

Study on Emerging Technologies Librarians: How a new library position and its competencies are evolving to meet the technology and information needs of libraries and their patrons.

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Abstract:

This study examines the roles and responsibilities of the emerging technologies librarian to illuminate and maximize the possibilities of the position as libraries around the world provide new content in new mediums to an increasingly tech-savvy user group. This relatively new position is being created as libraries strive to leverage new technologies to update service models in reference, instruction, and access service departments to meet their patrons' point-of-need preferences in location, device choice, and information seeking behaviors. While many skill and experience analyses have been conducted on other library positions, the emerging technologies librarian's roles and requirements remains vague, leaving librarians interested in the position unsure of what skills to obtain and hiring libraries unclear how such a position could benefit their library. Data will be collected from deep analysis of job advertisements via the American Library Association's JobLIST database within the past six years as well as from surveys distributed to and completed by current emerging technologies librarians. A content analysis of job advertisements reveals what types of libraries are hiring emerging technologies librarians, what the hiring organizations anticipate the job responsibilities will include, and what skills employers are looking for. The survey results provide valuable insight on how actual job responsibilities may vary from job advertisements. Also analyzed will be responses related to percentage of time spent on emerging technologies related work and skills respondents would have found advantageous. This study's findings will provide an accurate picture of current hiring trends and the opportunity through data analyzed and shared to tailor the hiring process to best meet the realities of this new position and their strengths for libraries. Data from this study will inform hiring practices, competencies, job responsibilities, and future opportunities for libraries and emerging technology librarians around the world.

Keywords: Emerging Technologies, Job Advertisements, Job Qualifications, Job Duties

Introduction

This study illuminates emerging technologies librarians' roles, responsibilities, and competencies in job advertisements and actual practice. Technology continues to rapidly evolve, changing the way people communicate, industries produce, and information flows. Libraries can leverage these emerging technologies in providing new resources and services that meet their patrons' point-of-need location, device preferences, and information seeking behaviors. New technologies can also make libraries more efficient in utilizing financial, staffing, and space resources. These new technologies also create additional demands upon busy library staffs. One response from libraries has been creating a dedicated position, the emerging technologies librarian.

As with many newly created positions, the exact roles and responsibilities of the emerging technologies librarian remain varied and vague. This leaves library administration unsure if they would benefit from creating the position, prospective emerging technologies librarians unsure of what skills and competencies they will need, and current emerging technologies librarians feeling disconnected and without clear direction. This study examines job advertisements from ALA's JobList to determine what is anticipated of emerging technologies librarians upon hire to address the confusion around emerging technologies librarians' roles and necessary skills. In light of this data, survey results from current emerging technologies librarians are analyzed to determine what their position's responsibilities entail and if they have the skills and competencies necessary to fulfill them.

The study's central questions are:

1. What type of libraries are hiring emerging technologies librarians?
2. What are the anticipated responsibilities and required skills upon hire?
3. Do current emerging technologies librarians feel they have the skills necessary to complete all responsibilities?
4. Are current emerging technologies librarian satisfied in their current role?

The quantitative and qualitative data will give an accurate picture of current hiring trends and opportunities to tailor the hiring process to meet the realities of the position. Libraries with emerging technologies librarians may see how a change in structuring and responsibilities could positively impact their librarian's performance. Libraries without an emerging technologies librarian will be able to determine if such a position would fit their current needs and help them remain relevant to their increasingly tech-savvy patron base. Emerging technologies librarian will gain a clear view of the current landscape of their profession.

Literature Review

While no studies have analyzed job advertisements for emerging technologies librarians, several studies of trends in advertisements have shown the growth in technology-related skill requirements among nearly every type of librarian. Karen Croneis and Pat Henderson analyzed *College and Research Libraries News* job advertisements from 1990 to 2000 and found positions with the words "digital" or "electronic" in the

job title had increased dramatically over the course of the study.¹ They recorded that these responsibilities became spread out throughout various librarian positions, as networking capabilities, the internet, an abundance of digital resources, and tech-savvy patrons proliferated and required more librarians to implement and manage new types of digital content and services. An interesting discovery was made between positions with the word “digital” in their title compared to those with “electronic.” Job descriptions with “digital” in their position title were primarily responsible for administration and project management with emphasis on securing funding and overseeing production. “Electronic” positions involved more traditional user-centered librarian duties including reference, instruction, collection development, and web pages.² Much in the same way Croneis and Henderson revealed nature of “electronic” and “digital” in job titles, this study hopes to illuminate some of the duties and qualifications which makes the emerging technologies librarian different from other technology-related position. In an analysis of *C&RL News* advertisements for reference librarians from 1966 to 2009, Wang, Tang, and Knight noted job technology-related duties including, “Web design, library systems, distance education support, and digitizing became standard” as early as 1990.³ This further demonstrates the pervasiveness of technology in libraries. Even as new positions dedicated to technology continue to be created, librarians in previously unrelated areas of service are expected to have and utilize a certain fundamental level of technology competency.

In recent years, several library professionals have published what they considered to be necessary competencies for librarians working in the 2.0 era to fulfill their new technology-related duties. These lists tend to focus on the interpersonal skills necessary for adapting technological innovation in specific library settings, rather than the technical expertise needed for implementation. Peltier-Davis (3) proposed a 14 point checklist of personal and professional competencies necessary for librarians to best utilize technology.⁴ Her checklist included the ability to continuously learn, the propensity to take risks, and the skills to enable and foster change.⁵ Saint-Onge included being visionary, confident, focused on connecting users to the library as information rather than the library as space, and embracing our roles as teachers in his “must-haves” for Law Librarian 2.0. He echoes the findings of earlier studies which find broader qualities and characteristics are viewed as more valuable in a 2.0 era librarian than specific technology skills.⁶ Partridge, Lee, & Munro’s focus groups also attempted to identify what competencies are needed by the Librarian 2.0, which they defined as, “the library and information professional in a world of ever changing emerging technology.”⁷ While a fundamental understanding of emerging

¹ Karen S. Croneis and Pat Henderson, “Electronic and Digital Librarian Positions: A Content Analysis of Announcements from 1990 through 2000,” *Journal of Academic Librarianship* 28, no. 4 (2002): 232-37.

² Croneis and Henderson, “Electronic and Digital Librarian Positions,” 234.

³ Hanrong Wang, Yingqi Tang, and Carley Knight, “Contemporary Development of Academic Reference Librarianship in the United States: A 44-Year Content Analysis,” *Journal of Academic Librarianship* 36, no. 6 (Nov 2010): 493.

⁴ Cheryl Peltier-Davis, “Web 2.0, Library 2.0, Library User 2.0, Librarian 2.0: Innovative Services for Sustainable Libraries,” *Computers in Libraries* 29, no. 10 (Nov 2009): 16-21.

⁵ Peltier-Davis, “Web 2.0,” 20.

⁶ Michael Saint-Onge, “Law librarian 2.0: Building the law librarian of the future,” *Library Relations Group Monthly Column*, entry posted March 2009, <http://law.lexisnexis.com/infopro/Librarian-Relations-Group/Meet-the-LRCs/Law-Librarian-20-Building-the-Law-Librarian-of-the-Future-0309/> (accessed April 30, 2013).

⁷ Helen Partridge, Julie Lee, and Carrie Munro, “Becoming “librarian 2.0”: The skills, knowledge, and attributes required by library and information science professionals in a web 2.0 world (and beyond),” *Library Trends* 59, no. 1, (2010): 318.

technologies was seen as essential, participants did not feel IT skills were. Engagement in lifelong learning, commitment to evidence based practice, and an array of personal characteristics from enthusiasm to resilience were cited as necessary qualities.⁸

As libraries continue to integrate more technology in frontend services and backend workflows, new positions will be created to meet individual libraries' needs and existing positions will need to adapt in order to meet the expectations of our users and ourselves. This study focuses on the emerging technologies librarian as a continuation of this evolution. What is an emerging technologies librarian? What old and new responsibilities are they completing? What competencies do emerging technologies librarians need?

Methodology

ALA JobLIST advertisements from 8/2006-10/2012 were collected with assistance from David Connolly at the American Library Association. The ALA JobLIST was selected as it contains the combined postings of *American Libraries* and *College & Research Libraries News* magazines and online-only job advertisements. The ALA JobLIST was chosen as one of the largest central locations for library job advertisements in the United States. ALA did not archive job advertisements previous to 2006. This was not seen as detrimental since the goal of the study was to gain knowledge of current emerging technologies librarians' roles and responsibilities.

The job advertisements were filtered by title and only advertisements that contained the phrase, "emerging technologies" in the job title were included in the study. Copeland pointed out that the variations in serial cataloger job titles and duties made it impossible to truly understand the nature of a specific position.⁹ This is true in the realm of technology-related librarian positions as well. A digital initiatives librarian, a metadata librarian, and a web librarian may have the same or vastly different responsibilities in varying libraries. However, this study is interested in possibly one of the least transparent job titles, that of the emerging technologies librarian.

Seventy-one advertisements were collected containing the phrase, "emerging technologies" within the job title. Of these, 2 were removed for proving to be a duplicate listing, determined by the extreme proximity of the posted dates, and 2 were removed for providing little to no job duty and requirement information, instead pointing interested parties to an outside website. 67 advertisements containing the phrase, "emerging technologies" within the job title were then analyzed for this study.

Advertisements were analyzed for library type, job duties, and experience and skill requirements. All advertisements were given a library type category by JobLIST. These categories were used by the author and included:

- Academic/Research
- Library Cooperative/System
- Public Library
- Special Library/Corporate

⁸ Partridge, Lee, and Munro, "Becoming "librarian 2.0," 326.

⁹ Ann W. Copeland, "The demand for Serials Catalogers: An analysis of job advertisements 1980-1995," *Serials Librarian* 32, no. ½ (1997): 28.

Many job advertisements included a wide variety of listed duties stated in various terms. In certain cases it was necessary for the author to make subjective classifications when categorizing duties. Job duties were placed in only one category. The following categories emerged during the categorization process:

- Trendspotting & Implementation
- Website Management
- Reference Activities
- Information Literacy & Instruction
- Collaboration with Internal and External groups
- Liaison to Academic Department
- Creating Online Instruction Materials
- Technology Assessment
- Social Media / Web 2.0 / Outreach
- Technology Training for both Staff and Patrons
- Electronic Resource Management
- IT / Systems
- Work Towards Tenure & Promotion
- Digital Initiatives
- Electronic Resource Management
- Supervisory
- Online Reference Services & Collections
- Equipment & E-Classroom Management

Required and preferred skills and experience were analyzed. Subjective decisions of some requirements' categorization were made due to the variety in terminology used. Each category was subdivided into required and preferred groups to allow for the importance placed on skills in the advertisement to be recorded. The following skill and experience categories emerged during analysis:

- Master's Degree (general)
- MLIS or MLS
- Information Literacy & Instruction
- Reference Activities
- Liaison / Specific Area Knowledge
- E-Science
- Supervisory
- Emerging Technologies / Education Technologies
- Digital Initiatives
- Online Instructional Materials
- Technology Training & Documentation
- Website Management
- Course Management Systems
- Programming & Scripting Languages
- Web 2.0/Social Networking Tools

- Project Management
- Communication & Interpersonal
- Collaboration
- Ability to Meet Tenure / Promotion Requirements
- Mobile Devices & App Creation
- UX & Accessibility
- Electronic Resources Management
- Systems/IT

An online survey of emerging technologies librarians was also conducted.¹⁰ Survey respondents were obtained through a variety of distribution channels. The author tweeted a link to the survey 3 times on her personal Twitter account. Due to the fleeting nature of tweets and the possible impact of retweets and favoriting a tweet, it is unclear how many participants accessed the survey through Twitter. The survey and information about the study were also sent out to Library and Information Technology Association listserv (lita-l) subscribers. The author also sent a survey directly to all current emerging technologies librarians at the institutions listed in her advertisement data. 294 librarians completed the survey. 40 respondents listed “Emerging Technologies Librarian” as their official position title and were grouped together for analysis. The remaining 254 respondents’ surveys will be analyzed in another study to determine the role of emerging technologies in librarians with a different title.

Results

Types of Libraries

The types of libraries that listed emerging technologies librarian job advertisements were largely Academic/Research Libraries (92.5%). Public libraries accounted for 4.5% of job advertisements and Library Cooperative/System and Special Libraries/Corporate split the remaining 3% of listings. See Table 1 for complete results.

Table 1: Types of Libraries in Advertisements

Library Type	Number of Ads	Percentage
Academic/Research	62	92.5%
Public	3	4.5%
Library Cooperative/System	1	1.5%
Special Libraries/Corporate	1	1.5%

¹⁰ Survey questions can be found in the appendix of this article.

Types of libraries represented in the survey were also predominantly academic, with 78% listing that as their place of employment. 13% worked at public libraries and the remaining 9% were split across law, medical, and consortia libraries (Table 2).

Table 2: Types of Libraries in Survey

Library Type	Number of Ads	Percentage
Academic/Research	31	77.5%
Public	5	12.5%
Law	2	5%
Medical	1	2.5%
Consortia	1	2.5%

Job Duties

Analysis of the job advertisements revealed 17 different categories of anticipated job duties (Table 3). 55.2% of advertisements contained 6 or more duties while 26.9% listed 8 or more job duties. 71.6% of all listings included emerging technology trendspotting and implementation and 44.8% included website management responsibilities. Traditional reference & instruction librarian duties were also present in many advertisements, including reference (41.8%), information literacy & instruction (38.8%), and liaison responsibilities (31.3%). Other categories of note included the frequency of collaboration (38.8%), online instruction material creation (26.9%), and technology training (23.9%).

Table 3: Job Duties in Advertisements

Duty	Number of Ads	Percentage
Trendspotting & Implementation	48	71.6%
Website Management	30	44.8%
Reference Activities	28	41.8%
Information Literacy & Instruction	26	38.8%
Collaboration - External & Internal	26	38.8%
Liaison	21	31.3%
Creating online instruction materials	18	26.9%
Technology assessment & evaluation	17	25.4%
Social Media / Web 2.0 / Outreach	17	25.4%

Technology Training - Staff & Patrons	16	23.9%
IT / Systems	14	20.9%
Tenure / Promotion	12	17.9%
Digital Initiatives	11	16.4%
Collection Development	9	13.4%
Electronic Resources Management	9	13.4%
Supervisory	8	11.9%
Online Reference Services & Resources	7	10.4%
Manage equipment / e-classrooms	4	6.0%

Analysis of the survey results revealed 15 job duty categories (Table 4). 81% of respondents listed trendspotting & implementation as one of their responsibilities. Traditional reference activities also appeared with frequency in the survey. Reference activities are duties of 72% of respondents and information literacy instruction is conducted by 61%. 61% of respondents also listed technology training and social media/Web 2.0/outreach included in their responsibilities. Technology training (61%), collection development (47%), and website management (42%) also appeared with frequency among respondents.

Table 4: Job Duties in Survey

Duty	Number of Responses	Percentage
Trendspotting & Implementation	29	81%
Reference Activities	26	72%
Instruction	22	61%
Technology Training - Staff & Patron	22	61%
Social Media / web 2.0 / Outreach	22	61%
Collection Development	17	47%
Website Management	15	42%
Liaison	14	39%
Digital Initiatives	11	31%
Electronic Resource Management	9	25%

Systems / IT	8	22%
Adult Services	2	6%
Youth/Teen Services	2	6%
Manage Equipment / E-Classrooms	2	6%
Project Management	1	3%

Education

Job advertisements were categorized by the minimum required degree. Each JobLIST advertisement contained a minimum degree field in the heading information. Using the general degree field at the top of each advertisement, it was revealed that 94% of listings required a Master of Arts/Sciences degree, 4.5% of listings required a Bachelor of Arts/Sciences degree, and 1.5% required no minimum education degree for consideration. Of the 94% of listing requiring a Master’s degree, 38.9% (26 listings) specified the required degree was a MLIS or MLS within the job requirements. See Table 5 for complete results.

Table 5: Education Requirements in Advertisements

Minimum Required Degree	Number of Ads	Percentage
Master of Arts/Sciences	63	94%
Bachelor of Arts/Sciences	3	4.5%
None	1	1.5%

Of the 36 survey respondents to the educational background question, all 36 had earned an MLS or MLIS degree. 6 additional respondents (16.7%) stated they had also earned an additional graduate degree beyond their MLS/MLIS.

Qualifications, Skills, & Experience

Job advertisements were analyzed for required and preferred/desired qualifications (Table 6). The most required qualification was experience using Social Media and Web 2.0 applications for outreach and service, which appeared in 16 advertisements. Instruction experience, the ability to work collaboratively, knowledge of emerging technologies, web development, and coding languages appeared in 16% or more of the advertisements. The most preferred/desired qualification was experience in creating online instruction materials, including tutorials, appearing in eight advertisements.

Table 6: Qualifications, Skills, & Experience in Advertisements

Skills and Experience in	Number of Ads Required	Percentage	Number of Ads Preferred / Desired	Percentage
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Social Media / Web 2.0/Outreach	16	23.9%	5	7.5%
Information Literacy Instruction	14	20.9%	7	10.4%
Work Collaboratively	12	18%		
Emerging Technologies	11	16.4%	3	4.5%
Website Management	11	16.4%	7	10.4%
Programming & Scripting Languages	11	16.4%	6	9%
Excellent Communication & Interpersonal Skills	11	16.6%		
Reference Activities	8	11.9%	4	6%
Digital Initiatives	4	6%	3	4.5%
Mobile Devices & Apps	4	6%		
Systems / IT	4	6%	3	4.5%
Project Management	2	3%	2	3%
Electronic Resource Management	2	3%	1	1.5%
UX & Accessibility	2	3%	2	3%
Database Creation: Access, MySQL	2	3%	1	1.5%
Technology Training	2	3%		

Meet Tenure/Promotion Requirements	2	3%		
Supervisory	2	3%	1	1.5%
E-Science / Big Data	2	3%		
Online Instruction Materials	1	1.5%	8	11.9%
Liaison	1	1.5%	7	10.4%
Course Management	1	1.5%	2	3%

Survey respondents were asked if they felt they had all the skills they needed to perform and succeed in their current role. 47% (17 respondents) felt they did not have all the skills to fulfill job responsibilities or new projects which they would like to work on. Respondents reported wanting more skills were asked which skills they would find advantageous. 94% percent of respondents wanted additional skills in computer programming and coding. 69% want web design skills, and 25% of respondents would find marketing skills to be advantageous in their work.

Table 7: Additional Skills Needed in Survey

Additional Skill	Number of Responses	Percentage
Computer Programming / Coding	15	94%
Web Design	11	69%
Marketing	4	25%
Communication	2	13%
Financial Management	2	13%
Administrative	1	6%
Collaborative	1	6%
Project Management	1	6%

Satisfaction

The Society for Human Resource Management's (SHRM) 2012 Employee Job Satisfaction and Engagement survey lists "Opportunities to use skills/abilities" as the most important factor in determining job satisfaction. Survey participants were asked if they felt their skills and knowledge in emerging

technologies were being utilized to their full potential in their current position.¹¹ 55% did feel their skills were fully utilized and 45% did not. Those responding negatively were asked what other types of activities and responsibilities would they like to take on to fully utilize their skills and knowledge. Of the 12 respondents providing free text answers, 4 cited greater interaction with other staff members through collaboration and training. 3 respondents wanted more technology responsibilities and opportunities, including website management, software development, and augmented reality projects. 3 respondents cited they did not necessarily want more or different responsibilities, but rather more available time to spend on their emerging technologies work. “Communication between employees and senior management” was the fourth most important aspect in determining job satisfaction by the SHRM. Survey participants were asked if they received adequate support from their library’s administration for emerging technologies projects. 59% said they received adequate support. 41% of respondents said they did not. When asked what additional support from administration they would like to receive, answers included financial, system resources (both in equipment and staff), training, flexibility and open-mindedness, moral support, encouragement for buy-in from rest of library, and time for experimentation.

Survey participants were asked what percentage of their time was spent on various job responsibilities. Emerging technologies-relate work only accounted for 29.5% of their work time. See the table for complete results.

Table 8: Work Time in Survey

Answer	Min Value	Max Value	Average Value	Standard Deviation
Emerging Technologies-Related	2.00	80.00	29.49	16.34
Systems / Web Design / Digital Collections	0	90.00	26.29	25.48
Reference & Instruction	0	90.00	24.57	20.11
Other Activities	0	50.00	15.06	13.33
Collection Development	0	20.00	4.60	5.71

Discussion

In addressing the first of four research questions, “What types of libraries are hiring emerging technologies librarians?” we have limited data to accurately answer it. Due to the limited advertisement sample and the previously mentioned bias of the ALA JobLIST towards academic library listings, it cannot be inferred that the vast majority of emerging technologies librarian positions are in the academic and research fields. Nor can all the analysis which is inferred be directly tied to academic libraries, as 7.2% of job advertisements are located elsewhere. As this is the first close examination of the position,

¹¹ Society for Human Resource Management, “2012 Employee Job Satisfaction and Engagement,” http://www.shrm.org/LegalIssues/StateandLocalResources/StateandLocalStatutesandRegulations/Documents/12-0537%202012_JobSatisfaction_FNL_online.pdf (accessed April 30, 2013).

further study will need to be conducted on the role of the emerging technologies librarian within the individual library types.

Variances in job titles needed to be analyzed as possible influences on job duties before addressing the second research question. All analyzed job advertisements contained the phrase, “emerging technologies,” in the title. However, only 28 advertisements, 41.8%, had the phrase as the only role in the job title. These included titles such as, “Emerging Technologies Librarian,” and “Emerging Technologies Analyst.” Other titles with more than one role present included those with emphasis on Reference & Instruction (8%), Systems (10.4%), and Web Management (9%). The high presence of additional departments and duties listed in the position title implies different responsibilities and roles, as well as different organization structures across individual positions and organizations. This suggests further research should be done on what exactly a job titles represents and implies.

In comparing job duties listed in the advertisements with those submitted on the survey, trendspotting & implementation, reference activities, and instruction appeared in the top four for each set of results. Emerging technologies librarians most often have a dual position, with responsibilities also in either reference or website management. Further research should be done to determine the effectiveness of these or other departmental pairings within this single position. There were clear discrepancies between the two sets of data as well. Technology training only appeared in 23.9% of job advertisements, 61% of survey respondents included it in their duties. This suggests more librarians are expected to train both peers and patrons on technology but may not be notified of such upon hire. These librarians may also not be vetted for pertinent skills and knowledge to conduct technology training. 61% of current emerging technologies librarian respondents said they had social media/Web 2.0/outreach responsibilities. Only 25.4% of job listings included such duties. This reveals that hiring libraries are not currently or accurately anticipating the role their emerging technologies librarian will play in their social media and outreach strategy. It also implies that libraries may be hiring librarians without the desire or knowledge to utilize social media and Web 2.0 tools effectively.

Survey respondents were queried on skills and competencies they would find advantageous in their work which they did not currently have. 94% percent of all survey respondents reported wanting with computer programming skills, revealing a drastic difference between the hiring requirements and the realities of the position. Only 16.4% of advertisements listed programming and scripting languages as required and 9% listed it as a preferred skill. A closely related skill set, web design and website management, also showed a marked difference. 69% of respondents stated they would find these types of skills advantageous, while only 16.4% of advertisements required them and 10.4% preferred candidates with them. Librarians in positions that aren't explicitly tied to website design and management are still frequently entering situations where they would find high level computer skills desirable. This infers hiring institutions are underestimating the technology skills necessary for emerging technologies librarian to fulfill either their stated job responsibilities or new responsibilities and duties as their positions evolve.

To address current emerging technologies librarians' satisfaction with their positions, two questions related to general job satisfaction were analyzed. 45% of respondents did not feel that their skills and knowledge were being fully utilized. The SHRM found that employees frequently had skills and abilities beyond the position for which they were hired. It is important for employers to recognize these employees

and further train and developed skills needed for internal promotion. Also contributing to job satisfaction is communication with senior management. In the survey, 41% of respondents did not feel they received adequate support from their library administration. As mentioned in the results section, librarians want more financial support for equipment, training, and staff. Respondents also listed flexibility, open-mindedness, and moral support were lacking in their current administrators. The perception of deficient support shows a lack of positive communication between emerging technologies and their administration. While finances are tight in most libraries, flexibility, open-mindedness, and moral support are qualities library administrators should adopt and be able to effectively communicate with their employees to create a supportive culture and improve job satisfaction.

Conclusion

The aim of this study was to determine what emerging technologies librarians' roles, responsibilities, and competencies include, both in job advertisements and actual practice by answering four research questions. It has been shown that there are discrepancies between the job descriptions from these positions and what duties are completed and what skills are needed in reality. The wide variety of job duties reflects the newness of the position and perhaps, the mutability of the definition for "emerging technologies." Emerging Technologies Librarians are filling many different roles dependent on the individual library's need. A set of competencies was not determinable because of the many differences seen between job advertisements requirements and current librarians' perceptions. Further research should be conducted on the role of emerging technologies librarians in different types of libraries, what departments they are located in, and what effect different recently created technology-related librarian positions, such as Web Librarian and Digital Initiatives Librarian, have on the roles of and the necessity for an emerging technologies librarian.

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Appendix

Survey Questions:

- 1) In what type of library do you work?
- 2) Where is your library located?
- 3) Is your official title "Emerging Technologies Librarian?"
 - a) If not, what is your official position title?
- 4) How long have you worked in emerging technologies?
- 5) How many years of professional library experience did you have prior to becoming an emerging technologies librarian?
- 6) Who do you directly report to?
- 7) What additional skills would you like to have to further your work as an emerging technologies librarian?
- 8) What are your job responsibilities?
- 9) Do you feel you have all the skills necessary to perform and succeed in your current role as an emerging technologies librarian?
- 10) What percentage of your work time do you spend on the following?
 - a) Emerging Technologies-Related, Reference & Instruction, Collection Development, Systems / Web Design / Digital Collections, Other Activities
- 11) Can you fulfill your responsibilities within a 40 hour average work week?
- 12) Do you ever work some nights or weekends when you are not scheduled to work?
- 13) How do you keep up on new emerging technologies?
- 14) If you need to acquire a new skill or knowledge set, which methods of learning do you find most helpful?
- 15) Which 2 departments within the library do you most often collaborate with on projects and initiatives?
- 16) What organizations and departments outside the library do you collaborate with?
- 17) How do you directly serve your patrons?
- 18) How do you serve library faculty and staff?
- 19) Do you feel you receive adequate support from your library's administration for emerging technologies projects?
 - a) If not, what kind of support would you like to receive from your administration?
- 20) Do you feel your skills and knowledge in emerging technologies are being utilized to their full potential in your current position?

- a) If not, what types of other activities and responsibilities would you like to take on?
- 21) Is there anything else you would like to contribute about your position working with emerging technologies?