



Update on Institutional Repositories & Data Management

Holly Phillips, MILS, MS, AHIP

Scholarly Communication Toolkit:
Everything you need to know
from copyright to advocacy

MLA CE: Austin, TX, 10/17/2010



This work is licensed under a Creative Commons Attribution-NonCommercial-Share Alike 3.0 United States License.

Session Outline

- Current State of Institutional Repositories
- Possible Future for IRs in Academic Libraries
- Possible Future for IRs in CTSA-Minded Institutions
 - Data Management
 - Supplementary Materials
 - New Area: Open Notebook Science

Institutional Repository Definition

- **Beginning:** [A] university-based institutional repository is 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.
 - Lynch (2003)
- **Now:** An Institutional Repository is an online locus for collecting, preserving, and disseminating -- in digital form -- the intellectual output of an institution, particularly a research institution.
 - Wikipedia (3/1/2010)

Current State of Institutional Repositories

- IR Literature Trajectory
 - Justification for IRs – including escalating publishing costs (1994-2004)
 - Librarian roles with IRs (2003-2005)
 - Developing successful IRs (2005-2008)
 - Evaluation of non-use and cost-benefit analysis of IRs (2007-present)
 - Decline of IRs and purpose seeking, including discussion of mandates (2008-present)

Current State of Institutional Repositories

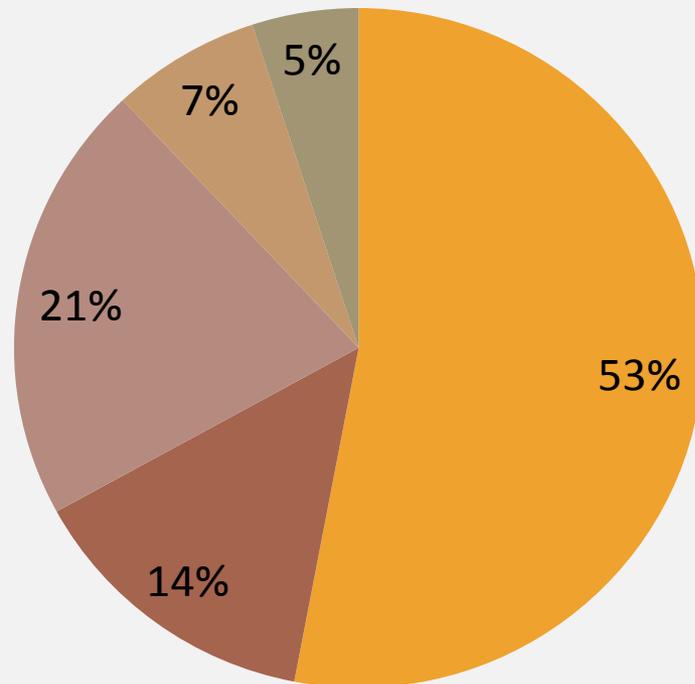
- Intended Use
 - Subvert publishing industry and create new scholarly communication platform to increase competition
 - Preserve locally produced digital materials – “intellectual output”
 - Open access to wide range of materials for researchers and students worldwide

Current State of Institutional Repositories

- Current Use

- By content type (2007)

- Student Work (53%)
- Faculty Scholarship (14%)
- Pictures (21%)
- Non-scholarly publications (7%)
- Historical texts (5%)



Current State of Institutional Repositories

- Most Cited Reasons for Non-use
 - Faculty time or awareness
 - Software learning curve
 - Rigid structure
 - Copyright concerns
 - Attribution or “scooping”
 - Quality and peer review concerns
 - Voluntary basis
 - Rewards and tenure
 - Subject bias
 - Prefer discipline repositories

Future of IRs in Academic Libraries

- Time to re-evaluate the mission and the result
 - Have we accomplished the intended use?
 - Subvert publishing industry and create new scholarly communication platform to increase competition
 - Preserve locally produced digital materials – “intellectual output”
 - Open access to wide range of materials for researchers and students worldwide
 - As is, can we afford to continue support?
 - Cornell seeking support for arXiv (TCoHE, 1/21/2010)
 - MIT spends @ \$71 per item per year (Foster, 2005)

Future of IRs in Academic Libraries

- What does the future look like?
 - Work to do:
 - Continue to advocate for open access to content
 - Change view of the value of content
 - Remove bias against ‘born digital’ work
 - Incorporate more content types
 - Move from preservation of “fixed” to “new media” formats
 - But it’s about more than the content...it’s about
 - How people use, and want to use, the system &
 - How we provide the infrastructure to the system

“Communications tools don’t get socially interesting until they get technologically boring.”

Clay Shirkey

Here Comes Everybody (2008)

Future of IRs in Academic Libraries

- Two examples to learn from
 - Provide user-centric systems
 - Example: University of Rochester
 - Provide discipline specific mega-repositories or data archives
 - Example: DataONE

Future of IRs in Academic Libraries

- Example 1: University of Rochester
 - Nancy Fried Foster and Susan Gibbons, “Understanding Faculty to Improve Content Recruitment for Institutional Repositories,” *D-Lib Magazine* 11 (January 2005).
 - Key finding: “what faculty members and university researchers want is to do their research, read and write about it, share it with others, and keep up in their fields.”

Future of IRs in Academic Libraries

- Example 1: University of Rochester
 - What faculty want:
 - Work with co-authors
 - Keep track of different versions of the same document
 - Work from different computers and locations, both Mac and PC
 - Make their own work available to others
 - Have easy access to other people's work
 - Keep up in their fields
 - Organize their materials according to their own scheme
 - Control ownership, security, and access
 - Ensure that documents are persistently viewable or usable
 - Have someone else take responsibility for servers and digital tools
 - Be sure not to violate copyright issues
 - Keep everything related to computers easy and flawless
 - Reduce chaos or at least not add to it
 - Not be any busier

Future of IRs in Academic Libraries

- Example 1: University of Rochester
 - Bottom line:
 - Personal digital repository preferred over IRs
 - Subject repositories over IRs
 - Result:
 - They built their own repository...

Future of IRs in Academic Libraries

- Example 1: University of Rochester
 - What IR+ offers:
 - Collaborative authoring and versioning tools
 - Create folders, add/upload files, share with other users, file backups
 - Publishing
 - Update files, set order of files and contributors, select version to publish, add metadata
 - Searching
 - Full text and faceted search
 - Researcher Pages
 - Users can create pages
 - Statistics
 - Repository and contributor statistics

The screenshot shows a researcher profile page for Nancy Fried Foster. The header includes the University of Rochester logo and navigation links like 'User Help', 'Administration Help', 'Contact Us', 'About', and 'Privacy Policy'. Below the header, there's a search bar and a 'Login' button. The main content area is divided into two columns. The left column features a profile picture of Nancy Fried Foster and a section titled 'All work in: UR Research'. Below this, there's a 'Researcher Information' section with details such as her title (Director of Anthropological Research), department (Department of Anthropology), and contact information (phone: 585-273-5036, email: nancy.foster@rochester.edu). The right column is titled 'Research' and contains a list of publications and research interests, including 'Designing the Academic Library Catalog', 'Enhancing e-Resources by Studying Users', and 'Participatory Design of Websites with Web Design Workshops'.

Future of IRs in Academic Libraries

- Example 2: DataONE
 - ONE = Observation Network for Earth
 - 5-year, \$20 million award through NSF
 - Vision
 - DataONE will be commonly used by researchers, educators, and the public to better understand and conserve life on earth and the environment that sustains it.
 - Mission
 - Enable new science and knowledge creation through universal access to data about life on earth and the environment that sustains it.

Future of IRs in Academic Libraries

- Example 2: DataONE
 - DataONE People and the Organization
 - “DataONE’s foundation for excellence is the expertise and established partnerships among participating organizations that have multi-decade expertise in a wide range of fields including: existing archive initiatives, libraries, environmental observing systems and research networks, data and information management, science synthesis centers, and professional societies.”

Future of IRs in Academic Libraries

- Collaborative workspaces that work for faculty
- Stable infrastructure, easy to navigate
- Discipline specific
- Outside funding from other universities or funding organizations (arXiv, NSF, etc)
- Leverage partnerships and collaboration across fields of expertise

- How can we apply this to CTSAAs?

Future of IRs in CTSAs

- We know that CTSAs
 - ...share a common vision to reduce the time it takes for laboratory discoveries to become treatments for patients, to engage communities in clinical research efforts, and to train a new generation of clinical and translational researchers.” ~ *NCRR Fact Sheet*
 - Strategic Goals Guiding the Consortium
 - Goal 3: Enhance consortium-wide collaborations

Future of IRs in CTSAs

- We also know about the
 - Revised Policy on Enhancing Public Access to Archived Publications Resulting from NIH-Funded Research
 - NOT-OD-08-033: 1/11/2008
- But do we know about the
 - Final NIH Statement on Sharing Research Data
 - NOT-OD-03-032: 2/26/2003

Future of IRs in CTSAs – data sharing

- Final NIH Statement on Sharing Research Data, NOT-OD-03-032: 2/26/2003
 - “The NIH expects and supports the timely release and sharing of final research data from NIH-supported studies for use by other researchers. Starting with the October 1, 2003 receipt date, investigators submitting an NIH application seeking \$500,000 or more in direct costs in any single year are expected to include a plan for data sharing or state why data sharing is not possible.”

Future of IRs in CTSAs – data sharing

- Data to be shared:
 - Recorded factual material commonly accepted in the scientific community as necessary to document and support research findings.
 - Data from human subjects (e.g., surveys, clinical studies) also can be shared if the identity and privacy of research participants can be protected.

Future of IRs in CTSAs – data sharing

- Data to be shared, cont.:
 - Potentially all kinds of data are candidates for sharing, but unique data are especially important. By "unique data", we mean data that cannot be readily replicated. Examples of studies producing unique data include: large surveys that are too expensive to replicate; studies of unique populations, such as centenarians; studies conducted at unique times, such as a natural disaster; studies of rare phenomena, such as rare metabolic diseases.

Future of IRs in CTSAs – data sharing

- Data NOT to be shared:
 - Data does not mean summary statistics or tables; rather, it means the data on which summary statistics and tables are based. This does not include laboratory notebooks, partial datasets, preliminary analyses, drafts of scientific papers, plans for future research, peer review reports, communications with colleagues, or physical objects, such as gels or laboratory specimens.

Future of IRs in CTSAs – data sharing

- Data sharing plans will vary depending on the data being collection but should include:
 - Expected schedule for data sharing;
 - Format of the final dataset;
 - Documentation to be provided, such as (i) whether any analytic tools will also be provided or (ii) whether a data-sharing agreement will be required; and
 - Mode of data sharing (e.g., under their own auspices by mailing a disk, posting data on their personal website, or through a data archive or enclave).

Future of IRs in CTSAs – data sharing

- What would it look like if libraries supported the collaboration and data sharing for CTSAs?
 - Serve as Principle Investigator for the project
 - Hire data stewards and project specialists
 - Manage the archive and collaboration software infrastructure

Future of IRs in CTSAs

- Future of Journals and Supplementary Material
 - 8/11/2010 Journal of Neuroscience announcement
- California Digital Library – Library as Publisher
 - Combining forces with UC Press

New Area – Open Notebook Science

- **Open Notebook Science** is the practice of making the entire primary record of a research project publicly available online as it is recorded. This involves placing the personal, or laboratory, notebook of the researcher online along with all raw and processed data, and any associated material, as this material is generated. The approach may be summed up by the slogan ‘no insider information.’
- “Open Notebook Science maintains the integrity of data provenance by making assumptions explicit.” “Faster Science, Better Science” – Jean-Claude Bradley
- Avoid false starts and mistakes.

New Area – Open Notebook Science

- Use multiple platforms – IRs, YouTube, GoogleDocs, wikis, blogs, social network sites, etc.
- Copyright issues
 - Who is author?
 - Can you publish if previously made public?
 - Establish precedence, but is it valid?
 - Data sets are not protected – “scooping”
 - Ephemeral?
- Other issues:
 - Rapidity and deluge of information
 - Why, when, and with whom should you share?

