Institutional Repositories and its Consequences for Government College Libraries

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Abstract

This paper describes the relevance of institutional repository and seeks to give a plan for formation of institutional repositories at government colleges particularly in India. It also discusses the benefits and obstacles of setting up an Institutional Repository, and librarians’ and authors’ roles in the successful setting up and management of an Institutional Repository. This concept directly or indirectly insists to all the colleges should come up with the institutional repositories.

1. Introduction

Strategic planning and a larger vision of Indian higher education system has undergone rapid expansion in education. By this impact the society is witnessing transform from developing to advance in education system, in particular higher education and research. In the present system of higher education, degree colleges occupies an unique place, as they function as institutions, transmitting knowledge to the progeny and as project activities for the degree of award and develop new ideas keeping in view the social problems and needs. In the electronic scenario, academic institutions including colleges and universities have increasingly recognized that an institutional repository (IR) is an essential infrastructure of scholarly dissemination.

In India, Presently, there are 121 IRs (registered under ROAR) from different academic institutions such as research & development, Management, universities and colleges etc. It indicates that India is the 3rd position in Asia after Indonesia and Japan. So, India is one of the leading countries having maximum number of institutional repositories in the world, and the
growth of IRs is steadily increasing day by day. Higher Education sector has witnessed a tremendous increase in the number of Universities/University level Institutions & Colleges since Independence. As of February 2017, there are 37,204 colleges and 11,443 stand-alone institutions in India. They should take strong step towards the establishment or setting up of institutional repositories for their future use.

2. Need and purpose of the study

Universities and R&D institutions, have already taken bold step towards the design and development of Institutional repositories. Archiving intellectual works of an institution will reflect the actual activity performance of its students and teachers and its helps to build the same excel in the college as unlike universities and R&D institutions.

In India, most of the Universities and R&D institutes have succeeded already in this way. Therefore the degree colleges also should come up with this technology which helps both the authors and the students to preserve their intellectual works at one place. Today libraries have to serve a variety type of users, unless these libraries have adequate resources such as finance, building, furniture etc., they may not be able to render necessary services to their users. The librarians of such colleges have to take interest in convincing the management and authoritative body towards the importance of institutional repositories. According the survey of literature most of the college libraries, yet have not come up with the IR. Hence, this study paper directly or indirectly insists to all the colleges should come up with the institutional repositories.

Institutional repository has the following purposes and benefits of colleges:

1) Opens up the outputs of the colleges to the world
2) Maximizes the visibility and impact of these outputs as a result
3) Collects and curates digital outputs
4) Manages and measures teaching and learning activities
5) Provides a workspace for work-in-progress, and for collaborative or large-scale projects
6) Enables and encourages interdisciplinary approaches to study and research
7) Facilitates the development and sharing of digital teaching materials and aids
8) Supports student endeavours, providing access to students projects, and orders issued by the colleges and development of e-portfolios

3. Structural model of Institutional Repository

Recently academic institutions have been grappling with how to manage the digital output they produce including journal articles, conference papers, reports, theses & dissertation, teaching materials, artwork, research notes, and research data. Clearly, technology has made it easy to create, store and access digital material. Paradoxically however, while there is potential
for instantaneous access, all too often many materials are not usually made accessible to many users and they remain marooned in the authors’ computers. The Fig-1 shows the structural model of Institutional Repository.

**Fig-1 Structural model of college Institutional Repository (IR)**

### 4. Hardware and Software requirements for IR design.

Hardware and software are interconnected they are essential to set up any kind of system. Similarly, to develop an Institutional Repositories the following software and hardware should be required.

<table>
<thead>
<tr>
<th>Hardware’s</th>
<th>Software’s</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Computer hardware’s:</strong></td>
<td><strong>Digital library application software:</strong></td>
</tr>
<tr>
<td>*Intel Pentium 2.4GHz processor</td>
<td>*Dspace/Greenstone/Eprints etc.</td>
</tr>
<tr>
<td>*512MB RAM /356MB</td>
<td></td>
</tr>
<tr>
<td>*36-36GB, 2 hard drives</td>
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<tr>
<td>*DVD+/RW drive</td>
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<tr>
<td>*150 or larger CRT monitor,</td>
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<tr>
<td>*Good quality Multimedia Kits</td>
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<tr>
<td><strong>Other hardware’s:</strong></td>
<td><strong>Other software’s</strong></td>
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<tr>
<td></td>
<td>*OCR</td>
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<td></td>
<td>*DOI</td>
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<td></td>
<td>*Image Editing Software’s</td>
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</tbody>
</table>
5. Challenges for colleges for IR

Despite the numerous benefits of an IR for colleges, there are implications and potential barriers to its success as;

5.1 Cost: The initial financial cost for an open source software adopted by most institutions for creating IRs is not high but the recurrent costs, especially staff costs (e.g. time spent drafting policies, developing guidelines, publicising, training, supporting users and creating metadata, specialist IT consultancy) may be significant. This is further discussed below.

5.2 Difficulties in generating content: A successful IR depends on the willingness of authors to deposit their work voluntarily and there may be local barriers and hindrances to be overcome.

5.3 Sustaining support and commitment: Far too often, it is difficult to sustain continuous support and commitment from the management and academic staff. It is expensive and difficult to honour, and perhaps it will prove to be all too easy to later abdicate. There is a need for institutions to think seriously before launching institutional repository program as it may disintegrate rapidly if not properly managed.

5.4 Rights management issues: Sometimes researchers are apprehensive about 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.

5.5 Policy Issues: Experiences suggest that an IR will only function to its capacity when a mandate is in place to populate it but clearly researchers can react negatively to any suggestion of compulsion.

5.6 Lack of incentives: 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

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**Table-I Hardware and Software requirements for IR design.**

<table>
<thead>
<tr>
<th>Hardware and Software</th>
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</thead>
<tbody>
<tr>
<td><em>Scanner and Video camera</em></td>
</tr>
<tr>
<td><em>Printer</em></td>
</tr>
<tr>
<td><em>Modem</em></td>
</tr>
<tr>
<td><em>Cables for networking</em></td>
</tr>
<tr>
<td><em>Switch, router, bridge and other connecting devices</em></td>
</tr>
<tr>
<td><em>CD/DVDs or other external storage devices</em></td>
</tr>
<tr>
<td><em>UPS Uninterrupted Power Supply</em></td>
</tr>
<tr>
<td><em>Operating Systems</em></td>
</tr>
<tr>
<td><em>Data Base Management System Software</em></td>
</tr>
<tr>
<td><em>Programming/ Scripting Language</em></td>
</tr>
<tr>
<td><em>Firewall &amp; Protection Software</em></td>
</tr>
</tbody>
</table>
available in other institutions. The challenge therefore in implementing an IR is to promote the benefits it offers while allaying stakeholders' concerns.

6. Remedies for successful implementation of institutional repositories in degree college libraries

Higher Education sector has witnessed a tremendous increase in the number of colleges in India. The libraries of such colleges should incorporate advanced technology to cater needs and requirement of users as well as administration. IR is the one such technology which increases images of colleges by archiving their intellectual works of a college. Hence, the colleges should adopt some necessary techniques for implement IR successfully. The necessary steps are as follows in below.

6.1 Role of Librarians:

Librarians are eyes and ears of library. They understand users needs and perceptions. They know what's working and what's not. When they act as information selectors, IR to succeed, it is essential that they be involved in its planning, implementation, and operation. So librarians have critical roles to play in both establishing and maintaining an IR through, along with this the librarians needs to know all about the IR, its principles, benefits and operational processes in order to promote it and act as IR evangelists. Librarians will need to develop advocacy programs, publicise IR through institutional news media and respond to questions by the stakeholders. Librarians can employ advocacy and marketing strategies to promote engagement with faculty members and help to generate content. They can also assist by proactively searching for content independently, regard to collection administrators and metadata specialists.

6.2 Role of authors:

Digital scholarship is the most dynamic academic phenomenon today. However IRs are comparatively new to much of the academic world, particularly in developing countries. The roles of authors includes a) uploading of research output, b) Responding to questions and comments posted by readers, c) updating materials especially pre-print articles and work in progress d) ensuring high quality and standards of materialsa and e) negotiating copyright issues with publishers. This should be done before publication of papers.

6.3 Quality assurance

Establishing a functional IR can facilitate growth in research, scholarly communication, academic collaboration, strategic alliances, and teaching and learning. To achieve these laudable
goals, quality issues must be prominent from the design stage, through installation and operation of the IR. Quality standards must cover various processes including system and services procurement, and contents collection, submission, preservation, retrieval and re-use. Also copyright is a quality benchmark for IRs and repositories must operate in legally sound environments. The three main quality players are the authors, IR administrators and Institutions. Populating an IR is vital in assessing its performance and it is easier for authors to upload their research outputs directly into the system. In so doing they will be responsible for the quality assurance and copyright of their materials. The IR administrator (librarian) is responsible for the system performance and would have to facilitate drafting of policies to guide operation of the IR. Without a firm policy to guide authors repositories may remain virtually empty but with a mandatory policy they will be populated more readily. The top management of colleges must be committed to matters of IRs by approving policies and operating procedures and providing resources for operating and updating the IR. Issues of Open Access must be decided at the top management level.

7. Marketing of IR Services:

Building of good IR service is not only sufficient and it is little critical to communicate how the service benefits the college libraries. Hence, library team should leverage users of their interest towards the use IR services.

1. Demonstrating the value of the repository to the institution as a whole, showcasing college research and as a benefit to academic research
2. Present IR service in face-to-face meetings on campus i with communities, departments, individuals, by phone, in person, to staff, academics, IT departments, etc.
3. Use printed brochures, posters, presentations and the college website to publicize the service
4. Do publicity both inside and outside the college. Some academics notice articles in the local newspaper and ask for more information
5. Build interest in long-term preservation on campus and
6. Offer presentations on topics of interest to academics and related to institutional repositories such as copyright, intellectual property rights in the digital age, etc.

Conclusion

The results of this research will be of special interest to administrators and library practitioners who are contemplating the creation of Institutional Repository or who are already involved in developing Institutional Repository and are seeking to improve service and increase outreach to remote users and local users. It not only provides qualitative and quantitative data for the development but also it will become a guiding document for the new born organizations who are inden to set up of Institutional Repositories in colleges. It will also make
recommendations for e resources repository software development and interface design and produce a research agenda for user-centered e-resources services. Faculty will be more comfortable with providing content if they do not think that the Institutional Repository movement will undermine the tried and tested norms of scholarly communication. The fundamental message should be do not stop submitting papers to peer reviewed journals but please deposit them in the digital repository as well. It is important that the library team should be made as easy as possible for them to contribute.

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