			
Plan	1,036.50	-	-
Non-Plan	375.20	441.00	390.75
UGC-Infonet	-	-	-
E-Subscription	18,500.00	5,194.56	7,500.00
Shodhganga (ETD)	-	-	-
E-Content (e-Pg Pathshala)	-	-	2,000.00
E-Shodh Sindhu	-	-	16,800.00

Information and Library Network Centre
(An Autonomous Inter-University centre of UGC)
Infocity, Gandhinagar - 382 007
BALANCE SHEET AS AT 31ST MARCH, 2016

(Amount – Rs.)						
SOURCES OF FUNDS	Schedule No.	INFLIBNET Centre		INFLIBNET-E-Content		INFLIBNET-N-LIST
		F.Y. 2015-2016 (Current Year)	F.Y. 2014-2015 (Previous Year)	F.Y. 2015-2016 (Current Year)	F.Y. 2014-2015 (Previous Year)	F.Y. 2015-2016 (Current Year)
UNRESTRICTED FUNDS						
CORPUS	01	2405,30,817.09	2721,39,645.65	2228,59,410.71	989,76,059.90	168,30,228.76
GENERAL FUND	02	2809,92,000.00	4191,30,808.21	-	63,947.54	-
DESIGNATED/EARMARKED FUNDS	03	0.00	0.00	-	-	-
RESTRICTED FUNDS	04	11366,50,741.50	7651,50,289.88	-	-	-
LOANS/BORROWINGS	05					
Secured		0.00	0.00	-	-	-
Unsecured		0.00	0.00	-	-	-
CURRENT LIABILITIES AND PROVISIONS	06	568,79,502.00	447,58,430.90	42,99,219.50	37,02,181.50	34,49,623.00
TOTAL		17150,53,060.59	15011,79,174.64	2271,58,630.21	1027,42,188.94	202,79,851.76
APPLICATION OF FUNDS						
FIXED ASSETS	07					
Tangible Assets		3950,04,669.84	5348,17,098.87	1.00	75,331.00	3.00
Intangible Assets		5,54,245.43	45,07,265.65	-	-	-
Capital Work-In-Progress		0.00	0.00	-	-	-
INVESTMENTS	08					
Long Term		0.00	0.00	-	-	-
Short Term		11236,83,343.00	8588,95,475.70	642,73,830.00	-	35,00,000.00
CURRENT ASSETS	09	1209,22,025.32	389,21,851.52	53,80,238.77	13,93,985.50	151,10,459.00
LOANS, ADVANCES & DEPOSITS	10	748,88,777.00	640,37,482.90	1575,04,560.44	1012,73,872.44	15,25,827.76
TOTAL		17150,53,060.59	15011,79,174.64	2271,58,630.21	1027,42,188.94	1,43,562.00
NOTES ON ACCOUNTS	22					202,79,851.76
						118,49,781.00

As per our report of even date attached.

For T N SHAH & Co.

Chartered Accountants

sd/-

[T. N. Shah]

Proprietor

FRN : 109802W

MEM. NO. : 042748

Place : Gandhinagar

Date : 16.06.2016

sd/-

[Harish Chandra]

Admn. Officer-PA&F

sd/-

[Dr. Jagdish Arora]

Director

Place : Gandhinagar

Date : 16.06.2016

The above Balance Sheet to the best of our belief contains a true account of the Funds and Liabilities and Properties & Assets of the Institution.

Information and Library Network Centre
(An Autonomous Inter-University Centre of UGC)

Indochy, Gandhinagar - 382 007

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED ON 31 MARCH, 2016

Schedule No.	INCOME	INFILINET - CENTRE					INFILINET - E-CONTENT					INFILINET - IL-JUST				
		F.Y. 2015-2016 (Current Year)		F.Y. 2014-2015 (Previous Year)		Total	F.Y. 2015-2016 (Current Year)		F.Y. 2014-2015 (Previous Year)		Total	F.Y. 2015-2016 (Current Year)		F.Y. 2014-2015 (Previous Year)		Total
		Unrestricted Funds	Restricted Fund	Unrestricted Funds	Restricted Fund		Unrestricted Funds	Restricted Fund	Unrestricted Funds	Restricted Fund		Unrestricted Funds	Restricted Fund	Unrestricted Funds	Restricted Fund	
		Corpus	Designated fund	Corpus	Designated fund		Corpus	Designated fund	Corpus	Designated fund		Corpus	Designated fund	Corpus	Designated fund	
11	ACADEMIC RECEIPTS	0.00	0.00	6,29,086.00	0.00	6,29,086.00	0.00	0.00	0.00	0.00	0.00	93,77,771.04	0.00	0.00	0.00	93,77,771.04
12	GRANTS & DONATIONS	0.00	0.00	39,07,500.00	0.00	39,07,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	INCOME FROM INVESTMENTS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	OTHER INCOMES	0.00	0.00	238,14,897.13	0.00	238,14,897.13	0.00	0.00	0.00	0.00	0.00	9,09,131.00	0.00	0.00	0.00	9,09,131.00
	TOTAL (A):	-	-	655,18,993.13	-	655,18,993.13	-	-	-	-	-	102,86,902.01	-	-	-	102,86,902.01
15	STAFF PAYMENTS & BENEFITS	0.00	0.00	30,38,64,004.00	0.00	30,38,64,004.00	0.00	0.00	0.00	0.00	0.00	5,92,385.00	0.00	0.00	0.00	5,92,385.00
16	ACADEMIC EXPENSES	0.00	0.00	31,79,479.00	0.00	31,79,479.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	ADMINISTRATIVE AND GENERAL EXPENSES	0.00	0.00	58,38,744.61	0.00	58,38,744.61	0.00	0.00	0.00	0.00	0.00	1,94,983.00	0.00	0.00	0.00	1,94,983.00
18	TRANSPORTATION EXPENSES	0.00	0.00	9,08,384.00	0.00	9,08,384.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	REPAIRS & MAINTENANCE	0.00	0.00	21,70,160.00	0.00	21,70,160.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	FINANCE COSTS	0.00	0.00	28,125.00	0.00	28,125.00	0.00	0.00	0.00	0.00	0.00	4,190.25	0.00	0.00	0.00	4,190.25
21	OTHER EXPENSES	0.00	0.00	78,344.43	0.00	78,344.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL (B):	-	-	95,27,82,104	-	95,27,82,104	-	-	-	-	-	791,188.25	-	-	-	791,188.25
	BALANCE BEING EXCESS OF INCOME OVER EXPENDITURE (A-B)	-	-	(316,08,827.91)	-	(316,08,827.91)	-	-	-	-	-	94,95,743.76	-	-	-	94,95,743.76
	TRANSFER TO FORM DESIGNATED FUND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BUILDING FUND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	OTHERS (SPECIFY)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BALANCE BEING SURPLUS (DEFICIT) CARRIED TO CORPUS/CAPITAL FUNDS	-	-	(316,08,827.91)	-	(316,08,827.91)	-	-	-	-	-	-	-	-	-	-
22	NOTES ON ACCOUNTS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

As per report of auditee attached.

For T.N. Shah & Co.

Chartered Accountants

sd/-

[T.N. Shah]

Partner

FRN : 109821W

MEM. NO. : 042748

Place : Gandhinagar

Date : 16.06.2016

sd/-

[Harish Chandra]

Admin. Officer-IA&F

sd/-

[Dr. Jagdish Kora]

Director

Place : Gandhinagar

Date : 16.06.2016

SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31st MARCH, 2016

(Amount-Rs.)

SCHEDULE – 4 RESTRICTED FUNDS :											
a) Opening balance of the funds											
UGC-INFONET	E-Subscription	E-Subscription	E-Subscription	North Eastern	Excess Amt.	UGC Website	UGC Grants for	Internet Conn.	CUG	Integrated	
Grants-in-Aids	Grants-in-Aids	College	Region	of Asso. Mem.	Maintenance	Shodhganga	at UGC	Project	E-Content Ports		
50,14,497.00	6516,80,782.38	633,91,215.00	293,04,853.00	47,53,574.50	0.00	98,27,247.00	0.00	7,33,255.00	25,72,054.00		
b) Additions to the Funds:											
i. Donation/grants											
0.00	6935,15,788.00	564,84,212.00	0.00	0.00	0.00	0.00	0.00	0.00	42,70,000.00		
ii. Income from Investments made of the funds											
0.00	153,79,399.00	0.00	18,69,026.00	0.00	0.00	0.00	0.00	0.00	1,63,509.00		
iii. Accrued interest on investments of the funds											
0.00	0.00	0.00	11,050.00	0.00	0.00	0.00	0.00	0.00	0.00		
iv. To be recovered from UGC											
0.00	0.00	0.00	0.00	15,72,797.00	30,45,985.00	0.00	0.00	0.00	0.00		
TOTAL (a+b)											
50,14,497.00	13805,75,939.38	1198,75,427.00	311,84,929.00	47,53,574.50	15,72,797.00	68,27,247.00	30,45,985.00	7,33,255.00	70,05,563.00		
c) Utilisation/Expenditure towards objectives of funds											
i. Capital Expenditure											
- Fixed Assets											
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14,06,950.00		
- Others											
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Total											
ii. Revenue Expenditure											
- Salaries, Wages and allowances etc											
0.00	3,38,098.00	0.00	0.00	0.00	8,64,900.00	10,63,577.00	5,27,389.00	6,31,647.00	10,05,232.00		
- Rent											
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
- Other Administrative Exps.											
0.00	12872,97,347.38	1198,75,427.00	9,86,407.00	0.00	7,07,897.00	43,71,774.00	25,18,626.00	0.00	2,28,969.00		
Total											
0.00	12876,35,443.38	1198,75,427.00	9,86,407.00	0.00	15,72,797.00	54,35,351.00	30,45,985.00	6,31,647.00	28,40,151.00		
TOTAL (c)											
NET BALANCE AS AT THE YEAR END (a+b-c)											
50,14,497.00	729,40,496.00	0.00	301,98,522.00	47,53,574.50	0.00	14,91,896.00	0.00	1,01,308.00	43,65,412.00		

SCHEDULE – 4 RESTRICTED FUNDS :	TOTALS								
	Vidwan Expert Database	UGC Scheme SA-III	E-Shodh Sindhu AICTE	E-Shodh Sindhu	ICSSR	NIRF	NML	F.Y. 2015-2016(Current Year)	F.Y. 2014-2015(Previous Year)
a) Opening balance of the funds	7,72,832.00	0.00	0.00	0.00	0.00	0.00	0.00	7651,50,289.88	21,246,93,064.88
b) Additions to the Funds:									
i. Donation/grants	0.00	0.00	600,87,877.00	16900,00,000.00	49,75,600.00	20,00,000.00	8,93,322.00	25022,26,799.00	5547,14,280.00
ii. Income from Investments made of the funds	79,198.00	0.00	0.00	200,49,333.00	0.00	0.00	0.00	375,40,455.00	100,93,586.00
iii. Accrued interest on investments of the funds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11,050.00	0.00
iv. To be recovered from UGC/M-IRD	11,20,825.00	10,65,449.00	0.00	0.00	0.00	0.00	0.00	68,05,066.00	51,40,161.00
TOTAL (a+b)	19,72,855.00	10,65,449.00	600,87,877.00	17000,49,333.00	49,75,600.00	20,00,000.00	8,93,322.00	33117,33,659.88	27846,41,954.88
c) Utilisation/Expenditure towards objectives of funds									
i. Capital Expenditure									
- Fixed Assets	0.00	0.00	0.00	0.00	5,10,300.00	0.00	25,358.00	19,41,608.00	5,56,877.00
- Others	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total									
ii. Revenue Expenditure									
- Salaries, Wages and allowances etc	11,44,213.00	10,65,449.00	587,07,456.00	29,545.00	6,21,667.00	4,98,849.00		664,98,300.00	44,85,284.00
- Rent	0.00	0.00	0.00	0.00	0.00	0.00		0.00	2,41,787.00
- Other Administrative Exps.	8,28,642.00	0.00	0.00	6879,90,132.00	2,12,931.00	11,85,102.00	4,59,756.00	21086,43,010.38	20141,97,617.00
Total									
TOTAL (c)	19,72,855.00	10,65,449.00	587,07,456.00	6880,19,677.00	13,44,868.00	16,83,951.00	4,85,114.00	21750,82,918.38	20194,91,665.00
NET BALANCE AS AT THE YEAR END (a+b-c)	0.00	0.00	13,80,421.00	10120,29,656.00	36,30,702.00	3,36,049.00	4,08,208.00	11366,50,741.50	7651,50,289.88



Information and Library Network Centre

(An Autonomous Inter-University Centre of UGC)

Infocity, Post Box No. 4, Gandhinagar - 382 007

Tele.: + 91 79 23268000, 23268100, Fax: + 91 79 23268222

Email : director@inflibnet.ac.in

Web: <http://www.inflibnet.ac.in>