Abstract:

The development of technology has brought enormous opportunity to bring the results of research primarily to all through digital communication – anyone, anywhere and anytime. IT is playing an important role in today’s world and these technologies are meant to help the customers/clientele. To keep pace with the changing world, libraries are also using these technologies to upgrade themselves, improving services, reaching each and every corner and making available resource to reach its users and Institutional Repository is an emerging concept and playing an important role in preserving the intellectual capital of the academic and research institutions. Now every institution wants to launch its IR and one such initiative is done by NISCAIR by launching NOPR.

Keywords: Institutional Repository, Digital repository, NOPR, DSPACE

1. Introduction:

The advancement in technology made us to think in terms of storing knowledge in digital form and several organizations are utilising these technology to stand in this competitive world and one such initiative is to build an institutional repository in less expensive ways. Institutional repository helps in for long-term preservation of knowledge base and cultures.

Institutional repositories (IRs) are proliferating as they become an indispensable component for information and knowledge sharing in the scholarly world (Lynch, 2005).

2. NISCAIR Initiatives:

National Institute of Science Communication and Information Resources (NISCAIR) came into existence on 30 September 2002 with the merger of National Institute of Science Communication (NISCOM) and Indian National Scientific Documentation Centre (INSDOC). Both NISCOM and INSDOC, the two premier institutes of the Council of Scientific and Industrial Research (CSIR), were devoted to dissemination and documentation of S&T information.

NISCAIR “serves as a prime custodian of all information resources on current and traditional knowledge systems in science and technology in the country”.

NOPR (NISCAIR online periodical repository): NISCAIR Initiatives.

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Institutional repository is becoming more relevant for the scientific and technical institution and for this NISCAIR also played important role in saving the intellectual capital of its Scientists.

NOPR is an online periodical repository of NISCAIR. It is only for periodicals. NISCAIR publishes 17 primary and two secondary scientific journals. NISCAIR built NOPR using DSPACE for electronic access to all those journals. Current issues of all the research journals are published in NOPR for open access well before the publication of print version. The repository has data spanning from 2007 till current issues and for some journals from 2002 onwards.

To increase visibility of NISCAIR journals, all the journals are registered with Directory of Open Access Journals (DOAJ), Registry of Open Access Repositories (ROAR), Directory of Open Access Repositories (DOAR), Google Analytics and all of the prominent search engines.

3. Institutional Repository

Various definitions have been given by various authors working in the field of library and information science.

An institutional repository (IR) is an electronic system that captures, preserves, and provides access to the digital work products of a community (Lynch, 2003).

IRs provide an institution with a mechanism to showcase its scholarly output, centralize and introduce efficiencies to the stewardship of digital documents of value, and respond proactively to the escalating crisis in scholarly communication (Gibbons, 2004).

Johnson (2002) defines IR as “a digital archive of the intellectual product created by the faculty, research staff, and students of an institution and accessible to end users both within and outside of the institution, with few if any barriers to access”.

Crow (2002) defines Institutional repository as “digital archive of the intellectual product created by the faculty, research staff, and students of an institution and accessible to end users both within and outside of the institution, with few if any barriers to access”.

More expanded definition of IR is given by Wikipedia as “an online locus for collecting, preserving, and disseminating -- in digital form -- the intellectual output of an institution, particularly a research institution”.

Dictionary of library and information science define IR as “a set of services offered by a university or group of universities to members of its community for the management and dissemination of scholarly materials in digital format created by the institution and its community members, such as e-prints, technical reports, theses and dissertations, data sets, and teaching materials”.

An IR is a digital collection of an institution’s intellectual output. It provides a web-based mechanism for researchers to deposit (self-archive) and access their research publications.
Gibbons (2006) identifies the five core features of institutional repositories: digital content; community-driven and focused; institutionally supported; durable and permanent; and accessible content.

He also identifies functions of an institutional repository and these are: material submission; metadata application; access control; discovery support; distribution; and preservation.

4. DSPACE

Software is a program or instructions that direct the computer. There are two types of software are available one is commercial software and other one is open source software. Commercial software are software that is designed and developed for sale to the general public whereas Open source software (OSS) is a software that available in source code form for which the source code and certain other rights normally reserved for copyright holders are provided under a software license that permits users to study, change, and improve the software. Commercial software is very expensive therefore libraries are moving towards open source software. There is various kind of open source software freely available. Some of the popular Open Source Software available for creating and designing institutional repositories are DSpace, Fedora, EPrints, Greenstone etc.

NISCAIR uses Dspace for digitising its scientific intellectual capital. Dspace is capable of handling multilingual content, even at Metadata level using globally accepted UNICODE standard.

Dspace is selected because:

- It is open source- no cost is involved for IR software
- Good functionality and features
- Provisions for controlled vocabulary.
- Use of Dublin core metadata standard.
- Use of URI’s-persistent network identifiers that eliminates online citation decay.
- Workflow largely controlled by the groups of submitters-freeing up librarian time and giving submitters a feeling of ownership (Dill E. & Palmer KL).

4.1 Metadata

As we already know that Metadata is data about data and Dspace uses “Dublin Core metadata standard” for describing items intellectually. Only three fields are required: title, language, and submission date and all other fields are optional. There are also additional fields for document such as abstracts, keywords etc. This metadata is displayed in the item record in DSpace, and is indexed for browsing and searching the system within a collection, across collections, or across Communities.
4.2 Search and Browse in NOPR:

NOPR facilitates simple search and advanced search. It also facilitates browsing by publication, title, author, and keyword and by date also. The search options are the standard Basic (menu based with drop downs and boxes) and Advanced (commands). There are several searchable fields and document types that allow the user to easily narrow their search.

NISCAIR publication collection group contains sub-collections. It contains Natural product repository, popular science magazines and Research journals. NOPR allows browsing by title, by publication, by author, by keyword and also by date.

![Welcome screen of NOPR]

Fig. 1: Welcome screen of NOPR
NOPR facilitates easy setup of email alerts and RSS feed, to stay-up-to-date on new articles whenever added to NOPR. It also provides quick links to the journals.

Fig2: Advanced Search
NISCAIR publications collections group contains sub-collection within this group are:

i) Natural Products repository

ii) Popular Science magazines

iii) Research Journals

It also lists and provide link to the recent articles that are submitted to NOPR.
### Fig 4: Search results shown in NOPR

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<td><strong>Title</strong></td>
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<td>Sufficiency of Disclosure in Patent Specification</td>
<td>Gupta, Maram Suresh</td>
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<td>Patent Activity by Patent Agents in India</td>
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Fig 5: Metadata for item in NOPR.
5. Benefits of NOPR:

- It raises the prestige of the institution.
- It improved visibility and act as a platform for local research.
- It facilitates research collaboration and flow of information.
- It brings the intellectual output in an organised way.
- It lowers the access barriers and offers the widest possible dissemination of an individual scholar’s work.
- It improves citation rates for published articles
- It preserves and provides long-term access to the scholars’ research output

6. Conclusion:

Institutional repository is lifesaving of research institution for saving the intellectual capital of its research scientists. Research communities including students not only in India but all over the world are being benefited by open access of NISCAIR journals. This will also help in enhancing the accessibility, visibility and subscription base of NISCAIR journals at National and International level. Traditional libraries are limited by storage space; digital libraries/repositories have the potential to store much more scholarly information and require very little space to contain it. As such, the cost of maintaining an institutional digital library is much lower than that of a traditional library.

References:


