Statement of Competency E

E. Design, query and evaluate information retrieval systems

Information retrieval systems in libraries and archives range from the traditional – such as card catalogs – to the current state of the art technologies such as web interfaces that incorporate online public access catalogs (OPACs), access to online databases and Web 2.0 social media tools such as Facebook, instant messaging (IM) and chat for reference interviews and access to e-books. However, these are only what the public sees, and in order for these systems to be useful and allow the user to find what he or she is looking for, they must be designed to encourage ease of use. This includes presenting the information in a way that makes sense to the user and that is easy to follow, as well as organizing the structure of the records so that the results that are returned match the user’s query as closely as possible.

In addition to having an understanding of the structure of information and how it is encoded librarians must be able to successfully query OPACs and online databases so as to be able to assist users. This includes knowledge of search techniques such as Boolean searching, use of truncation, as well as the knowledge of the best search techniques to use for each individual OPACs and database. As OPACs and databases now live in the world of the World Wide Web, librarians need to have a familiarity with the criteria for well-designed web pages, and must be able to evaluate them from the point of view of the user who may be trying to locate a resource through a web-based information retrieval system, but who is having difficulty due to the poor design of the interface. Keeping the users’ needs in mind, it is important for librarians to have enough knowledge of what goes into a well-designed web-based information retrieval system so that they can evaluate the systems in question and contribute to the design of an improved web page that will improve the users’ search experiences.
Jonathan Leff – Statement of Competency E

Librarians are often called upon to update web pages themselves, and so must have a working knowledge of the technical aspects of building a page, as well as the tools for doing so. There are many types of encoding languages used to build functional and well-designed web pages including HTML, CSS and JavaScript, as well as many tools for doing so, such as Dreamweaver. Knowing how to build and edit web pages enables librarians to make changes in a timely fashion.

Evidence and Criteria for Selection

1. LIBR 202 – Information Retrieval – Database for Cat Toys and Accessories

   This was a group project that I did for Information Retrieval with Shelly Ann Buchanan and Alejandra Dubcovsky. In it we first summarized principles of representation of information as described by Donald Norman and others. Two of the main principles were that people are better able to use representations of information that make sense on an intuitive level as opposed to those where the user has to stop and think before being able to access the information, and that different cultures have different priorities for what pieces of information they choose to represent. This therefore leads into the problem of how to construct a database that will actually represent items that the user is looking for. As part of the assignment, we were required to create a database using DBTextworks, and chose to create one to catalog cat toys and accessories. I created the database, and entered the information, as well as made revisions to it after we had reviewed and revised the categories. Creating the categories themselves was a collaborative process undertaken by all three of us. In the end each did a self-assessment of how we felt working as a group, and working on the project in general.
Jonathan Leff – Statement of Competency E

I feel this piece of evidence demonstrates my competence in constructing electronic databases, as well as my competence in applying the principles of database construction and representation of information in designing a system that reflects the anticipated needs of the users.

Note: I asked for and received permission from my group-mates to identify them by name for purposes of the e-Portfolio.

2. LIBR 251 – Web Usability – Evaluation Seminar

This piece of evidence is a collection of the three parts that were involved in the Evaluation Seminar portion of this class. Part A involved evaluation of two sets of library websites according to First Principles of Interaction Design as described by Bruce Tognazzini. After evaluating the websites, our task was to describe which site best adhered to the Tognazzini’s principle that we were using as the basis for our evaluation (“fame”) and which one did not (“shame”). Part B of the seminar involved an evaluation of the Library Online Tutorial for the School of Library & Information Science Students (LOTSS), according to principles (heuristics) as described by Jakob Nielsen. We were instructed to take the LOTSS tutorial and describe the ways that the site did not work in terms of heuristics. Part C involved evaluating the LOTSS site in terms of accessibility for special needs users, to determine whether or not it adhered to Section 508 accessibility guidelines and recommendations as described by the Accessibility Forum.

I feel this evidence demonstrates my understanding of the best principles involved in designing user interfaces for libraries, including the incorporation of OPACs and databases into library web pages that may often be a user’s first interaction with a library.
3. LIBR 256 – Archives and Manuscripts – Reference Sources Review

This goal for this assignment was to query several five online archival databases and to review them, evaluating them for ease of use, accuracy, and features. The sites ranged from simple, straightforward and easy to use (the Online Archive of California (OAC)) and that allowed the user to easily locate the item for which he or she was searching, to the one that I felt was the most difficult to use (the National Union Catalog of Manuscript Collections (NUCMC)) which was hard to navigate, required the user to be familiar with MARC21 encoding and to have the patience to dig down through the various layers to find what they were looking for, and then to take the search results from this site and look them up on a second, unrelated site to see if they could locate a copy of the item in question. This arrangement placed an unnecessary burden on the user.

I feel this evidence demonstrates my competency to evaluate online databases in such a way that I could anticipate what the average user experience might be. In addition, this assignment demonstrates my ability to query a variety of information retrieval systems through simple searches and advanced searches, as well as searches for a single item that requires multiple databases to return the desired results. Being able to evaluate an online database from such a perspective will allow me to assist in the re-design of such a site to make it more user-friendly.

Conclusion

The library world of the 21st Century is a far cry from days of old. The advent of the Internet and the World Wide Web has added a whole other level of sophistication to the skills and theories that librarians need to know in order to help users’ navigate library collections. Sophisticated library web pages provide access to catalogs and reference materials through online databases that used to be
available only in physical form. In addition, the average user now relies on the Internet as a – if not the – primary source of information. By being able to understand principles of good web design and users’ expectations when looking for information, libraries are able to design and implement systems that will help users find the information that they are looking for.