I-SCHOOLS AS A NATURAL HOME FOR DIGITAL LIBRARIES EDUCATION

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ABSTRACT

Given that digital libraries bring together technology, information, and the people using the information, it can easily be argued that i-schools should play a central role in educating DL professionals. This study examines the existing roles that i-schools play in DL education from two different vantage points: their offering of DL courses and their participation in a DL curriculum development project. In addition, we explore the potential to expand the iSchools Caucus by recruiting those schools that are active in DL education efforts (i.e., those that offer courses or participate in curriculum development) but are not yet members of the Caucus. based on the seven course syllabi available on the open Web, DL courses in the i-schools are further analyzed, in terms of the topics covered, the textbooks used, and the types of assignments used. From this analysis, we conclude that there is not yet a consensus on the topics covered or the assignment used in DL courses.

Categories and Subject Descriptors

K.3.2 [**Computing Milieux**]: Computer and information science education; H.3.7 [**Information Systems**]: Digital libraries

General Terms

Management

Keywords

i-schools, Digital libraries, Curriculum

1. INTRODUCTION

Both the federal government and individual institutions have made significant investments in research and development related to digital libraries (DLs) over the 15 years since the original National Science Foundation funding of the Digital Library Initiative [1]. Capitalizing on these investments, digital libraries have become a standard part of many academic and research organizations. However, the same investment has not been made

in the education of staff capable of building and managing DLs. Given that digital libraries bring together technology, information, and the people using the information, it can easily be argued that i-schools should play a central role in educating DL professionals.

2. CURRENT I-SCHOOL INVOLVEMENT IN DL EDUCATION

One way that i-schools might provide the education needed to train DL professionals is to offer a full course (or two) related specifically to digital libraries. Two prior studies of curricula in information and library science (ILS) schools and computer science (CS) departments identified 29 ILS schools and five CS departments that offer such courses [3,4]; the results of this study are updated here. There are now 39 schools offering DL courses. Of the 21 i-schools participating in the iSchools Caucus [2], 10 were found to offer a digital libraries-related course: Drexel, Florida State, Illinois, Indiana, Michigan, North Carolina, Pittsburgh, Rutgers, Syracuse, and Texas. From these data, we can conclude that, if one considers CS departments, ILS schools, and i-schools, it is among the i-schools that the probability is highest that there will be a digital library course.

Another way to examine the involvement of the i-schools in digital library education is through the lens of a particular curriculum development project's participants. Over the past three years, the University of North Carolina at Chapel Hill (a member of the iSchools Caucus) and Virginia Tech have been involved in a collaborative curriculum development project (http://curric.dlib.vt.edu/) funded by the National Science Foundation.[1] The project has expanded well beyond the borders of those two universities, involving over 100 different scholars and educators in developing or reviewing curriculum modules, field testing those modules in their classes, or serving on the project advisory board. Faculty from 11 of the 21 members of the iSchools Caucus participated in some significant way in this project. Those schools are: Carnegie Mellon, Drexel, Illinois, Indiana, Maryland, North Carolina, Penn State, Rutgers, Syracuse, UCLA, and Washington.

In addition to participating in this particular project, i-schools can increase their offerings of DL-related instruction by incorporating one or more DL-related modules in courses that make up their respective degree programs. The recommended curriculum framework articulated by the curriculum development project (http://curric.dlib.vt.edu/DLcurric_images/ModuleFramework2008-08-23.pdf) includes 10 areas, made up of a total of 46 modules. Courses commonly taught at i-schools – on information organization, collection development, information retrieval, knowledge representation, metadata, preservation, or project management, as well as digital libraries – could cover one or more of the 14 modules already developed (or other modules planned or recommended). There are currently 10 modules (available at http://curric.dlib.vt.edu/modDev/modDev.html) ready to use (i.e., they have already been reviewed and field tested). They cover the history of DLs, digitization, metadata, architecture, application software, information needs/relevance, information seeking behaviors/ search strategies, interaction design and usability assessment, reference services, and evaluation/user studies. Typically, one or two class sessions will suffice to cover a single module, so it should be relatively easy to include a number of modules within the constraints of a one- or two-year graduate degree program.

3. DL COURSES TAUGHT AT I-SCHOOLS

As noted above, 10 members of the iSchools Caucus offer a course focused on digital libraries. Further investigation into these courses was based on the seven syllabi that were available on the open Web; these included syllabi from the courses at Drexel, Indiana, North Carolina, Pittsburgh, Rutgers, Syracuse, and Texas. We examined the topics covered, the textbook used and the major assignments in each course.

The most common topics covered included: introduction to DLs, DL history, metadata, architecture, interaction design and usability, preservation, intellectual property, economics of DLs, and the future of DLs. In general, these correspond to modules in the curriculum framework referenced above. Topics not included in the curriculum framework, but added by an individual instructor, include: natural language processing, DL development issues, professional competencies, the DL community, and personal information management.

A half dozen different textbooks are used in these courses. They include:

- Witten, I.H., & Bainbridge, D. (2003). *How to Build a Digital Library.* Amsterdam: Morgan Kaufmann. (used in 5 courses)
- Arms, W.Y. (2000). *Digital Libraries.* Cambridge, MA: MIT Press. (used in 4 courses)
- Borgman, C.L. (2000). *From Gutenberg to the Global Information Infrastructure: Access to Information in the Networked World.* Cambridge, MA: MIT Press. (used in 4 courses)
- Lesk, M. (2005). *Understanding Digital Libraries.* (2nd Edition) San Francisco, CA: Morgan Kaufmann. (used in 3 courses)

A variety of activities are assigned in these courses. The two assigned most frequently are 1) the review or evaluation of an existing DL, and 2) the development of a DL. Both these types of assignments appeared in almost every syllabus available for analysis.

4. CONCLUSION

From the data reviewed here, we can conclude that the members of the iSchools Caucus are actively involved in DL education. Well over half the Caucus members either offer a course in digital libraries or have faculty who are actively involved in curriculum development in this area. While there still seems to be no clear consensus on the content needed in DL courses (or the textbooks or assignments used), continuing to learn from each other about educational initiatives can only help improve the current situation.

Another conclusion one could draw from this analysis is that the iSchools Caucus has an opportunity to expand its membership among the other schools that offer courses in digital libraries or are active in curriculum development efforts. This analysis identified 32 schools that fit this description. They include: Alabama, Alberta, British Columbia, Buffalo (SUNY), Catholic, Clarion, Dalhousie, Denver, Dominican, Hawaii, Iowa, Kent State, Louisiana State, Missouri, North Carolina Central, Old Dominion, Pratt, Queens, San Jose State, Simmons, South Carolina, South Florida, Southern Connecticut, Southern Mississippi, Tennessee, Texas A&M, Valdosta State, Villanova, Virginia Tech, Western Ontario, Wisconsin-Madison, and Wisconsin-Milwaukee. If the iSchools Caucus is seeking new members, these schools would be prime candidates.

We believe that i-schools should play an active role in developing strong educational programs to educate digital library professionals, and hope that i-schools not yet involved in the DL curriculum development project will begin to participate. Indeed, as the DL curriculum development project addresses sustainability issues, we hope that the members of the iSchools Caucus will step forward to integrate support of DL curricular activities into their future plans, and will help to ensure that digital library professionals will graduate in sufficient numbers from some of the most innovative schools involved in this important field.

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