Models, Institutional Implementations, and Educational Efforts for Digital Curation: An Annotated Bibliography

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Introduction and Scope

This bibliography explores the emerging subject of digital curation. Articles examine models, institutional implementations, and educational curriculum on the topic. Many articles articulate specific strategies for increasing awareness as well as collaboration for curation success. Articles included were published from 2006 to 2011. As digital curation is a fairly recent development that often follows the shifting progress of technology, particular emphasis was placed on collecting current articles, those from the past two years. All articles are in English and were retrieved from library and information science databases.

Description

Digital curation is a recent subject in library and information science. The term was first used in 2001 at the "Digital Curation" seminar in London (Beagrie, 2006). Beagrie defines digital curation as a set of "interdisciplinary activities that address the growing critical need to more effectively create, manage, use, and add value to digital assets over time" (as cited in Kunda & Anderson-Wilk, 2011, p. 895). With the advent of the digital age, many libraries, archives, and other institutions have the increased responsibility of managing and preserving this digital material for future use. While there is still contention among practitioners over the exact definition and scope of digital curation, there is a collective understanding of need. This has prompted the establishment of curation models. The Data Curation Centre's curation lifecycle model, called the DCC Preservation Lifecycle, describes sequential activities to ensure that all necessary stages of digital data are preserved. Other models, such as PREMIS (a data dictionary for preservation metadata) and OAIS (Open Archival Information System), aim to provide a framework for digital archiving at institutional repositories (Cunningham, 2008; Groenewald & Breytenbach, 2011). There is demand for qualified professionals with adequate training to take on digital curation needs. Digital curation specific curricula exist at only a handful of universities, but as the subject evolves and becomes more defined, so too does education and training.

Summary of Findings

There have been a number of attempts to refine the definition of digital curation and its related activities. Cunningham (2008) argues the DCC's definition is inappropriate and outdated. Cunningham suggests using a completely different phrase for the process of information management, "data stewardship." Yakel (2007) attempted to bring the definitions of four reports together and synthesized several core concepts and activities at the heart of digital curation. She theorized that digital curation is an "umbrella" term for digital preservation, data curation, and digital asset and electronic records management. Yakel's definition comprises five key components that perpetuate the model of digital curation as an active cycle and interactive process. Beagrie (2006) concludes that digital curation encompasses a full set of management activities. He states it is important to remember that the terms curation, preservation, and archiving are defined and interpreted differently among different disciplines. Digital curation is a term that connects both data creators and library communities. Beagrie (2006) concludes digital curation is vital to making digital knowledge useful and everlasting.

A number of digital curation models have emerged in the last five years. In 2008 the California Digital Library elected a complete overhaul of their repository centric digital curation strategy (Abrams, Cruse, & Kunze, 2009). Realizing that technical systems were ephemeral, the library's new goal was to approach curation from a content context rather than a systems context. The result was an effort to focus proactively on curation rather than reactively. Macdonald and Martinez-Uribe (2010) expanded on the California Digital Library's model and stated efforts of repositories need not only technical information structure but also collaborative services that deal with data from its design and inception to its final stages of publication. Kunda and Anderson-Wilk (2011) took the collaborative effort one step further by including user engagement in the curation process. This model argued that a system focused exclusively on preserving digital content would not survive unless users feel engaged and able to contribute to the process.

Digital curation implementations and projects have been popping up at various institutions world-wide. These initiatives highlight the triumphs and challenges faced in putting models into practice. Nearly all the initiatives studied suggested curation should include collecting digital content during the creation stages as opposed to just finished, published materials. At the University of Maryland, value was seen in the "gray literature" of campus research centers (Owen, 2011). The University's repository has been collecting reports,

presentations, and theses and dissertations to increase access to previously inaccessible content. This effort has exemplified Ogburn's position (2010) that "acquiring published work will not suffice. The associated files and possibly even the software, that illuminate and amplify publication will become essential components to collections" (p. 244-245).

A second commonality of institutional efforts with digital curation is the collaborative nature of the process. Michigan State University's digital curation planning project recommended a "Communities of Practice" strategy that engages campus units and other institutions through online forums and meetings to share digital curation experience, new ideas, and collaborate on initiatives (Schmidt, Ghering, & Nicholson, 2011).

In order to curate all stages of digital information and data development, metadata schemes must be established. Groenewald and Breytenbach (2011) suggested a structure that describes digital content, method of creation, and technologies used in creation for each digital object. Embedded within the metadata structure is a tracking system to note changes to the document. Joorabchi and Mahdi (2011) proposed using reference citations within documents and their established subject classification metadata to create an automated systems for archiving scientific digital literature.

Institutional digital curation initiatives have brought to light the exponential growth of research data. Increasingly, research grants are requiring data management be built into proposals. Stanton et. al. (2011) noted that while researchers know their "scientific domains intimately" they are not necessarily equipped to handle data management (p. 80). Therefore, there is a high demand for information professionals with digital curation skills. Cunningham (2008) detailed 24 different competencies and skills necessary for digital curation. Some universities are attempting to design and offer students a program designed around digital curation. University of Michigan's School of Information's curriculum is geared toward digital natives. Coursework has an emphasis on technology fluency (Yakel, Conway, Hedstrom, & Wallace, 2011). University of Arizona's School of Information Resources and Library Science curriculum has been evolving to include a balance of technology, data management, and policy (Fulton, Botticelli, & Bradley, 2011).

These programs coincide with the recent job analysis findings by Stanton et. al. in 2011. The study concluded ten relevant topics that should be addressed in program curricula for job success: digital data curation, database design and management, project management, essentials

of scientific research, cyberinfrastructure, collaboration, web content management, programming, data mining, and system administration (p. 89).

As digital curation is still a relatively new topic in library and information science, much research is still to come. Results of this research will hopefully fully define its function and develop guidelines and policies that enable institutions to preserve digital material for generations.

Bibliography

Abrams, S., Cruse, P., & Kunze, J. (2009). Preservation is not a place. *International Journal of Digital Curation*, *4*(1), 8-21.

Database:
N/A

Search Strategy:
I read an article titled "Notes on Operations: Digital Curation Planning at Michigan State University" and found the study interesting. As is such, I elected to look through the references in the article to learn what research the study was based on. This is I how I found the citation to "Preservation Is Not a Place." I looked for the journal (by title) in Hagerty's journal listings and learned it is an open access journal. I accessed the full text of the article by utilizing the web address found with the reference citation (www.ijdc.net/index.php/ijdc/article/viewFile/98/73).

Search String:
Referenced in:
Schmidt, L., Ghering, C., & Nicholson, S. (2011). Notes on operations: Digital curation planning at Michigan state university. *Library Resources & Technical Services*, 55(2), 104-118.

Method of Searching:
Footnote Chasing

Abstract:
"This paper presents a snapshot of the Digital Preservation Program of the California Digital Library's (CDL) efforts in its early phase. A renewed emphasis on services (rather than systems) was motivated by a desire to deprecate the centrality of the repository as *place*. Having the repository as the locus for curation activity has resulted in the deployment of a somewhat cumbersome monolithic system that fails short of desired goals for responsiveness to rapidly changing user needs and operational and administrative sustainability. The Program is pursuing a path towards a new curation

environment based on the principle of devolving curation function to a set of small, simple, loosely coupled services."

Annotation:

The proposed model dictates curation take place through the process of small, commoditized services that possess the ability to evolve. Reliance on a central repository creates system overload. This model de-emphasizes a digital repository and focuses on cloud computing-based systems to promote flexibility in the curation cycle. Curation Services section is helpful in defining how curation has evolved from a systematic approach into a multi-service.

Beagrie, N. (2006). Digital curation for science, digital libraries, and individuals. *International Journal of Digital Curation*, *1*(1), 3-16.

Database:

N/A

Search Strategy:

I came across this article twice, once early on in my search process when browsing the archives of the International Journal of Digital Curation and a second time as a footnote in "Community Stories and Institutional Stewardship: Digital Curation's Dual Roles of Story Creation and Resource Preservation" by Kunda and Anderson-Wilk's. I accessed the full text of the article through the International Journal of Digital Curation's open archives by searching by volume and issue number.

Search String:

Referenced in:
Kunda, S., & Anderson-Wilk, M. (2011). Community stories and institutional stewardship: Digital curation's dual roles of story creation and resource preservation. *Portal: Libraries and the Academy*, 11(4), 895-914.

Method of Searching:

Footnote Chasing

Abstract:

"The term digital curation is increasingly being used for the actions needed to add value to and maintain these digital assets over time for current and future generations of users. The paper explores this emerging field of digital curation as an area of inter-disciplinary research and practice, and the trends which are influencing its development. It analyses the genesis of the term and how traditional roles relating to digital assets are in transition. Finally it explores some of the drivers for curation ranging from trends such as exponential growth in digital information, to "life-caching", digital preservation, the Grid and new opportunities for publishing, sharing, and re-using data. It concludes that significant effort needs to be put into developing a persistent information infrastructure for digital materials and into developing the digital curation skills of researchers and information professionals."

Annotation:

This paper concludes digital curation encompasses a full set of management activities across an information lifecycle, from creation to access and preservation. Additionally, a concise, but relevant history of digital curation is given. Beagrie maintains that data management needs to be an initiative not just by the library and information science professionals but also by researchers and creators of information, which forms the model for later research by Yakel, Kunda & Anderson-Wilk, and Ogburn.

Becker, C., & Rauber, A. (2011). Decision criteria in digital preservation: What to measure and how. *Journal of the American Society for Information Science and Technology*, *62*(6), 1009-1028.

Database:

Three databases searched simultaneously: Library Literature & Information Science [Dialog 438], Social SciSearch [Dialog 7], and ERIC [Dialog 1]

Search Strategy:

I selected these three databases by looking at the INFO SCI OneSearch collection in Dialog. I had previously done a keyword search using all the INFO SCI databases, but the results produced were vast. I narrowed my search using only these three databases. I felt they would provide the most relevant results. As this was an initial search, I chose the keyword method and browsed through the results, noting citations of interest.

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  S6    1049  S4 AND PY=>2005
```
sort s6/all/py,d
```
  S7    1049  Sort S6/ALL/PY,D
```

Method of Searching:

Keyword

Abstract:

"This article sheds light on the actual decision criteria and influence factors to be considered when choosing digital preservation actions. We categorize decision criteria from a number of real-world decision-making instances in a taxonomy. We show that a majority of the criteria can be evaluated by applying automated measurements under realistic conditions, and demonstrate that controlled experimentation and automated

measurements can be used to substantially improve repeatability of decisions and reduce the effort needed to evaluate preservation components."

Annotation:

Through the evaluation of over 500 case studies, general decision criteria and influence factors for effective preservation planning are presented. A taxonomy for digital preservation decision criteria is derived from case studies and a collection object description scheme is described. Theoretical aspects are stressed at the expense of practical applicability; accordingly, the paper is intended for experts in the field and not generally accessible to general library science practitioners.

Cunningham, A. (2008). Digital curation/digital archiving: A view from the national archives of Australia. *American Archivist*, *71*(2), 530-543.

Database:

Library Literature & Information Science Full-Text [Hagerty Database]

Search Strategy:

I wanted to use Hagerty's database resources and selected this particular one for its wealth of library and information citations. I used the thesaurus and searched for "digital curation," resulting in nothing useful. Then I tried "preservation" and selected the given term "preservation of library materials." Finally I chose the sub category of "electronic data archives/conservation and restoration" and viewed only those citations under the "peer reviewed tab." I sorted the results by date.

Search String:

preservation [term entered in thesaurus]
preservation of library materials [selected from thesaurus list]
electronic data archives/conservation and restoration [selected from thesaurus list].

Method of Searching:

Controlled Vocabulary

Abstract:

"This paper considers similarities and differences among the concepts of digital curation, digital archives, and digital libraries. It argues that digital archiving requires active archival intervention across the entire records continuum, and that, as such, the Open Archival Information System (OAIS) reference model is deficient because it ignores the need for pre-ingest archival activity. It identifies the major challenges that still require resolution, such as securing access to the various skills and capabilities required for digital curation, Australian style. The paper concludes with thoughts on the skills and capabilities needed to deliver total digital archiving outcomes."

Annotation:

Cunningham attempts to delineate digital archiving as a separate entity from digital curation. States three strong views of process and a weak review of how the National Archives of Australia (NAA) is addressing these issues. The article takes a negative view of previous digital preservation and curation efforts. The author cites that more than just research needs to be done on this topic and the implementation of effective strategies is immediately necessary. The article boasts that NAA is well versed in how to tackle these issues, but provides no evidence of past or future endeavors. To put it bluntly, this article comes across as merely a rant.

Fulton, B., Botticelli, P., & Bradley, J. (2011). Digin: A hands-on approach to a digital curation curriculum for professional development. *Journal of Education for Library and Information Science*, *52*(2), 95-110.

Database:

N/A

Search Strategy:

While retrieving a previous article by Yakel in Hagerty Library's Summon, I found a listing for Digital Library and Digital Curation Education, which I learned was a special section in the Journal of Education for Library and Information Science. I read a one page introduction for this special section by guest editor Jeffrey Pomerantz which included the titles of articles in this section. One of these titles was "DigIn: A Hand-on Approach to Digital Curation Curriculum for Professional Development." I then searched for this title on Hagerty's website and was able to access the full text of the article through ProQuest.

Search String:

Mentioned in:
Pomerantz, J. (2011). Digital library and digital curation education, part two. *Journal of Education for Library and Information Science*, *52*(2), 77.

Method of Searching:

Browsing

Abstract:

"The University of Arizona School of Information Resources and Library Science (SIRLS) created its graduate certificate program in Digital Information Management ("DigIn") in 2006 with initial funding from the Institute of Museum and Library Services (IMLS). The curriculum, now also offered to master's students, balances applied technology with a firm grounding in interdisciplinary management and policy issues designed to support a wide range of careers. The first half of a three-year data collection and analysis effort provides initial support for the hands-on approach and a positive impact on attitudes about technology and career aspirations. We discuss results to date, our approaches to hands-on curriculum development, and the technical infrastructure supporting it."

Annotation:

Few digital curation programs exist in universities. This article reports on development and programs of University of Arizona's graduate certificate for digital curation funded by the IMLS award. Fulton gives a detailed history on the evolution of curriculum and rationale for necessary coursework. Statistics on enrollment are given and challenges the program faces for future continuation are described.

Groenewald, R., & Breytenbach, A. (2011). The use of metadata and preservation methods for continuous access to digital data. *The Electronic Library*, *29*(2), 236-248.

Database:

Three databases searched simultaneously: Library Literature & Information Science [Dialog 438], Social SciSearch [Dialog 7], and ERIC [Dialog 1]

Search Strategy:

I selected these three databases by looking at the INFO SCI OneSearch collection in Dialog. I had previously done a keyword search using all the INFO SCI databases, but the results produced were large and vast. I narrowed my search using only these three databases. I felt they would provide the most relevant results. As this was an initial search, I chose the keyword method and browsed through the results, noting citations of interest.

Search String:

s (digital OR digitization OR digital()preservation OR preservation)
s (curation OR archive? OR archival()collection?)
s s1 and s2

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  S3     2740  S1 AND S2
```

rd s3

```
  S4     2355  RD S3  (unique items)
```

s s4 and py=>2005

```
  S6     1049  S4 AND PY=>2005
```

sort s6/all/py,d

```
  S7     1049  Sort S6/ALL/PY,D
```

Method of Searching:

Keyword

Abstract:

"This paper aims to investigate the awareness about digital preservation and the use of metadata principles and the implementation of tools for the preservation of documents stored on personal computers. Data were collected through a digital questionnaire and literature studies were done on several strategies, policies and best practices. Personal visits to libraries actively working on digital preservation and curation formed a basis for conducting the survey. The paper provides a broad overview of certain aspects that must be considered when implementing digital preservation strategies."

Annotation:

Groenewald establishes a lack of discernment in digital preservation especially in South Africa. The article expands on this model and argues metadata guidelines should be developed to serve as a preservation model. Examples of metadata to add or embed within digital documents include method and technologies, workflow, or history of changes.

Heidorn, P.B. (2011). The emerging role of libraries in data curation and e-science. *Journal of Library Administration*, *51*(7/8), 662-672.

Database:

Library Literature & Information Science Full-Text [Hagerty Database]

Search Strategy:

I wanted to use Hagerty's database resources and selected this particular one for its wealth of library and information citations. I used the thesaurus and searched for "digital curation," resulting in nothing useful. Then I tried "preservation" and selected the given term "preservation of library materials." Finally I chose the sub category of "electronic data archives/conservation and restoration" and sorted the results by date.

Search String:

preservation [term entered in thesaurus]
preservation of library materials [selected from thesaurus list]
electronic data archives/conservation and restoration [selected from thesaurus list].

Method of Searching:

Controlled Vocabulary

Abstract:

"The role of libraries is to collect, preserve, and disseminate the intellectual output of the society. This output includes books and serials as well as the digital versions of the same. Scientists, other scholars, and all of society are now producing, storing, and disseminating digital data that underpin the aforementioned documents in much larger volumes than the text. The survival of this data is in question since the data are not housed in long-lived institutions such as libraries. This situation threatens the underlying principles of scientific replicability since in many cases data cannot readily be collected again. Libraries are the institutions that could best manage this intellectual output."

Annotation:

Heidorn argues that libraries themselves must start taking on a formative role in curating data rather than relying on society to create an institution to do so. The article argues libraries are equipped to do this but largely focuses on only academic libraries. Strategies for implementation are based on the Digital Curation Centre's Lifecycle model for digital curation.

Horava, T. (2010). Challenges and possibilities for collection management in a digital age. *Library Resources & Technical Services*, *54*(3), 142-152.

Database:

Social SciSearch [Dialog 7]

Search Strategy:

I selected Social SciSearch because of the wealth of articles it contains related to information science. This was an initial search using this database so I chose a keyword approach.

Search String:

ss (digital OR digitization OR digital()preservation OR preservation OR conservation OR restoration)
ss (curation OR archive? OR archival()collection? OR historical()collection?)
s s9 and s18
limit s19/2008:2011

Method of Searching:

Keyword

Abstract:

"This paper considers some of the major issues concerning collection management in academic libraries in a rapidly changing environment. Specifically, this paper reflects on core values, scholarly communication issues, acquisition activities, access and delivery issues, and innovation. The paper concludes with ideas for incorporating shifts in these areas into a sustainable, forward-looking approach to collection management."

Annotation:

Article argues that when dealing with digital curation, practitioners must maintain the core values of collection management but refine them in the context of the networked, digital world. Horava provides ten practical approaches to adapting collection development for the digital environment.

Joorabchi, A., & Mahdi, A. (2011). An unsupervised approach to automatic classification of scientific literature utilizing bibliographic metadata. *Journal of Information Science, 37*(5), 499-514.

Database:

Social SciSearch [Dialog 7]

Search Strategy:

I selected Social SciSearch because of the wealth of articles it contains related to information science. This was an initial search using this database so I chose a keyword approach.

Search String:

ss (digital OR digitization OR digital()preservation OR preservation OR conservation OR restoration)
ss (curation OR archive? OR archival()collection? OR historical()collection?)
s s9 and s18
limit s19/2008:2011

Method of Searching:

Keyword

Abstract:

"This article describes an unsupervised approach for automatic classification of scientific literature archived in digital libraries and repositories according to a standard library classification scheme. The method is based on identifying all the references cited in the document to be classified and, using the subject classification metadata of extracted references as catalogued in existing conventional libraries, inferring the most probable class for the document itself with the help of a weighting mechanism. A dataset of 1000 research articles, papers, and reports from a well-known scientific digital library, CiteSeer, were used to evaluate the classification performance of the system."

Annotation:

An automatic approach for classifying digital scientific documents into their Dewey Decimal subject category is presented. The proposed approach leverages the Dewey classifications of references cited in, and citing the document under consideration to infer its Dewey classification. Experimental evaluation show the efficacy of the approach, and thoughts for future work are presented. The paper is appropriate for technology professionals in library science, but not too technical for the average reader. Further experimentation and implementation need to be done before considering this technology in an actual digital curation framework.

Kunda, S., & Anderson-Wilk, M. (2011). Community stories and institutional stewardship: Digital curation's dual roles of story creation and resource preservation. *Portal: Libraries and the Academy*, *11*(4), 895-914.

Database:

Three databases searched simultaneously: Library Literature & Information Science [Dialog 438], Social SciSearch [Dialog 7], and ERIC [Dialog 1]

Search Strategy:

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s s1 and s2

```
  S3     2740  S1 AND S2
```

rd s3

```
  S4     2355  RD S3  (unique items)
```

s s4 and py=>2005

```
  S6     1049  S4 AND PY=>2005
```

sort s6/all/py,d

```
  S7     1049  Sort S6/ALL/PY,D
```

Method of Searching:

Keyword

Abstract:

"Digital curation must involve both digital asset preservation and the important value-added function of facilitating user understanding of and engagement of digital resources. This paper presents a model of digital curation that embraces both the digital preservation challenge and the community engagement challenge."

Annotation:

Work expands on the concept of traditional digital repositories to include user engagement and use. Scope includes case studies in this regard, focusing not only user engagement, but digital preserved content as well. Well-written, but generally fails to give a broad scope of the problem or how the proposed approach would apply in general.

Macdonald, S., & Martinez-Uribe, L. (2010). Collaboration to data curation: Harnessing institutional expertise. *New Review of Academic Librarianship*, *16*(Special Issue), 4-16.

Database:

Library Literature & Information Science Full-Text [Hagerty Database through which the referencing article was found]

Search Strategy:

While retrieving the full text of the article "Data Curation and the Academic Library" by G. Walton through a title search in Hagerty's Summon (originally found through Library Literature & Information Science Full-Text; controlled vocabulary search), I found this citation listed in the results. I accessed the full text of the article by clicking the citation and retrieving it from InformaWorld Journals.

Search String:

Shown in results for title search of:
Data Curation and the Academic Library

Method of Searching:

Browsing

Abstract:

"This paper aims to highlight a number of initiatives in the Universities of Edinburgh and Oxford, showing how research data repository infrastructures can be effectively realized through collaboration and sharing of expertise. We argue that by employing agile community, strategic and policy judgment, a robust data repository infrastructure will be part of an integrated solution to effectively manage institutional research data assets."

Annotation:

Expands on Abrams idea that curation is done through a process of services. Previous efforts made at the University of Edinburgh and the University of Oxford emphasize collaborative efforts between repository managers and researchers. This paper is one of the few articles in this area to provide financial considerations that often initiate which projects and institutional policies are implemented.

Ogburn, J. (2010). The imperative for data curation. *Portal: Libraries and the Academy*, *10*(2), 241-246.

Database:

Library Literature & Information Science Full-Text [Hagerty Database]

Search Strategy:

I wanted to use Hagerty's database resources and selected this particular one for its wealth of library and information citations. I used the thesaurus and searched for "digital curation," resulting in nothing useful. Then I tried "preservation" and selected the given term "preservation of library materials." Finally I chose the sub category of "electronic data archives/conservation and restoration" and viewed only those citations under the "peer reviewed tab." I sorted the results by date.

Search String:

preservation [term entered in thesaurus]
preservation of library materials [selected from thesaurus list]
electronic data archives/conservation and restoration [selected from thesaurus list].

Method of Searching:

Controlled Vocabulary

Abstract:

> "In order to grow effective future librarians, we must urge our professional graduate programs to incorporate data management into their curricula. The funding and planning for the care and retention of data must be built into the front end, not the back end, of the research process. Leaving digitally based information to languish in personal electronic filing drawers amid a jumble of un-related information and with no plans for its survival guarantees it disappearance."

Annotation:

The article offers solid reasoning for impending need for digital curation and associated issues, but arguments are not well supported with documentation or relevant current research.

Owen, T. M. (2011). Evolution of a digital repository: One institution's experience. *Journal of Electronic Resources Librarianship*, *23*(2), 142-149.

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Three databases searched simultaneously: Library Literature & Information Science [Dialog 438], Social SciSearch [Dialog 7], and ERIC [Dialog 1]

Search Strategy:

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Method of Searching:

Keyword

Abstract:

> "In this article, the development of a digital repository is examined, specifically how the focus on acquiring content for the repository has transitioned from faculty-published research to include the gray literature produced by the research centers on campus,

including unpublished technical reports and undergraduate research from honors programs. Inclusion in the repository increases the creditability of the research center and provides wider distribution of this often under-recognized research."

Annotation:

Case study that looks at value of expanding institutional repositories to include digital content that is unpublished such as reports, presentations, and theses and dissertations. Results show this material is easily acquired because it has fewer copyright restrictions and gives access to previously inaccessible data. Interesting and different approach to preservation but study could be augmented with usage statistics to show how this effort is benefiting the university and researchers.

Schmidt, L., Ghering, C., & Nicholson, S. (2011). Notes on operations: Digital curation planning at Michigan State University. *Library Resources & Technical Services*, *55*(2), 104-118.

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Method of Searching:

Keyword

Abstract:

"Recognizing the need for guiding the management and preservation of Michigan State University's digital assets, a team led by university archivists and librarians conducted a digital curation planning project to explore and evaluate existing digital content and

curation practices. While the findings were specific to Michigan State University, the process of assessing practices and identifying needs may be replicated elsewhere."

Annotation:

Study assessed digital content created and preserved by various departments and services and centers at Michigan State University. Findings from surveys and interviews revealed the major types of data that will be used to address curation processes and guidelines in the future. The paper provides statistics from the university to give credibility to proposed initiatives. The included survey provides model for other institutions to use in assessing digital curation needs.

Stanton, J.M., Youngseek, K., Oakleaf, M., Lankes, R.D., Gandel, P., Cogburn, D., & Liddy, E.D. (2011). Education for escience professionals: Job analysis, curriculum guidance, and program considerations. *Journal of Education for Library and Information Science*, *52*(2), 79-94.

Database:

Library & Information Science & Technology Abstracts (LISTA) [Hagerty Database]

Search Strategy:

In trying to fill any gaps on my topic, I chose this database because it was the only library/information science database from the Project Description I had not used. I elected to use the thesaurus and searched the terms "digital curation." The suggested vocabulary was "digital preservation" or "digital libraries." I used both these terms with Boolean "and" and limited my results to peer reviewed journals covering dates of 2005-2012. I sorted my results first by descending, which retrieved many articles I already had. Next I sorted ascending to determine any older articles I may have missed.

Search String:

digital curation [term entered in thesaurus]
digital libraries and digital preservation [terms suggested by thesaurus]
digital preservation and digital librar* [terms entered for search, results limited by date, 2005-2012, and peer reviewed journals]

Method of Searching:

Controlled Vocabulary

Abstract:

"This article focuses on understanding the dimension of work, worker, and workplace, including the knowledge, skills, and abilities needed for eScience professionals. We used focus groups and interviews to explore the needs of scientific researcher and how these needs may translate into curricular and program development choices. A cohort of five master's students also worked in targeted internship settings and completed internship logs. We organized this evidence into a job analysis that can be used for curriculum and program development at schools of information and library science."

Annotation:

Analyzes skills needed for research data management. Approach employed a two-pronged strategy for job analysis: 1) analyze the work itself, and 2) analyze the qualifications of the worker. This research contributes significantly to understanding requirements necessary for library/information science students to be successful as eScience professionals. The list of recommended courses are helpful and practical.

Yakel, E. (2007). *Digital curation*. OCLC Systems and Services, *23*(4), 335-340.

Database:

Library & Information Science & Technology Abstracts (LISTA) [Hagerty Database]

Search Strategy:

In trying to fill any gaps on my topic, I chose this database because it was the only library/information science database from the Project Description I had not used. I elected to use the thesaurus and searched the terms "digital curation." The suggested vocabulary was "digital preservation" or "digital libraries." I used both these terms with Boolean "and" and limited my results to peer reviewed journals covering dates of 2005-2012. I sorted my results first by descending, which retrieved many articles I already had. Next I sorted ascending to determine any older articles I may have missed.

Search String:

digital curation [term entered in thesaurus]
digital libraries and digital preservation [terms suggested by thesaurus]
digital preservation and digital librar* [terms entered for search, results limited by date, 2005-2012, and peer reviewed journals]

Method of Searching:

Controlled Vocabulary

Abstract:

"This article provides an overview of development and recent focus on digital curation and ties it to larger cyber-infrastructure initiatives, noting how this theme has permeated in recent reports, conferences, and educational offerings."

Annotation:

This article defines digital curation and summarizes recent efforts from reports from the previous five years. Yakel defines digital curation as an active life cycle that involves collaboration between content creators and curators. Analysis is limited to basic concept definitions and provides no initiatives or suggestions or the future ideas for how to address data curation through practice or education.

Yakel, E., Conway, P., Hedstrom, M., & Wallace, D. (2011). Digital curation for digital natives.

Journal of Education for Library and Information Science, *52*(1), 23-32.

Database:

Library Literature and Information Science [Dialog 438]

Search Strategy:

Originally when I used this database in Dialog, I did a search with key words "digital()curation?" and then ranked the results by author. This provided a list of relevant authors to search for that I recorded. Later I went back and searched for Elizabeth Yakel because she appeared in my initial author ranking results near the top.

Search String:

s au=yakel, elizabeth
S5 76 AU=YAKEL, ELIZABETH
e au=yakel, elizabeth
sort s5/all/py,d
S6 76 Sort S5/ALL/PY,D

Method of Searching:

Author

Abstract:

"A new generation of digital archivists and digital preservation specialists (also known as digital curators) is needed to manage information through its life cycle. A strong digital curation has three components: courses, practice-based internships, and a solid technological infrastructure. This article discusses the education of digital archivists and curators at the University of Michigan's School of Information in the context of these three components."

Annotation:

New library and information science curriculum aimed at incorporating learning styles and technology competency of "digital natives." Review is heavy on rationale and integration of technology in curriculum. Table 2 is useful in showing which technologies are to be implemented in courses. Article fails to define how this curriculum for digital natives compares to former curricula aimed at the pre-digital native generation.

Conclusion and Personal Statement

Completing this project, though intense, was an invaluable learning experience. The assignment overall was a way to learn how to research and become versed on a particular topic. It reinforced the evaluative nature of selection and use of APA style.

I have been interested in digital libraries for some time and saw this assignment as an opportunity to learn about one aspect of the subject. Digital curation was a fairly foreign process to me before starting this assignment. I read a lot of articles that provided general background knowledge and had to learn a number of new terms synonymous with the topic. I am positive that if I had selected a topic I had already known some about, I would not have learned as much.

One of the main things I learned about digital curation is that it is still basically in its infancy. The concept is still being framed and few curricula are offered to students interested in pursuing it. However, I did come to understand that digital curation is extremely interdisciplinary, and as is such, can be addressed from different avenues and educational opportunities. It will be an interesting subject to keep an eye on for the future.

Learning to document my search process in such detail for this project took time. I often found myself accumulating articles and then realizing I had gotten lost with my search strategy. I did have to backtrack and eventually force myself to write down each stage of the search process so I would not get lost and have to replicate the search again.

If I were to complete this project again, something I would recommend to myself is to utilize the database covered in class in conjunction with my search for articles. While completing this project, I would work on multiple searches over a couple of weeks in the *same* database and subsequently forget how to use another database when I switched. I basically had to relearn how to search and utilize a database's interface with each switch. Something that I did that was extremely helpful was to create a matrix (like that in the project description) detailing which articles covered what topics. As I read the articles, I could add them to the matrix and check-off topics it covered. This made the later task of organizing the literature review easier.

I certify that:

- This assignment is entirely my own work.
- I have not quoted the words of any other person from a printed source or website without indicating what has been quoted and providing an appropriate citation.
- I have not submitted this assignment to satisfy the requirements of any other course.

Signature: Renee Smith
Date: 12/4/11