Challenges and Opportunities in Library Discovery

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CHALLENGES and OPPORTUNITIES in Library Discovery

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OPPORTUNITY: Concept-mapping discovery tools

- Diagrams that depict suggested relationships between concepts
- Helps users uncover connections in research they may not know existed - a fancy topic explorer
- Helps visual thinkers

https://yewno.com/
OPPORTUNITY: XR technologies + Discovery

- XR = eXtended Reality technologies
  - Virtual, augmented, immersive, and mixed reality
- Not just a gaming fad
- Used in learning environments
- “Armchair adventures”
- Libraries are using these technologies to enable users to explore and discover new things
OPPORTUNITY: XR technology usage in the classroom is increasing

$700 million will be invested in AR/VR applications in education by 2025 (Goldman Sachs)

60% of all higher education institutions in America will be using virtual reality in the classroom by 2021 (Gartner)

**CHALLENGE:** Little research is available on the effectiveness of these technologies within higher education

“The user experience in some AR, VR and MR applications can be intensely emotional and even disturbing, which raises further questions about the ethical and psychological responsibilities of offering such technologies.” (EDUCAUSE)

[https://library.educause.edu/~/media/files/library/2017/10/eli7149.pdf](https://library.educause.edu/~/media/files/library/2017/10/eli7149.pdf)
OPPORTUNITY: Voice-activated personal assistants + Discovery

Apple’s Siri
Google’s Assistant
Microsoft’s Cortana
Amazon Echo and Alexa
Google Home
OPPORTUNITY: The number of voice search queries is increasing rapidly

OPPORTUNITY: Voice design API kits available

Libraries and vendors are exploring this technology and experimenting with Alexa Skills Kit. A few examples:

- OverDrive
- EBSCO
- Demco
- Worthington Libraries (OH)
- Framingham Public Library (MA)

https://www.worthingtonlibraries.org/visit/services/alexa-skill
CHALLENGE: Making non-traditional forms of discovery accessible

- Concept mapping tools, XR technologies, and voice-activated tools clash with universal design concepts.
- The technologies may aid some people with vision, hearing, physical, mental, intellectual, and learning disabilities, and be 100% inaccessible to others.

http://ai.umich.edu/blog/accessibility-and-universal-design-a-qa-with-u-m-experts/
OPPORTUNITY: Personalization + Discovery
CHALLENGE: Privacy, ethical, security concerns

● Compromises are a real possibility
  ○ Devices could be hacked without an owner’s knowledge
  ○ Devices could become real-time wiretaps
  ○ Some services / applications have security vulnerabilities

● Clash between improving the UX and privacy
  ○ Longstanding norms in the library profession around privacy are being challenged
  ○ Encryption and determining what types of data can / should be stored and used to improve interfaces and experiences
  ○ We shouldn’t make ourselves easy targets
OPPORTUNITY: Discover all the things!

- Resources
- Expertise
- Services
- Locations
- News & Events

Full library discovery: [http://orweblog.oclc.org/full-library-discovery/](http://orweblog.oclc.org/full-library-discovery/)
CHALLENGE: Making “all the things” discoverable is hard

- Resources
- Expertise
- Services
- Locations
- News & Events
CHALLENGE: Google is still many’s preferred tool for discovery

“While most historians recognize that Google has limited access to materials—it doesn’t actually search “everything”—it was generally seen as the most comprehensive discovery tool available for certain types of searches. Google discovery tools’ convenience, ease of use, and overwhelming scope of searchable material clearly outweigh the limitations of its search.”

OPPORTUNITY: Increase in user research and UX support

- Libraries are paying more attention to users’ motivations
  - Libraries are needing to demonstrate to campus administration data-driven research and library analytics to show impact
  - User research is supporting assessment efforts in libraries
- More UX librarians and UX departments are showing up in libraries
  - Support user research and usability on discovery interfaces
  - Bring consistency and universal design principles
  - Improve accessibility
CHALLENGE: Serendipitous discovery

- As books move to offsite storage, and as we purchase more virtual resources, providing opportunities for serendipitous discovery is getting more challenging.

- There are very few online virtual browsing tools that replace and enhance physical access to library stacks.

CHALLENGE: Researchers have evolving needs because of changes in digital scholarship

- Growing demand of digitized primary sources
- Need for discovery interfaces to better represent the complex relationships between collections or entities represented in collections
- Want easy connections to other related resources
OPPORTUNITY: Linked data + Discovery

- Shareable, extensible, and easily re-usable
- Supports multilingual functionality for data and user services
- Improve capabilities for discovering and using data
- Structured data adds richer sets of pathways for browsing
- Creates an opportunity for libraries to improve the value proposition of describing and making more discoverable their assets

https://www.w3.org/2005/Incubator/lld/wiki/Benefits
Opportunities for library discovery are vast

- Concept mapping, voice-activated, and extended reality technologies
- Personalization
- Full library discovery
- More UX support
- Linked data

But there are still many challenges

- Making interfaces and technologies accessible
- Privacy, security, ethics
- Serendipitous discovery
- Digital scholarship and scholarly publishing changing at a rapid pace
- Not enough research available
Resources Consulted

- http://downloads.alcts.ala.org/ce/180215_Library_resource_Discovery_slides.pdf
- https://www.lib.ncsu.edu/projects/virtual-shelf-index
- https://www.worthingtonlibraries.org/visit/services/alexa-skill
Thanks!

Questions? Contact me:

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