Usability of Digital Library:
An Evaluation Model

Judy Jeng
Rutgers University

Abstract

The proposed research is to evaluate and develop methods and instruments for assessing usability of digital libraries. Usability testing is a user-centered evaluation to make a product more usable and user-friendly. Compared to other areas in digital library research, little work is being done to understand the purpose and usability of digital libraries. There is a need for further work on methods for analyzing usability, including an understanding of how to balance rigor, appropriateness of techniques, and practical limitations. This research seeks to contribute to the understanding of usability, review methods and their applicability, and propose a suite of methods for evaluating usability for academic digital libraries.

Two academic digital libraries, the Rutgers University Libraries and the Queens College Library, are selected as the test sites. These two sites provide organized and well-managed pointers to their rich local holdings, electronic resources, and services that support their target users' teaching, learning, and research. Fifteen subjects will be recruited from each site to participate in the study.

A list of 10 questions is designed to test the effectiveness, efficiency, learnability, and user satisfaction of the system. These 10 questions represent the typical use of academic library Web sites. Question 1 is to locate a book. Question 2 is to locate a journal. Question 3 to 5 are to use databases. Question 6 is to use an e-encyclopedia.

Question 7 is to locate an e-book. Question 8 is to locate a digital library project. Questions 9 and 10 are to seek instructions on library services.

Effectiveness will be measured by how many answers are correct. Efficiency will be measured by the time spent on answering each question. These tasks are not to test the abilities of individual users, but rather on the system's usability. The tasks are arranged from easy to difficult with some questions requiring similar skill to measure learnability. User satisfaction is measured by post-test questionnaires. Click-cost, user-lostness, and navigation disorientation are examined by observation. The effects of demographic variables such as gender, age, status, will be analyzed.