The Role of Institutional Repositories in Open Access:
An Annotated Bibliography

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Introduction and Scope

The following bibliography covers the role that an academic institutional repository (IR) can have in the open access movement. Due to the relative newness of IRs and open access (OA), research integrating the two is still limited. The articles include quantitative and qualitative research and were published from 2004 to 2010 in North America, Europe and Australia. While most of the articles reflect recent studies, a few older articles are included to provide angles that current research has neglected. These articles consider the views of various university stakeholders in the success of an IR, namely the university faculty, students, librarians and IR managers. One article reveals the opinions of scholarly journal publishers, a group that is directly affected by the success or failure of the OA initiative. Overall, this bibliography offers a variety of topics when considering the effectiveness of IRs in OA.

Description of Topic

While variations occur in the definition of an institutional repository (IR), most scholars agree that an IR, at a minimum, is a web-based database that collects, preserves and disseminates an institution’s intellectual output. IRs developed from the practice of self-archiving by individual authors (Xia & Opperman, 2010). Universities introduced them in 2002 to pave the way for changes in scholarly publishing and communication (Ware, 2004). There are many noted benefits to IRs, including increasing the stature of a university by showcasing its intellectual output, providing better storage and structure for this knowledge, improving teaching through the sharing of this output, and taking
advantage of already invested time and money in information systems (Pickton & McKnight, 2007).

With the changing landscape of scholarly communication due to growth in the electronic publishing, it is only appropriate that universities explore IRs as a means for keeping current with today’s academic trends. A major trend that IRs can support is the open access (OA) movement. Like IR, OA has various meanings depending on the definer. Most agree that OA applies to materials in digital form that are freely accessible to all (Ware, 2004; Palmer, Dill, & Christie, 2009). OA is a controversial topic in contemporary library science, but with rising journal subscription costs and lack of author control over intellectual output, it is a topic that requires attention.

**Literature Review**

According to Xia and Opperman (2010), IRs enable universities to serve as OA publishers by providing members with a way to freely share their intellectual output. Their research also notes interesting, but not surprising data regarding the contents of IRs. In baccalaureate institutions, IRs are comprised more of teaching materials, as the focus is on undergraduate education. Masters institutions, on the other hand, focus on research and rely on scholarly journals and faculty output to fill their IRs (Xia & Opperman, 2010). Most repositories will inevitably gather the most materials based on the needs of its members.

Content is also potentially linked to the discipline of the materials. Scholars in the physical sciences and mathematics, for instance, have a mutual dependence on research findings and are motivated to circulate their work openly (Xia, 2007). These fields favor
subject-based repositories to IRs, but Xia (2007) has found no direct correlation between the steady use of subject-based repositories and the willingness to self-archive in IRs. In fact, the opposite has surfaced. The social sciences, humanities and arts tend more toward IR deposits even though these fields widely do not employ subject-based repositories (Creaser et al., 2010). Research has not yet explained why there are consistent differences in each discipline’s use of IRs. It has found, however, that mandate policies have a direct impact on self-archiving across disciplines (Xia, 2007)—and that most authors show a high willingness to self-archive if mandated (Carter, Snyder, & Imre, 2007).

In order to understand the importance of OA in the academic world and the necessity of fully-functioning IRs, the impact of OA on research should be explored, as well. A study on the mean citation rates of freely available journal articles compared to those that are not free found that the citation rates are much higher for articles that are OA (Antelman, 2004). Furthermore, the highest citation rates come from political science and mathematics disciplines, where culture dictates the sharing of knowledge. Antelman (2004) found that OA articles have greater research impact regardless of the work’s discipline.

It is also worth knowing the advances that individual disciplines are making toward OA in their fields. The National Institutes of Health (NIH) Public Access Policy was signed in 2009 and requires scientists who receive NIH funding to submit their final peer-reviewed manuscripts to the digital archive PubMed Central upon acceptance for publication (Thomas & Blackwell, 2010). A survey one year after the policy’s signing failed to prove that the NIH mandate can take credit for the growth of research universities’ IRs. It also showed a common theme among self-archivers: departmental
and/or personal websites are the most popular vehicle for sharing scholarly communication (Kim, 2010; Swan & Brown, 2004; Thomas & Blackwell, 2010).

Thus far in IR and OA research, a majority of studies are about the stakeholders in a university’s IR. Most of this research explores the attitudes these stakeholders have toward OA and their contributions to IRs. Scholars have collected the most data on authors of intellectual output. The main concern for most authors when it comes to choosing where to submit their work is simply getting published in a peer-reviewed, reputable journal (Carter et al., 2007). There are also still significant concerns that equate OA with vanity publishing or poor quality output (Creaser, 2010).

For those authors who do opt to publish in OA publications, one study found that 92% of them did so because of their belief in the principle of free access for all (Swan & Brown, 2004). Another highly motivating factor is the speed with which intellectual output can be disseminated through OA vehicles (Swan & Brown, 2004; Creaser, 2010). When faculty in particular were surveyed, few were found to use their university’s IR and most chose to self-archive via their personal websites (Kim, 2010). Most operated on altruism and the principle of reciprocity of knowledge, although several factors contributed to their decisions to self-archive including the culture of their discipline, technical skills and academic award. Conflicting with other theories, copyright concerns, age and time requirements did not factor into their decision (Kim, 2010).

Rowlands, Nicholas and Huntingdon (2004) found some of these results years before, which implies that the cultures of scholarly work are not quick to change. They took a comprehensive look at the different demographics of senior researchers and found that, for the most part, authors want to reach their targeted audience through a quality,
Institutional Repositories and Open Access

...refereed journal that offers a moderately good publisher service. Authors generally have a positive view of OA, which leaves it up to the academic community to keep IR standards and content on par with author desires (Rowlands et al., 2004; Creaser et al., 2010).

This brings into conflict the desire and need for universities to accept student work in IRs. In the IRs of baccalaureate institutions, students are the largest contributors (Xia & Opperman, 2010). Studies a few years prior to this finding, however, report that students rarely use IRs (Pickton & McKnight, 2007). While including student work could help with the OA initiative within a university, the debate of quality materials could be renewed. Most IR managers are in favor of allowing the deposit of student theses and dissertations under specific conditions (Pickton & McKnight, 2007). They also argue that it is the reader’s responsibility to evaluate the materials they obtain from an IR. Student views have not yet been discovered on this subject.

While IR managers may have initially anticipated most materials being deposited by faculty, they have turned to alternative ways to collect materials for IRs (Xia & Sun, 2007). These include accepting student work (as seen above) or allowing non-authors, such as departmental staff or library liaisons, to deposit work for the author. Xia and Sun (2007) argue, however, that faculty who do not take charge of their own materials will have no relationship to the IR and no incentive to support its OA principle.

The last group of stakeholders are academic librarians. Not much research has been found on librarians’ attitudes toward OA or their roles in IRs. Librarians generally feel that their profession should support OA, but few were actively acting to advance the initiative (Palmer et al., 2009). While there is no correlation between the number of years in library science and a librarian’s attitude or behavior, those who manage educational
campaigns on OA within the university had a higher positive outlook toward OA. Palmer et al. (2009) also found that librarians are overall resistant to IRs because of apprehension over the costs, technical support and maintenance required to manage an IR.

According to a recent study, librarians do not feel that their resource supplies have been impacted by the availability of OA journals (Creaser, 2010). While the OA movement hopes IRs can push to reduce the demand for paid subscription access, no research so far indicates this (Ware, 2004). Nevertheless, it does not stop the concern that scholarly publishers have over the potential success of IRs. According to Ware’s findings (2004), a majority of publishers think that IRs will have a significant impact on scholarly publishing and are actively seeking to integrate themselves with this new movement so as to not become obsolete.

Further research is needed before more conclusive knowledge of IRs and their role within the OA movement can be attained. There still appears to be much confusion among the stakeholders over IRs, OA and copyright issues (Creaser et al., 2010; Kim, 2010). Additional education within universities and disciplines is necessary, because as Ware (2004) notes, the challenges with IRs has less to do with technology and more to do with managerial, organizational and cultural issues. Academic librarians must be on the lookout for the inevitable future research on this topic if they wish to stay abreast of the changing scholarly communication landscape.
Bibliography


Abstract: Although many authors believe that their work has a greater research impact if it is freely available, studies to demonstrate that impact are few. This study looks at articles in four disciplines at varying stages of adoption of open access—philosophy, political science, electrical and electronic engineering and mathematics—to see whether they have a greater impact as measured by citations in the ISI Web of Science database when their authors make them freely available on the Internet. The finding is that, across all four disciplines, freely available articles do have a greater research impact. (Excerpt from published abstract)

Annotation: Although this study is old in technology years, it is one of the few that examines the research impact of open access (OA) articles. It mirrors the findings of more recent studies regarding the culture of traditional disciplines. It asserts the need for librarians to understand scholarly communication practices if a university’s institutional repository (IR) is to successfully support the open access movement. College and Research Libraries is a peer-reviewed scholarly journal published by the Association of College and Research Libraries.

Search Strategy: After reading “Census of institutional repositories in the Unites States,” I checked the references and found this article.

Database: N/A

Method of Searching: Footnote chasing

Search String: Referenced in:


Abstract: Researchers from Southern Illinois University Carbondale (SIUC) surveyed faculty members from 10 academic research libraries to learn about scholarly publishing activities, attitudes, and policies. Areas of special interest included the effect of publishers’ intellectual property policies and institutional promotion and tenure processes on library faculty publishing decisions. The
researchers wanted to determine if there were any correlation between a library faculty member’s rank and tenure status and the number of peer-reviewed articles published in refereed journals. (Excerpt from published abstract)

**Annotation:** Provides no extensive new findings, but sets up areas for future research. The survey ensured anonymity by using web survey to encourage sincere responses. It provides the text of the questionnaire as well as visual representations of the data. It showed that most faculty member would have a high willingness to self-archive if mandated. *portals: Libraries and the Academy* is a peer-reviewed scholarly journal.

**Search Strategy:** After reading “Where there’s a will there’s a way?: Survey of academic librarian attitudes about open access,” I checked the references and found this article. I found the full text by searching the Drexel University Libraries’ website.

**Database:** N/A

**Method of Searching:** Footnote chasing

**Search String:** 


**Abstract:** This paper presents the results of two complementary surveys undertaken in 2008 as part of a wider project investigating the effects and impact of open access to research outputs in the UK. The institutional view, from a survey of academic librarians, is compared to researchers’ perceptions and practices. Reasons for making research outputs available on open access, or not doing so, were sought, and the role of open access material as a research resource investigated. (Excerpt from published abstract)

**Annotation:** Provides quantitative and qualitative data. It displays a variety of graphs showing the results and succinctly combines both survey findings, which support past conclusions about the impact of OA on libraries. *New Review of Academic Librarianship* is a peer reviewed scholarly journal that has previously published the work of this author.
Search Strategy: Found by searching Electronic Collections Online (ECO) via OCLC FirstSearch. I chose ECO because it contains scholarly journals from many fields, including library science and education.

Database: ECO

Method of Searching: Keyword search

Search String: institutional reposit* and open access and academic


Abstract: This article investigates the awareness of scholarly authors toward open access repositories and the factors that motivate their use of these repositories. The article reports on the findings obtained from a mixed methods approach which involved a questionnaire returned by over 3000 respondents, supplemented by four focus groups held across Europe in the summer 2009. The research found that although there was a good understanding and appreciation of the ethos of open access in general, there were clear differences between scholars from different disciplinary backgrounds in their understanding of open access repositories and their motivations for depositing articles within them. (Excerpt from published abstract)

Annotation: Several of the authors have published work in this field. The article gives a concise literature review and thoroughly analyzes the responses of the questionnaire and focus groups. It provides several graphs to help visualize the results. This research goes further than other studies in examining the views of authors. *New Review of Academic Librarianship* is a peer reviewed scholarly journal.

Search Strategy: Found by searching ECO via OCLC FirstSearch. I chose ECO because it contains scholarly journals from many fields, including library science and education.

Database: ECO

Method of Searching: Keyword search
Search String:  
institutional repositor*  
and open access  
and academic


Abstract: This study investigated factors that motivate or impede faculty participation in self-archiving practices—the placement of research work in various open access (OA) venues, ranging from personal Web pages to OA archives. The author’s research design involves triangulation of survey and interview data from 17 Carnegie doctorate universities with DSpace institutional repositories. (Excerpt from published abstract)

Annotation: Gives thorough background of the golden and green roads to OA. Research specifies the academic status and rank of the faculty, which previous studies have neglected. It applies the social exchange theory to faculty self-archiving behavior. It employs a survey and follow-up interviews for both quantitative and qualitative data. *Journal of the American Society for Information Science and Technology* is a peer reviewed scholarly journal.

Search Strategy:  
I chose Information Service for Physics, Electronics and Computing (INSPEC) because it contains science and technology journal articles and this topic specifically deals with technology in university libraries. I used Dialog to do an abstract search.

Database:  
INSPEC [Dialog File 2]

Method of Searching:  
Abstract search

Search String:  
s (open(w)access and institutional(w)repositor? and academic)/AB


Abstract: This article reports on the results of a national survey conducted in the summer of 2006 of academic librarians' attitudes toward open access principles and related behaviors. Surveyed librarians appear to be more comfortable with tasks that translate traditionally held responsibilities, such as educating others, to the open access environment. Most significant is the discrepancy between stated
support of library involvement in open access initiatives and significantly lacking action toward this' end. (Excerpt from published abstract)

**Annotation:** Gives thorough background of open access philosophies and the roles of librarians. It is one of the first research studies done on librarians’ attitudes and gives meticulous analysis of the responses. The authors use known strategies and recognize the limitations of the survey. *College and Research Libraries* is a peer reviewed scholarly journal published by the Association of College and Research Libraries.

**Search Strategy:** After reading “The role of reference librarians in institutional repositories” by Charles W. Bailey, I did a cited reference search on Web of Science and found this article.

**Database:** Web of Science

**Method of Searching:** Cited reference search

**Search String:** *Cited author:* Bailey CW*
*Cited work:* Ref*
*Cited year(s):* 2005


**Abstract:** Research students, in particular, are a group that could make a major contribution to an IR, both currently and in their future careers. A short email survey was carried out, comprising questions about student use of the repository, advocacy undertaken and attitudes toward research student content. Responses were received from [repository management] representatives of 35 universities in the UK and abroad. The paper concludes that there is a need for clear guidance on the quality of repository content; that evidence of use should be sought; and that IR policy should accommodate the needs of all stakeholders. (Excerpt from published abstract)

**Annotation:** Gives direct outlooks on the role that research students can play in IRs. By using open-ended questions, the survey allowed respondents the freedom to express themselves fully and precisely. It is one of the few articles that thoroughly address student involvement in IRs. *Journal of Librarianship and Information Science* is a peer reviewed scholarly journal. The article is based on the dissertation, which was runner-up in 2005 for the Library and Information Research Group postgraduate prize.
Search Strategy: Found in my initial search. I chose Education Resources Information Center (ERIC) because it specializes in education literature and this topic specifically deals with the academic environment. After determining that ERIC had no synonyms for “institutional repository,” I used Dialog to do a keyword search.

Database: ERIC [Dialog File 1]

Method of Searching: Keyword search

Search String: s institutional(w)repositor?


Abstract: This article reports on a large-scale international survey of authors’ perception and experience of the journals system conducted by ciber in association with National Opinion Polls (NOP). It explores the factors that inform authors’ decisions where to publish and, in particular, which groups of readers they perceive to be most important. It probes readership behaviour and the values that underlie authors’ attitudes towards copyright and emerging business models, notably open access. It is concluded that many aspects of author behaviour are highly conservative and that a significant shift towards open access is, in the short to medium term, highly unlikely.
(Excerpt from published abstract)

Annotation: Claims to be possibly the largest survey at the time with almost 4,000 responses from senior researchers in 97 countries. While the magnitude is impressive, the authors fail to give innovative discussion on the topic, even at that time. The article is peppered with direct quotes from survey responses and data tables of the findings. Learned Publishing is a peer-reviewed scholarly journal.

Search Strategy: After reading “Census of institutional repositories in the Unites States,” I checked the references and found this article.

Database: N/A

Method of Searching: Footnote chasing

**Abstract:** Surveys were carried out to learn more about authors and open access publishing. Awareness of open access journals among those who had not published in them was quite high; awareness of ‘self-archiving’ was less. For open access journal authors the most important reason for publishing in that way was the principle of free access; their main concerns were grants and impact. Authors who had not published in an open access journal attributed that to unfamiliarity with such journals. (Excerpt from published abstract)

**Annotation:** Cited frequently by more recent research. The findings reflect current studies. While the surveys found that authors are least likely to have previously deposited work in an IR compared to other electronic sources, it may be due to the relative newness and unavailability of IRs at every university. This research can be considered alongside current data despite its age. *Learned Publishing* is a peer-reviewed scholarly journal.

**Search Strategy:** After reading “Census of institutional repositories in the Unites States,” I checked the references and found this article.

**Database:** N/A

**Method of Searching:** Footnote chasing


**Abstract:** Signed into law in January 2008, the National Institutes of Health (NIH) Public Access Policy went into effect March 19, 2009. This law has the potential to affect significantly the activities of librarians, researchers, and
publishers. In an effort to assess the impact, Joseph Thomas of East Carolina University studied how academic libraries are responding to the new mandate and whether the librarians perceived a correlation between their activities in response to the mandate and the growth of institutional repositories. (Excerpt from published abstract)

**Annotation:** Briefly discusses methodology and uses only one table. The simple survey reveals that the growth of IRs is not attributable to the NIH mandate. Thomas admits that the study lacks data regarding which respondents had NIH grants. He presented his research at the 24th Conference of the North American Serials Interest Group (NASIG). It was published in *The Serials Librarian*, a peer reviewed scholarly journal.

**Search Strategy:** Found by searching ECO via OCLC FirstSearch. I chose ECO because it contains scholarly journals from many fields, including library science and education.

**Database:** ECO

**Method of Searching:** Keyword search

**Search String:** institutional repositor* and open access and academic


**Abstract:** The institutional repository (IR), an open Web-based archive of scholarly material produced by the members of a defined institution, has come to the fore following the launch of DSpace at MIT at the end of 2002. Here we review recent developments in IRs and explore the impact their expansion may have on scholarly publishing. (Excerpt from published abstract)

**Annotation:** Gives background information on IRs and has more than a dozen citations, making this non-obsolete. It reports the results of a survey conducted to learn the views of publishers, which return the usual conclusions. The author provides substantial reasoning to confirm that IRs will complement scholarly publishing instead of harming it. *Learned Publishing* is a peer-reviewed scholarly journal, one of many that have published this author.
Search Strategy: After reading “Is there a role for research students in an institutional repository? Some repository managers’ views,” I checked the references and found this article.

Database: N/A

Method of Searching: Footnote chasing


Abstract: This research examined self-archiving practices by four disciplines in seven institutional repositories. By checking each individual item for its metadata and deposition status, the research found that a disciplinary culture is not obviously presented. Rather, self-archiving is regulated by a liaison system and a mandate policy. (Excerpt from published abstract)

Annotation: Discusses the study’s findings and its relationship to the “disciplinary culture theory.” It only studied chemistry, economics, physics and sociology because they are traditional fields and allowed for cross-institution comparisons. The author acknowledges the limitations, but feels the research is an adequate starting place for future analysis of self-archiving across disciplines. *The Journal of Academic Librarianship* is an international and peer reviewed scholarly journal. The author’s work with IRs is frequently published.

Search Strategy: After seeing Xia’s name several times, I chose to do an author search in Library Literature and Information Science (LLIS) via Dialog. I chose LLIS because of its sole focus in library studies.

Database: LLIS [Dialog File 438]

Method of Searching: Author search

Search String: e au=xia

s e5, e12

**Abstract:** (M&BIs) in the United States. The focus includes repository content composition, operational style, development history, and accessibility. The research studies a group of institutional repositories through the analysis of their content elements. The article also discusses important management issues and identifies challenges. This research can provide a valuable resource to other libraries of similar type and size for the planning and implementation of new repositories, as well as assess the current environment of institutional repositories. (Excerpt from published abstract)

**Annotation:** Includes an extensive literature review prior to discussing the research. The study provides data that demonstrates the increased contributions from students and librarians. It asserts that more teaching materials are needed if the IRs are to be used as open educational resources. While a lack of teaching materials may weaken an IR, the author gives no evidence that it hinders a student’s education. *Serials Review* is a peer reviewed scholarly journal. The authors’ works with IRs are frequently published.

**Search Strategy:** After reading “The institutional repository rediscovered: What can a university do for open access publishing?” by Jean-Gabriel Bankier and Irene Perciali, I did a cited reference search on Web of Science and found this article.

**Database:** Web of Science

**Method of Searching:** Cited reference search

**Search String:**

*Cited author: Bankier J*

*Cited year(s): 2008*


**Abstract:** This research evaluates the success of open access self-archiving in several well-known institutional repositories. Two assessment factors have been applied to examine the current practice of self-archiving: depositorship and the availability of full text. This research discovers that the rate of author self-archiving is low and that the majority of documents have been deposited by a librarian or administrative staff. Similarly, the rate of full-text availability is relatively low, except for Australian repositories. (Excerpt from published abstract)
**Annotation:** Claims to be the first in-depth and systematic analysis of self-archiving in IRs. It studied nine IRs that use EPrints because the software has depositor data. The total amount of documents checked was less than ten percent, as well, which makes it difficult to make conclusions about the multiple IRs absent from this study. Authors admit this is the beginning of this type of research and offer ways to mature this study in the future. *Serials Review* is a peer reviewed scholarly journal. Xia’s work with IRs is frequently published.

**Search Strategy:** After seeing Xia’s name several times, I chose to do an author search in LLIS via Dialog. I chose LLIS because of its sole focus in library studies.

**Database:** LLIS [Dialog File 438]

**Method of Searching:** Author search

**Search String:**
e au=xia

s e5, e12