

Competencies Needed for Digital Librarianship

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Introduction

This paper examines the competencies needed by librarians who work with digital content in digital libraries. The sources for this list of competencies come from the literature of library and information science education as these educational programs develop curricula to prepare graduates to meet the needs of users of digital libraries. As we consider the development of the implementation of a Maghreb Digital Library for Education, Science and Culture, the question of competencies needed by those who provide the services to users of the library becomes crucial to not only the establishment of the library, but to sustaining the library and ensuring its success in meeting the needs of users after the initial establishment.

Perceptions of Digital Librarianship in literature

Saracevic and Dalbello wrote in 2001 that Library and Information Studies (LIS) education has not been a leader in the development of digital libraries, but as in so many other instances, a follower. They suggest that digital library research has been primarily done by computer scientists while the library and information studies community has focused on the applications and practice, not the research. They use the astronomical metaphor of the digital library research community and the digital library practice community being in the same planetary system, but one is on Mars and the other on Venus (Saracevic and Dalbello, 2001, p. 212). The suggestion that librarians are focusing on practical applications (the Venus connection) while computer scientists are doing most of the ground breaking research that supports the practical applications (the Mars connection) seems to be borne out by an informal review of those in libraries and those teaching and doing research in schools of library and information studies. If Mars is associated with the male gender and Venus with female, most LIS faculty doing digital library research seem to be male and most librarians are female. Whether this gender pattern holds true when specific responsibilities for digital librarianship are examined remains to be determined. But there is more to the Mars and Venus distinction, of course than just gender. There may be other aspects, such as service orientation and holistic, community orientation that also contributes to the divisions implied by this planetary metaphor.

Curricular Trends in Education for Digital Librarianship

One of the first surveys of LIS course offerings on digital librarianship was conducted by Spink and Cool in 1998. They used two methods. They analyzed the websites of LIS schools to determine if courses were listed that dealt with digital libraries. They also put out a call on an LIS listserv on the web for people to respond as to whether they offered courses on digital libraries. Twenty institutions responded to the listserv that they had courses on digital libraries. Twelve of the respondents were from U.S. institutions, and of these, 10 were American Library Association (ALA) accredited programs. Of the

eight from outside the U.S. one was from Europe (U.K.) and the rest were from areas outside Europe. The analysis of the websites confirmed the findings reported to the listserv. Most of the courses identified were technical in orientation and focused on construction of digital collections (Spink and Cool, 1999).

Saracevic and Dalbello did a second survey on education for digital librarianship in 2001 (Saracevic and Dalbello, 2001). They used similar methods to Spink and Cool, but found a significant increase in the number of digital library courses offered at ALA accredited programs. Forty-seven (nearly 90%) of the ALA accredited programs in 2001 had courses that dealt with digital libraries, but only 15 of these were specifically dedicated to digital libraries. The other courses identified by Saracevic and Dalbello were courses that included digital libraries as a unit in the course, but were not exclusively digital library courses. Saracevic and Dalbello took their analysis further and looked at the course content of the 47 courses that concerned digital libraries. They identified the following elements as part of the course content.

- knowledge management
- standards
- document structure and electronic text
- preservation
- community building and social context

Yan Quan Liu did a third survey of courses for education of digital librarians in 2003. She also used the website analysis method and she examined library and information study programs around the world. She found 36 websites with digital library courses. This compares with 20 such websites found in 1999. Twenty of the 36 schools identified as having digital library courses were ALA accredited programs, twice the number found in the 1999 survey. The remainder of the programs were computer science or LIS programs in Europe, South America or Asia. Among those programs that were in LIS, the course content tended to be technical in programs outside North America, while programs in North America content focused more on organizing, preserving, managing and providing access to collections (Liu, 2004).

A review of the results of these three surveys of LIS education for digital libraries suggests that the three most common elements are Computer Science, Library and Information Studies, and Communication. While other elements can be identified, competencies relating to Computer Science and Library and Information Studies seem to be central to most of the course content.

Competencies needed for Digital Librarianship

In 1999, Spink and Cool proposed a model curriculum for digital librarianship. They developed their content as a blend of LIS and Computer Science curricula to achieve a general digital libraries program of study. The following are their broad curricular headings and the content that might be offered under each heading: (Spink and Cool, 1999).

Theoretical and Historical Foundations

History of libraries; Human information behavior; Information retrieval theory;
Development of digital collections and digital libraries

Technical Infrastructure of the Digital Library

Information retrieval engines; Database construction of digital libraries;
Distributed collections; Multimedia formats and applications; Interoperability;
Network technology; Web applications in digital library collections; Interface
design; Communication protocols; Query languages

Knowledge Organization in Digital Libraries

Metadata; Indexing; Classification; Database integration; Document formats

Collection Development and Maintenance

Digital archives; Digital conversion technology; Digital preservation, Information
Access and Utilization of Digital Libraries, Users and uses of digital libraries;
Usability and evaluation research; Information behavior in digital libraries

Social, Economic and Policy Issues

Electronic publishing; Scholarly communication; Copyright issues and
intellectual property rights in digital library collection; Costs of building digital
library collections; Funding for digital environments

Professional Issues

Roles and responsibilities of the digital librarian; Management of digital libraries;
Bibliographic instruction

Choi and Rasmussen presented a paper at the 2006 Joint Conference on Digital Libraries (JDCL) in North Carolina on a survey they carried out. Digital library professionals in American academic libraries were asked questions about the new knowledge and skills required for digital library work. In their paper, Choi and Rasmussen identified three broad categories of digital library competencies: Technical, Library-Related, and Other Managerial Competencies (p. 188). They developed a list of the top three competencies in each category, as ranked by respondents. Technical knowledge competencies that respondents thought important were the “systems” aspects of digital projects including Digital Library (DL) architecture and software, technical and quality standards, and markup languages. Library-related competencies respondents considered important included identifying user needs, digital archiving and preservation, and cataloging and classification. Special managerial competencies that were deemed important were communication skills, project management and leadership skills, and the ability to handle legal issues. Although traditional courses may include some of these skills identified as important for digital librarianship, schools of library and information science in the United States are responding to the perceived need to provide course content that specifically focuses on digital libraries by establishing specific programs or concentrations in digital librarianship.

Library and Information Science Education’s Response to Skills for a Digital Environment

By examining four schools in the U.S. that have established concentrations or programs of study to educate students to work with digital libraries (DL), we can get more

information on the perceptions of competencies needed for digital librarianship.. These four schools are:

University of Illinois - Certificate of Advanced Study (CAS) = Digital Libraries Concentration

<http://www.lis.uiuc.edu/programs/cas-dl.html>

Indiana University - Master's Degree - Digital Libraries Concentration

<http://lair.indiana.edu/research/dlib/>

Rutgers University - Master's Degree - Digital Libraries Concentration online

<http://www.scils.rutgers.edu/programs/lis/OnlineMLIS.jsp>

Syracuse University – Certificate of Advanced Study (CAS) – Digital Libraries Concentration.

<http://istweb.syr.edu/academics/graduate/mls/digitallibraries/index.asp>

A review of these four programs of study suggests a variety of skills are seen as appropriate for librarians working with digital libraries. Most have both computer science and LIS course content, although some specify that the courses are to be taken from the Computer Science schools, not LIS. Of the two master's degree curricula, Rutgers seems to have the most traditional LIS content within their electives, with courses such as Cataloging and Classification and Management of Libraries and Information Technology (IT) for Libraries listed among the electives and two required noncredit LIS “core” professionalization courses. Indiana University, however, also requires a basic “core” of professional courses be taken in addition to the more technical electives listed. In both cases, the master's degree with a digital libraries concentration is based on the foundation of library and information studies.

LIS education programs in Europe and other parts of the world seem to be taking an alternative approach of integrating course work on competencies identified for digital librarianship in the regular degree programs. There are some exceptions to this approach in Europe. There is one specialized program in the U.K. and a second “cooperative” program on the continent between three universities (University of Parma, Italy; University of Oslo, Norway; and the University of Tallinn, Estonia). For the purposes of this workshop, the question might be “What is the best way to develop and maintain the training of staff who will provide the support and services of the Maghreb Digital Library for Education, Science and Culture?” Hopefully our discussions in this workshop will provide some enlightenment and direction.

References:

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