

DIGITAL LIBRARY DEVELOPMENT IN AUSTRALIA

ABSTRACT

This paper will present results of a survey that was conducted during the winter and spring of 2014. The participants are librarians that have a digital library or institutional repository within the institution they serve. The questionnaire asks both qualitative and quantitative questions regarding the following:

- About what kind documents are in the collection?
- How is the library staff marketing the collection?
- Who is the target market or audience?
- What kind of information sharing is happening with the university?
- Basic demographic information

The survey was mediated by Survey Monkey and the participants was sent the link via email.

Digital library development in Australia began with a government initiative in the early 2000s. Mary Anne Kennan and Danny A. Kingsley (2009) had looked at the state of institutional repositories as of September 2008. The authors found varying universities at different states of repositories (Kennan & Kingsley, 2009). Some of the universities were entrenched; others had barely started to begin the repository process beginning in 2008.

The mandate continued with the requirement for repositories at academic libraries under the Excellence for Research for Australia (ERA) to support open access (Harvey, 2008 as cited by Kennan & Kingsley, 2009). The academics needed to supply copies of their articles or conference proceedings to their academic library in order for a copy of the file to be submitted to ERA during the review of the reference period.

Previous to this, academic libraries in Australia had undertaken different levels of repositories mainly with the view of offsite storage of the print collections. According to Genoni (2007, 2008, 2012) the Victorian and South Australian universities were some of the first to collaborate and have co-located offsite storage. The holdings would be available to the patrons via the OPAC and there would be a 24 hour turnaround in order to bring the book back to campus for check out. While this is a repository per se, this is not a digital one.

Our study will look at digital libraries in Australia. As Kennan and Kingsley's study occurred in 2008, this should be a good time to do an updated environmental scan of Australia. Along with looking at digital libraries, we are interested in if anyone is using the digital libraries that have been set up. If there only a few users, this begs the question what kind of marketing is being done at the digital libraries. This survey will look at both the types of records the digital library is archiving and the type of marketing that is being done to let people know the information is being kept at the repository.

INTRODUCTION

The paper has three purposes: to give an overview of the Australian digital collections as they stand today; discussion of the marketing of digital collections tied to a pilot study that the authors have undertaken and finally, to discuss assessment and evaluation of what users' desire in a digital collection. The study focuses primarily on developers using open source software, primarily used by institutional repositories. The software is being adopted by a wide range of libraries and cultural institutions, academic, government and cultural. Once the library has content digitally the question then becomes who are your users? Most of the literature is most concerned with the development and implementation of the digital libraries. There is very little literature on the marketing of the collections once they are built. The marketing of the digital library is as important as building it. The underlying concept to quote the movie *Field of Dreams* (2004), "build it, they will come" seems to be the ideal but it appears that very little time, money, or effort is given to make sure they do come. In order to find out if appearances are true we put together a survey on the marketing of digital libraries.

Australian Digital Libraries

For this paper, digital libraries encompass institutional repositories (IR), archives, and collections of various types. A digital IR has on deposit documents from academics and students. According to Clifford Lynch, "an institutional repository is . . . a set of services that a university offers to the members of its community for the management and dissemination of digital created by the institution and its community members" (Lynch, 2003, p. 2).

The most common type of deposit is theses and dissertations that have been accepted as completed by students graduating with their bachelors' honours, masters, or PhD. Many times academics will deposit pre-print or post-review articles that will be published by journals in the various disciplines. Many of the universities in Australia have begun to mandate that all articles that are submitted for publication must be deposited. This is due to the Australian government's use of Higher Education Research Data Collection (HERDC) reporting. Australian Research Council (ARC) administers the Excellence in Research for Australia (ERA) "which aims to identify and promote excellence across the full spectrum of research activity in Australia's higher education institutions" (ARC, 2014). In fact, ARC requires each higher education university to have an IR for academics to deposit their research publications.

IRs are just one type of digital library and may have other types housed within the library like an archive or special collection. National and state libraries may also have digitized collections available for citizens to access via the internet as not everyone can get to a physical space. While public libraries have historical documents and newspapers in their collections, they tend to be caught in a catch-22 where it is expected they will digitize their collections but many times the funding is not forthcoming. This situation is oftentimes called an "unfunded mandate" (Velasquez, 2009, p. 3272). Additionally, major public libraries may have "competing mandates for cultural preservation, access and service provision, and resource efficiency" (McShane & Thomas, 2010, p. 155). In order to do any of those mandates well takes strategic planning that is tied to their parent organization's mission and vision. Public libraries also have to compete for funds with police, fire, parks, recreation, public works, and other departments that may appear more

important in the scheme of things to those doling out the money. The whole concept of public good sometimes gets lost as defined in the theory of political economics. Johnson (2005) defined a public good as “a very special class of goods which cannot be withheld from all and for which the marginal cost of an additional person consuming them, once they have been produced, is zero”. Many of the councils find that public libraries are some of the most popular with the public who visits them but that does not always endear them to the mayor and council.

Marketing of Digital Collections

What each type of digital library or institutional repository has in common is that it needs to have visitors to make it viable. Librarians have used various methods and techniques of marketing in order to influence faculty and visitors to come to the web site and use the digitized materials and records. According to Kennedy (2011) some of the types of techniques included internal and external email, online social networks, screen savers, usage statistics, web page alerts, bookmarks, banners, posts, calendars, brochures, giveaways, newsletter, direct mail, patron training, staff training, faculty/professionals as marketing tools, phone calls, surveys, and word of mouth. The previous list is by no means the entire list included in Kennedy's article but just an example of some of the techniques and methods used by digital libraries. She goes on to make the point that there is no one particular method preferred by any type of digital library but they all try different things according to their theoretical bent (Kennedy, 2011). Kotler and Levy's (1969) seminal work makes the point that in order for marketing to be effective it requires a customer orientation instead of product orientation still holds true. In our study we are interested in how the different types of digital libraries staff have used marketing in order to get their target audience involved in their collections.

Assessment and Evaluation of Digital Libraries

As with any project, clear evaluation and assessment measures should be in place before a project starts. When a project is evaluated, a decision is made about whether it met the stated goals and objectives and whether the outcomes were successful or not. As repositories develop, managers collect qualitative and quantitative data about a repository's services and collections to see if the service is meeting the needs of the community or organization it serves. Campbell-Meier (2011) identifies the need for both qualitative and quantitative measures for repository assessment. Through case studies, she documents IR developers noting that there “...are benefits in developing and maintaining an IR, but the difficulty lies with defining them, describing them, and actually confirming that [the benefits] are happening” (pp. 172-173).

Saracevic (2000) identified six dimensions for evaluation: content, technology, interface, service, users, and context. Fuhr et al. (2007) and Zhang (2010) discuss the development of holistic evaluation models for digital libraries. Fuhr et al. discuss the need for flexible measures, involved users and the development of a digital library research community. Zhang proposes a model based on Saracevic's evaluation dimensions. Evaluation criteria are developed by the type of user as well as the specific level or area. Both models include information seeking behaviour as part of the evaluation process.

METHODOLOGY

The research used a mixed methods questionnaire that contained 37 questions sent to an international group of digital collection managers and developers identified from the Registry of Open Access Repositories (ROAR). The survey was conducted on Survey Monkey. At this point, it is a pilot study as we have 29 responses. We are continuing to send out requests to take the survey to eligible parties in digital libraries and institutional repositories.

The survey asked questions about digital collections, attempting to determine the size and scope of the collections, and what the user experience is in using the collection. We are also interested in current marketing practices the digital libraries are using to get users to the web site. There were some basic demographic questions asked regarding what country the respondent was from as well as gender, age, education, and role in the digital library.

RESULTS

Size and Scope of the Collections

Given the small sample size that we currently have in the pilot study, the size of the collection are at two ends of the spectrum either less than 10,000 (9, 39%) or more than 50,000 (5, 22%) with the remaining falling in between those sizes (9, 39%). The majority of the collections had the following:

Table 1. What does your collection primarily contain?

Answer	Number	%
Historical Records	14	61%
Images	11	48%
Organizational Records	10	44%
Scholarly Communication	18	78%
Sound Recordings	9	39%
Video Recordings	10	43%
Other: Greek & Latin Texts, Theses & Dissertations, Data sets and GIS	3	14%

Note: Will not total 100% as respondents could choose multiple answers.

Table 2. What type of material is primarily represented in your collection?

Answer	Number	%
Documents	22	96%
Images	7	30%
Sound Recordings	5	22%
Video Recordings	6	26%
Data sets	4	17%
Other: Power Point slides	1	4%

Note: Will not total 100% as respondents could choose multiple answers.

Table 3: Categorization of Digital Library Collection

Answer	Number	%
Archival	11	50%
Government	0	0%
Historical	12	55%
Institutional (university or college)	20	91%
Subject	8	36%
Corporate	0	0%

Other: Government	1	5%
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Note: Will not total 100% as respondents could choose multiple answers.

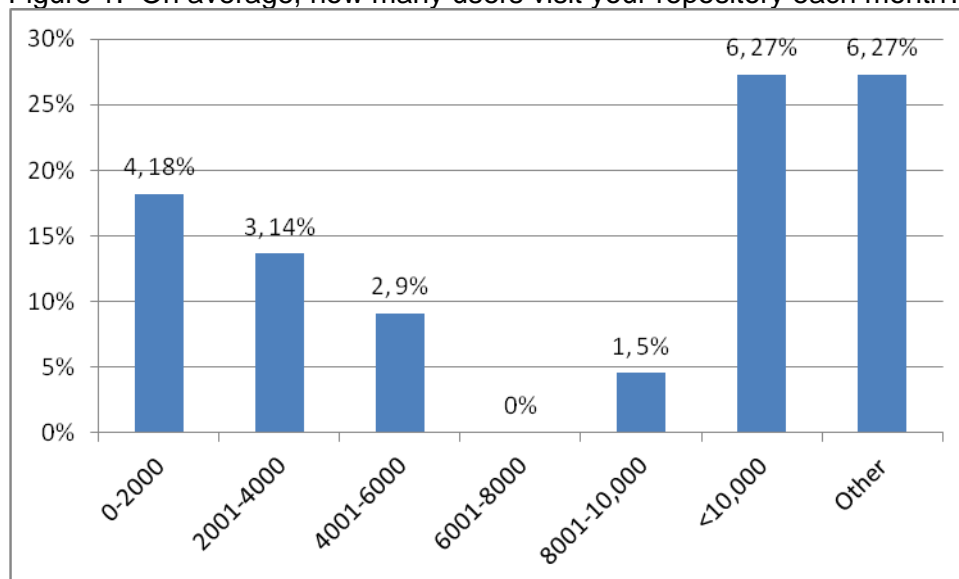
Users

In order to determine how to market to the users of the digital library, one needs to know who the users are – theoretically. The question was asked on the survey. There was quite a range of answers as it was qualitative but it could be narrowed down into three answers: don't know (12), staff and students of their own university (6), and researchers and scholars (3). The answer to this question was surprising as it made it very obvious even in such a small sample that these digital library managers and librarians were unaware of who was using their digital library and didn't appear to care.

The participants were asked how many documents were downloaded from their site in June 2014. There were four that did not know as they did not keep track. The rest of the answers were primarily in the 1,100 to 30,000 documents downloaded. There were three outliers that were 102,228, 337,487, and 500,000. There was also one at 41,000.

The question asked about how many users they had visiting their digital library site. There was one that didn't track individual users and two that didn't know. Again, not tracking users was perplexing as it seems vital to know how many users you have at your site at any given time. The definition of user was those who accessed, browsed, or downloaded documents and materials.

Figure 1. On average, how many users visit your repository each month?



There was a group of questions where the respondents were asked to consider different aspects about their users on a Likert-like scale. The question started with:

“Please use the following scale to indicate the extent of agreement about how well each of the following statements is an accurate description of your organization’s relationship with its users.”

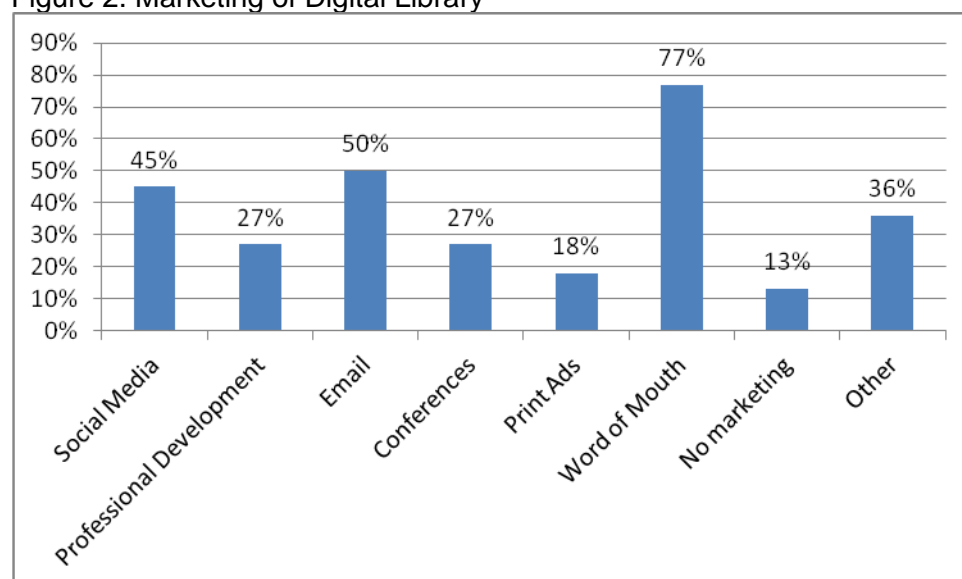
Table 4: Organization’s Relationship with its Users

	Strongly Disagree		Disagree		No Opinion		Agree		Strongly Agree	
We frequently and systematically monitor the needs of our users	18%	4	27%	6	9%	2	41%	9	5%	1
We get ideas about new products and services from our users	14%	3	36%	8	5%	1	41%	9	5%	1
We regularly talk to our users	19%	4	19%	4	10%	2	43%	9	10%	2
We regularly evaluate users' preferences	14%	3	32%	7	9%	2	36%	8	9%	2
We regularly discuss our users needs	9%	2	18%	4	9%	2	50%	11	14%	3

Marketing

The rest of the survey looked at how the digital library was being marketed to the users. There was a range of answers supplied but not everything was considered.

Figure 2. Marketing of Digital Library



Note: Will not sum to 100% as respondents could choose multiple answers.

The other category answer consisted of websites, Google, Wikipedia, subject librarians, graduate workshops, and marketing to internal clientele like academic staff within the university.

When money was considered the majority of the digital libraries 90% (18) of the 20 answering had no budget for marketing. This aspect was amazing. The whole idea of putting up a \$100,000 plus for a digital library considering the software, the staff, and the time to put it together and then there is no money to market the whole concept. When asked how much the budget was the majority either said zero or had no idea. One came up with a figure of \$100.

The survey asked a group of questions about the functional value of marketing the digital library collection. The majority of the answers were "no opinion." The next group of questions were about the professionalism of those marketing the digital library collection. Again, the majority of the answers were "no opinion." When asking about the quality of marketing of the digital library, the answers were "no opinion" by

the majority. The group of questions about the cost of marketing gain had the highest “no opinion” answers of the marketing questions. The last group of marketing questions asked attitudinal questions about marketing and the group, for the most part, had no opinions.

Evaluation and Assessment

Fifty percent of respondents do not have assessment measures in place for their digital library collections. As discussed in the literature review, it is difficult to develop assessment measures for a growing or developing collection. Holistic models of evaluation assess use as well as service. Measures may change over a projects lifetime; however, it is difficult to gauge success without benchmarks of some kind.

Table 5. Do you have assessment measures in place for the digital library collection?

Yes, we have identified goals for digital collection and collect specific metrics to measure our progress	27%
Yes, we collect specific metrics, but do not have specific goals	23%
No, but we are developing assessment measures	18%
No, we do not have assessment measures	37%

Respondents were also asked about evaluation measures. Respondents were asked to check all of the metrics they currently collected and had an opportunity to write in additional measures. While the quantitative data measured may provide a basic benchmark for the collection, the information provided does not explain how or why a collection is being used.

Table 6. What metrics do you collect to evaluate the collection? Check all that apply

Number of items added	100%
Number of items downloaded	80%
Number of items viewed	40%
Number of authors	40%
Number of new collections (Other)	20%
Number of views of recently included items (Other)	10%
Number of accounts created	10%
Number of searches	0%

Demographics

The majority of the respondents had information science backgrounds. The respondents could choose more than one answer under the degree answer so the answers were as follows:

Table 7. Participant's Education

Degree	Number	%
Bachelors with LIS concentration or focus	2	10%
Bachelors degree	14	70%
MLIS, MLS, MIM or equivalent	12	60%
Masters in another field	5	25%
PhD in LIS or CIS related field	0	0%
PhD in another field	2	10%
JD	0	0%

Other: Diploma in Library and Information Technology	1	5%
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Table 8. Participant's Age

Age	Number	%
21-29	3	15%
30-39	5	25%
40-49	8	40%
50-59	3	15%
60 or older	1	5%

The gender of the participants was 50% male and 50% female.

Conclusion

Repository managers should use qualitative and quantitative measures for inputs, processes, outputs, outcomes to evaluate and improve repository systems and services. Some of the metrics used may be important for benchmarking. Assessment and evaluation are part of an iterative process and must be revisited throughout the life of a digital collection.

Users are important. The librarians and collection managers should pay attention to them. Marketing the digital collection is also important. The idea that putting up the website for the digital content is enough to get users to find it is ludicrous. The marketing of any product or service takes time and effort. If the library staff (whatever the type) is not willing to put forth the effort to market the service, then there will be no users outside of the local community (students, academics, etc.). The digital library willing to spend some money on marketing will be the one that will see the biggest gains in user downloads and users coming from outside of their community.

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