

An Overview of Indian Institutional Repositories

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Abstract: *The paper discusses the idea of Indian Institutional Repository (IR) its need, importance, benefits, issues in organization and management of IR, performance of librarians, scholarly society, educational institutions and the Government organizations. It additionally gives an overview of Institutional Repositories popularity of World and India initiatives taken in the institutions gaining knowledge of Indian scenario.*

Keywords: India – Institutional Repositories, IR, Academic Research Institutions, Intellectual Property, Digital Libraries

Introduction

An Institutional Repository (IR) is a system in which a persistent consensus is developed among frequent activity oriented people to share their contributions that are in their possession in shape of articles, study papers etc. It is considered the wealth of all people among such group. The contributor loses her/his declare over the information once he/she has contributed the article thereby making it accessible to these who are in need of the associated knowledge. The recipients are benefited by way of the pleasant literature of eminent writers with the aid of paying nothing and violating no rule of any land. In this way an Institutional Repository is a non-stop amalgamation of a variety of things to do along with contributing articles, speaking to the repository and collaborating in building the IR.

Lynch Clifford (2003) indicates his views on Institutional Repository, “a university-based institutional repository is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long-term preservation access or distribution.” The critical word Lynch uses here is “community”. The term institutional repository implies a society based service though repository developers interpret this in specific method.

Institutional Repositories

Repositories offer services to faculty, researchers, and directors World Health Organization need to archive analysis, historic, and inventive materials. OA archives or repositories don't perform referee however merely create their contents freely accessible to users round the world. they will contain un-referred preprints, refereed post prints, or both. However, they will limit deposit to items within the right discipline or authors from the proper establishment. OA archives is restricted to e-prints (electronic preprints or post prints of journal articles) or will embody theses and dissertations, course materials, learning objects,

data files, audio and video files, institutional records, or the other quite digital file. once universities host OA archives, they're typically committed even as a lot of to semipermanent preservation on open access.

Definition

According to Clifford Lynch (2005), “a university-based institutional repository is a set of services that a University offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long-term preservation where appropriate, as well as organization and access or distribution.”

Dhanavadan (2014) found the Institutions of higher education are developing their repositories. According to *OpenDOAR*, there are 2,600 repositories in the world, of which 120 (4.6%) cover the subject of library and information science. Of the 120 repositories for library and information science, the United States has contributed 17 (14.17%), followed by the United Kingdom with 12 and Germany with 9. India is in the fifth position with 5 repositories.

International Open Access Policies

A number of Governments in the world and learned societies and professional associations have declared and adopted statements on Open Access covering various aspects including copyrights of authors. There has been enhanced government scrutiny within the U.K., the U.S., and therefore the world organization of the traditional critical publishing system, with specific attention being paid to the perceived high price of scientific, technical, and medical journals and therefore the proven fact that a lot of research in these areas is government funded.

The open access movement's "constitutional convention" was in December 2001 at a meeting in Budapest convened by the Open Society Institute. The resulting statement of this meeting, the "Budapest Open Access Initiative," was made public in February 2002. In April 2003, a second influential meeting resulted in the "Bethesda Statement on Open Access Initiative (BOAI)," which further refined the definition of open access. Berlin Declaration (2003) defines open access as 'a comprehensive source of human knowledge and cultural heritage approved by the scientific community'. The American Research Libraries' (ARL) Task force defines open access as "a cost effective way to disseminate and use information. It is an alternative to the traditional subscription-based publishing made possible by new digital technologies and networked communication" (Ghosh and Das 2006).

Open Access publishing

- The developers of OA publishing are technological, financial, ethical and scholarly.
- Through internet growing the people widely
- Reduce the online storage cost.
- Demand for immediate dissemination and research force.
- Authors, Readers, Teachers and Students, libraries, Universities, Journals and publishers whatever it is no matter how prestigious or popular and

- Probably develop the visibility and impact of their work. Agencies, Government organizations

IR Initiatives in Indian Scenario

India is not lacking behind in building Institutional repositories as a result of several premier establishments like IITs, IIMs, IISc and Universities have already taken the initiative of IR. The assorted government and skilled bodies also are concerned to assist these establishments and universities for building intellectual repositories. Recently, the Govt. of India has setup the Information Commission (KC) to arrange a transparent cut road map for the establishments of upper learning in India for taking the initiative like up gradation of libraries and building Institutional Repository. Similarly, The University Grant Commission, (UGC) has already setup a separate agency particularly info Library Network (INFLIBNET) with the target of modernization of libraries and fixing information centers for accessing and sharing the huge information of analysis. The INFLIBNET is providing the specialised coaching and networking of libraries among its member establishments and universities for choosing, managing, protective and scattering donnish materials. Some skilled associations and societies like Developing Library Network (DELNET) Society for Advancement of Library & IP (SALIS) and Indian Library Association (ILA) also are concerned in modernization of libraries, coaching and fixing the IRS. Bharat is sooner than several developing countries and some developed countries in terms of building} variety of digital libraries or digital archives and creating digital contents for them. World communities have appraised Indian efforts, and contents of some digital libraries are frequently accessed in several elements of the globe (Ghosh and Das, 2006).

Importance of IR:

- Scholarly communication
- Preserving digital Materials
- Increase the institution's visibility, status and public value
- Easy/Open access
- Organizational support for faculty seeking innovative approaches to research dissemination
- Demonstrate the quality, and scientific, social and economic relevance of an institution's research.
- Process improvements –store once, use many
- Information asset management by institutions
- Increasing need of archival and access to unpublished information bearing objects
- Provides the possibility to standardise institutional records
- Allows the creation of personalised publications lists

Features of Institutional Repository

- The Institutional Repository should have OAI submission facility, so that the user can avail required information as and when required.
- Institutional Repository should have simple submission and registration of papers or document by faculty, researcher scholars and other members.

- It should provide user friendly searching and browsing access, import & export facility and it should be accessibility over the Internet.
- It should be continuous and trust worthy and should store the data for long time service.
- IR facilities should be started by the basic motivation of library staff to grow content through the self archiving by the author of article.
- IR should provide accessible to worldwide to the users.

Major Selected Problems of Institutional Repositories in India

On any occasion Institutional Repository initiative is undertaken, it's initial planned keeping in sight the objectives of the several establishment yet as initiative. Then a model is developed, tested and enforced. Once achieving satisfactory results, the Institutional repository is developed and enforced at the next scale and once more tested. Though IR are comparatively fast and high-priced open access software, there ought to be correct infrastructure, like software, hardware , people who ought to be properly trained and proper rules and rules to take care of the different policies and to manage the system. According to Pickton & Barwick (2006). The implications and potential barriers to its success are summarized below:

Problems in Creating Content: A successful repository depends on the enthusiasm of creator/authors to deposit their works freely and there may be local obstacles and hindrances to overcome the situation. There are confirmed difficulties in generating content, particularly at the starting. Unless the worth of associate IR is incontestable quickly, the organizations long-term commitment to the project could began to wane. The most effective way to prove the enduring financial worth of the IR and to confirm its long- term survival is to quickly populate it (Gibbons, 2004).

Copy Right to Issues: Sometimes researchers are apprehensive about in infringing publishers copyright and lack adequate awareness about their own intellectual property rights. They may be uncertain about making their work available online before it is published by a traditional publisher.

Working Environment Issues: Whatever contributing content it should be be user-generated or “self-service” sites is time overwhelming and time are some things that teachers usually lack. Researcher should be willing to contribute content however reluctant to try to it themselves. This involves mediate deposits service for them.

Procedure Issues: Knowledge suggest that an IR will only function to its capacity when a mandate is in place to supply with inhabitants it but clearly researchers can react negatively to any suggestion of compulsion. Lynch (2003) has cautioned that an IR should not become a tool for enforcing administrative control over academic work.

Lack of Motivation: In the absence of any incentive academics feel reluctant to provide even bibliographic details of their scholarly output especially when they know that incentives are available in other institutions.

Expensive Task: Initial monetary value for associate open source software adopted by most organization for making authority isn't high however the continual prices, particularly employees prices (i.e time spent drafting policies , developing guidelines, business enterprise

, training, supporting users and making information, specialists IT consultancy) is also important.

Current Status of OAIR around the World and India

Throughout World there are currently 3803 Open Access repositories which are registered in OpenDOAR. USA (537), UK ((280), Germany (223), Japan (222), Spain (140), Italy (133), France (128), Croatia (111), Poland (101), Brazil (99). But the India is occupying 13th place in the ranked list.

Table-1: Current status of OAIR around the World

Country	No. of Repositories	Rank	Country	No. of Repositories	Rank
USA	537	1	Netherlands	64	17
UK	280	2	Taiwan	61	18
Germany	223	3	Portugal	57	19
Japan	222	4	Norway	55	20
Spain	140	5	Colombia	53	21
Italy	133	6	Peru	49	22
France	128	7	Argentina	48	23
Croatia	111	8	Sweden	48	24
Poland	101	9	China	41	25
Brazil	99	10	South Africa	39	26
Canada	85	11	Greece	37	27
Australia	83	12	Hungary	37	28
India	81	13	Korea, Republic of	35	29
Ukraine	80	14	Others	730	30
Turkey	76	15	Total	3803	
Indonesia	70	16			

Source: <http://v2.sherpa.ac.uk/>

OA Institutional Repositories in India

Table-2 shows the OA Institutional Repositories in India. There are 81 OAIR which is using different software with multilingual repositories.

Table-2 OA Institutional Repositories in India

Name of the Institute	Type	Software	Name of the Institute	Type	Software
AMU Repository	Inst.	EPrints	IACS Inst. Repository	Inst.	DSpace
Architexturez South Asia	Discip.	Archi	ICRISAT Open Access Repository	Inst.	EPrints
Archives of Indian Labour	Inst.	HTML)	Indian Academy of Sciences	Inst.	EPrints
ARIES Digital Repository	iscip.	DSpace	Indian Institute of Astrophysics Repository	Inst.	DSpace
Bhagirathi	Inst.	DSpace	Indian Institute of Management Kozhikode Digital Library	Inst.	Greenstone
DeepBlue Knowledge Repository-PDPU	Inst.	DSpace	Indian Institute of Management Kozhikode Scholarship Repository	Inst.	EPrints
Central Drug Research Institute	Inst.	DSpace	Indian Institute of Petroleum Inst. Repository	Inst.	DSpace
West Bengal Public Library Network	Inst.	DSpace	INFLIBNET's Inst. Repository	Inst.	DSpace
CUSAT	Inst.	DSpace	Intelctual Contributions of Delhi Technological University	Inst.	DSpace
IMTECH	Inst.	EPrints	Anjuman-I-Islam's Kalsekar Technical Campus	Inst.	DSpace
DRS at National Institute Of Oceanography	Inst.	DSpace	Inst. Repository@CSIO	Inst.	EPrints
GGSIPIU	Inst.	DSpace	Inst. repository@VSL	Inst.	DSpace

Vidyasagar University	Inst.	DSpace	CECRI	Inst.	EPrints
IIT Bombay	Inst.	DSpace	Goa University	Inst.	DSpace
Indian Institute of Geomagnetism	Inst.	DSpace	NPL	Discip.	EPrints
Indian Institute of Management Kozhikode	Inst.	DSpace	Kautilya Digital Repository at IGIDR	Inst.	DSpace
IUCAA	Inst.	DSpace	Knowledge Repository Open Network	Aggregating	DSpace
M S University	Inst.	DSpace	KrishiKosh	Aggregating	DSpace
Vidyanidhi	Inst.	DSpace	Librarians' Digital Library	Discip.	DSpace
GIPE	Inst.	DSpace	Mahatma Gandhi University Theses Online	Inst.	Nitya
IMSC	Inst.	DSpace	Management Development Institute - Open Access Repository	Inst.	DSpace
INFLIBNET	Inst.	DSpace	National Aerospace Laboratories Inst. Repository	Inst.	EPrints
NITR	Inst.	DSpace	National Repository of Open Educational Educational Resources	Govt.	Metastudio
TU	Inst.	DSpace	National Science Digital Library	Inst.	DSpace
Dyuthi	Inst.	DSpace	NIRT Inst. Repository	Inst.	EPrints
E Knowledge Center	Inst.	Drupal	NOPR	Inst.	DSpace
eGyankosh	Inst.	DSpace	OneWorld South Asia Open Archive Initiative	Discip.	EPrints
Indian Institute of Science	Inst.	DSpace	Open Access Repository of IISc Research Publications	Inst.	EPrints
NML	Inst.	EPrints	Open Access to Odia Books	Discip.	EPrints
MDRF	Inst.	EPrints	NIC	Discip.	EPrints
ATREE	Inst.	EPrints	Osmania University Digital Library	Inst.	DSpace
Bangalore University	Inst.	EPrints	RAIITH	Inst.	EPrints
CMFRI	Inst.	EPrints	Research Archive of Indian Institute of Technology Hyderabad	Inst.	EPrints
IARI	Inst.	EPrints	RRI Digital Repository	Inst.	DSpace
IITD	Inst.	DSpace	sdmctet	Inst.	DSpace
MoES:Open Access Digital Repository	Inst.	EPrints	ShodhGanga: A reservoir of Indian theses	Aggregating	DSpace
SBT MKU	Inst.	EPrints	Social Science Cyber Library	Discip.	CALIBRE
IIHR	Inst.	DSpace	University of Mysore	Inst.	EPrints
Etheses - A Saurashtra University Library Service	Inst.	EPrints	Vidya Prasarak Mandal - Thane	Inst.	DSpace
NITR	Inst.	EPrints	WeSchool Digital Repository	Inst.	DSpace

Source: <http://v2.sherpa.ac.uk/>

Growth of OAIR in India

Figure-1 shows the growth rate of OAIR in India, started in India by 2005 with 3 repositories later on growing slowly, after 2013 every year it is growing tremendously on the average of 44.42% every year.

Figure-1 Growth of OAIR in India

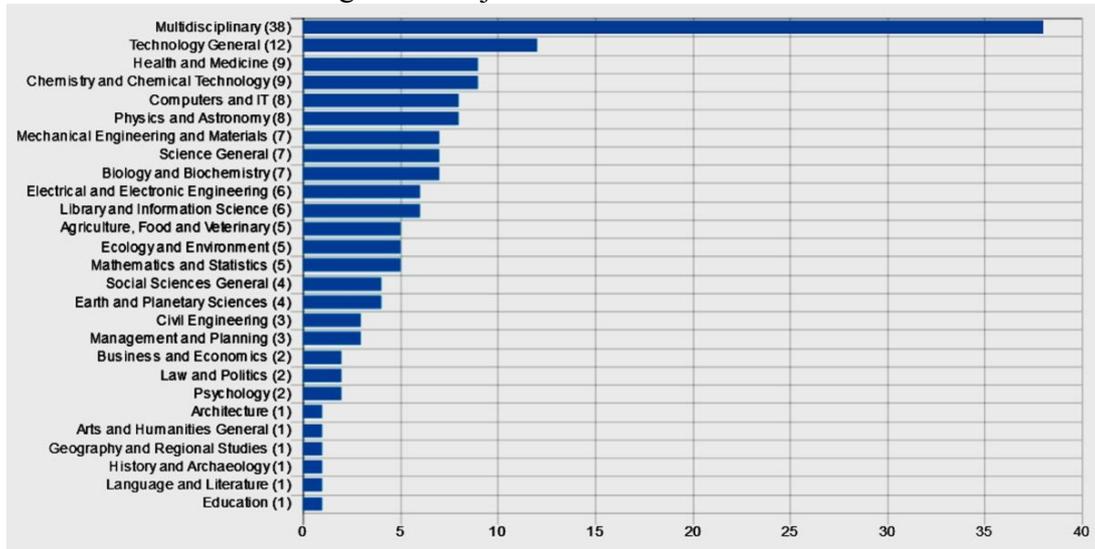


Source: <http://v2.sherpa.ac.uk/>

Subject-wise OAIR of India

Figure-2 indicates the subject-wise OAIR in India, there are highest with 38 Multidisciplinary repositories following Technology (12), Health& Medicine and Chemistry & Chemical technology (9), Computer & IT and Physics & Astronomy (8) and the lowest only one repositories are Archetecture, Arts & Humanities, Geography, Regional Studies, History & Archeology, Language & Literature and Education

Figure-2 Subject-wise OAIR of India

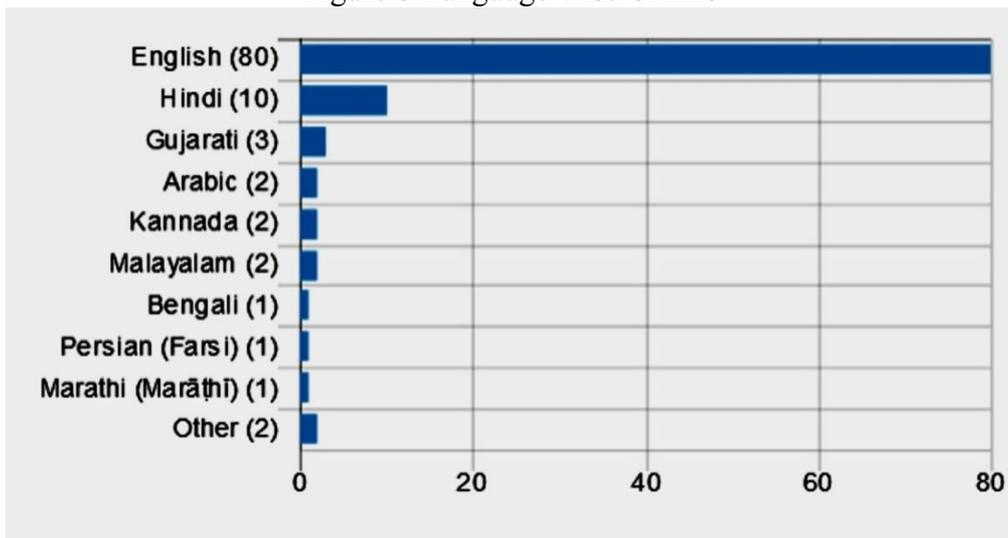


Source: <http://v2.sherpa.ac.uk/>

Language-wise OAIRs

Figure-3 shows the language-wise OAIRs in India. The highest in english language (80), Hindi (10), Gujarati (3), Arabic, Kannada, Malayalam with (2) and Bengali, Persian, Marathi with 1 and other language are 2 OAIRs.

Figure-3 Language-wise OAIRs

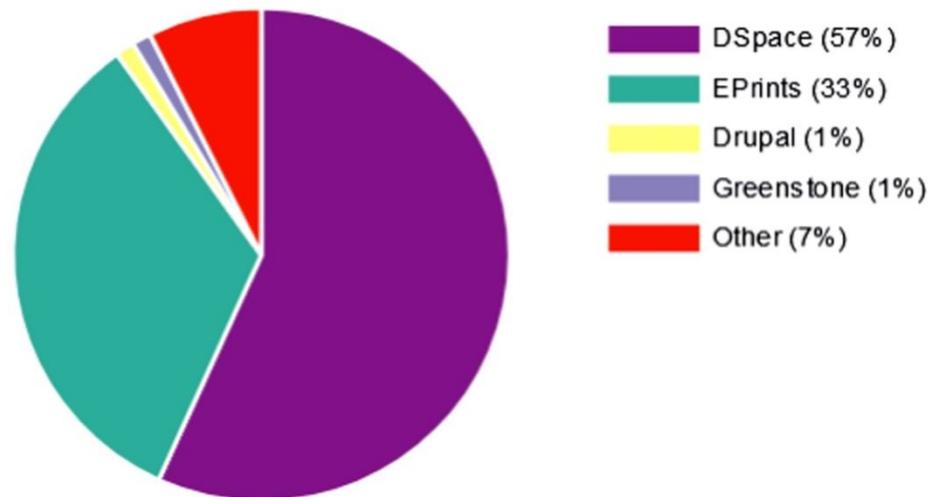


Source: <http://v2.sherpa.ac.uk/>

Software-wise OAIRs

Figure-4 shows the software-wise OAIRs in India. The highest (57%) IRs using DSpace software, following EPrints (33%), Drupa and Greenstone (1%) and other (7%) using other software for OAIRs.

Figure-4 Software-wise OAIRs



Source: <http://v2.sherpa.ac.uk/>

Conclusion

IR's Institutions is an increasing number of going through the problem of hike in the subscription costs of journals. Similarly, others aid substances have also turn out to be very high priced and are turning into out of attain of the libraries. The person strain on libraries particularly in the Institutions of higher learning has elevated manifold and as a end result the libraries are required to equipment themselves to meet their complete and more advantageous information needs. On the other hand, new thrust areas are additionally coming up and libraries need to fulfil these new statistics needs as well. Thus, the IR's Institutes have to reflect on consideration on a number viable alternatives. In this direction, IR machine has emerged as a viable gadget for meeting challenges of the growing price and to meet the user's needs. Indian initiatives have proved that there is no longer much problem in initiating the IR in establishments of higher learning. Some classes have been learnt which are mentioned above and equal may be useful for others.

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