

Institutional Repositories: A Primer

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1.0 Introduction

An institutional repository is an online archive for collecting, preserving, and disseminating digital copies of the intellectual output of an institution, particularly a research institution or a university.

Generally for a university an institutional repository is collection of digital objects (or assets) in variety of formats, It includes works of various degrees of scholarly authority and from various stages in the process of scholarly inquiry In addition to published work, an IR may include preprints, theses and dissertations images, data sets, working papers, course materials or anything else a contributor deposits. Institutional repositories are typically motivated by a commitment to open access.

The open access philosophy.

As per Budapest Open Access Initiative the open access is defined as “By ‘open access’ to this literature, we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.”

Typically speaking, about India, as an approximation government funds for 75% of education and 95% of research. The results of research funded by government should ideally be accessible in open access to the society at large because the major source of government funds is from its citizens. Funding agencies like National Institute of Health in United States & Wellcome Trust in UK have already mandated submission of results of research funded by them in open access journals or make them available in open access. Moreover, Articles in open access have greater impact in terms of citation rates than those published in subscription-based journals;

Open access means easier access to knowledge, so more researchers can built on that knowledge without duplication of efforts, reaching larger audience with greater access and more citations, Institutions are also benefited as their research becomes more visible adding to the reputation of the institute.

Institutional repository is the foremost initiative for wider spread of research output so that the knowledge.

2.0 Advantages of institutional repository

An institutional repository has the following general advantages for an institution:

- Institutional repositories collect and curate digital outputs
- Institutional repositories open up the research outputs of the university or institution to the world, along with intensification of the visibility and impact of these outputs as a result
- Publicly accessible institutional repositories showcase the university to interested communities – prospective staff, prospective students and other stakeholders
- Manage and measure research and academic activities
- Provide a workflow system for collaborative or large-scale projects
- Enable and encourage interdisciplinary approaches to research
- Facilitate the development and sharing of digital teaching materials and aids
- Support student endeavours, providing access to theses and dissertations and a location for the development of e-portfolios

3.0 Institutional Repository Contents.

Institutional repository can accommodate any type of digital contents, few of them can be;

Peer-reviewed journal articles and conference proceedings

The key content in repositories is the peer-reviewed journal articles. The collection of journal articles published by an institution via an open access repository gives larger impact and visibility to that institute as well as individual contributors

Research data

Contributors can also deposit their research data that supports their final research output in to institutional. Number of research funding agencies mandates to researcher to make their data Open Access, once they have themselves analysed and published their findings from the data. This data can be useful to researchers so that they can use the data to verify results, to compare with their own data or to re-use in some way to generate new data and knowledge

Datasets can be of any type – database files, spreadsheets, images, audio files, video files, representations of artwork, drawings, GIS data etc.

Monographs and books

Most institutional repositories also contain books or book chapters. In case if the book is copyrighted or contributor is reluctant to deposit it is still important for the book to be deposited, with only metadata on display. Having the metadata visible means that the book is counted in the institution's assessment procedures, its existence is known to would-be readers and it can be located by Web search engines. Repository will also help to increase the awareness of the book.

Other content types

In addition to the types of content described above, institutional repositories frequently contain theses, dissertations and other research-related outputs such as

- Lecture notes and presentations
- working papers;
- research and technical reports;
- conference proceedings;
- newsletters and bulletins;
- papers in support of grant applications;
- status reports; statistical reports; committee reports and memoranda;
- technical documentation;
- surveys and many more

4.0 Establishing an Institutional Repository

There are many ways and approaches to kick start institutional repository based on the specific context and target audience however there are few common considerations which must be addressed while establishing the institutional repository.

4.1 Justify the relevance to institution and contributors

The justification for a repository must be made to the institution that will own and sustain it. It is critical to work out a case which is in line with the priorities of the institution. This means provision of tools to increase visibility, usage and impact of the research output of an institution. The MIS data derived from a repository will also be helpful to present the case before assessment bodies like NAAC. A well-prepared justification document to the authorities can highlight the applicable advantages of the repository to the institution.

4.2 Defining the purpose of the repository

Repositories can have a number of purposes. The primary purpose of any repository is to provide open access to research outputs. However, it can be also used for encouraging digital publishing initiatives. The digital preservation can also be a purpose. Repository services should be developed with a clear idea of the purpose of the repository.

The most successful repository collections are the ones that support the needs of the community. A typical needs assessment includes both informal input, such as through discussions with contributors or some type of survey. The LEADIRS Workbook (<http://hdl.handle.net/1721.1/26698>) provides a sample needs assessment survey that can be adapted for use by institutions.

4.3 Defining repository services

A repository can provide a number of services. The LEADIRS Workbook (<http://hdl.handle.net/1721.1/26698>) provides a set of questions for implementers to help determine which services should be incorporated into the repository: These questions are;

- What is the service's mission?
- What kinds of content will you accept?
- Who are the key users?

- Who are the key stakeholders?
- What responsibilities will the library bear versus the content community?
- What are your top service priorities?
- What are the short-term priorities and long-term priorities?

4.4 Choosing repository software

Based on the needs and services of the repository, institutions may assess the available software platforms.

One can choose open source software (e.g. DSpace, EPrints, Fedora, Greenstone) which are free to download and it is open for changes and enhancements from the development community. On the other hand commercial software can also be chosen where in one has to pay for the software as well as for its maintenance and upgrades. The software vendor owns, creates, and maintains the source code, the scope or customizations are limited in this case. One can also opt for cloud based models where in the service provider owns and distributes a software platform, or also hosts and manages data. In this model, the software vendor provides additional services for a fee, and also controls and updates the software source code (e.g. EPrints Services, Open Repository, DuraCloud etc.).

Implementers should choose the software that best matches requirement and available resources (financial and human).

4.5 Developing repository policies

Collection, management and access are the three core policy areas need to be considered while establishing. It is recommended to form an “Advisory Group” to assist in making policy decisions. The core policy decisions that will have to be made are as follows:

Collection

- What types of contents can be submitted to the repository?
- Who will be able to submit in the repository?
- Criteria for determining a collection in the repository. Who regulates, sets, and authorises membership?
- What will be the structure of repository – around individual contributors, or by department, research division, etc.?
- How the content will be deposited? (mediated deposit or by contributor)

Management

- General rights and responsibilities of libraries and those who create collections of digital content.
- The type of metadata to be used.
- Curation and preservation tasks.

Access

- Privacy policy for registered users of the system.

- Possibility of restricted access to content based on request of contributor
- Possibility of providing embargo periods for content

4.6 Manpower Requirements

Human resources requirement to maintain a repository varies from institutions to institution. However, there are two main types of jobs involved:

- Repository Manager- manages the 'human' side of the repository including content policies, advocacy, user training and a liaison with a wide range of institutional departments and external contacts.
- Repository Administrator- manages the technical implementation, customisation and management of repository software, manages metadata fields and quality, creates usage reports and tracks the preservation issues.

More details on this can be found in SHERPA Briefing document, Institutional Repositories: Staff and Skills Requirements

(<http://www.sherpa.ac.uk/documents/sherpaplusdocs/notts-Repository%20Staff%20and%20Skills.pdf>)

4.7 Setting up communities

Usually repositories can be structured according to collections, often called communities. These are groups that contribute content to an institutional repository – academic or administrative departments, colleges, etc. Institutions can begin with a pilot programme for their repository services, showcasing a few communities who are keen to contribute. This enables repository staff to kick-start the repository with content, testing, and streamlining the procedures and policies. This kick-start communities can also be very helpful for showcasing to other potential communities.

4.8 Advocacy

Promoting the repository is one of the greatest challenges for repository managers.

A number of approaches can be taken to popularise the repository. :

- **Profiling:** This is related to positive branding of repository, it involves the use of brochures, newsletters and web sites that discuss the benefits of repositories.
- **Pull Approach:** In this approach the contributor is encouraged by reward for depositing the work. There can be specific incentives for researchers who deposit.
- **Push Approach:** The contributor can be demonstrated the positive effects of the repository after submission of content. For example usage statistics for authors whose downloads are very high can be displayed.
- **Consultation Approach:** This involves direct communication and consultation with faculty to involve contributors in developing the repository to meet their needs. This can be done through surveys, meetings, informal conversations. This can be most effective approach as contributors can campaign their peers (other potential contributors) about the value of the repository.

5.0 Summary

Institutional repository is the answer to the challenge of spreading the knowledge by means of providing scholarly research output of an institution adhering to philosophy of open access. Repositories also helps to intensify the impact of an institution as well as collaborator by giving wider publicity to the scholarly work carried out along with other advantages. Institutional repositories can be easily established by analysing the requirement along with systematic approach as discussed.

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