



## Open access initiatives and its impact on scientific communities: a review of INFLIBNET Centre

**Saroj kumar Panda**

Scientific and Technical Assistant, INFLIBNT Centre, Gandhinagar

### Abstract

*INFLIBNET Centre is aggressively working towards creation of open access institutional repositories and platform to support open access publishing at higher learning institutions like universities, colleges and R & D research centre in India, and imparting training in applications on various aspects of new technology to achieve such goals and encouraging library and information professionals to expand their horizon in digital content creations, process of digitization, managing digital depositories and open access etc. In the country like India, open access journals and institutional repositories are two main routes of open access publishing system now a day. This article discusses on different open access initiatives taken by the INFLIBNET Centre in serving the scholarly and scientific communities in the country. The article also reviewed the current status, benefits and its impacts on the universities and its users.*

**Keywords:** Open access; INFLIBNET; OJS; Info Port; Shodh ganga; Shodh gangotri; India

### Introduction

The development of Information and Communication Technologies (ICT) in research and education sector has resulted in the availability, accessibility and efficient dissemination of information resources. In the scholarly world, Internet has become an information hub that contains all types of information resources such as books, journals, magazines, archives and manuscripts. It has changed the way we use and access information and knowledge. With availability of such huge and important digital resources, accessibility becomes essential to ensure the use of information resources, access may be open access or through subscription or purchase a part of it.

Since a decade ago, open access has emerged as alternative way to the publisher-driven 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 a user through well-organized and professionally-managed web interfaces. The proposal of open access originated from grounds that it would strengthen the exchange of ideas and information among the

scientific community of young researchers, it would unaffected and unencumbered from the limitations of subscription costs, licensing arrangements and copyright inherent to the traditional model of commercial journal publishing and help researchers, postgraduate students, librarians and other stakeholders to incorporate open Access approaches into their existing research methodologies. In today's world, open access journals and institutional repositories are two major routes to promote open access and convince the scholarly world for open access publishing.

The INFLIBNET Centre is working proactively for spreading the open access movement in the country, dedicated towards the implementation of open access tools and standards in universities and higher learning institutions, customization of open source software for library automation, setting up open institutional repositories, digital libraries, open e-content courseware's, etc. The open access R & D group is specially designed to support and provide trainings to library professionals on different tools and techniques for effective use of open source software's and standard. Major open access initiatives taken-up by the Centre includes



OJAS, a platform offered to faculty and researchers in universities to host their open-access journals, and three institutional repositories, namely:

ShodhGanga, ShodhGangotri and IR@INFLIBNET.

## About INFLIBNET

Information and Library Network (INFLIBNET) Centre is an autonomous and Interuniversity Centre of University of Grants Commission (UGC), Govt. of India, is working towards the development of academic libraries and information centres in India. The Centre is involved in improving communication facilities amongst scientist, engineers, social scientists, academics, faculties, researchers and students for information transfer and access, by 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.

The INFLIBNET Centre is also involved to developing and maintaining 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 other library related facilities. The Centre connects more than 5000 libraries including universities, technical institutions, R & D Organizations, colleges etc, is proved to be a large library network in the Indian subcontinent having nation importance.

INFLIBNET is set out to be a major player in promoting scholarly communication among academicians and researchers in India. (INFLIBNET, 2014) In the umbrella of INFLIBNET many services and activities are run for the development of Indian higher education to the each and every people of India.

The Centre is adapting open source software's and platforms and its implementations in the library and information science in order design websites or to provide services and training to the entire library and other researcher's community in India. Centre also support to develop Institutional Repository. INFLIBNET centre also create electronic theses and dissertations database for the researchers. It is fully open to the readers all over the world. Leverage

## Open access Initiatives at INFLIBNET

### InfoPort

InfoPort also called as INFLIBNET Subject Gateway for Indian Electronic Resources launched in 2012 by the INFLIBNET Centre during the inaugural session of 8th PLANNER (Promotion of Library Automation and Networking in North Eastern Region) held at Sikkim University. The motto behind the designing and development of InfoPort is to serve the academic community a comprehensive gateway to all Indian scholarly content which are scattered over the Internet. InfoPort integrates all the Indian's origin scholarly content into a single interface and can be accessible on open access. The gateway supports search, browse and multiple listing to the indexing contents on diversified subjects. The Centre collaborates with librarians and scholars in college and universities in the process of identification and selection of resources and promotes open access to Indian scholarly content through the InfoPort.

All the contents in InfoPort are arranged alphabetically as well as subject wise. Contents are classified according to Dewey decimal classification (DDC) subject groups scattered from 000 to 999. As on 15<sup>th</sup> August, 2015, InfoPort has 1529 unique resources which are of following types.

- Lecture Notes
- Institutional Repository
- E-Books
- E-Journals
- AV Materials

- Dictionaries
- Directories
- Online Bookshop
- Online Libraries
- Organisations and their Institutions
- Other Resources (Reports, Portals, Biographies, Blogs, Forums, Maps and Archives and Museums)
- Publishers

InfoPort integrates Intute: a UK based web search engine that allows students to search an array of academic sources by subject. The Idea behind the integration of Intute in InfoPort portal is to help users for finding more sources on a particular subject. InfoPort can be accessible from INFLIBNET website at <http://infoport.inflibnet.ac.in/>. The interface of InfoPort is given Figure 1.

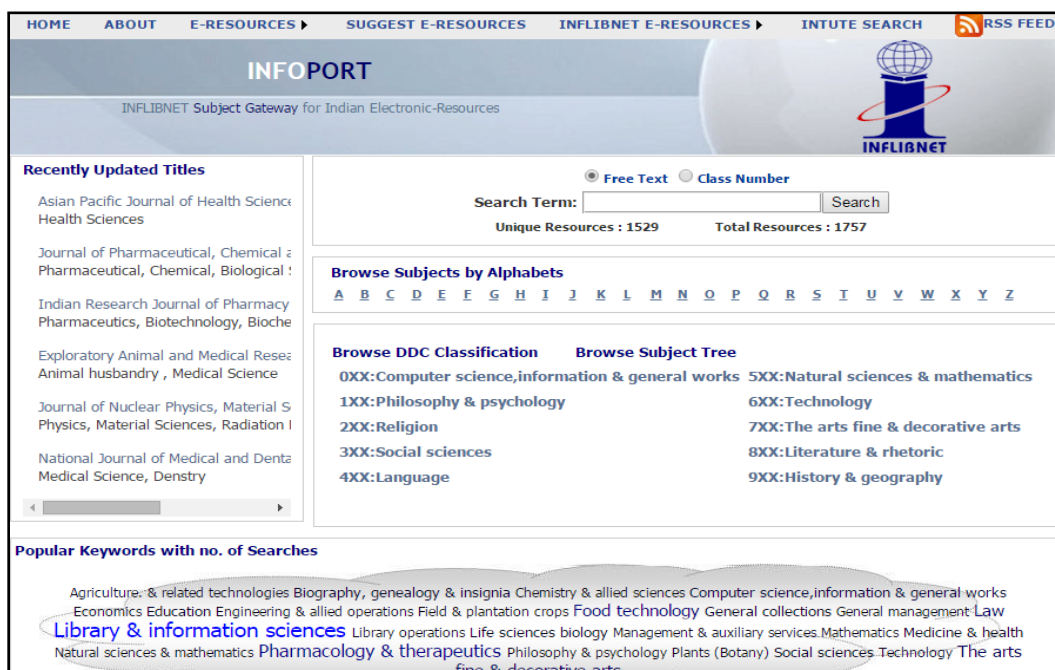


Figure 1: InfoPort home page

## Open Journal Access System (OJAS)

In India, thousands of scholarly journals are being published covering a wide spectrum of subjects; most of them are open access peer-reviewed journals. The opportunity for faculty and researchers to publish in open access is scarce especially in the state government funded academic universities due to the lack of funding, technology awareness and skilled manpower. However, there are very less number institutions specially in India are not in the fore front and promote open access publishing and hosting. Looking at this scenario, the INFLIBNET Centre has installed and configured Open Journal Systems (OJS) on the server hosted at Gandhinagar to facilitate universities and institutions a platform to publish online of electronic version of journals into open access mode.

The Centre has chosen OJS that is an open source solution developed by the Public Knowledge Project (PKP) through its federally funded efforts to expand and improve access to research. The OJS is specially designed for managing and publishing scholarly journals online. OJAS at INFLIBNET was launched on 27 January, 2010 during Foundation Stone Laying Ceremony of INFLIBNET own building at Gandhinagar. The aim of the OJAS initiatives is to encourage Indian universities and institutions that are publishing

journals in print format and really in the hunt for such kind open access platforms for its hosting. Figure 2 shows the interface of OJAS platform which hosted at INFLIBNET Centre. OJAS can be accessible at <http://inflibnet.ac.in/ojs>.



Figure 2: The interface of OJAS

OJAS welcomes all the Indian journals that are published in print as well as digital form. Journals hosted on OJAS are accessible to all users world-wide and without any limitations. Metadata (bibliographic details) from journals hosted on OJAS is harvested by the indexing services or specialized search engines like ARC, OAISTER, Google Scholar, etc. Users may use such specialized search engines to get more comprehensive results to their search queries. The overall benefit is extended to the academic community of the country and especially the higher education of the country when the articles get citation internationally, researchers get recognition globally and the journals get high impact factors with the open access publishing.

As on date, OJAS has published 17 journals in 18 different subjects covering Literature, Culture and Media Studies, Psychological, Economics, Geography, Political Science, Sociology, Anthropology, Humanities, Social Sciences, Management Sciences, Farm Sciences, Agriculture Sciences, Animal Reproduction, Physical, Biological and Environmental Sciences. Table 1 provides the current status of OJAS that indicates number of published organizations and number of journals that each has published.

Table 1: Current status of OJAS

Sl. No.	Published Organizations	No. of journals hosted on OJAS
1	Nagaland Central University, Nagaland	1
2	Assam University, Assam	1
3	CSSR, New Delhi	5
4	Mizoram University, Aizwal, Mizoram	1



5	Dr. Y. S. Parmar University of Horticulture & Forestry, Solan, Himchal University	1
6	Karnataka Agriculture University, Karnataka	1
7	School of Management Sciences, Varanasi	2
8	Knowledge Consortium of Gujarat, Gandhinagar, Gujarat	1
9	University of Kashmir, Srinagar	1
10	Indian Society for Study of Animal Reproduction, Tamil Nadu	1
11	Gauhati University, Assam	1
12	Indian Institute of Advanced Study, Shimla, Himachal Pradesh	1
	<b>Total</b>	<b>17</b>

### Shodhganga: a reservoir of Indian Theses

The Shodhganga initiative at INFLIBNET was started in 2010 with an aim to facilitate open access to Indian theses and dissertations to the academic community world-wide. Over a 5 years period this initiative gets a remarkable response from Indian academic fraternity. Now, Shodhganga is one of the rich and unique sources of information not in India but world of users. It is a central digital repository of Indian electronic theses and dissertations based on an open source digital repository software called DSpace developed by MIT in partnership with Hewlett- Packard (HP) in 2002. DSpace supports "Open Archives Initiative's Protocol for Metadata Harvesting" (OAI-PMH) and uses a qualified version of the Dublin Core schema for its metadata.

The INFLIBNET Centre is not only maintaining the Central ETD Repository (Shodhganga) but also deploy a central server to harvest the metadata from all such ETD repositories distributed in universities with an aim to provided unified access to theses and dissertations through its harvesting server. Shodhganga is not only a common platform for universities or research scholars to deposit their Ph.D. theses but also serve as a backup archive to university ETDs. Shodhganga can be accessible at <http://shodhganga.inflibnet.ac.in/>. Figure 3 depicts the home page of Shodhganga repository.



Figure 3: Home page of “Sdodhganga”

As on 23 August, 2015, the total number theses are 42492 which have been uploaded by 226 universities. Total numbers of 228 universities have been Signed MoU for Shodhganga. Recently, JNU University is one of the pioneers and central university in India has deposited more than 5,000 PhD theses in Shodhganga repository. All the theses being deposited in Shodhganga are available to all users in open access.

Table 2: State wise number of universities and their theses in sum

Sl. No.	State	Count of University	Sum of No. of Theses	Percentage Average of no. of Theses
1	Andhra Pradesh	10	1342	3.16
2	Arunachal Pradesh	1	29	0.07
3	Assam	4	551	1.30
4	Bihar	4	10	0.02
5	Chhattisgarh	3	1382	3.25
6	Delhi *	8	5451	12.83
7	Goa	1	500	1.18
8	Gujarat	17	4426	10.42
9	Haryana	7	1144	2.69
10	Himachal Pradesh	5	224	0.53
11	Jammu & Kashmir	4	402	0.95
12	Jharkhand	2	54	0.13
13	Karnataka	18	1438	3.38
14	Kerala	6	4469	10.52
15	Madhya Pradesh	8	1719	4.05
16	Maharashtra	23	2363	5.56
17	Manipur	1	358	0.84
18	Meghalaya	1	41	0.10
19	Mizoram	1	20	0.05
20	Nagaland	1	1	0.00
21	Odisha	4	37	0.09
22	Pondicherry *	2	1545	3.64
23	Punjab	7	975	2.29
24	Rajasthan	13	908	2.14
25	Sikkim	1	8	0.02
26	Tamil Nadu	32	6240	<b>14.69</b>
27	Telangana	3	1249	2.94
28	Tripura	1	16	0.04
29	Uttar Pradesh	19	4793	11.28
30	Uttarakhand	6	561	1.32
31	West Bengal	9	236	0.56
32	(blank) @	5	0	0.00
	<b>Grand Total</b>	<b>228</b>	<b>42492</b>	<b>100.00</b>



\*~ Union Territories of India, @~ Universities have already signed MOU but not yet uploaded

Table 2 updates the current status of Shodhganga open access repository. The highest number of theses uploaded in the Shodhganga is from the state of “Tamil Nadu” followed by Delhi, Uttar Pradesh, Kerala, and Gujarat so on.

## Shodhgangotri

“Shodhgangotri” is one more open access initiative of INFLIBNET Centre and an important source of information for research scholars. It is a repository of Indian Research in Progress details (Synopses/Research Proposals for PhD programme). In Shodhgangotri, research scholars are supposed to deposit electronic versions of approved synopsis which they have submitted to the universities for getting registered for doctoral programmes. The synopses are made available in open access and may be browsed globally. This repository aims at highlighting the research trends followed across Indian universities and thus prevents duplication of efforts in research. Once the full text of a particular thesis is submitted and uploaded, a link to the full text (in Shodhganga) from synopsis in Shodhgangotri is provided. As on 23 August, 2015, 2129 synopsis has been uploaded in the repository. The highest number synopsis has uploaded from Shri Jagdishprasad Jhabarmal Tibrewala University, Rajasthan (1063) followed by Mahatma Gandhi University, Kerala (178), Veer Narmad South Gujarat University, Gujarat (136) and so on.

## IR@INFLIBNET

Besides Shodhganga and Shodhgangotri, INFLIBNET has its own repositories which are also made available to everyone. It has been set-up to host full-text of research publications of technical staff as well as other publications of the Centre using DSpace. The papers published in CALIBER and PLANNER proceedings have been uploaded in PDF format. The Institutional Repository also includes Course Materials, Newspaper Clippings, etc. As on 23 August, 2015, there are total 1480 unique research articles available in the INFLIBNET repositories in open access mode.

## E-PG Pathshala: E-content for PG Courses

E-PG Pathshala is a national e-content project of MHRD, under its National Mission on Education through ICT (NME-ICT), began in last quarter of 2013. The Ministry has been allocated this work to the UGC for development of e-content in 77 subjects at postgraduate level. The project is being executed by INFLIBNET as an IUC of UGC. The aim of this project to standardize the textbook materials for MA, MSc and MCom courses which are ran by different universities in the country. Under this E-PG Pathshala project, 416 modules are freely available to post graduate students. It provides create high quality, curriculum-based, interactive content in different subjects across all disciplines of social sciences, arts, fine arts and humanities, natural & mathematical sciences, linguistics and languages. E-PG Pathshala can be accessible at <http://epgp.inflibnet.ac.in>.

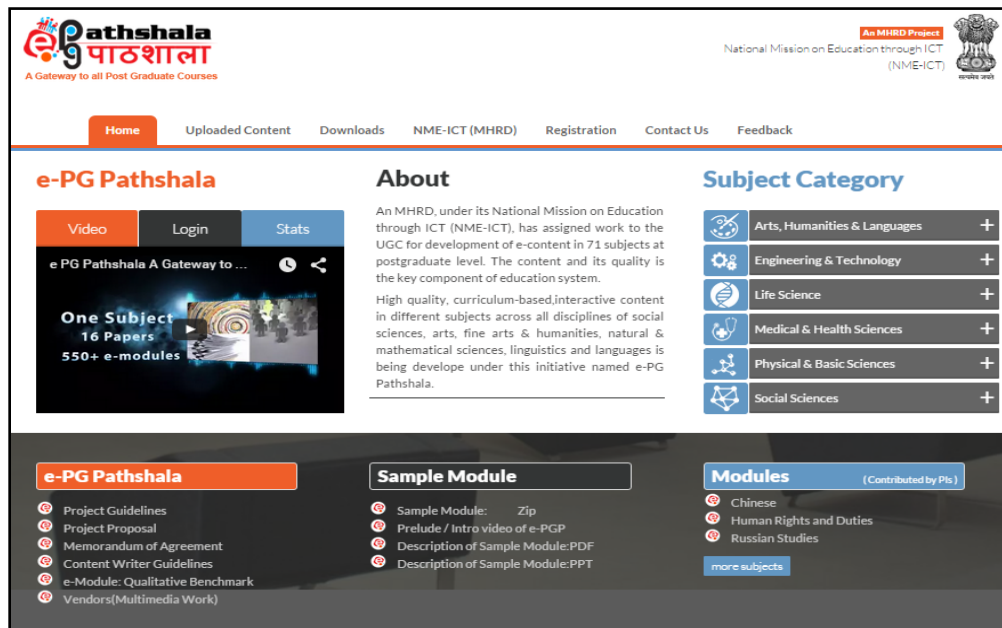


Figure 4: Home page of “E-PG Pathshala”

## Discussion and Conclusion

The Open journal system initiative at INFLIBNET encourages faculty members in universities and other higher learning institutions to start their own journals and hosting it on open access platform called OJAS. The OJS initiative has a tremendous impact upon the scientific communities and research across the subject disciplines. The research impact of OA articles as measured by the number of citations varies from discipline to discipline. This OJS initiative can increase the journal's readership as well as contribution to the public good on a global scale and change the mindsets of researchers, faculty members, authors and editors towards open access publishing and provides an opportunity to increase their works visibility in the scholarly world.

The openly available theses and dissertations at INFLIBNET Shodhganga repository contributes considerably to the scholarly knowledge bank and constitute a pivotal segment of research literature. ETDs ensure access to knowledge and learning and can transfer India's potential for development, lift young Indians to new levels of understanding and competencies and make India one of the leading knowledge societies in the world.

One of the objectives the Centre is to establish new method of collecting, sharing, recording, disseminating and preserving knowledge and that are reasons, the INFLIBNET are engaging and continuously doing efforts towards open access publishing and open archives.

## References

- [1] Arora, J. (2014). INFLIBNET@A Glance. Retrieved on August 20, 2014, from <http://www.inflibnet.ac.in/downloads/brochure/inflibnet@glance.pdf>.
- [2] Chandrakar, Rajesh and Arora, Jagdish (2010). Open journals System: an INFLIBNET Initiative. INFLIBNET Newsletter, Vol. 17, No.2 & 3 (April to September 2010).
- [3] Chandrakar, Rajesh and Arora, Jagdish(2011). Initiative of the INFLIBNET Centre for delivering information to the Indian academic community. Available at <http://conference.ifla.org/past-wlic/2011/164-chandrakar-en.pdf>





- [4] Hirwade, M. A., & Rajyalakshmi, D. (2006). Open access: India is moving towards third world superpower. Online available at [http://ir.inflibnet.ac.in/bitstream/1944/537/1/8\(cal%2006\).pdf](http://ir.inflibnet.ac.in/bitstream/1944/537/1/8(cal%2006).pdf)
- [5] INFLIBNET website - <http://www.inflibnet.ac.in/>
- [6] Tripathi, Manorama. (2012). ETD Initiatives in India: an Audit of National Landscape. Available at: [ateneo.unmsm.edu.pe/ateneo/bitstream/.../MTripathiETD2012FT.pdf](http://ateneo.unmsm.edu.pe/ateneo/bitstream/.../MTripathiETD2012FT.pdf)
- [7] Patel, Y., Vijayakumar, J. K., & Murthy, T. A. V. (2005). Institutional digital repositories/E-Archives: INFLIBNET's initiative in India, In 7th MANLIBNET Annual National Convention, Kozhikode (India) (pp. 5-7).
- [8] Sinha, M. K. (2008). Open access, open source archives, and open libraries initiatives for universal access to knowledge and information: An overview of Indian initiatives. PLANNER 2008. Available at <http://ir.inflibnet.ac.in/bitstream/1944/1142/1/27.pdf>
- [9] Tonta, Y., Ünal, Y., & Al, U. (2007). The research impact of open access journal articles. Online available at <http://eprints.rclis.org/9424/1/tonta-unal-al-elpub2007.pdf>.
- [10] Waghmode, S. S. (2014). Analytical study of INFLIBNET's Institutional Repository (IR@INFLIBNET). Online available at [http://eprints.rclis.org/23768/1/Analytical%20study%20of%20INFLIBNET%E2%80%99s%20Institutional%20Repository%20\(IR@INFLIBNET\).pdf](http://eprints.rclis.org/23768/1/Analytical%20study%20of%20INFLIBNET%E2%80%99s%20Institutional%20Repository%20(IR@INFLIBNET).pdf)