Institutional Repositories: A key role of the librarians and LIS professionals

Mr. Krupal D. Shinde

Assistant Librarian, Annasaheb Vartak College of Arts, Kedarnath Malhotra College of Commerce, E. S. Andrades College of Science, Vasai – 401202, Maharashtra, India.

Dr. Jagdish N. Kulkarni

Librarian & Director (Additional Charge), Knowledge Resource Centre, SRTM University, Nanded-431606, Maharashtra, India.

Abstract:

Institutional Repositories (IRs) have become an increasingly important tool for preserving and disseminating the institute's scholarly literature in recent years. This study explores the role of librarians and library and information science professionals in the IR. It also aims to identify any special training needed for library and information science professionals. Afterwards, it describes the research methodology that was used for the study and tracks the various research literature related to it. Following that, present the results of the current study and the analysis of the data. The survey revealed that the library handled IRs, and librarians played a very significant role in IRs. Many institutions engaged in IR also employ library and information science professionals. The Librarian & Library and Information Science professionals was identified as being a key player in IR.

Keywords: Institutional Repository, Library, LIS professionals, Librarian

Introduction:

In today's information age, information seekers can get information from anywhere in the world with the click of a mouse. Libraries benefit from information and communication technology. They offer electronic services along with traditional

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services. Institutions have transformed their assets digitally over the past few years (Prabhakar & Rani Manjula, 2017). It is undeniable that the digital environment shapes development across all spheres. The same applies to library and information science (LIS). The impact of the ICT environment is more apparent in libraries around the world since libraries are no longer viewed as a repository for books but rather as a gateway to knowledge materials and a hub for innovation and pleasure of the institutes (Kataria, 2007).

A common contemporary trend for disseminating and sharing research is IRs. They are a practical institutional instrument for managing and disseminating institute student, researcher & faculties digital materials to broaden access to them on both an institutional and international scale (Dhanakar et al., 2008). A library's involvement in institutional repositories is an opportunity to become more deeply involved in the shift in scholarly communication and to contribute to that shift and for librarians, it offers a chance to acquire new skills and roles as well as reengineer their knowledge of access control, metadata, preservation, and format migration (Cassella, & Morando, 2012). In the past few years, academics and research institutions have increasingly turned to digital documents for the production and use of data. These materials include text, photographs, graphics, archival material, videos and audios, websites, blogs, vlogs, televisions, and radio broadcasts (Rao, 2007). IRs are becoming increasingly important as library resources. Digital content is a vital component of sustainable IRs (Chanai, 2019).

This paper begins with an overview of contemporary trends in preserving and disseminating the institute's scholarly literature through IRs. After that it tracks the various research literature related to the study and describes the research methodology used for the study. Then, present the data analysis and findings of the current study. Mainly this paper discusses the role of librarians and LIS professionals in IR management.

Concept of Institutional Repository:

"An Institutional Repository is an organization based set of services which the organization offers to the members of its community for the management and

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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).

According to Shearer (2006) "An IR is a digital archive of an institution's intellectual output. They collect and make accessible a range of research material and also part of a larger global system of repositories".

Objectives:

The main objective of the present study were as follows:

- To find out the role of the librarians and LIS professionals in the IR.
- To identify any special training is required for the LIS professionals.

Methodology:

A study has been conducted on IR of academic and research institutes in Western Maharashtra. For this study, the author used various information sources such as Directory of Open Access Repositories (OpenDOAR), Registry of Open Access Repositories (ROAR), Research Literature, LIS Links/Groups/Forums. This study used survey and observation techniques, and data was collected from academic and research institutions with IR using questionnaires. In this study, the role of librarians and LIS professionals in IR development and management, training for LIS professionals was discussed.

Scope & Limitation of the study:

Institutional repositories in Western Maharashtra available on the internet have been considered for this study. Institutional repositories available on the intranet, closed institutional repositories, and non-functional IRs were not considered for the study.

Western Maharashtra:

The Western Maharashtra region consists of seven districts Kolhapur, Satara, Sangli, Solapur, Pune, Nasik, and Ahmednagar (Maharashtra forest department, n.d.).

Role of the librarians and LIS professional in IR:

Libraries incur development and maintenance costs of the IR. But librarians should play an effective and significant role in implementing IR as they are responsible for it. For this, librarians should pay special attention to content quality, copyright integrity and preservation (Dhanakaret al., 2008). Considering the repercussions of migrating from custodial responsibilities to actively contributing to the advancement of academic communication, librarians must be prudent when committed to an IR: a paradigm shift from old roles to a much more practical and enhanced institutional environment is required (Chanai, 2019).Effectiveness of LIS professionals can be enhanced through implementation of strategic programs for LIS professionals working for IR. These programs include skill development, effective training and awareness campaigns (Suresha & Srinivasa, 2017). Library and information departments are expected to play a key role in collection development and metadata curation, which makes it only logical for them to manage these digital archives as a part of their strategic functions. The knowledge of traditional librarianship is no longer adequate to run successful IRs. It is necessary to have a variety of abilities, including communication skills, management skills, technical skills and knowledge of access rights and preservation (Cassella, & Morando, 2012). Knowledge of ICT poses a challenge to LIS professionals. For LIS professionals, having sufficient knowledge of HTML language, installing and customizing D-Space to suit the library's needs and operating system requirements is essential. IR success depends on contributors' willingness to submit their intellectual work to IR, so librarians need to convince contributors of the importance of IR (Murugathas & Balasooriya, 2015).

Institutional Repositories in Western Maharashtra:

There are 14 IRs in Western Maharashtra region. Out of 14 IRs ,11 IRs were selected for the study. Non-functional IRs and IRs who did not participate in the survey were excluded from the study. The excluded IRs were:

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- Defence Institute of Advanced Technology (http://192.168.27.101:8080/jspui/): This site can't be reached.

- MES's Institute of Management and Career Courses, Pune (http://125.99.67.226:8080/jspui/): This site can't be reached.

- Sir Parshurambhau College,Pune: This institute did not participate in survey.

The selected IRs for current study and participated in the survey were shown in the table 1.   **Table 1: List of IRs participated in the survey**
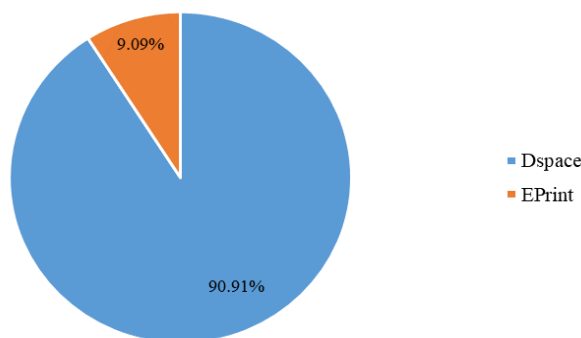
Sr. No.	Institute Name	Repository Name
1	Bhogawati Mahavidyalaya, Kolhapur	Bhogawati Mahavidyalaya Institutional Repository
2	Tararani Vidyapeeth's Kamala College, Kolhapur	Kamala Institutional Repository
3	Shivaji University, Kolhapur	Shiv Dnyansagar
4	National Centre for Cell Science, Pune	IR@NCCS
5	Indian Institute of Science Education and Research, Pune	Digital Repository@IISER
6	PE Society's Modern College of Arts, Science and Commerce, Shivajinagar, Pune	DSpace @ P.E.Society's Modern College of Arts, Science and Commerce
7	Tilak Maharashtra Vidyapeeth, Pune	TMV's Knowledge Resource Centre Digital Repository
8	PE Society's Modern College of Arts, Science and Commerce, Ganeshkhind, Pune	Modern College of Arts, Science and Commerce
9	CSIR-National Chemical Laboratory	CSIR-NCL Digital Repository
10	Gokhale Institute of Political & Economics, Pune	DSpace@GIPE
11	Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune	DSpace@IUCAA

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Results and Discussions:

IR Software used for IR development:

Various IR software like Greenstone, DSpace, Digital Commons, Eprint, PURE, CONTENTdm, HAL, WEKO, etc. are used to develop IR. Fig. 1 illustrates that majority (90.91%) of the institutions in the Western Maharashtra used DSpace IR software for IR development while only 9.09% used Eprint IR software.

Fig 1: IR software used for IR development

Number of records in IRs:

Table 1 provides information on the number of records in the IR of institutions that have their own IR in Western Maharashtra. There were 4 institutes with more than 5000 records in its IR in Western Maharashtra as follows: Gokhale Institute of Political & Economics, PE Society's Modern College of Arts, Science and Commerce, Indian Institute of Science Education and Research, Tilak Maharashtra Vidyapeeth. The IR of the Gokhale Institute of Political & Economics, Pune had the highest number of records (31434).

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Table 1: Number of records in IRs

Sr. No.	Institution Name	No of Records
1	Bhogawati Mahavidyalaya, Kolhapur	1166
2	Tararani Vidyapeeth's Kamala College, Kolhapur	1864
3	Shivaji University, Kolhapur	3858
4	National Centre for Cell Science, Pune	1148
5	Indian Institute of Science Education and Research, Pune	6925
6	PE Society's Modern College of Arts, Science and Commerce, Shivajinagar, Pune	1203
7	Tilak Maharashtra Vidyapeeth, Pune	9498
8	PE Society's Modern College of Arts, Science and Commerce, Ganeshkhind, Pune	5000
9	CSIR-National Chemical Laboratory	2475
10	Gokhale Institute of Political & Economics, Pune	34592
11	Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune	4142

IR managed by the library:

In Table 2, you can find information on who manages the institution's IR. It was observed that the IR of all the institutions participating in the survey was being managed by the library.

Table 2: IR managed by the library

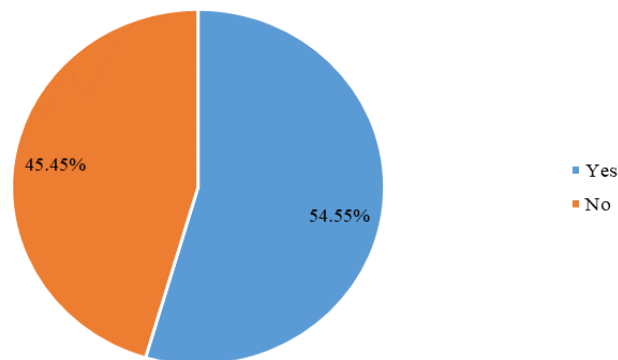| IR managed by the library	Frequency (N=11)	Percent
Yes	11	100
No	0	0

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Role of the librarian:

Table 3 provides information about the role of the librarian in IR. It has been noted that librarians serve in a variety of IR-related tasks, including IR manager, system administrator, reviewer, and customizer. It has been noted that librarians frequently function as IR managers and system administrators.

Table 3: Role of the librarian

Role of the librarian	Frequency (N=11)	Percent
System Administrator	10	90.91
IR Manager	10	90.91
Reviewer	8	72.73
Customizer	7	63.64

Positions of IR Manager is well defined:

Figure 2 shows whether the position of IR manager is well defined in institutions that have IR. It was found that 54.55% of institutions the IR manager's position was well defined while 45.45% of institutions the IR manager's position was not well defined.
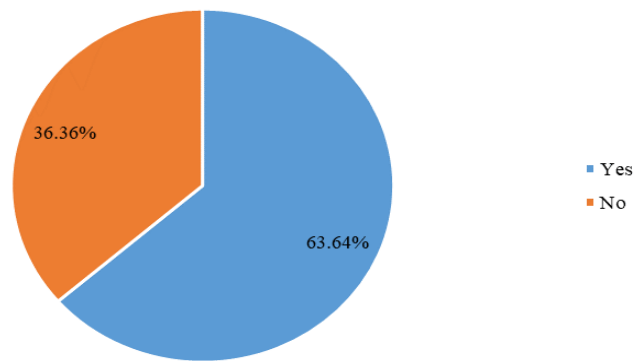

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Fig. 2: Positions of IR Manager is well defined
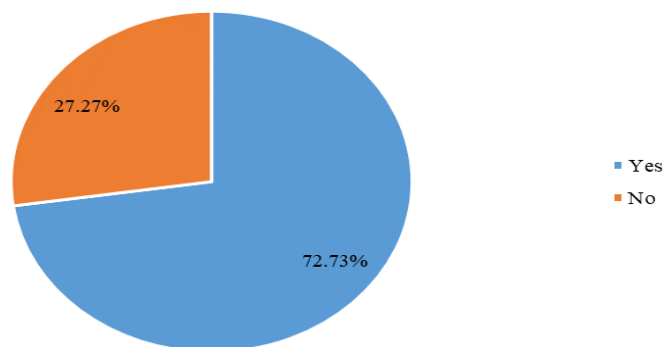
Role of LIS professionals in your IR

Fig. 3 shows whether LIS professionals have a role in IR. It was observed that 63.64% of institutions had LIS professional roles for IR. In contrast, 36.36% of institutions did not have LIS professional roles for IR.

Fig. 3: Role of LIS professionals in your IR

Any special training is required for the LIS professionals:

Fig. 4 shows whether specialized training is required for LIS professionals. Among the surveyed IRs, 72.73% of institute librarians felt specialized training was needed for LIS professionals. However, only 27.27% of institute librarians felt no specialized training was required for LIS professionals.
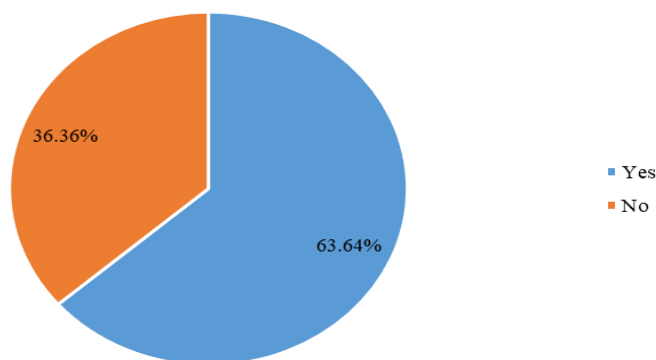

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Fig. 4: Any special training is required for the LIS professionals

Workshop/ Training programme organized at institution:

Figure 5 shows how many IR institutions organized workshops/training programs. It was observed that 63.64% IRs of the institutions had conducted IR related workshops/training programs in their institutions, while 36.36% IRs of the institutions hadn't.

Fig. 5: Workshop/ Training programme organized at institution

Librarians and LIS professionals are the key persons in the IR:

Table 4 illustrate whether librarians and LIS professionals were the key persons in IR. All institutions participating in the survey agreed that librarians and LIS professionals are the key players in IR.

Table 4: Librarians and LIS professionals are the key persons in the IR

Librarians and LIS professionals are the key persons in the IR	Frequency (N=11)	Percent
Yes	11	100
No	0	0

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Findings:

- It was found that the majority of the surveyed institutions in Western Maharashtra (90.91%) used DSpace IR software for establishing IR while only 9.09% used Eprint IR software.

- Gokhale Institute of Political and Economics, Pune had the highest number of records (31434) in IR.

- All the IRs that participated in the survey were managed by the institution's library.

- The survey revealed that the role of the librarian in IR was very complex i.e. simultaneously he/she performed different roles like system administrator, IR manager, reviewer, and customizer.

- The study found that the position of IR manager was not properly defined in 45.45% of the institutions.

- It was found that 63.64% of institutions have LIS professionals involved in IR related work.

- The survey revealed that IR institutions where LIS professionals worked in IR usually did the following tasks such as assisting in the formation of IR, scanning identified documents for IR, entering Metadata, and uploading identified documents.

- Most institutional librarians surveyed (72.73%) believe that specialized training for LIS professionals is necessary.

- It is noteworthy that most (63.64%) of the IR institutions represented in the survey offered training programs/workshops related to IR.

- In all institutions that participated in the survey, librarians and LIS professionals were identified as the key players in IR.

Conclusion:

It was revealed from the survey that IRs were handled by the institution's library, and librarians played a very complex role in IR. LIS professionals also performed IR-related

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tasks in most IR institutions (63.64%). According to 72.73% of institutional librarians surveyed, LIS professionals need specialized training. It was identified that librarians and LIS professionals are key players in IR. It is clear from this study that the library's role was important in the development and management of IR. Considering the growing importance and benefits of IR, it is clear that IR can be established in any institution's library environment. However, librarians and LIS professionals play a crucial role in IR development and maintenance. Therefore, librarians and LIS professionals have the opportunity to acquire the necessary innovative skills related to IR.

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