

A Study of Students' Perceptions of Library Catalogues on Tablet Computers: The NEOS Consortium Catalogue

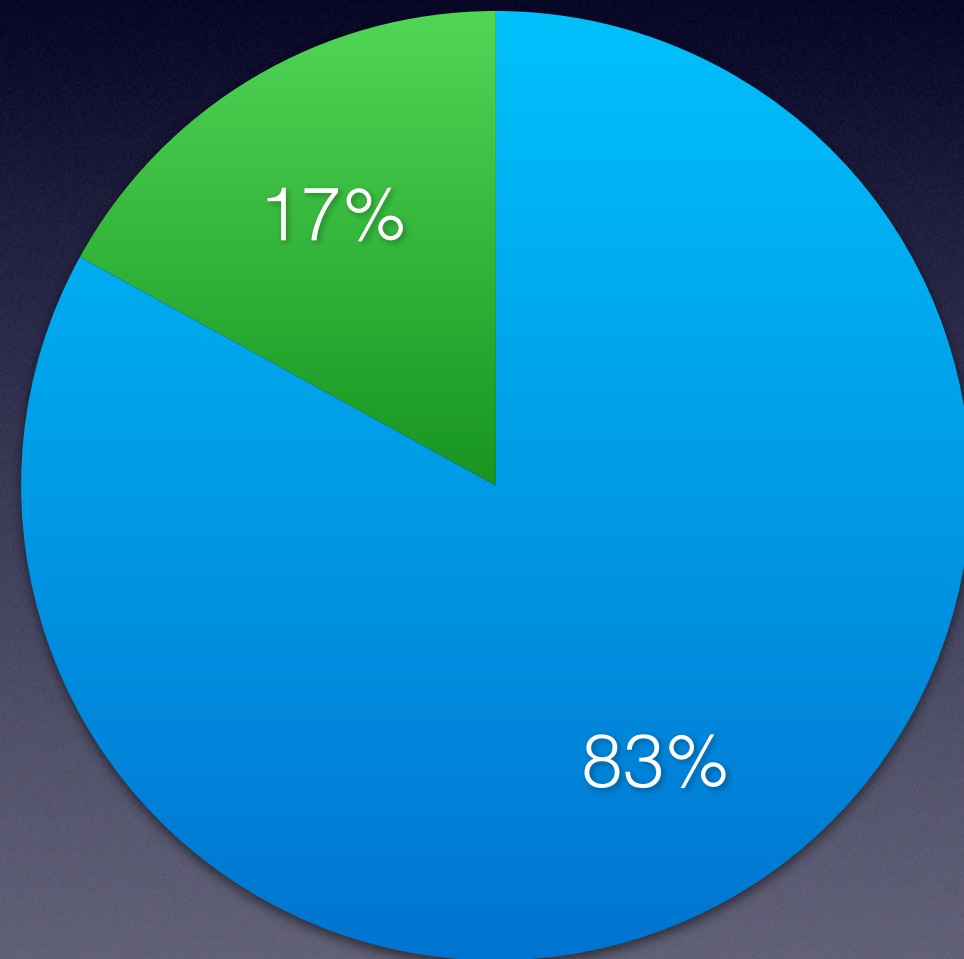
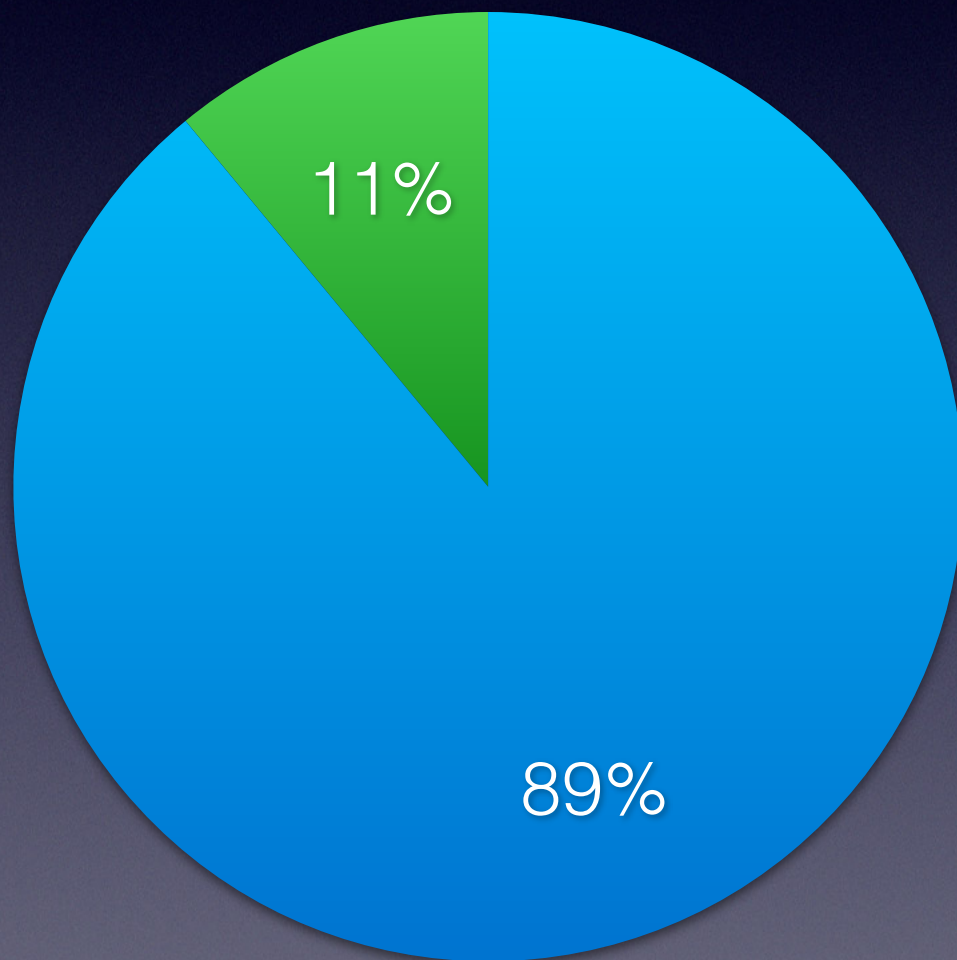
By Erik Christiansen

How the project emerged

- When using NEOS on my own tablet I felt some of design aspects were not intuitive.
- An evaluation of NEOS on traditional computers would not be forward looking.
- A “useful” usability experiment and design analysis would *have* to focus on touch screens.

Why is mobile computing important?

Percentage of World Wide Web Traffic 2012 vs. 2013



● Traditional Computing
Source: Statista Portal

● Mobile

Project Overview

Research Questions

How well does NEOS function when using a tablet?

What are students' perceptions of using library catalogues on tablet computers?

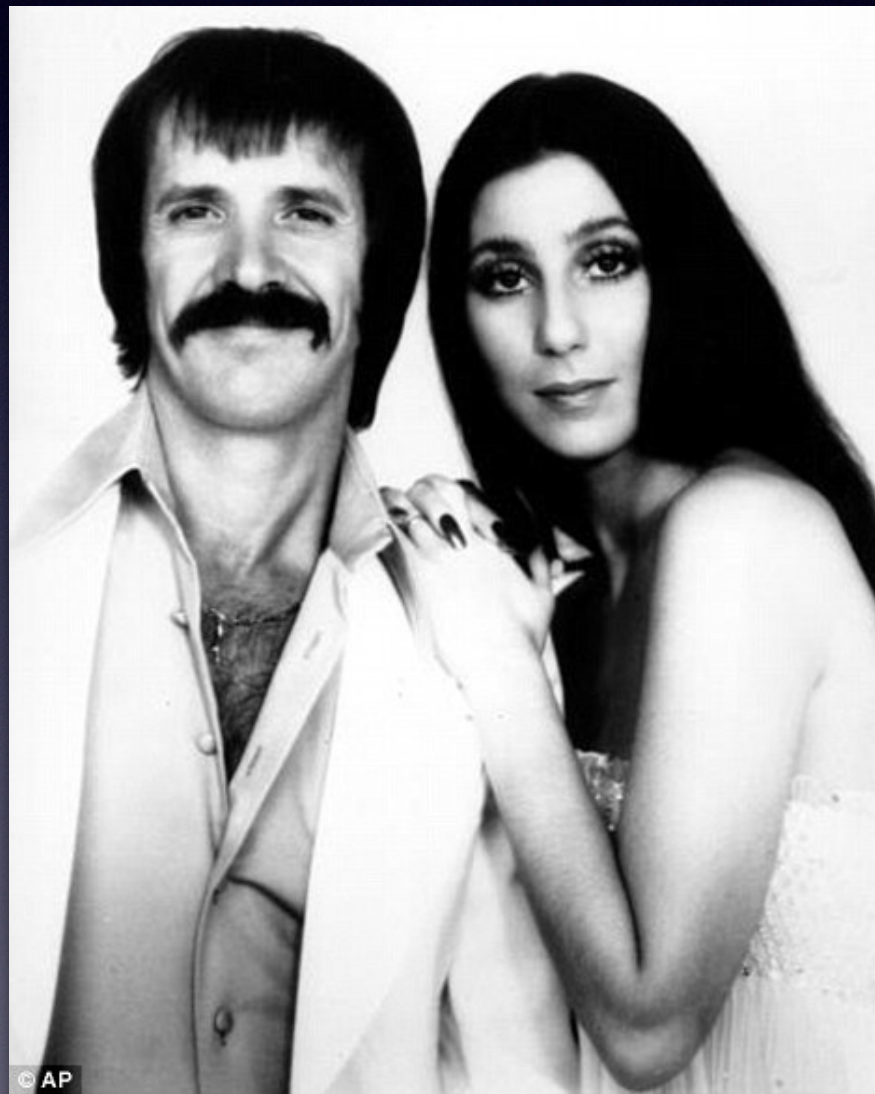
Assumption

1. Navigation and deciphering menus would be more difficult.
2. A non-native design language would confuse users.

Related Literature

- Limited number studies that focus on ‘tablets’ exclusively.
- Lots of usability studies regarding mobile computing.
 - Portland State - 2012
 - Ryerson University - 2011
- This study followed ‘best practices’ for usability testing.
 - *Information Architecture* - Morville & Rosenfeld
 - *Don't Make Me Think* - Steve Krug

Participants



Study Design

Part 1: usability tasks

- Basic keyword searches.
- Selecting titles and navigating through menus.
- Specifying the library location.
- Placing holds and checking out material.
- Viewing item and account information.

Task Results

| Tasks (Seconds) | Sonny | Cher | Hall | Oates | Averages |
|--------------------|-------|------|------|-------|----------|
| 1 | 9 | 39 | 7 | 17 | 18 |
| 2 | 5 | 9 | 5 | 7 | 6.5 |
| 3 | 4 | 3 | 5 | 4 | 4 |
| 4 | 41 | 42 | 27 | 20 | 32.5 |
| 5 | 4 | 3 | 6 | 3 | 4 |
| 6 | 49 | 31 | 29 | 45 | 38.5 |
| 7 | 37 | 19 | 30 | 36 | 30.5 |
| Total: | 149 | 146 | 109 | 132 | 134 |

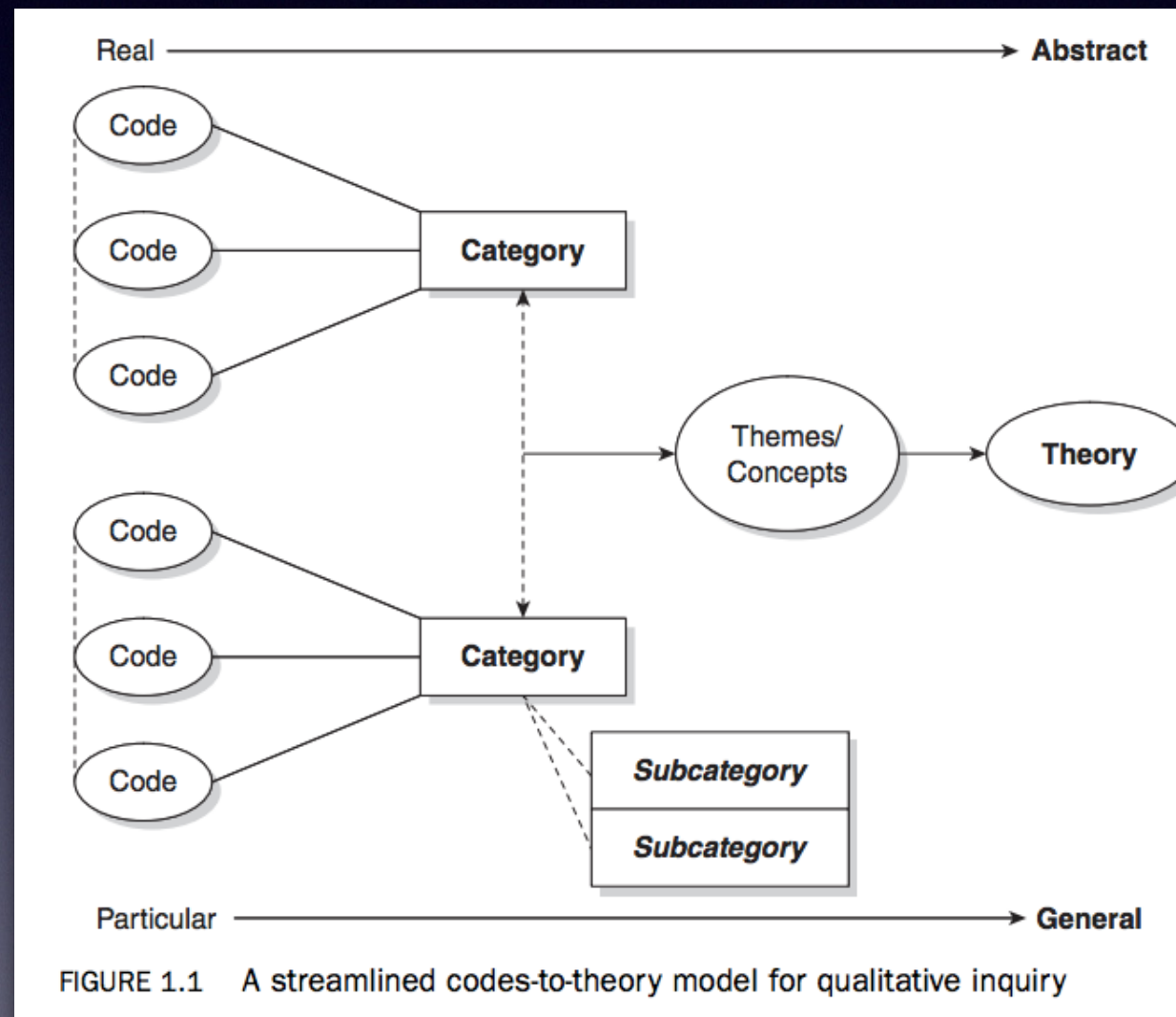
Study Design

Part 2: semi-structured interviews

- Types of devices owned by the participants.
- Hours spent on a tablet
- Hours spent browsing the web.
- How often the participants access NEOS weekly.
- Overall experience using NEOS on a tablet: likes and dislikes.
- NEOS vs. other online library catalogues.
- Possibility of a mobile app.
- Additional suggestions or comments.

Analysis

Two-step coding system as outlined in “An Introduction to Codes and Coding” by Saldana



Themes

Ended up with over **30 code categories** from 4 interviews. Reduced these codes to **3 themes**

- **Catalogue design and functionality**
- **Participants' device usage habits and preferences**
- **Information seeking behaviour**

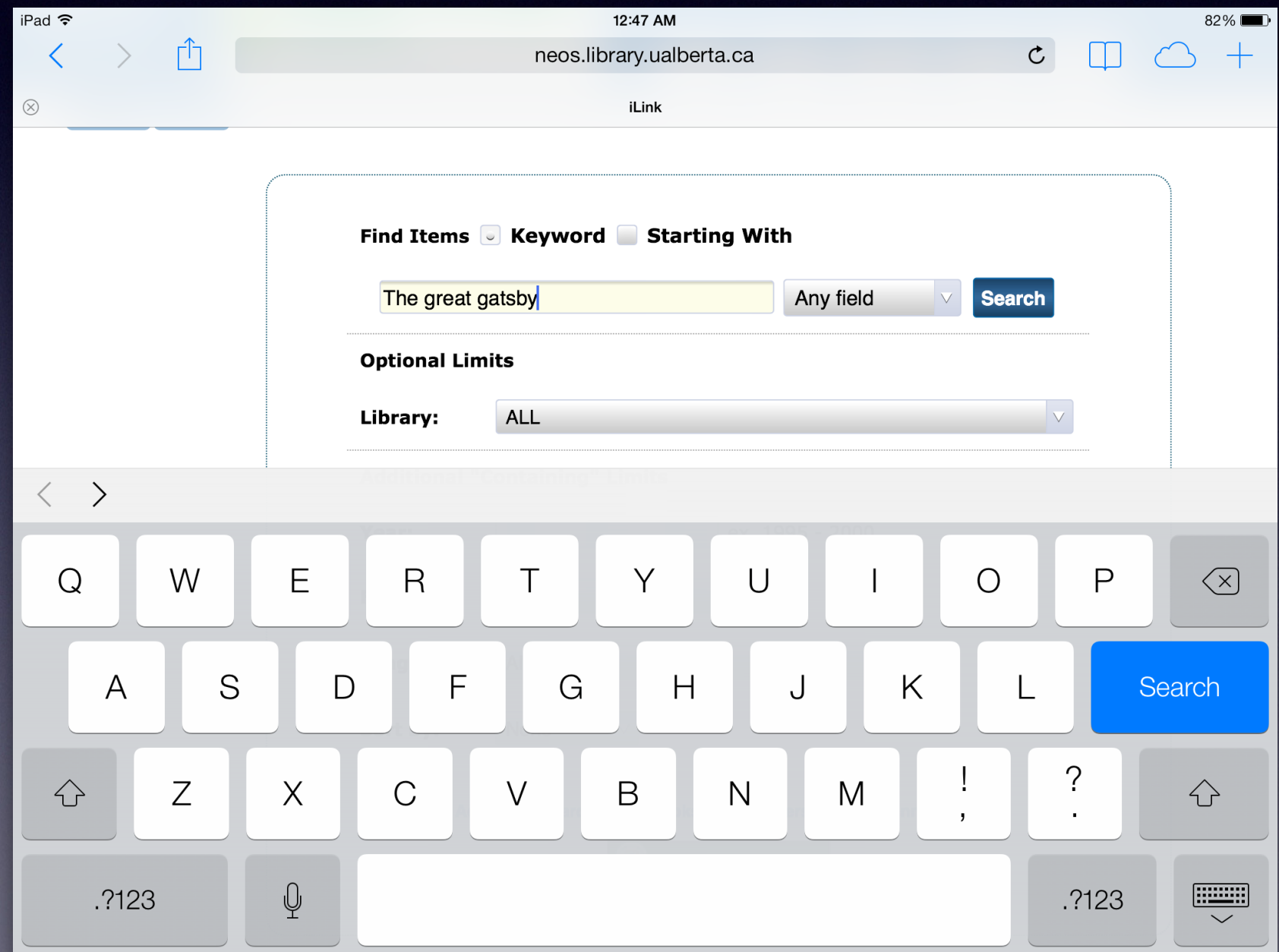
Catalogue Design & Functionality

Design language
& cross platform
usability.

The screenshot shows the NEOS Library Consortium Catalogue interface on an iPad. The top status bar indicates 'iPad', signal strength, time '2:16 PM', and battery level '96%'. The browser address bar shows 'neos.library.ualberta.ca'. The page header includes the 'NEOS Library Consortium Catalogue' logo, the 'UNIVERSITY OF ALBERTA LIBRARIES' logo, and a navigation menu with links: 'new search', 'advanced search', 'reserve desk', 'my account', and 'contact us'. Below the header, there are 'Go Back' and 'Logout' buttons. The main search area is titled 'Find Items' and includes a search type selector with 'Keyword' selected and 'Starting With' as an option. A search input field is present, followed by a dropdown menu set to 'Any field' and a 'Search' button. Below the search area, there are sections for 'Optional Limits' and 'Additional "Containing" Limits'. The 'Optional Limits' section includes a 'Library:' dropdown set to 'ALL'. The 'Additional "Containing" Limits' section includes fields for 'Year:' (with an example 'ex. 1995 - 2000'), 'Format:' (set to 'ANY'), 'Language:' (set to 'ANY'), and 'Sort by:' (set to 'None').

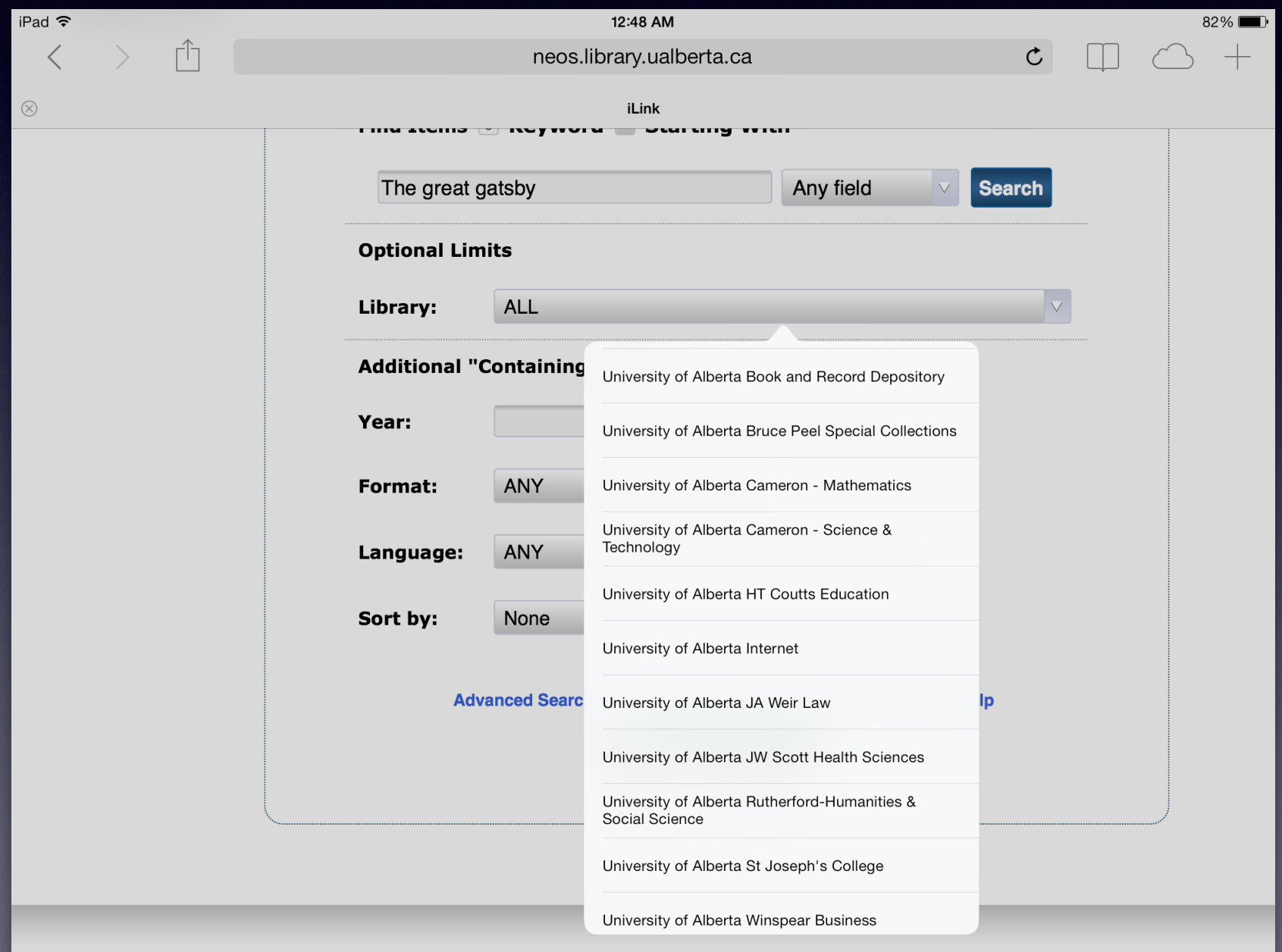
Catalogue Design & Functionality

- Catalogue searches proved to be tedious.
- Participants felt a tablet was not ideal for text entry.



Catalogue Design & Functionality

- Participants did not like scrolling through long lists to specify the library location.



Catalogue Design & Functionality

Authentication using library card barcode and PIN:

- Slow and requires multiple sign-ins.
- Desire for CCID login option.

The screenshot shows the NEOS Library Consortium Catalogue interface on an iPad. The page displays search results for 'The great gatsby' by F. Scott Fitzgerald. A red circle highlights the 'Place Hold' button. The interface includes a header with the NEOS logo and University of Alberta Libraries, a navigation bar with links like 'new search', 'advanced search', 'reserve desk', 'my account', and 'contact us'. The main content area shows item information, including the title, author, publisher, and a table of holdings. The holdings table lists the location as 'MacEwan University - City Centre Campus' and the status as 'On Shelf'.

record 14 of 189 for search Any field "The great gatsby"

Item Information **Catalogue Record**

F. Scott Fitzgerald : The great Gatsby/Tender is the night **..Place Hold**

Tredell, Nicolas.

Publisher: Palgrave Macmillan,
Pub date: 2011.
Pages: xiii, 220 p. ;
ISBN: 9780230292222

1 copy available at MacEwan University - City Centre Campus.

Holdings

| Copy | Material | Location |
|-----------------------|----------|----------|
| PS3511 .I9 Z8796 2011 | 1 Book | On Shelf |

MacEwan University - City Centre Campus [where's this?]

Change Display

- .. Brief Display
- .. Full Display
- .. MARC Display

Page Tools

- .. Send Correction
- .. Create Permanent Link

Catalogue Design & Functionality

Authentication using library card barcode and PIN:

- Slow and requires multiple sign-ins.
- Desire for CCID login option.

iPad 12:48 AM 82%

neos.library.ualberta.ca

iLink

NEOS
Library Consortium
Catalogue

new search advanced search reserve desk my account contact us

Go Back Logout

My Account

Type your ID for information.

Library Card Barcode Number:

PIN:

[What is my pin?](#)

Display User Information **Reset Query Values**

Participants' Device Usage Habits

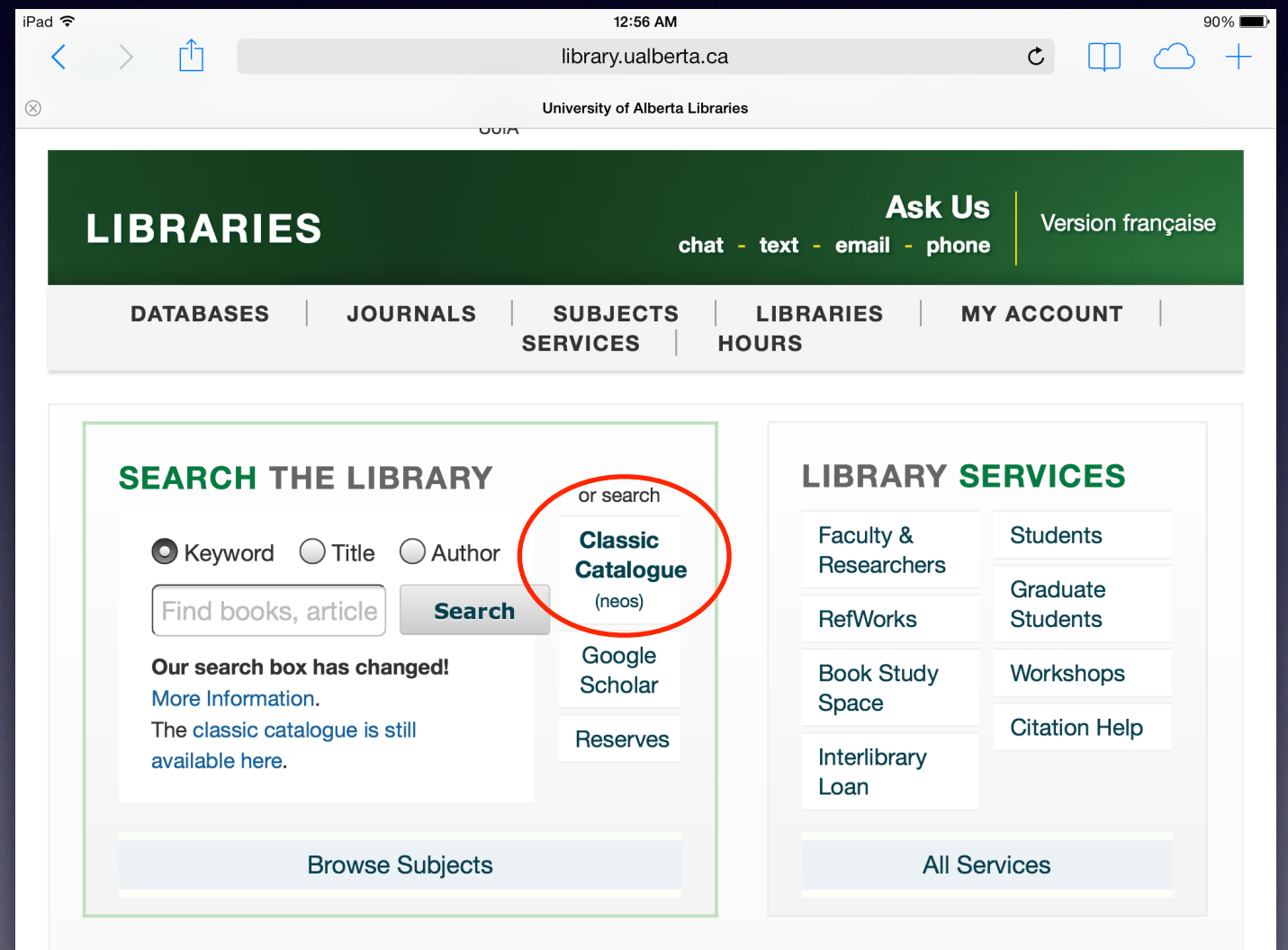
- Three of the four participants did not use their tablet as their primary device.
- Tablets used primarily for web browsing and entertainment.
- Laptops largely preferred for using the library catalogue.



CC image courtesy of [Tom Raftery](#) on Flickr.

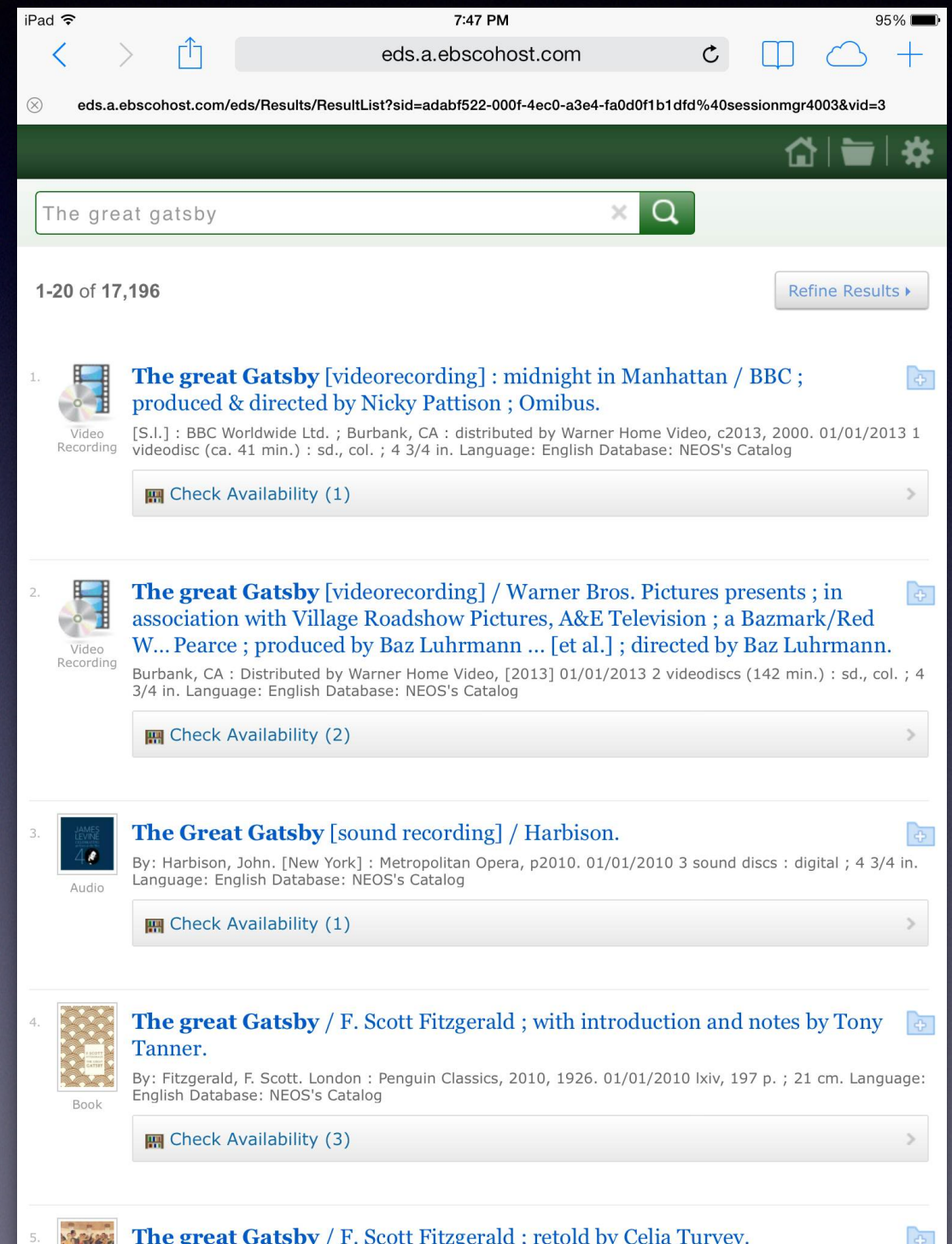
Information Seeking Behaviour

- Two of the four participants did not regularly consult NEOS.
 - Preferred UofA's new integrated search.
- NEOS was most heavily used when participants conducted research for an assignment.
- Well promoted by the university librarians.



Mobile App?

- Reactions to a mobile app were mixed.
 - Limited functionality.
 - Poor user experience.
 - Another thing to download.
- Participants were content with a browser optimized version.



Conclusions

- **NEOS' usability issues are mostly front-end design.**
- **Cross platform usability is key.**
- **Mobile app or mobile optimized version *could* be beneficial.**
- **A one-time universal login system (CCID) would reduce text entry requirements.**
- **An improved and interface should be accompanied by heavy promotion from the library.**

Acknowledgements

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- Research participants.
- SLIS Cohort.

Thank you!

References

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Questions?