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Feeding the Fledgling Repository: Starting an Institutional Repository at an Academic Health Sciences Library

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In 2005, the Scott Memorial Library at Thomas Jefferson University started an institutional repository (IR), the Jefferson DigitalCommons (JDC) <http://jdc.jefferson.edu/>. Originally intended as a showcase for faculty scholarship, it has evolved to serve also as a university press for original journals and newsletters, and as an institutional archive. Many lessons have been learned about marketing techniques, common IR issues, and advantages of an IR for a library. IR recruitment has come to be viewed as yet another form of collection development and has been integrated into all forms of the Library's outreach. Jefferson's academic health sciences environment has proven similar to other academic environments on issues of acceptance and participation.

KEYWORDS: Institutional repository, Jefferson Digital Commons, marketing, self-archiving, university press

INTRODUCTION

In 2005, the Scott Memorial Library embarked on a trial of an institutional repository (IR) (see Figure 1). Its original intent was twofold: (1) to promote Jefferson scholarship through open access self-archiving of faculty articles and (2) to develop a digital library of works from the university's special collections. However, it quickly evolved to support original publication, as well. By 2005, the Library had already joined BioMed Central and Scholarly Publishing and Academic Resources Coalition (SPARC) and was educating faculty on the benefits of open access publishing. The Library had served as the main campus leader in adoption of new academic technologies and believed it could use this status to promote open access self-archiving among its faculty. As the IR evolved, however, it became clear that faculty members were not enthusiastic adopters of

the new technology, and that significant efforts and time would be required to encourage their participation.



Figure 1: Jefferson Digital Commons home page

DOES THE IR SOFTWARE MAKE A DIFFERENCE?

Significant planning went into the selection of software to run the repository. The Berkeley Press product, Digital Commons, was finally selected. It provided hosting and support services that were not otherwise available on campus and, at the time of selection, was the only service that offered both full-text searching and integrated serial publication support. Other commercial and freeware software products have matured or emerged since then, including Fedora, DSpace, Digital Assets Repository, Greenstone Digital Library, and Eprints; however, Digital Commons has proven to be a robust platform for Jefferson.

An additional advantage of the Commons software was its relationship with ProQuest UMI, which allowed Jefferson's dissertations to be included automatically in the JDC as its first "collection," without the need for staff or faculty participation. The initial collection could be tracked for statistics and cited to faculty.

Whether hosted or open source, all IR software has the same inherent issue—voluntary participation by faculty requires significant behavioral change. A further issue encountered at Jefferson was that the Library’s technological capability was higher than the demand for the service. Library staff had to take on the task of changing faculty perceptions as well as shaping a market by creating demand for the service.

WHAT DOES JEFFERSON COLLECT?

The Commons came with Jefferson’s dissertations already loaded. The Library then chose to digitize and post one of its rare books, Sir Astley Paston Cooper’s 1840 *On the Anatomy of the Breast* (see Figure 2), both because it is a unique resource that would generate a significant amount of traffic and because it is a beautiful and compelling piece to demonstrate during promotional visits to faculty. It functioned as a proof-of-concept work. From there, the Commons moved on to faculty postprints and original materials.



Figure 2: Sir Astley Paton Cooper’s *On the Anatomy of the Breast*

Jefferson Digital Commons collections currently include:

- Digital reproductions of archives and special collections digital library
- Faculty preprints/postprints
- Original materials:
 - Student products and dissertations
 - Lectures, campus events, conference proceedings
 - Teaching materials and original faculty products
 - Journals, newsletters, e-books
- All formats, including video, PDF, PowerPoint, Word documents, Excel, and so forth.

Digital Reproductions/Digital Library

Converting a library's own print collections into digital format is in many ways the easiest way to populate a repository, if only because the library controls the material and the process. The main barriers are usually money and time.

Jefferson used a combination of in-house digitization and outsourcing to reproduce five historical books, a series of Jefferson yearbooks, and course catalogs. For the in-house program, staff attended training sessions at professional meetings, learned about standards and digitizing equipment, and visited programs at other local institutions. Equipment was purchased, documents for the program were prioritized, procedures were developed, and support staff were trained. Support staff acquired new skills, making them more valuable employees. The digitization of archival materials about alumni provided welcome relief for the University archivist; alumni and their descendents can now easily consult the class yearbooks or index of graduates themselves without having to request the information from Archives staff. Digitization is now an on-going activity within the Library's structure.

Good candidates for conversion include:

- Rare books <http://jdc.jefferson.edu/cooper>
- Institutional histories/archives/yearbooks
- http://jdc.jefferson.edu/jmc_yearbooks/
- Library reports, as well as training and help documents
<http://jdc.jefferson.edu/library/>
- Image collections (photos, postcards) http://digitalcommons.utep.edu/photo_db
- Local newspapers and community documents <http://libx.bsu.edu/azlist.php>

Faculty Preprints and Postprints

The common question is, "If we build it, will they come?" The answer is no, not without a lot of coaxing. Participation in an IR requires significant change in faculty behavior, as well as task changes for library staff. Faculty have to overcome inertia and habit. They have to give time, thought, and attention to the new task. They are susceptible to peer pressure from professional societies that fear for their publishing revenues.

Many publications and even entire conferences have been devoted to faculty participation in an IR.¹⁻⁴ Most useful to Jefferson's approach were the results from the work of Foster and Gibbons at the University of Rochester, which was based on anthropological faculty studies.^{5,6} While it might be effective to talk to administrators about promoting a department or school about archival preservation, about open access as a public good, or about finding alternatives to a dysfunctional publishing environment, it was clear these topics would do little to motivate individual researchers. However, researchers would consider a repository program that could speak to their needs for:

- Control over format, presentation, version, and access
- Professional visibility and increased citation rate
- Possible superior discoverability (depends on field)
- Free participation
- Ease of participation, or even better, having someone else do it *for* them

Jefferson paid careful attention to Foster and Gibbons' work when addressing faculty. For example, the provision of use statistics for each paper helps prove to the researcher that material is being found by others. While it takes some powerful arguments to counter the barriers to participation represented by publisher policies (e.g., understanding contracts, versions, permissions) or the time required to make deposits, it is possible to train departmental administrative assistants to manage the work on behalf of their faculty.

Because the Jefferson project did not start out with a faculty or departmental partner, the Library needed to solicit and enlist participants on its own. The University Librarian visited departments and committee meetings to present about the Commons, with varying degrees of success. Influential campus leaders were approached. Promotional materials were developed, including a tongue-in-cheek invitation to publish in the fictitious "Jefferson Journal of Amazing Results." Some faculty actually inquired about submitting to it.

Library marketing was completely restructured to include promotion of the Commons. In addition to bookmarks and brochures devoted to the Commons, the service was featured heavily in the Library's orientation materials, newsletter, blog, and workshops (e.g., "Take Advantage of the Jefferson Digital Commons for Shameless Self-Promotion"). All educational sessions for faculty included a pitch for the Commons, and Commons information was included in all orientations for new faculty and staff. While Scott Memorial Library does not have a formal subject liaison program, any librarian who had a strong relationship with a department was recruited to represent the Commons.

Since faculty will also sometimes react to a direct invitation, staff set up a search profile to identify Jefferson articles as they appeared in the health sciences literature. Support staff were trained to screen the results for copyright issues and to issue invitations to deposit in the Commons. If faculty would e-mail the correct format of the material, Library staff would actually make the deposit into the IR. In the first two years of this program, approximately 50% of Jefferson publications were eligible for deposit. Of those, approximately 15% were provided by faculty in response to the Library's invitations. This rate was rather better than the 5% rate observed by others, but still not stellar.⁷

Stevan Harnad has long discussed the need for mandates by university administrators or faculty governing bodies to improve this performance.⁸ The developments over the last year at NIH/PubMed Central, mandating that all NIH funded research be deposited in PubMed Central no longer than 12 months after publication, along with Harvard's Faculty of Arts and Sciences adopting a policy that allows their scholarly research

articles to be made freely available online, are exciting and prompting other institutions to follow. 9–11 As more government and academic institutions adopt such policies in support of open access, it will help make the deposit of materials an expected and common practice for researchers.

To some faculty, however, IRs appear as competition. For example, they may question why a Jefferson faculty member should deposit an article in the Jefferson Digital Commons if he or she already has to deposit it at PubMed Central.

A clear opportunity for promotion is to celebrate achievements in the form of new deposits, number of deposits, new departmental participation, or whatever excuse will suffice. Faculty will often respond to publicity for their work. The library can also send a representative of the repository to departmental or institutional receptions for campus authors.

The most persuasive argument occurs when a repository can provide use statistics on a regular basis to the authors who have deposited. The Digital Commons software supplies monthly e-mails to faculty, showing the number of times each article has been downloaded. Once one article has been deposited in the Commons, these monthly reports may prompt further inquiry by the faculty member about what else might be eligible for deposit.

Original Materials: Lectures and Special Events

Every academic campus, whatever the subject coverage, is a rich source of guest lectures, conferences, workshops, and campus traditions such as debates or performances. All are candidates for recording and preserving in an IR. Common issues include the cost and format of recording, getting releases from the participants, and potential relationships with supporting donors or commercial sponsors. For video products, streaming delivery is an issue as well. Some events may require restrictive access.

Original Materials: Teaching Products

An institutional repository can be an excellent location to store reusable teaching materials, such as syllabi, lectures, videos, and images. IR software may feature limited access by IP or login, such as a course management system. In Jefferson's case, selected materials are posted for the purpose of sharing for common benefit. A student-produced sequence of anatomical dissection videos <http://jdc.jefferson.edu/vghd> serves as a case in point (see Figure 3). This product has become so popular, that Jefferson has been approached to allow mirroring of the material. A higher quality version of the material is available on DVD; in this case, the IR version generated interest in a product that could be sold to generate program revenue.

Of course, there is competition from professional societies and other organizations to collect teaching materials in health sciences. One notable example is HEAL, the Health

Education Assets Library <http://www.healcentral.org>. Other possible “competitors” include:

- Creative Commons, the National Science Digital Library <http://www.nsdlib.org>
- Public Health Image Library <http://phil.cdc.gov/Phil/home.asp>



Figure 3: Multimedia Teaching Tools—a visual guide to human dissection

- BEN Portal, also from the National Science Digital Library <http://www.biosciencednet.org>
- Family Medicine Digital Resources Library <http://www.fmdrl.org>
- Merlot (Multimedia Educational Resources for Learning and Online Teaching) <http://www.merlot.org>
- Images from the History of Medicine from the National Library of Medicine http://www.nlm.nih.gov/cgi-bin/gw_44_3/chameleon?sessionid=2008102214252310825&skin.nlm&lng=en

Original Materials: Administrative

Administrative archives depend on building relationships with administrative staff. Modern documents are now mainly created in digital format, so locating and collecting

them can be difficult. In a few cases, materials can just be collected from departmental Web sites; however, a strong archives or records management program is more effective. Materials that may be collected include annual reports, course catalogs, programs of special events (e.g., commencement, diversity programming), and dissertation preparation instructions.

Special Cases in Medicine

The IR provides unique opportunities to develop and maintain original clinical materials. For example, Jefferson could offer the IR as a location to post official copies of protocols and methods, so that a busy department could benefit from version control.

Patient education materials placed in the Commons could be found by potential patients, and linking back to the clinical department could produce new patient enrollments. Jefferson's Myrna Brind Center of Integrative Medicine <http://jdc.jefferson.edu/jmbcim> created a series called "Topics in Integrative Medicine" for just this purpose. Grand rounds lectures recorded and preserved in the IR could also be accessed by patients or potential patients, thereby serving as promotional materials; examples are available at http://jdc.jefferson.edu/jmbcim_lectures/.

PROMOTION STRATEGIES: CREATING DEMAND

Many methods of contacting faculty were explored, including attending departmental meetings, campus celebrations and receptions, forming alliances with departmental chairpersons, presenting at new faculty orientations, and advertising in the Library's e-newsletters, blog, brochures, and direct mailings. Personal invitations from the Library Director to faculty opened many doors (see Figure 4).

Congratulations on the recent publication of your article: [citation]

The publisher permits you to deposit the final Word version of your article in Jefferson's institutional repository, the Jefferson Digital Commons (<<http://jdc.jefferson.edu>>)

The goal of the Commons is to enhance the visibility of Jefferson scholarship, and to promote Jefferson authors. Articles deposited in the Jefferson Digital Commons are indexed by Google, Google Scholar, Yahoo and other major search engines. Upon deposit they are fully accessible by all Internet users, thereby extending the influence of your work and encouraging additional citations.

Join the growing number of Jefferson authors who have deposited their work in the Digital Commons and submit your article today.

Instructions for deposit are available at <<http://jdc.jefferson.edu/faq.html>>, or you may email the final Word version of your paper to Editor.JEFFLINE@jefferson.edu and Library staff will deposit it for you.

Figure 4: Sample invitation letter

The Commons was deliberately structured to appeal to faculty with:

- Paper of the day—a rotating feature (controlled by Library staff) (see Figure 5).
- Personal researcher pages, to feature individual authors (see Figure 6).
- Visible statistics—Top 10 downloads or number of individual article downloads sent in monthly e-mails to authors.
- Option to integrate repository content into main university Web pages, for example, a departmental research page.

In addition, the Commons offers individual faculty or departments the option of taking editorial control over their own series. With training from Library staff, departmental administrative assistants can manage sections for their faculty.

Among the lessons learned so far:

- Do not expect high deposit rates without a mandate (campus or departmental).
- Faculty perceives competition with other archives, such as NIH PubMed Central or Creative Commons.

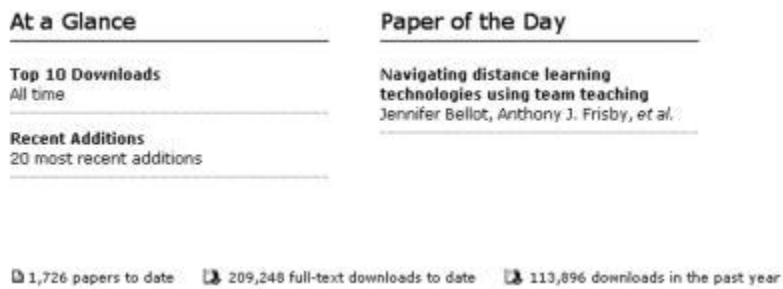


Figure 5: Paper of the Day

- [home](#)
 - [about](#)
 - [help](#)
 - [my account](#)
 - [notify me](#)
- Thomas Jefferson University
- JEFFLINE: Library

Advanced Search:



100%

Selected Works of Elaine Yuen

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Dr. Yuen is Research Associate Professor in the Department of Health Policy and a Research Associate in the Center for Research in Medical Education and Health Care. She received her PhD in Health Care Planning from the University of Pennsylvania, MBA in Healthcare Administration from Temple University, and BA from the University of Chicago. She is currently Principal Investigator in a project studying ethnic disparities in GERD recognition and treatment. She is also lead investigator in two other projects: costs and quality of cancer care in Italy; and hospitalizations for ambulatory care sensitive conditions in Pennsylvania. Previous projects have assessed the biopsychosocial factors contributing to asthma prevalence in Philadelphia school children; television programming and awareness of caregiver needs; mental health of Korean immigrant women as they care for their elderly relatives; and access to care and avoidable hospitalization for patients with asthma and diabetes in the greater Philadelphia area. Dr. Yuen often works with clinicians at Jefferson Medical College on specific health problems or disease states, analyzing health service use and costs with combined clinical and administrative data from various public and private sources.



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- [Daniel Z. Lurie, Elaine J. Yuen, Vittorio Hain, Carol Hakimevich, Mary Robinson, Kenneth S. Zedler, and Joseph S. Gonella \(2005\) A Population-based Longitudinal Healthcare Database in the Emilia-Romagna Region, Italy: A Resource for Planning and Research](#)

Selected Works of Elaine Yuen

- [Elaine Yuen \(2001\) Cultural and religious perspectives on caregiving and loss](#)

Figure 6: Personal researcher page

- Some publishers will negotiate deposit privileges outside their usual practices, if asked, especially if the requester is one of their editors.
- Reach out to administrative assistants and offer training to them. Faculty may not take the time to deposit but will delegate.
- Common barriers to acquiring materials involve costs of recording lectures, extent of access, and file format. Consider subsidies and format modification services.
- Monthly e-mail alerts with statistics generate interest and enthusiasm. Faculty appreciate that the program is free for them to use, that it may increase their citation rates, that someone on staff will help, and that they have control over the format, presentation, and version of their own material.
- Identify and recruit influential campus authors.
- Lead by example – put your own materials up for all to see.

- Start slowly. When a project is staff driven, it is easy for staff to become overwhelmed.
- All library staff must help to promote the IR at **every** opportunity.
- Measure success. Define meaningful statistics and compare return on investment to other tools.

EXPECTATIONS AND RETURN ON INVESTMENT

When an activity is staff driven, it is important to pace the work carefully and manage expectations. It is possible to overwhelm staff with too much of a good thing if the IR proves popular and the work comes in too quickly. Plan for technical or student staff support and provide adequate funding for clerical work so the librarians can concentrate on recruitment and organization.

Before embarking on the project, set some expectations for return on investment: What will constitute success for you? Be willing to build slowly, with proof-of-concept materials, departmental partnerships, presentations, and pilot projects. Common options for measuring return on investment include:

- Compile statistics
 - Number of items deposited
 - Number of series/collections/communities
 - Number of views or downloads
 - Types of materials included
- Identify users
 - In-house vs. external
- Extent of participation
 - Student, faculty, administrative.

CONCLUSION

Judging by the number of deposits, participating faculty, and participating departments, the Jefferson Digital Commons has raised the Library's visibility as an academic partner and attracted significant campus participation. This unique service fills both the need for an on-campus publishing outlet and serves as a showcase for Jefferson scholarship. The primary use of the Commons now derives from the original materials it produces as the university press. Faculty members, although slow to adopt, have proven to be extremely positive, once engaged. Although it is difficult to measure, the Library also derives satisfaction from the conviction that it is supporting change in publishing patterns and/or publisher policies through its support for the IR.

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