Impact of Institutional Repositories on Technical Services

By

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Abstract

The library technical services (TS) units at Ohio State University are heavily involved in the operation of the institutional repository. A literature review revealed that the majority of articles addressing the impact of institutional repositories on library operations emphasize the role of public services. In an effort to determine if the Ohio State experience was unusual, a survey was sent to 123 ARL libraries through the ARL director's listserv. The survey was designed to determine how the management and workload associated with institutional repositories is distributed across the library including whether IR responsibilities are fulfilled in TS and whether there has been reorganization of TS to handle the IR. Twenty-one percent (21%) of the libraries returned the survey. Most of the institutions indicated that the operation and management of the IR is distributed across multiple units of the library. Most also reported heavy technical services involvement. The fact that 86% of the technical services positions involved in the IR are not new indicates that in general technical services units have not been reorganized. Overall, there are many similarities between Ohio State and the institutions responding to our survey. The services for the IR are widely distributed across multiple units of libraries and the institutions in this study reported heavy technical services involvement. However, the involvement of technical services at Ohio State is among the strongest.

Introduction

In 2002 the Scholarly Publishing and Academic Resources Coalition (SPARC) published a position paper making the case for institutional repositories as a "critical component in reforming scholarly communication … as having the potential to serve as tangible indicators of a university's quality" (Crow, 2002, p. 4) by demonstrating the relevance of its research activities. The SPARC paper further argues that the responsibility of organizing and maintaining the content of the institutional repository rests with libraries (p. 20).

Since 2002 many institutions and libraries have embraced the role of capturing and distributing the unique content of the institution through the establishment of repositories. An examination of the Registry of Open Access Repositories (ROAR) shows that there are 204 North American (29 in Canada;175 in the United States) repositories registered in combined categories of "research institutional or departmental" and "e-Theses". Additionally, there are 26 repositories registered as "research-cross institutional" (6 in Canada; 10 in United States) (Brody, n.d.). The commitment to offering a new major service such as an institutional repository involves the evaluation of priorities and the allocation of resources. What is the impact an institutional repository on libraries? When a library initiates an institutional repository, what is the impact on the organization? Who in the library is responsible for "capturing and preserving the intellectual

output of the academy? This paper looks specifically on the impact of the institutional repository on technical services within the library.

Background

The idea for a “knowledge bank” grew out of discussions in 2001 of the University’s Distance Learning/Continuing Education Committee. The concept was to “collect, to index, and to preserve digital content produced by faculty and to support the creation of new research content and learning packages” (Rogers, 2003, p. 26). The context of the discussions was a desire to provide more support for distance education. “In the fall of 2001, a planning committee, chaired by Joseph J. Branin , director of University Libraries, was formed to investigate the validity of the concept” (p. 26). The repository became the Knowledge Bank (KB), a joint initiative of the University Libraries and the Office of the CIO, and was registered with the Registry of Open Access Repositories (ROAR) in September 2004. Since 2004 the KB has grown to a repository of 44 communities and over 31,000 items.

The Knowledge Bank can be considered a general repository both in terms of content and formats. The selection of material for the KB is made by the participating communities. The KB belongs to these communities, not to the Libraries. As long as communities have the rights to distribute the material, have the desire to make the material universally available (communities can choose to embargo content for up to 5 years), and have decided that the material is of long-

term value, they can submit, or authorize a third party to submit, their content into the KB. The result is that the content of the KB is diverse in terms of subject matter, and local audiences served. For example, scientific material includes the Byrd expedition photo albums from the Byrd Polar Research Center; abstracts from the OSU International Symposium on Molecular Spectroscopy; the Ohio Journal of Science (1900-the present with a rolling wall of 2 years) from the Ohio Academy of Science; videos of Ohio rivers from the College of Food, Agricultural, Environmental Sciences; and, poster presentations from the School of Earth Sciences. Humanities and social science materials include *Early Modern Japan*, an interdisciplinary journal of the East Asian Studies Center, *Polata Knigopisnaia* from the Hilander Research Library, conferences and presentations sponsored by the Mershon Center for International Security Studies, and notes documenting every known structure at Ohio State from the inception of the University in the 1870s through 1988 from the Austin E. Knowlton School of Architecture Herrick Archives. Content types include abstracts, articles, conference proceedings, journal runs, lectures, and undergraduate honors theses. Formats in the KB include images, text, video, and audio. Electronic theses and dissertations, however, often a category of content in institutional repositories, are not part of the KB. Ohio State's master's theses and doctoral dissertations are deposited to the OhioLINK (state-wide consortium of academic libraries) ETD Center.

In the context of the Knowledge Bank, Clifford Lynch's definition of an institutional repository (IR) as a "... set of services … for the management and

dissemination of digital materials created by the institution and its community members" (2003) is useful. The KB has become a set of library services offered to the academic community to preserve its academic and creative assets. Services provided by the Libraries include advice on rights issues, guidance on digitization standards and technical issues, and a review of metadata options. Customization of digitization, presentation, and metadata is available. Once material is ready to be deposited, services also include customization of input forms, training for community submitters, or, alternatively, creation of metadata and input of the material into the KB by the library on the behalf of the community. While the work of the KB at the OSU is widely distributed among functional units, the bulk of the management for the KB falls to a team of three representing the administration (for general oversight), information technology (systems management), and technical services (workflow coordination, metadata, input and quality control). Additional units involved in the operation and implementation of the KB may also include public services (subject specialists), and preservation (for digitization and preservation metadata expertise).

Institutional repositories are frequently thought of in terms of their public face. After all, the purpose of the repositories is to preserve intellectual output of the academy and make it available to users. The OSU experience, however, has been that the biggest impact on day-to-day operations of the Libraries is on the technical services units of the Libraries. Beyond the initial contact with

communities, much of the continuing conversations are held between technical services personnel and the content creators or administrators in the community. Rights issues, metadata definition and creation, item input, and quality control of the KB have become the responsibility of technical services. Technical services (TS) and information technology (IT) work very closely to monitor performance of the DSpace system. The work of some long-term personnel in TS has been redirected to the KB digital efforts, and for both TS and IT, new personnel have been added. We began to wonder if our experience was unique.

This paper looks at the impact of IRs on TS. We will describe the OSU experience and also report on the experience of Association of Research Libraries (ARL) institutions who responded to a survey on the topic. Again, Lynch's definition of an IR as a set of services is useful. What are the set of services offered? Are these services distributed across the various units of the library? What, if any, responsibilities are fulfilled in technical services (TS)? If TS plays a role, has there been any reorganization of TS in order to accommodate the responsibilities of the repository? What skill sets have been needed? Are any of the responsibilities fulfilled by staff employed prior to the establishment of the repository? What have been the training needs for these individuals? How has the training been accomplished? Have new staff been hired?

Literature review

Library Literature was searched using the following combinations of terms: technical services with a) institutional repositories and b) change; institutional repositories with a) staffing and b) personnel. The more general topic of technology and change was also searched. For the purposes of this paper, the literature found was grouped by two main themes: definitions of IRs, and the library units and personnel involved in the management and implementation of IR services.

Definitions of Institutional Repositories.

Definitions of IRs have evolved. Early definitions emphasize a mission to collect and preserve unique institutionally produced material. In a 2002 SPARC position paper, Crow defined an institutional repository as "a digital archive of the intellectual product created by the faculty, research staff, and students of an institution and [made] accessible to end users both within and outside of the institution, with few if any barriers to access" (2002, p.4).

Other definitions emphasize the types of content frequently found in IRs. Bailey described an institutional repository as including a variety of materials "such as e-prints, technical reports, theses and dissertations, data sets, and teaching materials. He also noted that some institutional repositories are also being used as electronic presses, publishing e-books and e-journals" (2005a, p. xvii). In 2006, Bailey added learning objects to the list of types of materials found in an IR (Bailey & the Association of Research Libraries, 2006). The results of a 2006

survey of ARL member libraries that had implemented institutional repositories showed that the most common type of deposit was electronic theses and dissertations. Articles were a close second. The report notes that only a few include university catalogs, yearbooks, or alumni publications" (Bailey & the Association of Research Libraries, 2006, p. 17).

Some authors add other features or services as components to their definitions. Ware (as quoted by Bailey) includes OAI-compliance and long-term preservation of digital materials by defining the repository as "open and interoperative" (Bailey 2005b, p. 260).Clifford Lynch, Executive Director of CNI provides perhaps the broadest definition of an institutional repository:

> …a university based repository is a set of services that a university offers to the members of its community for the management & dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long-term preservation where appropriate, as well as organization and access or distribution. (2005b, p. 2)

Management and implementation of IR services.

The ARL survey noted that the most frequent types of units listed first as units responsible for IRs were "digital library/initiatives or systems units within libraries. Also listed were administrative units, archives, and research or technical services (Bailey & the Association of Research Libraries, 2006, p. 15). Walters discusses

the advantages of having a single unit responsible for digital initiatives. Single designated units

> …act as a conduit through which collecting, disseminating, preserving, and collaborating with other organizations occur. Such a unit can develop the single voice and vision needed to articulate the myriad possibilities for scholarly communications—promoting new services and developing and explaining new processes. They also may act as conduits for other departments within the library, exploring the contributions these areas can make to IR development. Composed of librarians, archivists, technologists, and other staff who make the case for overall changes in scholarly communications, [digital library initiatives] units become the "champions of the IR cause. (Walters, 2007, p. 215)

Other writers describe a cross-departmental collaborative approach. Chan, Kwok, and Yip in their case study of the Hong Kong University of Science and Technology (HKUST) Institutional Repository noted that personnel from several departments were involved in the management of their institutional repository. Departments involved included Systems, Collection Development, Acquisitions, Administration, Cataloging, and Reference (Chan, Kwok, and Yip, 2005, p. 270). Eckwright and Bolin vary the collaborative model in an article in which they describe the "hybrid librarian". In this article they write of the advantages of designing and implementing services around the individual skills of existing

personnel in multiple departments, not necessarily following the formal organizational structure of the organization (Eckwright & Bolin, 2001, p. 453).

There is very little in the literature on the topic of the impact of institutional repositories on the organizational structure of the library. The articles found primarily discuss the changing role of reference librarians and how their expertise is important in promoting, implementing and managing an institutional repository. In fact, issue 3 of the 2005 *Reference Services Review* is devoted to this topic. Buehler and Boateng of the Rochester Institute of Technology, studied the impact of institutional repositories on the role of reference librarians by reviewing expectations found in the literature and using those results to inform an analysis of their own situation. The authors were surprised to find that the impact on the role of reference librarians was not as great as expected (2001, p. 291). Jenkins, Breakstone, and Hickson in an article advocating more involvement of reference librarians in institutional repositories conclude that "[t]he experience of the University of Oregon in developing and promoting an IR makes it clear that such endeavors benefit from the inclusion of library staff with different backgrounds and expertise from a variety of areas" (2005, p. 322). The emphasis of their article is on the marketing and collaborating role of the subject specialists.

> Because reference librarians [have] … liaison responsibilities to specific disciplines, their knowledge of the specialized research needs and scholarly communication patterns of the different disciplines can inform every step of the IR's growth. … [The authors conclude that the] skills of

> reference librarians uniquely position them for a dual role in the IR community: as facilitators in getting the content into the repository and content out to users. (Jenkins, Breakstone, & Hixson, 2005, p. 322).

Bell, Foster, and Gibbins state that the "recruitment of content for the IR offers a wonderful new opportunity for reference librarians to go beyond day-to-day requests of 'answer this question, buy this book, do a library session for this class'. Indeed, IR content recruitment puts the librarian into the role of publishing associate to the faculty member" (Bell, Foster, & Gibbons, 2005, p. 290). Bailey promotes the role of reference librarians outlining possible activities that reference librarians can engage in (2005b, p. 266).

No articles were found that specifically discuss the role of technical services librarians. There were articles that mentioned the need for technical services staff to learn new procedures and technologies, and the need for realigning the responsibilities of technical services staff so that the work of the institutional repository could be performed without an increase in staff (Cohen & Schmidle, 2007; Hudgins & Macklin, 2000).

Method

The authors examined, in detail, the operation of the institutional repository at the Ohio State University, concentrating on the IRs impact on technical services. In an effort to determine if the OSU experience was unusual, a survey was sent

on October 3, 2008 to 123 ARL libraries through the ARL director's listserv. The authors sought answers to the following questions:

1. What IR responsibilities are fulfilled in TS?
2. Has there been any reorganization of TS in order to accommodate the responsibilities of the repository?
3. What IR responsibilities are fulfilled by staff employed prior to the establishment of the IR? If so, are these new responsibilities added on to former work, or has the former work been handled in some other way.
4. What responsibilities are fulfilled by new personnel?

Because libraries are organized differently, the survey was designed to capture information on the organizational structure of the responding library. Generically named library functions (for example, acquisitions, collection development, cataloging/metadata, reference) were presented and respondents were asked to map those functions to actual units within their libraries, and to indicate which of those functional units fell within the technical services. In addition, specific tasks or activities related to the management of an institutional repository were described and respondents were asked to indicate which were performed in technical services. Questions were asked whether the institutional repository services were staffed with existing staff, new staff, or a combination and if existing staff were used, how were services formerly provided by these staff currently covered. Libraries were given 2 weeks to respond. For a complete list of survey questions, please see appendix A.

Results

Twenty-six (26) responses (including the OSU) were received, a 21% response rate. (Table 1). In lieu of completing the survey, the representative of one institution emailed that her institution was still in planning stages and so she could not complete the survey at this time. In addition, three institutions indicated that they were in developmental or planning stages, resulting in surveys from 22 institutions with operational institutional repositories. Two of these institutions have stand-alone units that are responsible for their IRs. The responses from one of these two institutions will be included in the discussion because the staffing of the unit drew from former technical services staff.

To assist in understanding the operation of the IR within the institution, information was gathered on the organizational structure of the institution responding. Participants were asked to indicate which service units (described generically by function) were involved in the IR and then to relate those units to the organizational structure of their library by providing the name of the unit providing the services. For example, one of the services listed was administration. For those who indicated that administration was involved in the IR, this service unit had a variety of titles, such as Administration, Administrative Services, Administrative and Fiscal Services, the Dean, and the Office of the University Librarian. Units performing cataloging and metadata also had a variety of title, such as Bibliographic Services, Cataloging, Cataloging and Metadata Services, Monographic Services, Original Cataloging and Production Services,

Special Collections Cataloging, Scholarly Resources Integration, and Technical Services. Other service units that were reported to be involved in the IR are Acquisitions, Collection Development, Information Technology, Interlibrary loan, Preservation, Reference, Reserves, Serials and Electronic resources, and User instruction. With the exception of Reference and User Instruction, each service unit listed was considered part of Technical Services by at least one reporting institution. Table 2 gives a list of the functional units and indicates the number of institutions that responded that the unit was part of Technical Services. The focus of this paper is the impact of an institutional repository on technical services within the libraries. Therefore, the result reported are for those units and tasks that were described by the respondents as being part of Technical Services. Even if the exact same functional unit is within Technical Services in one institution, and outside Technical Services in another, the results represent only the unit reported to be a part of Technical Services. For example, there were 19 responses reporting that collection development units were involved in the institutional repository. Seven of those 19 reported that collection development was part of technical services in their library. For the purposes of this paper the responses from the seven units in technical services are discussed.

To get a more granular understanding of the impact of IRs on TS the participants were requested to indicate which tasks related to the operation and management of an IR take place in technical services. A list of 24 tasks was provided. Participants were asked to check all of the tasks that take place in technical

services. The same convention of reporting only the results from tasks and activities identified as being part of technical services is followed. Not surprisingly, over half of the institutions reported that most of the tasks relating to metadata were performed in technical services. The exception is the task of defining preservation metadata standards; only 25% of the institutions indicated that this task is performed in technical services. Ninety percent (90%) of the institutions reported that defining descriptive metadata standards took place in technical services; 70% reported that defining structural metadata standards took place in TS; and 65% reported defining administrative metadata standards took place in TS. The task of assigning metadata was the second most frequent task performed in Technical Services. (Table 3).

At least a third of the institutions that reported some TS involvement in the IR responded that 10 of the 24 tasks listed were performed in technical services. Three more tasks (determining digitization standards, preservation operations, and batch loading were performed in technical services by 30% (6/20) of the institutions. No institution reported that system upgrades and system back-ups were performed in technical services.

The data reported for the number and FTE of personnel involved in IR responsibilities are reported in table 4. Technical services positions represent 28% of all the IR positions reported by the libraries (87/223.5). The estimated FTE of technical services personnel is 46% of all FTE estimates for IR personnel

in the libraries. Only 14% of the TS positions handling IR responsibilities are new (12/87). Table 5.

Discussion

Most of the institutions responding to this survey indicated that the operation and management of the IR is distributed across multiple units of the library. Most also reported heavy technical services involvement. Of the 22 operational repositories examined, 20 involved technical services. (Nineteen reported involvement; one institution reported that the cataloging/metadata unit was involved, but did not indicate (probably erroneously), that the unit was part of technical services.) Two of the institutions had created separate units for the purposes of managing the IR. One of the newly created units comprises four staff drawn from technical services. The copy cataloging that had been performed by the four is now being handled by others taking on a greater workload, and by outsourcing.

The fact that 86% of the technical services positions involved in the IR are not new indicates that in general technical services units have not been reorganized. Fifteen (of 22) institutions added positions to handle the IR operations; only 6 added positions in technical services (3 added positions in technical services and other units.) Overall, there were 12 instances where respondents indicated that the new duties replaced former responsibilities. The most frequent responsibilities replaced were traditional AACR2/MARC cataloging, ordering and receiving materials. In the case of cataloging the respondents indicated that

either other personnel had absorbed the load, or that the institution was outsourcing cataloging more frequently. A few institutions commented that less ordering and receiving is taking place which frees up staff in acquisitions and cataloging. There were 63 instances of technical services positions for which respondents indicated that the new IR activities were absorbed by existing personnel.

Of the 12 positions added to technical services units, eleven were metadata librarians, coordinators, or technicians. Two of the technicians have specific responsibilities for quality control of metadata. The one position that did not include metadata in the title included metadata responsibilities. The description provided for the responsibilities of the Electronic Resources Assistant was soliciting and downloading content, and entering metadata. This description is very similar to descriptions provided by others for metadata technicians.

Conclusion

The literature emphasizes public service involvement in IRs, but the operation of the OSU repository has heavily involved the technical services. The management of the KB has been shared by the administration, technical services and information technology. A major impetus for this study came from a desire to know whether the Ohio State University Libraries' experience in providing services for an institutional repository is typical. Overall, there are many similarities between OSU and the institutions responding to our survey. The

services for the IR are widely distributed across multiple units of libraries and the institutions in this study reported heavy technical services involvement. However, the involvement of technical services at OSU is among the strongest. Sixteen (16) out of 24 institutional repository tasks (66%) are performed in technical services at OSU. The mean for the number of IR tasks performed in technical services for the institutions reporting is 9, the median 8. Only 3 other institutions reported equal or greater responsibility for IR tasks taking place in technical services. The OSU Libraries' administration has strongly supported the new services provided for the Knowledge Bank. Through a combination of reassignment of personnel and new positions OSU technical services has received 7 new positions in the last five years (approximately 4.5 FTE) to provide services of the KB. Those positions include 3 metadata librarians, a special programs librarian, two metadata and quality control technicians, and a technical services department head. Only 3 positions in technical services have had to absorb IR responsibilities into their existing work. This has been possible because of a decrease in acquisitions which results in fewer materials to order, check-in and catalog. The OSU administrative support of the KB is in contrast to an average of .6 new positions added to technical services of each of the 20 institutions responding to this survey. Because of the low response to the survey, the results reported may not be indicative of ARL institutions hosting IRs. However, there is no reason to believe that the experience of those who responded is atypical. Traditionally, Technical Services has been responsible for organizing and describing material in order to facilitate discovery. Content is the

prime concern, format secondary. In all probability, the role of technical services in the modern academic library will expand as content and delivery options increase.

References

Bailey, C. W., Jr. (2005a). *Open access bibliography: liberating scholarly literature with e-prints and open access journals*. Washington, D.C.: Association of Research Libraries. Retrieved December 22, 2008 from http://info.lib.uh.edu.proxy.lib.ohio-state.edu/cwb/oab.pdf

Bailey, C.W., Jr. (2005b). The role of reference librarians in institutional repositories. *Reference Services Review*, 33 (3), 259-267.

Bailey, C W., Jr. and the Association of Research Libraries. (2006). *Institutional repositories*. (SPEC Kit 292). Washington, D.C.: Association of Research Libraries, Office of Management Services.

Bell, S., Foster, N. F., & Gibbons, S. (2005). Reference librarians and the success of institutional repositories. *Reference Services Review*, 33 (3), 283-290.

Brody, Tim. (n.d.). *Registry of open access repositories (ROAR)*. Retrieved January 26, 2009, from http://roar.eprints.org/

Buehler, M., & Boateng, A. (2005). The evolving impact of institutional repositories on reference librarians. *Reference Services Review*, 33 (3), 291-300.

Chan, D. L. H., Kwok, C. S. Y., & Yip, S. K. F. (2005). Changing roles of reference librarians: the case of the HKUST institutional repository. *Reference Services Review*, 33 (3), 268-282.

Cohen, S. & Schmidle, D. (2007). Creating a multipurpose digital institutional repository. *OCLC Systems & Services*, 23 (3), 287-296.

Crow, R. (2002). *The case for institutional repositories: a SPARC position paper.* Washington, D.C.: SPARC.

Eckwright, G.Z., & Bolin, M. K. (2001). The hybrid librarian: the affinity of collection management with technical services and the organizational benefits of an individualized assignment. *Journal of Academic Librarianship*, 27 (6), 452-456.

Hudgins, J., & Macklin, L. A. (2000). New materials, new processes: implementing digital imaging projects into existing workflow. *Library Collections, Acquisitions & Technical Services*, 24 (2), 189-204.

Jenkins, B., Breakstone, E., & Hixson, C. (2005). Content in, Content out: the dual roles of the reference librarian in institutional repositories. *Reference Services Review*, 33 (3), 312-324.

Lynch, C. (February 2003). Institutional repositories: essential infrastructure for scholarship in the digital age. *ARL Bimonthly Report*, No. 226. Retrieved January 26, 2009 from http://www.arl.org/resources/pubs/br/br226/

Rogers, S. A. (2003) Developing an institutional Knowledge Bank at Ohio State University: from concept to action plan. *portal: Libraries and the Academy*, 3 (1), 125-136.

Walters, T.O. (2007). Reinventing the library - how repositories are causing librarians to rethink their professional roles. *portal: Libraries and the Academy*, 7 (2), 213-225.

Table 1. Responses to survey

Type of institution	Number of respondents	Operational Institutional Repository	Technical Services Involvement
University	24	20	19
Other	2	2	1
Total responses	26		

Table 2. Units involved in the operation and management of the IR

Number of institutions = 20

Functional names of units	**Total Number of institutions reporting that unit is involved with IR**	**Unit is part of Technical Services (number)**
Acquisitions	4	4
Administration	11	3
Cataloging/Metadata	20	20
Collection Development	19	7
Information Technology	18	5
Interlibrary Loan	2	0
Preservation	10	3
Reference	4	0
Reserves	2	1
Serials/Electronic resources	1	1
User Instruction	1	0

Table 3. Tasks performed in Technical Services

Number of institutions = 20

Task	Performed in Technical Services	
	Number	Percent
Defining descriptive metadata standards	18	90
Assigning metadata	17	85
Negotiating workflows	16	80
Defining structural metadata	14	70
Defining administrative metadata	13	65
Quality control	13	65
Setting up presentation of content	9	45
Submitting content	9	45
Negotiating project parameters	7	35
Training submitters	7	35
Determining digitization standards	6	30
Preservation operations	6	30
Batch loading	6	30
Digitizing content or arranging for digitization through a vendor	5	25
Defining preservation metadata standards	5	25
Soliciting content	4	20
Governance	4	20

Seeking copyright permissions	4	20
Marketing	3	15
Educating faculty and staff on rights management	2	10
Database operation	2	10
System monitoring	1	5
System upgrade	0	0
System backup	0	0

Table 4. Number of personnel and FTE involved in the IR

Number of institutions = 20

Institution	Entire Library Organization		Library Technical Services	
	Number	FTE	Number	FTE
1	4.0	4.0	4.0	4.0
2	5.0	2.0	1.0	0.5
3	varies	varies	4.0	4.0
4	~41.0	6.0	5.0	2.0
5	1.5	1.5	1.0	1.0
6	14.0	1.5	9.0	0.5
7	4.0	2.0	1.0	0.2
8	12.0	11.5	5.0	5.0
9	8.0	1.5	3.0	0.5
10	5.0	2.5	2.0	0.5
11	15.0	5.0	0.0	0.0
12	7.0	7.0	3.0	3.0
13	~10.0	3.0	5.0	2.0
14	3.0	2.0	2.0	1.0
15	4.0	1.5	4.0	1.5
16	21.0	7.0	9.0	2.0
17	26.0	6.0	11.0	2.4
18	not reported	0.8	not reported	0.1

19	20.0	6.0	8.0	2.0
20	20.0	6.5	10.0	4.5
Total*	223.5	43.3	87	36.7
Average	12.4	4.1	4.6	1.8

Note: An additional institution estimated staffing, but are still in planning stage.

*Total of actual numbers reported. In cases where an approximate value reported,

the estimate was used in the calculation.

Table 5. Effect of IR Position Responsibilities (tasks) in Technical Services (TS)

	IR tasks absorbed	IR replaced former tasks	New Positions for IR tasks	Total
1	0	4	0	4
2	1	0	0	1
3	4	0	0	4
4	4	1	0	5
5	1	0	0	1
6	8	1	0	9
7	1	0	0	1
8	3	0	2	5
9	2	0	1	3
10	1	0	1	2
11	0	0	0	0
12	1	0	2	3
13	4	0	1	5
14	2	0	0	2
15	3	1	0	4
16	9	0	0	9
17	9	2	0	11
18	0	0	0	not reported
19	7	0	1	8
20	3	3	4	10

Total	63	12	12	87

Appendix A. Survey on the Impact of Institutional Repositories on Technical Services

Note: This is a paper version of an online form. The form was designed so that the answer boxes for the open-ended question expanded as needed. The form also allowed respondents to add additional positions, as needed, for question 7.

Overview

The objective of this survey is to gather information on the impact of institutional repositories on technical services departments in academic libraries. Given Clifford Lynch's definition of an institutional repository in terms of a "… set of services … for the management and dissemination of digital materials created by the institution and its community members", we will identify how those services are distributed across the various units of the library. Specifically, we will look at how TS staffing and training.

Your name:

Your email:

Institution:

1. Using the following descriptive list of services, indicate all Library units involved in tasks related to your institutional repository. (Please check all that apply)

☐ Acquisitions

☐ Administration

___

- ☐ Cataloging/Metadata
- ☐ Collection development
- ☐ Course reserves
- ☐ Information technology
- ☐ Interlibrary loan/lending
- ☐ Preservation/reformatting of materials
- ☐ Reference
- ☐ Serials/electronic resources
- ☐ User Instruction

2. Using the following descriptive list of services, please provide the name (or names) of units within your Library that perform these functions.

Descriptive list	***Names of units in your library***
Acquisitions	
Administration	
Cataloging/metadata	
Collection development	
Information technology (IT)	
Interlibrary loan	
Preservation/reformatting of materials	
Reference	
Reserves	

Serials/electronic resources	
User instruction	

3. If Institutional Repository tasks are centralized into a single unit, what is this unit called and where does the unit fall within the Libraries' organizational chart?

4. Which of the following Institutional Repository (IR) functions, if any, take place in Technical Services? (Please check all that apply, including those tasks for which responsibility is shared with personnel outside Technical Services.)

- ☐ Governance
- ☐ Marketing
- ☐ Soliciting content
- ☐ Negotiating project parameters
- ☐ Negotiating workflows
- ☐ Setting up presentation of content
- ☐ Determining digitization standards
- ☐ Digitizing content or arranging for digitization by vendor
- ☐ Educating faculty and staff on rights management issues
- ☐ Seeking copyright permissions for content
- ☐ Defining preservation metadata standards
- ☐ _____

- ☐ Preservation operations
- ☐ Defining descriptive metadata standards
- ☐ Defining administrative metadata standards
- ☐ Defining structural metadata standards
- ☐ Assigning metadata
- ☐ Submitting content
- ☐ Training submitters
- ☐ Batch loading
- ☐ Quality control
- ☐ Database operation
- ☐ System upgrade
- ☐ System monitoring
- ☐ System backup

5.

a) ☐ What is the total number of people in the entire library organization involved with the operation of the IR?

b) ☐ What is the estimated FTE of people in the entire library organization involved with the operation of the IR?

6.

a) ☐ What is the total number of people in Technical Services involved with the operation of the IR?

b) ☐ What is the estimated FTE of people in Technical Services involved with the operation of the IR?