

Unit 7: Open Archives Initiatives (OAI)

By

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Open Access / Archives Initiatives (OAI)

- Open Access to scholarly information is a burning issue in web based education and research now a days.
- For many librarians and scholars, journal price inflation is itself the central problem and open access is the solution.
- Open Access (OA) is a step ahead of 'Free Access' which removes the price barriers by providing free access to end users.

Vehicles of Open Access

There are two primary vehicles for delivering open access to research literature.

- Open Access Journals
- Open Access Archives

Open Archives Initiative (OAI)

- The Open Archives Initiative (OAI) is an attempt to build a 'low barrier Interoperability framework' for archives (Institutional Repositories) containing digital content.
- OAI is, therefore, closely related to the Open Access Publishing movement.

Interoperability

- “The ability of multiple systems, using different hardware and software platforms, data structures, and interfaces, to exchange and share data” (NISO, 2004).
- “The ability of two or more systems or components to exchange information and use the exchanged information without special effort on either system.”

Institutional Repositories

- An Institutional Repository is an archive of an institution's intellectual output created by the faculty, research staff and the students of the institution and accessible to end users both within and outside the institution.

Intellectual Output

- Pre-prints of articles or research reports submitted for publication.
- The text of journal articles accepted for publication
- Conference papers
- Students projects
- Doctoral theses and dissertations

Definition of Institutional Repositories

- Clifford Lynch, Director of the Coalition for Networked Information defines IR as ‘a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members.’

The four main objectives for having an institutional repository are:

- To create global visibility for an institution’s scholarly research;
- To collect content in a single location;
- To provide open access to institutional research output by self-archiving it; and
- To store and preserve other institutional digital assets, including unpublished or otherwise easily lost (grey) literature (e.g. theses or technical reports).

Benefits of Institutional Repositories

- Enhances the professional visibility of the faculty, and raises the prestige of the Institute;
- Provides a global platform for local research and hence improved visibility;
- Facilitates improved research collaboration and information flow;
- Brings together the intellectual output of the institution in an organized fashion, which otherwise would be scattered;
- Lowers access barriers and offers the widest possible dissemination of an individual scholar's work;
- Improves citation rates for published articles; and preserves and provides long-term access to the scholar's research output.
- Preserves and provides long-term access to the scholar's research output.

Most Common Challenges

- Considering the benefits and the drawbacks of Institutional Repository the challenges the implementation team face in building a repository includes the following:
- Adoption rate by academics
- Providing for sustainability
- Developing policies
- Managing Intellectual Property Rights
- University Support
- Cost Management
- Digital Preservation
- Identifying key stakeholders

Major steps in building an Institutional Repository

- Setting up an IR is not a easy task. Broadly, the following logical steps are the major milestones in building an IR:
- Learning about the process by reading about and examining other IRs.
- Developing s Service Definition and Service Plan:
 - Conduct a needs assessment of your university.
 - Develop a cost model based on this plan.
 - Create a schedule and timeline.
 - Develop policies that govern content acquisitions, distribution and maintenance.

- Assembling a team
- Technology – choose and install software platform
- Launching a Service
- Running a Service

Technical Issues

An IR system consists of the following technology building blocks:

- Windows or UNIX / Linux operating systems.
- Web server, such as Apache and related web application tools
- Database, such as MySQL, Oracle, SQL server
- Institutional Repository Software.

Selection of Institutional Repository Software

The technical cost consideration for an IR is following:

- Software costs (one-time and ongoing)
- Hardware, Servers, etc.
- Operations Staff
- Programming staff (if necessary)
- Backup and recovery
- Preservation

When examining a software platform, the following features of the software are to be considered.

- File formats supported: text, images, data sets, video, audio, etc.
- Metadata Standards (descriptive, technical, preservation).
- Interoperability: OAI compliance, Z39.50
- Full-text search
- Submission of content approval
- User authentication and authorization;
- Back-end: content distributor, editor, administrator, front-end; end user access to content.

IR software

- E-prints
- Dspace
- Greenstone
- Ganesh

Conclusion

- The development of IRs is a very new enterprise / concept for many academic and research institutions worldwide.
- IRs is proliferating, as they become an indispensable component for information and knowledge sharing in the scholarly world.
- IRs can be implemented as a possible solution for the problem in scholarly communications.