

BUILDING AN INSTITUTIONAL REPOSITORY FOR NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH: A CASE STUDY

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Abstract:

An institutional repository expands a scientific library's ability to participate in the scholarly communication system, and this capability should be considered a source of value, especially in a world that continues to migrate to the digital. The spread of knowledge in term of publications among the community is also an important task of scientific institute. Institutional repository fulfils this necessity. In this consequence NIOH has been developing an institutional repository to accumulate the occupational health research work of this institute. In this article, a case study of National Institute of Occupational Health (NIOH) institutional repository namely "?????" (Kalpakosh) is reported.

KEYWORDS :

Institutional Repository, Kalpakosh, Scientific Library.

INTRODUCTION

The institutional repository provides a platform for better visibility of an institution and enables worldwide access to the research finding of the institution. An institutional repository is a database with a set of services to capture, store, index, preserve and redistributes a scholarly research in digital formats. It is a set of services that an institute 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 (Lynch, 2003). The common accessibility of an institutional repository is shown in Figure 1. Various research identified the application of institutional repository in many ways such as Scholarly communication, Electronic publishing, Managing collections of research documents, Preserving digital materials for the long term, Adding to the institutes prestige by showcasing its research, Institutional leadership role for the Library Knowledge management, Research assessment, Encouraging open access to scholarly research, Housing digitized collections (Madsen and Oleen, 2013; Sawant, 2011; Russell and Day, 2010; Barton and Waters, 2004).

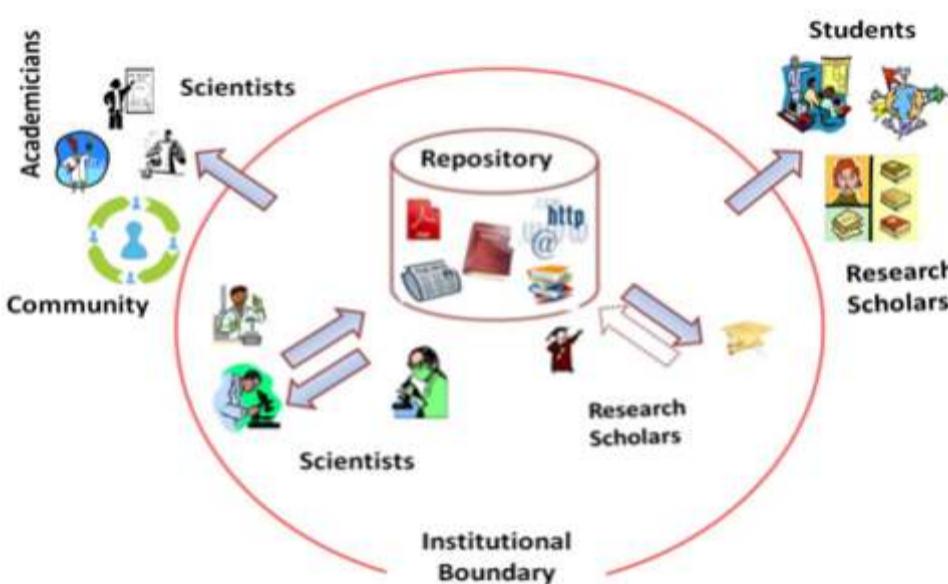


Figure 1: Accessibility boundary of an institutional repository

BACKGROUND

National Institute of Occupational Health (NIOH) Ahmedabad is a research institute of Indian Council of Medical Research (ICMR). It has two Regional Occupational Health Centers (ROHCs) at Bangalore and Kolkata. The NIOH, India's specialist research organization, has been engaged in intensive research to promote the physical health, mental health, and safety at work; to conduct intensive research in the field of occupational and environmental health. NIOH activities have been dedicated based on national priorities and needs. The institute maintains institutional citizenship with the Government and non-government agencies, judiciary, industry, universities and international bodies for research, education and related service activities. The research works of the institute have been published in various research journals/conferences. Now, the institute has more than 1200 publications. Figure 2 (a) shows number of publications of various journals/conferences in a time interval. Figure 2 (b) shows the number of publications in different categories. It is important to manage and spread wider visibility. In this regards, NIOH is developing an institutional repository repository namely “??????” (Kalpakosh). Kalpakosh is a combination of two Sanskrit words. Kalpa (???) means Research and Kosh (???) means Repository. It will be available online at <http://www.kalpakosh.res.in>.

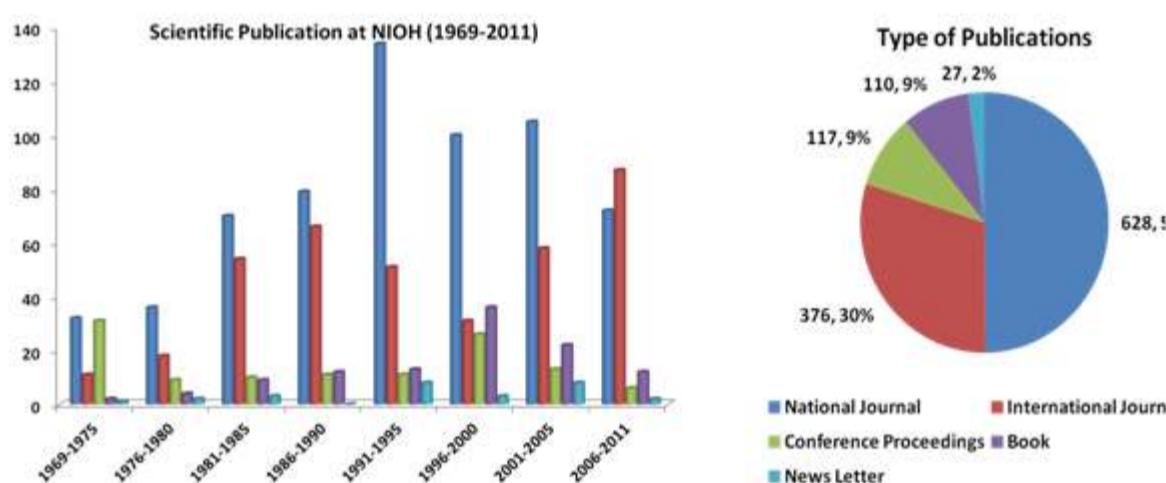


Figure 2: (a) Year wise number of publications (b) Number of publications in different categories.

INSTITUTIONAL REPOSITORY SOFTWARE PLATFORM

Once we have determined the need to create an institutional repository and begun planning our service offering, it is

time to examine the available systems closely to choose which one matches the needs. The essential components of an institutional repository are: Interface for adding content to the system; Interface for searching/browsing/retrieving content; Content database for storing content; Administrative interface to support collection management and preservation activities (Li and Banach, 2011; Barton and Water, 2004). There are several open source and commercial, institutional repository software platforms available such as DSpace developed by HP Labs and MIT Libraries, EPrints developed by University of Southampton, Fedora jointly developed by the University of Virginia and Cornell University, and Greenstone developed by New Zealand Digital Library Project at the University of Waikato (Tsai et al., 2006; Barton and Water, 2004). These provide facility of customization as per requirement of institute. In our work, a DSpace an open source institutional repository software platform was adopted for the customization as need for NIOH institutional repository. The major reason we chose to adopt the DSpace system is because it contains several stable built-in modules such as the Open Archives Initiative - Protocol for Metadata Harvesting (OAI-PMH) support, indexing and retrieval, and content management. As open source software, DSpace can be easily modified to develop new services upon it. At present DSpace most closely fits our goals of an institutional repository, though, a common and standardized access interface could be deployed across the diverse repository and archival systems. The DSpace digital repository system provides us a test-bed for our prototype system. It captures, stores, indexes, preserves and redistributes an organization's research material in digital formats (Tsai et al., 2006; Holt et al., 2009).

IMPLEMENTATION OF NIOH INSTITUTIONAL REPOSITORY

There were three major issues for the proper organization of research work, metadata mapping and preservation, and navigation when implementing DSpace as the institutional repository (Tsai et al., 2006). The occupational health research carried out in different dimensions as per mandate of the institute. Therefore, the publications of the occupational health research works were classified into four communities such as human study, experimental study, environmental study and general study for the proper navigation and placement of research articles. Further, each community was classified into various collections. Figure 3 depicts the communities and collections used in NIOHIR.

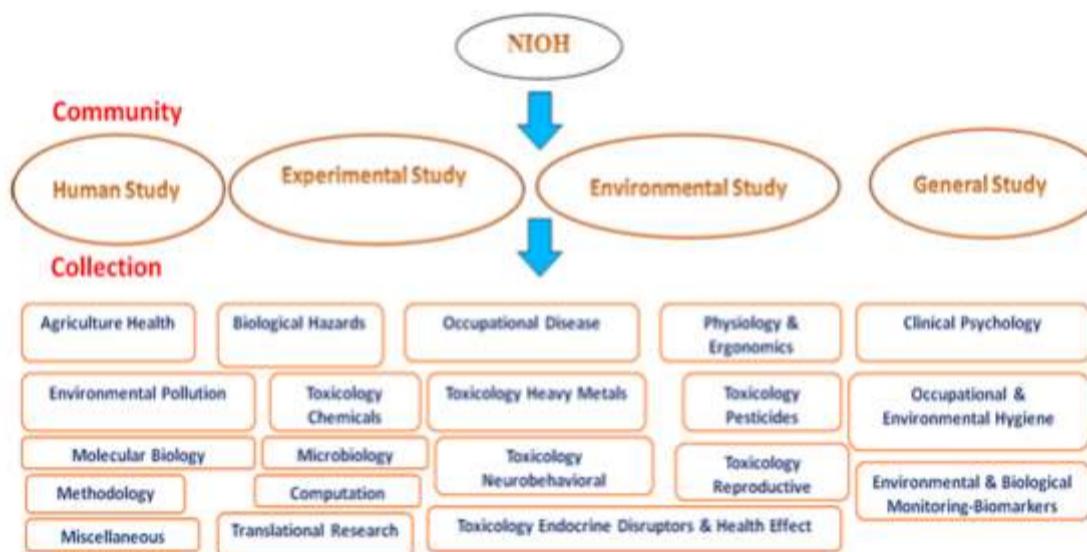


Figure 3: Communities and Collections

The user friendly interface is provided for the smooth navigation. Figure 4 shows the home page of the institutional repository. It contains browsing, searching, community options. Also, it gives the information of about institute and contact details. The login facility is also provided on this page. Browsing facility is an important component to navigate or search the items. Communities and collection, issue date, author, title and subject wise browsing facilities is provided. Figure 5 shows an example of a community display with its collections. Figure 6 shows an example of browsing for the publication on the issue date. It also provides facility to arrange publications in ascending or descending order on the issue date. Similarly, it can be browsed the publications on title, author or subject wise.

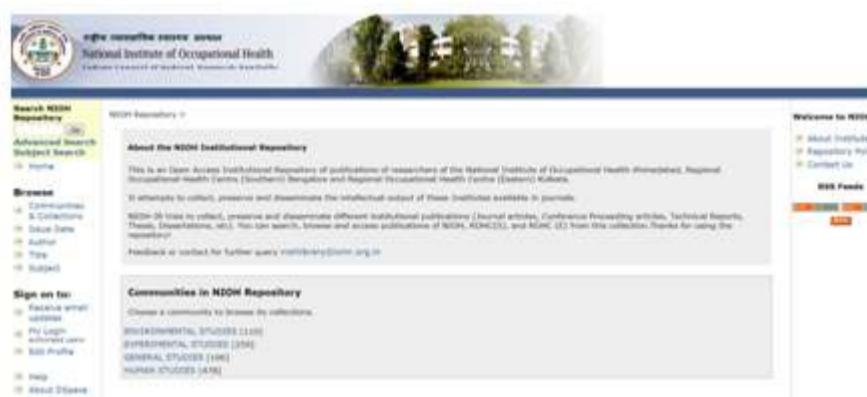


Figure 4: Home page of Institutional Repository "Kalpakosh".



Figure 5: Environmental Studies community and its related collections.

In the first view of browsing issue date, title, author(s) name is displayed. After double clicking on the title, the closer view of publication is appeared. It contains journal information, keywords, publisher, Citation, Abstract, ISSN additionally. Also, it provide to view the complete metadata information by clicking show full item record. The end user also interested to know about the number of citations and impact factor of journal of an article. Therefore, this information is incorporated with each publication.

NIOH Repository > Browsing by Submit Date		
Jump to a point in the index: (Choose year): (Choose month): (Or type in a year):		
Sort by:	submit date	Or order: Descending <input checked="" type="checkbox"/> Results/Page: 25 <input type="checkbox"/> Authors/Record: All <input type="checkbox"/> Update
		Showing results 1 to 25 of 1942
Issue Date	Title	Author(s)
2012	Fluoride levels in drinking water and other surface water of an industrial area with off Odisha State. H. Tudu	Ravichandran R; Bhattacharya SK; Mukherjee AK; Gangopadhyay PK; Raychaudhury A; Sanyal H; Sen SJ; Narayana J; Ravichandran R; Rajesh R
2012	Assessment of Indoor Air Pollutants with Special Reference to Particulate Matter Poly Aromatic hydrocarbon in Rural Village.	
2012	Organochlorine Pesticides and Polychlorinated Biphenyls in Various Tissues of Shelducks in Nalakana Bird Sanctuary, Chilika Lake, Odisha, India	Dhananjayan VJ
2012	Variability of BTEX in Residential Indoor Air of Kolkata Metropolitan City.	Majumder DJ; Mukherjee AK; Mukhopadhyay K; Sen S
2012	Role of Liver Fungi in Removing Trace Metals from Electropolishing Effluent.	Padan Arup; Biswas HK; Rajesh Singh
2012	Situational analysis of nursing education and work force in India.	Tiwari RBJ; Sharma PK; Zidpey SP
2012	Organochlorine Pesticides residue in blood samples of agriculture and sheep wool workers in Bangalore (Karnataka) India. Bull of Env Cont Toxicology, 2012; 88: 487-500	Dhananjayan VJ; Ravichandran R; Rajmohan H R; Tiwary Gajendra PK; Biswas SK; Rayamajhi K; Chatterjee HK; Chakraborty B; Mukherjee B
2012	Socio-economic status of workers of building construction industry.	Tiwari RBJ; Saha AJ; Sahoo SK; Parikh JH
2012	Blood chromium levels of children working in gem-polishing industries in India.	

Figure 6. Display the publications year wise.



Figure 7. Showing the publications details.



Figure 8: Meta data information about a publication.

The administrative tools are provided for proper management for the inclusion and deletion of the publications. Administrative tools cover the item inclusion and withdrawn, editing of news, authorization facility, etc. Statistics facility is also provided to see the usability of the institutional repository. By using this facility, administrators will be able to see the statistics such which publication views several times, what are the monthly/yearly frequency to view the articles etc.

CONCLUSION

The importance of institutional repository in the this information age is placing greater demands. In this scenario NIOH is responsible for the creation, storage, management and preservation the institutional research activities. This article shares the experience of our implementation of DSpace system for the digital archive communities as institutional repository. We provided a systematic arrangement of occupational health research work on institutional repository with optimistic navigation features.

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