

Institutional Repositories, Policies, and Disruption

By Nancy Fried Foster, Susan Gibbons, Suzanne Bell, and David Lindahl, River Campus Libraries, University of Rochester

Abstract

For many librarians, institutional repositories (IRs) promised significant change for academic libraries. We envisioned enlarging collection development scope to include locally produced scholarship and an expansion of library services to embrace scholarly publication and distribution. However, at the University of Rochester, as at many other institutions, this transformational technology was introduced in the conservative, controlled manner associated with stereotypical librarian culture, and so these expected changes never materialized. In this case study, we focus on the creation of our institutional repository (a potentially disruptive technology) and how its success was hampered by our organizational culture, manifested as a lengthy and complicated set of policies. In the following pages, we briefly describe our repository project, talk about our original policies, look at the ways those policies impeded our project, and discuss the disruption of those policies and the benefits in user uptake that resulted.

Introduction

It is easy to think of new technologies that seem threatening to the future of libraries. Take Google, for example. When Google first emerged, it was just the newest of a number of search engines. But academics took to Google quickly, using it for a number of tasks previously done with the library catalog. As its appeal to academic users grew, Google added features directed explicitly to academics, such as favoring items from institutional repositories, scanning whole books, and developing Google Scholar.

Google is an example of a “disruptive technology” as described by Clayton M. Christensen in a 1997 business book, *The Innovator’s Dilemma*, and examined in an academic library context by David W. Lewis in a 2006 article in *Library Administration & Management*.¹ Lewis characterizes disruptive technologies as technologies that:

...initially underperform established products in mainstream markets. This makes them easy to ignore. But disruptive technologies have other features that are valued by a few fringe or new users. They also improve at a faster rate than established technologies. This is what makes them dangerous to established firms. Disruptive technologies often appear to be merely toys, but before you know it the toys have grown up and are cheaper, faster, and better than what established firms are selling (p. 69).

Academic libraries, however, need not be simply the victims of disruptive technologies. They can also introduce the technologies and bring disruption to the status quo. But doing so

¹ Lewis, David W. “*The Innovator’s Dilemma*: Disruptive Change and Academic Libraries.” *Library Administration & Management* 18(2):68-74 Spring 2004; <<http://hdl.handle.net/1805/173>>.

requires a dynamic and flexible organizational culture that is rarely found in academic libraries. To illustrate this point, we will focus on the creation of our institutional repository (IR), a potentially disruptive technology, how its success was hampered by our organizational culture, and how this was manifested in the form of a lengthy and complicated set of policies. In the following pages, we briefly describe our repository project and the potential uses of repositories, look at the ways our policies impeded our project, and discuss a more flexible approach to those policies and the benefits in user uptake that resulted.

Background: Setting up the Repository

The impetus for the University of Rochester to implement an institutional repository came from Provost Charles Phelps in 2000, and was related to his interest in the economics of scholarly communication. Our library dean, Ron Dow, shared Phelps’s concern and initiated a study of “faculty e-archives” and electronic theses and dissertations (ETDs). One of the authors, Susan Gibbons, along with a committee of library staff, undertook this study, ran several proof-of-concept projects, and finally recommended establishing an institutional repository using the DSpace platform.²

In early 2003, we quietly made our repository available for universal viewing and faculty deposits. At the time it had only modest customizations and very little content. Fourteen months later came the official launch of our heavily customized DSpace, locally branded as UR Research.³

Our original goals were to provide open access to the work of university faculty members and researchers and to do this in a way that showcased our institution, thus the need for local branding. We also wanted to add functionality to the repository so that it would work better for our faculty members. After an ethnographic study of how our faculty members do their work, we built “Researcher Pages,” individual showcase pages that allow faculty members to gather and highlight their work on easy-to-personalize pages, as well as a download counter that pushes otherwise buried usage data into the public interface of the IR.⁴

Disruptive Technology, Status Quo Policies

UR Research was a new technology on campus, and one that we believed would self-evidently appeal to our faculty members. After all, it gave them a way to safely store their scholarly work and easily share it with colleagues. However, faculty members did not rush to put their work into the repository.

As we learned more about our faculty members’ work practices, we learned some things about the repository itself that impeded uptake. For example, the repository was organized into departmental communities, which do not map to the cross-institutional nature of our

² DSpace is open-source software developed initially by the Massachusetts Institute of Technology and Hewlett-Packard as a platform for the storage and dissemination of digital research material. See website at <<http://www.dspace.org>>.

³ UR Research can be seen at <<https://urresearch.rochester.edu>>.

⁴ Our ethnographic study and subsequent development of Researcher Pages was generously funded by a National Leadership Grant from the Institute for Museum and Library Services.

scholars' specialist peer groups. For another, our faculty members are much more concerned with doing new work than archiving work that is completed; they need better authoring tools before they can concern themselves with submitting their work to a repository.⁵

The shortcomings of the platform accounted for much but not all of the problem. Another significant obstacle was the elaborate set of policies that we had put in place for the repository. A committee of several library staff members met every other week for approximately four months to craft a set of policies for the IR. All of the policies were modeled after those used at MIT. Specifically, the policies addressed:

- Acceptable content and formats
- Who may contribute to the IR
- What a "community" is
- The responsibilities a "community" takes on and the rights it retains
- The library's rights and responsibilities
- The university's responsibilities
- The use of the Memorandum of Understanding (MOU)
- What the author or copyright owner agrees to in the distribution license
- The IR's privacy policy
- The services the library will offer, and whether they will be offered free or for a fee
- The preservation support that will be provided for content
- Whether items may be withdrawn
- The required fields for a submission
- The metadata standards that the IR will support
- The authentication process that will be used⁶

Our decisions were made based on the limited information that we had about IRs and faculty work practices. Since we were under the impression that faculty would immediately want to use the IR, we underestimated the need for staffing. Moreover, we viewed MIT as our role model in establishing an IR. Consequently, we mimicked their process, particularly when it came to establishing IR policies. Looking back, we believe that we made some of these decisions well but could have acted differently on others.

Our approach to setting the policies surrounding our DSpace installation demonstrates how little we understood what we were getting into. Looking back, it seems obvious that most of this effort was a waste of time. Faced with the prospect of a new service, we tackled it in a highly institutional and bureaucratic fashion, which simply turned out to be wrong.

⁵ For a fuller discussion of these issues, see Nancy Fried Foster and Susan Gibbons, "Understanding Faculty to Improve Content Recruitment for Institutional Repositories," *D-Lib Magazine*, 11:1 2005.
<<http://dlib.org/dlib/january05/foster/01foster.html>>.

⁶ Our original DSpace policies can be found at
<<http://docushare.lib.rochester.edu/docushare/dsweb/View/Collection-3363>>. Current IR policies are on the UR Research website: <http://library.rochester.edu/index.cfm?page=1346>.

Some of the documents the committee produced were and still are useful, and appear on our informative website about our IR (<http://library.rochester.edu/index.cfm?page=1346>). It simply looks more professional and authoritative to have a list of “types of content we will accept,” rather than a one-liner saying: “We’ll take anything you will give us. Anything - please!” It is also good to have answers ready for questions about such matters as “what if I need to withdraw an item?” and “who holds the copyright if I put my material in your repository?” Also, although users do not generally ask, it is good to have something on hand about privacy and what formats we will attempt to preserve over the long term.

Where we went wrong was in all the policy-making around “communities” and “levels of service” and “memorandums of understanding.” For us, anything at the “community” level was wasted effort, because – as we experienced both anecdotally and in our research project – faculty members work as *individuals*, not as groups (departments or communities). There is no point to delineating “community start-up procedures,” because a start-up process almost never begins at the community level. Our only successful approaches have always been with individuals. Having a policy in place that dictates that we must work with a department as a whole, have buy-in from a chair, to the point of having that person sign a form acknowledging the establishment of their “community” in the IR, and thus a resulting relationship and service agreement with the Libraries, turned out to be not only unnecessary but capable of stopping the whole process in its tracks. At an early meeting with a member of the graduate school of education, this policy process was introduced. Quite understandably, the prospect of securing departmental agreements and establishing workflow policies was so overwhelming that she vanished, never to be heard from again. It took us a year to attract the attention of two other individuals in that school and get them to contribute some work.

Equally wasted was our work to delineate “levels of service”—a detailed description of what services the Libraries would provide for free, and what the communities would need to be prepared to do or pay for themselves. Whatever were we thinking? That we would be overwhelmed with demand? We now take it for granted that we will do whatever it takes to entice participation—we scan, we deposit, we write the emails asking permission to use published materials, and so on.

Disruptive Technologies, Disruptive Policies

Lewis talks about the two major transitions that libraries have undergone within the past fifty years, drawing on the work of Michael Buckland.⁷ The first transition, begun in the late 1960s, entailed the automation of many library functions with traditional paper collections. The second and thus far incomplete transition will lead to the “electronic library, where both collections and bibliographic control mechanisms are electronic” (Lewis 2004, p. 69).

Lewis points out that:

Many, but not all, of the technologies that are driving this transition are disruptive. They are cheaper and faster even though at the outset they do not

⁷ Lewis draws on the work of Michael Buckland, *Redesigning Library Service: A Manifesto*. Chicago: ALA, 1992.

seem powerful or sophisticated enough to meet current needs. The technologies involved are often developed outside of libraries and their established vendor community. In many cases, the services or products are marketed directly to library users. Finally – and this is probably the clearest warning sign – in most cases libraries and their most important users haven't asked for the new products and are quick to make a case for the superiority of current practices (p. 69).

Institutional repositories are an interesting case, being a potentially disruptive technology both developed and implemented by libraries. Disruptive technologies, by their very nature, cannot be planned, and yet we have tried to do just that. We have tried to build and establish IRs within the historical comfort zones of libraries, governed by policies that try to control use and adoption. If academic libraries truly hope to bring significant change to the work practices of faculty and the current scholarly communications paradigm, we must be willing, and more importantly able, to invest in a better understanding of the work, and offer new tools that are in some cases a departure from the traditional role of libraries.

Supporting Disruption

Returning to the study of our IR implementation, how could we better have fostered the adoption of IRs by our faculty members? In retrospect, we should have approached IR policy-making very differently. If we did it all over again, a small group would meet to make the decisions needed to get our instance of DSpace up and running. Examples of such decisions would be the crafting of a non-exclusive distribution right and the distribution of critical roles, such as who was responsible for backups. Beyond that, we would focus our energies on marketing the potential uses of an IR, and following up with individualized support for faculty adoption of the technology.

In order for an IR implementation to be successful, it is necessary to attract a critical mass of users. Disruptive technologies attract new users by developing and offering an improvement or an alternative to users who are dissatisfied with the more established technologies.

Again, take Google. According to the corporate website, its founders, Larry Page and Sergey Brin, met at Stanford University in 1995 and, despite some differences, soon began to work together.

Their strong opinions and divergent viewpoints would eventually find common ground in a unique approach to solving one of computing's biggest challenges: retrieving relevant information from a massive set of data.

By January of 1996, Larry and Sergey had begun collaboration on a search engine called BackRub, named for its unique ability to analyze the "back links" pointing to a given website...

A year later, their unique approach to link analysis was earning BackRub a growing reputation among those who had seen it. Buzz about the new search technology began to build as word spread around campus.⁸

Google’s way of finding and providing access to better results was its attraction. But, what is the attraction of an IR? There is no attraction, per se, of an IR to a faculty member. However, anything that would allow faculty members to do some of their current research-related activities better and faster, and especially something enabling them to reach more of their colleagues, be read more, and be cited, would be enormously attractive. When the IR is part of a larger system that makes it easier for faculty members to author and co-author their papers, and then preserve and self-publish their work with a few simple clicks, then we believe that faculty will adopt it and make it a success. Until that time, we have to fill in some service gaps and present IRs in a way that addresses a broader set of work processes.

Since our new technology does not currently address our faculty members’ immediate, high-priority needs, we must capture their interest by appealing carefully to the critical needs that the technology does, indeed, meet. However, little time or attention was paid to the idea of marketing the IR before the service began. We incorrectly believed that the value of the service would be relatively straightforward and evident. Consequently, we imagined doing nothing more than a nicely choreographed rollout of the system with a press release and some small fanfare. We have subsequently learned how to speak to our faculty members in their language, stressing the value of the IR for preservation and for simplified sharing, especially of presentations and supplements to published work.

Broader Disruptions

In looking at IR items and collections that receive the most traffic, we note that the most successful ones either support the research needs of a clear community of interest or discipline (in our IR, this is a collection of musical scores), or take on the functions of scholarly societies or journals (in our IR, this includes a collection of papers with genealogical interest as well as an electronic journal).

The future success of our IR may lie in its connection to larger publishing programs that are, themselves, undergoing disruptive change. For example, a scholarly association has approached us to host a disciplinary repository within our IR. This would provide the scholarly society with a place for grey literature (including pre-prints and published versions of articles from “green” journals) and for non-commercially published journals, including publications that are too small, too new, or too arcane to receive support for paper publication, or that would better be published digitally because of their use of new media and technological features. While it makes sense for scholarly societies themselves to host disciplinary repositories, our early experience is that scholarly societies lack the resources to do this and may turn to universities or other institutions to host these repositories for them. This will entail many challenges, including developing funding models and forging new partnerships.

⁸ Google, “Corporate Information” <<http://www.google.com/corporate/history.html>>; what purports to be the original presentation, including an early algorithm, can be found at <<http://dbpubs.stanford.edu:8091/diglib/pub/slides/berkeleydlijan98/berkeleygoogle2/sld001.htm>>.

We wonder whether other scholarly societies will connect their use of repositories to their journal publishing. Libraries may be on the road to becoming auxiliary or even major providers of publication services through their repositories or through additional technologies that have yet to be developed. In other words, IRs may turn out to be a disruptive technology, but not for the user base we expected and planned for so carefully.

While other disruptive technologies, such as Google, seem to take off quickly, IR technology may take off more slowly, as a large set of publishing practices changes over the next several years. We must nurture these slower starting technologies by being more willing to take risks in our traditional policies and practices. And we must be prepared for cultural disruption to go along with disruptive technologies.