

# THE CHANGING FACE OF LIBRARIES: IMPLICATIONS FOR LEARNING IN ELECTRONIC ENVIRONMENTS

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# Human and Computer Interaction

- Reasons for necessary interaction between the two
  - ▣ Today's world of technology makes it important to establish a connection between libraries and library patrons
  - ▣ Libraries must revolutionize themselves to evolve with changing trends regarding new technologies
  - ▣ “As computing technology penetrates our workplaces, homes, schools, community organizations, automobiles, and aircraft, literally every element of our daily lives, having technology that is useful and usable is of paramount importance” (Olson, p. 515)

# Studying the Historical Perspective

## □ 1982

- First conference on human factors in computer systems
  - Persons interested in the effect computers were having in society
    - “People who had a strong interest in making technology more valuable for a wider audience” (Karat, p. 532)
- Development of the human-computer interaction (HCI) field
  - Shows how much of an influence computers have been on life in general to have started a field of their own for study

# Historical Perspective cont.

- Areas of focus in the HCI field
  - User interface developments
    - To produce software and hardware that is useful, usable, and aesthetically pleasing for patrons
      - “How do we capitalize on the strengths of each human, coupling them with assistance from computing, to bring about the most in a productive, satisfying life?” (Olson, p. 503)
  - User awareness
    - Ensuring users know about certain areas of technology and understand how to use these areas
  - Usability methods
    - Functionality of systems

# Studying the Interaction

- Online Computer Library Center (OCLC)
  - A research organization dedicated to the public purposes of furthering access to the world's information
  - Employs the following to research patron's responses to new technology
    - **Heuristic evaluation** - “rule of thumb” measuring to review a products usability
    - **Usability testing** - Evaluator uses four steps to test product: Identify, Record, Analyze and Report
    - **Prototype** - A functional model of a product, in which a user interacts with

# Studying the Interaction cont.

- Human Computer Interaction Lab at the University of Maryland
  - Their research is concerned with how they can bring users into the design process
    - Try to do this by
      - Working with children ages 7-11 to create new technologies for children by using prototypes, robots and art
      - Using the Questionnaire for User Interaction Satisfaction (QUIS) which is designed to “assess users' subjective satisfaction with specific aspects of the human-computer interface” (HCIL, 2006)

# Current Human/Computer Interactions

- Factors to consider about digital libraries
  - ▣ A digital library stores information in a digital form and is a type of information retrieval system
    - Digital libraries are growing in popularity
    - Large scale digitization projects are underway
    - Digital libraries have ventured into audio and visual collections, just as physical libraries have

# Current Human/Computer Interactions

## □ Digital libraries

- Pros of this new technology in relation to human interaction:
  - Easy to access
  - Available to world community
  - Low cost for physical libraries to run
  - Provides preservation and conservation
  - Provides space for physical libraries



# Current Human/Computer Interactions

## □ Digital Libraries

- Cons of this new technology in relation to human interaction:
  - No universal standards yet
  - Still some places without computer access
  - Copyright laws
  - Someone has to constantly check for broken links
  - Technology standards will change over time

# Current Human/Computer Interactions

- Factors to consider about virtual reference
  - Virtual reference is the remote delivery of reference materials which are provided to users by a librarian who is in a physical library
  - The reference process still remains the same even though it is not face-to-face:
    - Opening
    - Establishing the information need and user's affective state
    - Confirming and clarifying the question
    - Conducting the search
    - Answering the question
    - Making sense of the answer
    - Closing the interview (Westbrook, p. 253)

# Current Human/Computer Interactions

## □ Virtual Reference

- Pros of this new technology in relation to human interaction
  - Can be more structured by having clear dialog with the patron
  - Puts the control of the question in the patron's hands
  - Initial contact is made by the patron

# Current Human/Computer Interactions

## □ Virtual Reference

### ■ Cons of this new technology in relation to human interaction:

- can be discouraged if the virtual reference program is not working properly
- patron can seem detached from the process
- can lack the personal touch of a face-to-face interview
- places more responsibility on the librarian to make the patron feel comfortable

# Current Human/Computer Interactions

- Factors to consider about Digital Library Catalog Interfaces
  - A library catalog registers all bibliographic items found in a library or group of libraries
    - Catalog interfaces have previously displayed catalog in set patterns-searches consisting of author, title, keyword, and subject
    - Libraries need to adjust to growing trends, such as patrons continuing to search using Google and other one line search boxes
    - “Many interfaces are behind in search capabilities, visual appeal, usability and engagement that would draw a patron in” (Breeding, p. 34)
    - Some new interfaces include Worldcat Local, Encore, AquaBrowser, Primo and Polaris
    - New interfaces can focus on displaying these new technologies and contribute to a patron’s thought process

# Current Human/Computer Interactions

## □ Digital library catalogs interfaces

### ■ Pros of this new technology in relation to human interaction

- Very similar to Google and Amazon searching
- Advanced search capabilities using authors and titles of books if so needed
- Library can add pictures of book jackets
- OpenURL linking
- User friendly
- Faceted Navigation
- Community tagging available combined with MARC record subject heading tags
- “Did you mean....?”

# Current Human/Computer Interactions

## □ Digital Library Catalog Interfaces

### ■ Cons of this new technology in relation to human interaction:

- Most obvious destination does not always show up first
- Can be problematic for catalogers, resulting in items not being readily available
- Community tag clouds have to be monitored by a librarian to ensure the correct tags are being given to an item

# Conclusion



- With today's technology, more and more information is becoming available as digital resources
- Libraries must stay current with technology in order to continue to provide service to patrons in an up to date manner
- Computers are here to stay, and libraries must find a happy medium between paper and next-generation technologies to continue to appeal to patrons



# Important Sites

## □ Digital Libraries

- <http://www.ipl.org>
- [www.openlibrary.org](http://www.openlibrary.org)

## ■ Virtual Reference

- <http://www.tscpl.org/ask/>
- <http://www.emporia.edu/libsv/howdoi/askalib.html>

## ■ Online Catalogs

- <http://encore.topekalibraries.info/iii/encore/app>
- [www.oclc.org/worldcatlocal](http://www.oclc.org/worldcatlocal)

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