Joomla as an Alternate System of Institutional Repository in Visva-Bharati University

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Abstract

In the paperless society, the reorganization of an institutional repository (IR) has been increasing tremendously which now became an essential infrastructure of intellectual communication. (Jain, Bentley, & Oladiran) An IR is a collection of digitized documents consisting of accessible collections of scholarly publications that represent the intellectual assets of an institution. It is a system for academic institutions to manage the digitized documents their communities produce, maximize access to research outputs both preprint and postprint publications and also to increase the visibility and academic prestige of both the institution and authors. This paper will draw the attentions of library administrators about an alternate (except different repositories software likewise DSpace, Eprints, Greenstone, etc) way to manage the Institutional Repository for the University / Institute.

Keywords: Institutional Repository, Digital Repository, IR, Joomla, DSpace, Content Management System.

1. Background

The present paper is an extension of literature, initially published in Visva-Bharati Library Network e-Newsletter, 4(5), 2017 as a tutorial entitled as "Institutional Repository of Visva-Bharati: New Look of Web Interface through Joomla".
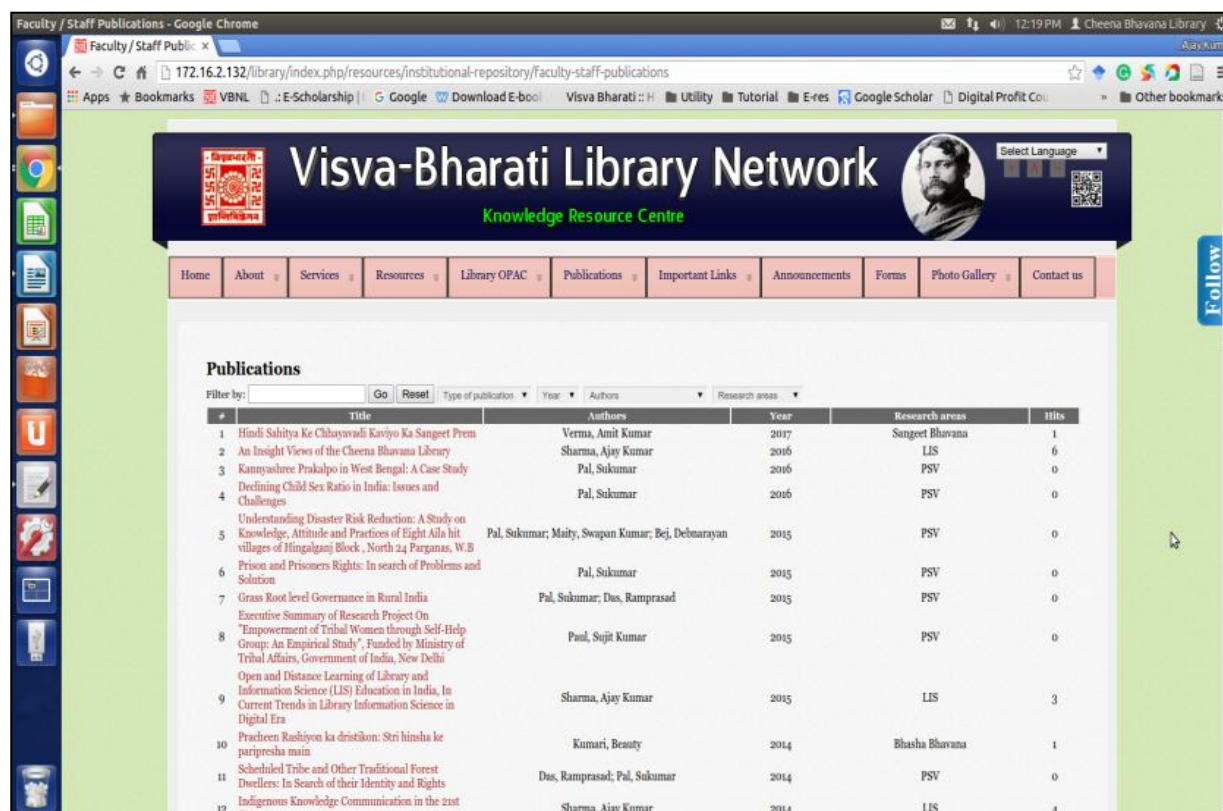
Although the web page of Institutional Repository for Visva-Bharati has been created long back but that was merely a template & non-interactive webpage designed in HTML. Institutional Repository (IR) of Visva-Bharati faculty, staff & scholars has been actually started since 2011, when research publications have been shared to library for upload on Visva-Bharati website. The new interface through Joomla has been implemented in the month of April 2017 with different types of functionalities and search interface. In the latest updates users can freely truncate their search term by different types of search like title, type of publication, authors, year of publication, bhavana/subject/research etc. Joomla is a freely available Content Management System (CMS), which is used to build websites and online applications and there is freedom to modify or change its source code. Therefore, it is categorized as open source software and extendable which is separated into frontend templates and back-end templates (administrator). Joomla is developed using PHP, Object Oriented Programming, software design patterns and MySQL (used for storing the data). (Tutorials Point (I) Pvt. Ltd., 2005)

2. Aim of this IR

Authors may get citation based on the details of the original publication without hampering copyright issues. The download of full text from outside the campus is being restricted but, they can visualize the bibliographic details of the publications. Sometimes, VB fraternity may not be aware about some publications of his/her colleagues & scholars and for which they need to pay to the publishers or else to have the accessibility of the full text of one particular publication. This initiative may remove that kind of limitation and indirectly enhance the interdisciplinary research. Thus, it is helpful to both author/contributor of the publication as well as colleagues & scholars of the institute being users.

3. URL & Layout

Visva-Bharati Library website can be accessed by two URLs. Outside the university campus, it may be accessed at http://14.139.211.2/library/index.php and within/from the campus it may be accessed on intranet at http://172.16.2.132/liibrary/index.php The new look of web display / interface of IR on its website under Faculty / Staff / Scholars publications (http://14.139.211.2/library/index.php/resources/institutional-repository/faculty-staff-publications) which may be browsed under the sub-menu name 'Institutional Repository' of Resources menu, highlighting the publications list, search interface along with hits.

Figure - 1: Layout of IR Interface

4. Implementation

Visva-Bharati Library has created its repository through J! Research, a component for Joomla which allows for management of research-related work such as; publications, projects, and theses categorized by research area. The extension is oriented to University researchers and

research departments which utilize or plan to adopt Joomla as their content management system for publishing research. (joomlaresearch) Though the Visva-Bharati Library has also developed its repository using DSpace (software for developing Institutional Repository) but author would like to shows an alternate system of various repositories software (likewise DSpace, Eprints, Greenstone, etc) for developing digital library.

5. Features

There are several important features & functions of this component, some of which include the following: (joomlaresearch)

- ➢ Management of Projects, Research Areas, Publications, Theses, Staff, Facilities and Cooperations.
- ➢ Automatic Inline Citation and Bibliography Generation.
- ➢ APA, MLA, IEEE, Chicago, CSE and Vancouver Citation Styles.
- ➢ Bibutils 3.x Integration.
- ➢ Publications Import/Export in MODS, RIS, and Bibtex formats.
- ➢ Multilingual Support

6. Coverage

It covers the publications of faculty, staff or research scholar of Visva-Bharati fraternity. Its publications vary from journal articles, books, book chapters, proceedings, thesis, patents, technical reports, etc.

Research Area	No. of Publications	Percentage (%)
LIS (*Visva-Bharati Library Network*)	24	25.5
Siksha Bhavana (*Institute of Science*)	28	29.8
Bhasha Bhavana (*Institute of Languages, Literature and Culture*)	06	6.4
Sangeet Bhavana (*Institute of Dance, Drama & Music*)	12	12.8
Vinaya Bhavana (*Institute of Education*)	12	12.8
Palli Samgathana Vibhaga (*Institute of Rural Reconstruction*)	12	12.8

Table - 1: Number of Publications uploaded at Visva-Bharati Library

Here research area has been denoted by the attached institute or bhavana / department of the author of the publications. Though Visva-Bharati University has 12 bhavanas / institutes and 15 centers in its campus. The data represented in above table merely not actually representing all the publications of Visva-Bharati fraternity. Users from the Visva-Bharati now started to share their publication to library for upload on library website for its wider accessibility and ultimately got increased hits & citations. From the given data, it resembles that mass awareness is required amongst the Visva-Bharati fraternity.

From the figure - 2 Siksha Bhavana shared 28 publications and got top position securing 29.8 % and Visva-Bharati Library secured second top position of 25.5 % by sharing 24 publications. It would be impartial analysis at this stage when people started sharing their publication for wider accessibility. But, I personally feel for analysis of this data for creating competitive environment amongst different Bhavana / Institutes / Centers of Visva-Bharati

and ultimately share more and more publications of their departments for securing better positions.
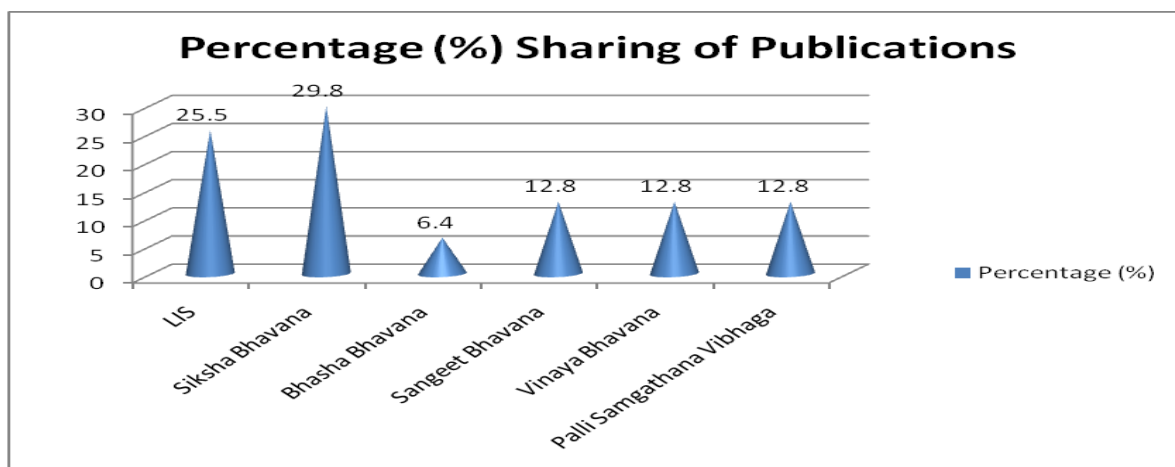

Figure - 2: Percentage sharing of Publications

7. Accessibility

Though the new interface of IR with all bibliographic details is accessible globally but access of its full text is restricted within the Visva-Bharati University Campus (Computers using Visva-Bharati Networking – controlled by Computer Centre). However, if author(s) publishes his/her publications in open access environment, that particular publications will be accessible throughout the world.

8. Functionality

Some distinctive attributes have been implemented in this new interface of Institutional Repository. All the publications may get numbers of hits for its full text access and this feature may be helpful to users to get the right paper at right time easily and quickly from this IR.

a. *Title search / filter*: Users may search / filter with any text from the title of the documents. Search term may entered and press to go button, it matches the term given with the entered titles of the documents and gives the result irrespective of years and type of publications.

Figure - 3: Textual search

b. *Filter by type of publications***:** Users may filter all the publications with its publications type likewise journal articles, books, book chapters, proceedings, thesis, patents, technical reports, etc. Users may get selected type of publications at one place irrespective of years, authors and research areas.
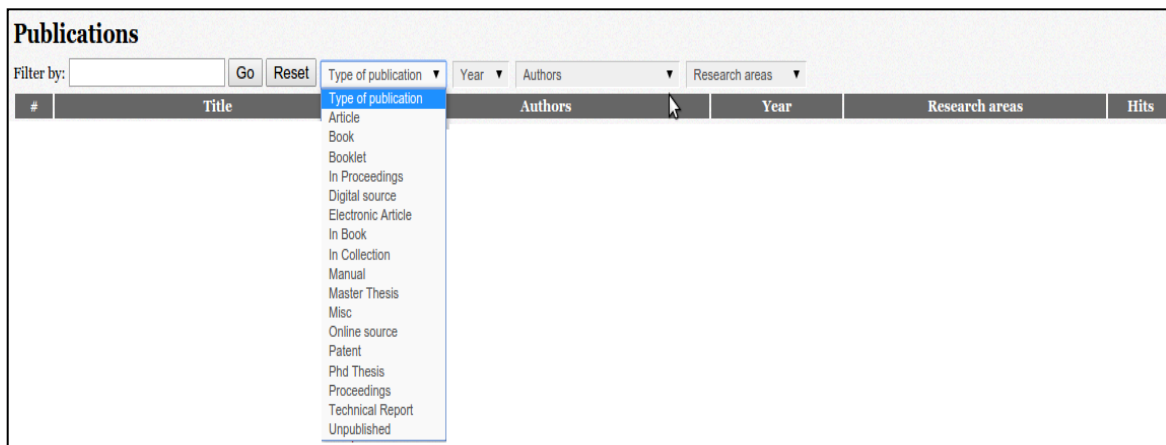

Figure - 4: Filter by type of publications

c. *Filter by year of publications***:** Users may filter / sort all the publications with its publications year, in other words users may get selected years of publications at one place irrespective of types, authors and research areas.
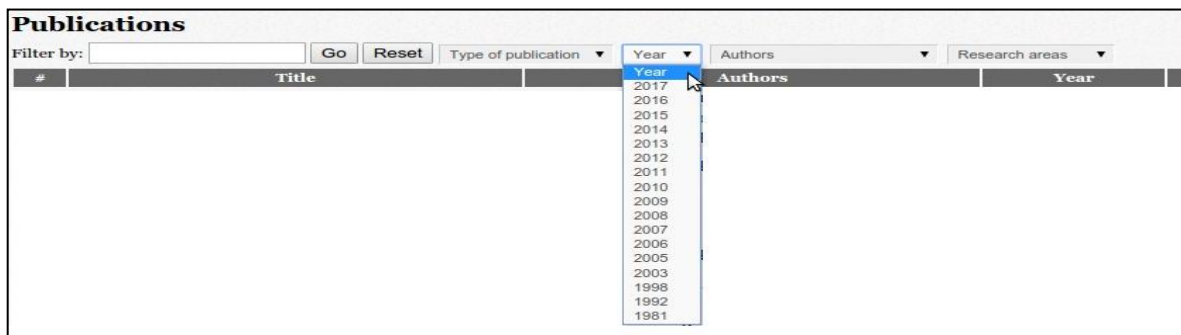

Figure - 5: Filter by year of publications

d. *Filter by author of publications***:** Users have also the facility to filter all the publications with its author, means same author publications may get at one place irrespective of type, years and research areas. Author from the outside Visva-Bharati can also be browsed through this functionality in case of joint authorship with Visva-Bharati fraternity.

Figure - 6: Filter by author

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*e. **Filter by research areas:*** Research areas indicate the Bhavana / department of Visva-Bharati of the concerned author (based on first author of the publication). Users may filter / sort all the publications of same Bhavana at one place irrespective of types, authors and year of publications.

Figure - 7: Filter by research area

9. Appeal

All the Faculty / Staff / Scholar of Visva-Bharati University are requested to provide the soft copy (preferably pdf files of the publication) of their publications to make accessible within the university campus and wining citations / hits and also make the repository more resourceful.

10. Conclusion

An Institutional Repository is progressive in all respects and it satisfies every aspects of digital documents specially "building digital collections, creating tools for collecting, analyzing, and authoring digital information; using digital collections and analytical tools to generate new intellectual products" (American Council of Learned Societies, 2006). It has futuristic concept that looks at managing digital data of all sorts both for now and future; it will develop gradually along with the whole digital scholarship environment and even foster and catalyze developments. Creating digital repository with any content management software (CMS) is a unique attempt with comparison digital repository softwares.

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