WorldCat Usability at UMD

Library Research & Innovative Practice Forum, June 8, 2016

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Huge thanks to the research team: Steve Quintilian, Madhu Singh, Heidi Hanson, and "emeritus" members Alex Carroll and Jaime Mears. Team effort!

About the Study

- What we wanted to learn: how easily can our users use WCUMD to…
  - Find items (either known or unknown)?
  - Identify materials at UMCP and consortial locations (CIC, USMAI)?
  - Identify different material types (articles, books, media)?
  - Effectively use facets/limiters?
  - Identify online versus print materials?
- We designed test tasks that would require users to do the above.
- Focusing on ability of tool to allow users to do the work.

● Originally, we had also considered the question of whether the tool allowed subjects to get relevant results, but relevance is difficult to evaluate, and we ended up not taking on this piece of analysis.

About the Study

Two-round iterative study

- Round 1 conducted using WorldCat Local, during April-May 2015
- Round 2 conducted using WorldCat Discovery, during November 2015

Study Participants

- For each round, recruited six participants from three affiliate statuses
  - Two faculty
  - Two graduate
  - Two undergraduate
- Literature suggests a usability test include a sample size of approximately five
- Participants awarded Amazon gift card for participation
  - Funding provided by UMD Libraries' Library Research Fund

- Selecting from three different affiliate statuses provided opportunity to see whether users with differing levels of expertise experienced the discovery layer differently.
- Departments represented in Round 1: Chemistry, Hearing & Speech Sciences (2), Behavioral & Community Health, Education, and Physics.
- Departments represented in Round 2: Journalism (2; one person indicated 2 departments), Electrical and Computer Engineering, Economics, Comparative Literature, English, Psychology

Study Administration

- Users completed the exercise while sitting at a dual monitor workstation in MSD (second floor of McKeldin).
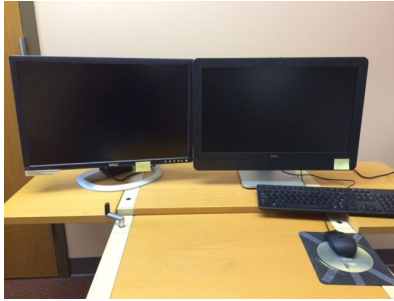
- Users input answers on one screen in Qualtrics survey, and performed their searches on the other. Actions were screen-captured and recorded with Camtasia. Asked subjects to speak their strategies aloud.

Usability Tasks

1. Find a (known) book title (we provided the citation) owned by CP, held at Shady Grove.
    1.a. Is this title owned by CP?
    1.b. What is the permalink for this title?
    1.c. At what branch is this title located?
2. Find a (known) book title (we provided the citation) owned by USMAI institutions (not CP).
    2.a. Is this title owned by CP?
    2.b. What is the permalink for this title?
3. Find a (known) journal article (we provided the citation) owned by CP, held online.
    3.a. Is this article owned by CP?
    3.b. What is the permalink for this article?
    3.c. **What is the format of this article?** (print/online/microform; this did not display in Round 1 testing, due to incorrect display logic)
4. Find 3 (unknown) sources on the topic "the effects of sleep deprivation on mental health" fitting these criteria. Provide permalink or citation.
    4.a. An e-book published between 2004 and the present.
    4.b. A peer-reviewed journal article published between 2004 and the present.
    4.c. A video or DVD published between 2004 and the present.

What Changed Between Rounds 1 and 2?

A Few Major Differences Between

[WorldCat Local](#) and [WorldCat Discovery](#)

Searching "Jane Eyre" in both

- Four tab homepage display to two tabs
- Results list stays in left column, item details display on right side of screen
- Round 1: Text links display at upper right: Cite/Export | Print | E-mail | Add to list | Share | Permalink | Ask Us! / Round 2: Button with two icons at upper right replaces text links – bottom icon adds record to list, top icon leads to options for: Email record | Cite record | Record link (word "permalink" does NOT appear); option to print is gone
- Holdings/availability information in displayed in "Availability" section that displays expanded by default
- Facets changed for Round 2: cleaner in general, and Book more obviously contains e-book; Video is supercategory for DVD
- Round 2: Availability errors due to high server traffic (possibly

- on our end in addition to on OCLC's end)

Results: Task Timing

| Task	Average Time Round 1	Average Time Round 2
1. Known - CP-owned book @ Shady Grove - find item	14 s	14 s
1a. Known - CP-owned book @ Shady Grove - find permalink	53 s	40 s
1b. Known - CP-owned book @ Shady Grove - find branch	38 s	29 s
2. Known - USMAI-owned book - find item	44 s	1.2 min
2a. Known - USMAI-owned book - owned by UMCP?	9 s	14 s
3. Known - CP-owned online journal article - find item	55 s	1.1 min
3a. Known - CP-owned online journal article - owned by UMCP?	11 s	16 s
3b. Known - CP-owned online journal article - find permalink	21 s	16 s
4a. Unknown - e-book - find item & citation/permalink	3.2 min	2.4 min
4b. Unknown - peer-reviewed article - find item & citation/permalink	2.1 min	51 s
4c. Unknown - video/DVD - find item - find item & citation/permalink	2.1 min	1 min

- Just to give an idea of how long these things took our participants, on average
- Any differences between average task timing are not statistically significant, because of small sample size.
- Only showing where there were data points in both rounds; because of faulty logic in Qualtrics in our first round, there was a task that showed up on Round 1 but not Round 2; a few tasks that showed up in Round 2 but not Round 1
- Quickest task: determining ownership; longest tasks: finding unknown items. Interestingly, in round 2, finding a USMAI-owned book took more time on average than in Round 1.

Results: Finding Items - Successes

Number of Subjects Who Found Items
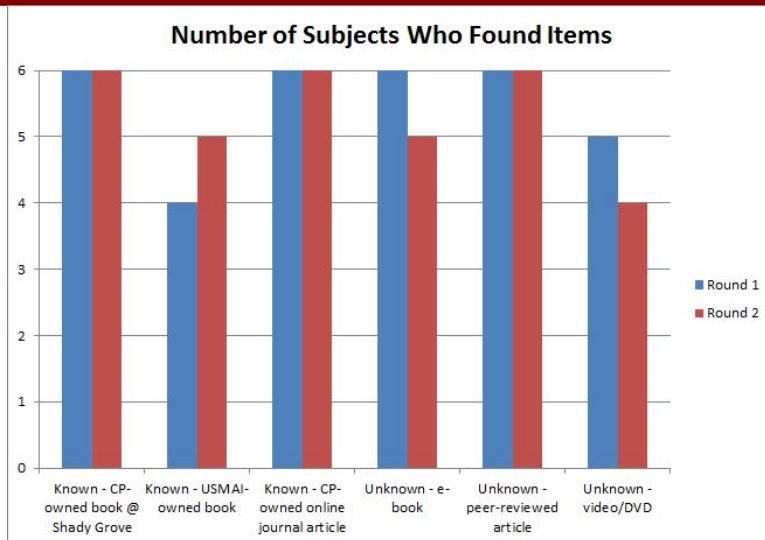
- Overall pretty high rate of success, but more difficult tasks: finding items - USMAI-owned book; unknown e-book, unknown video/DVD
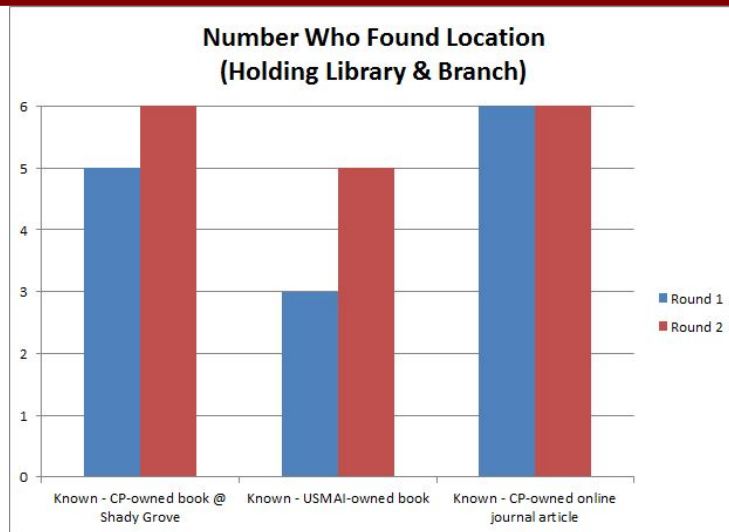
Results: Finding Items- Difficulties

Number of Subjects With Difficulty Finding Items
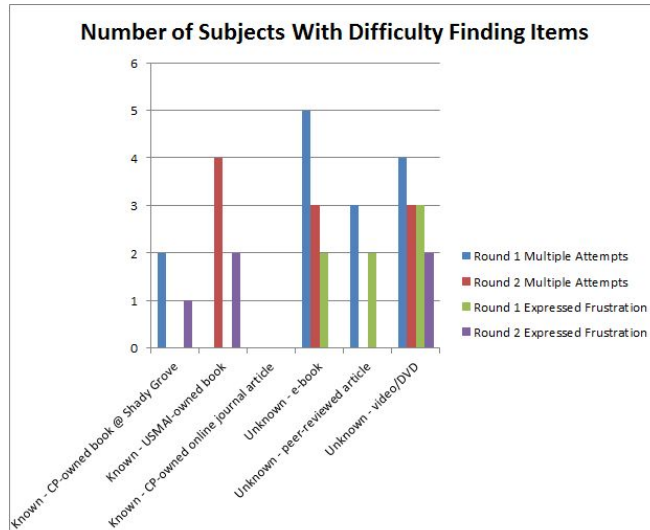
Things to notice:
- Round 2: the USMAI-owned known book was more difficult to find, apparently, than in Round 1
- Round 2: finding the peer-reviewed article was apparently easier
- Difficulties really clustered around finding the unknown items, which required longer amounts of searching, multiple attempts, more expressed frustration
- Note about "expressed frustration:" we were only able to capture things that we were able to hear; if subject didn't speak, then we don't know if they were frustrated or not!

Results: Finding Location (Holding Library & Branch)

Number Who Found Location (Holding Library & Branch)
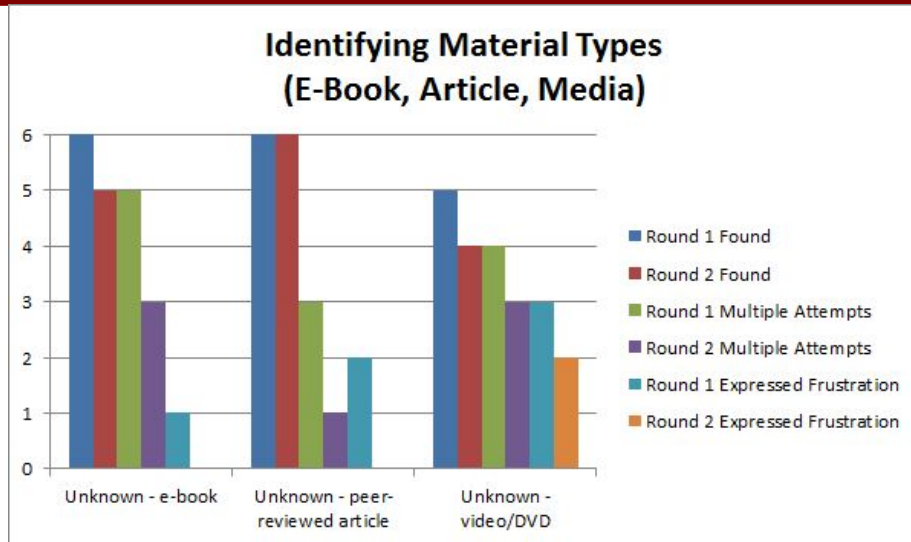
- Note: we did not ask people to identify the location of the unknown items they found
- Figuring out the location of the USMAI-owned title was more difficult

Number with Difficulty Finding Location (Holding Library & Branch)
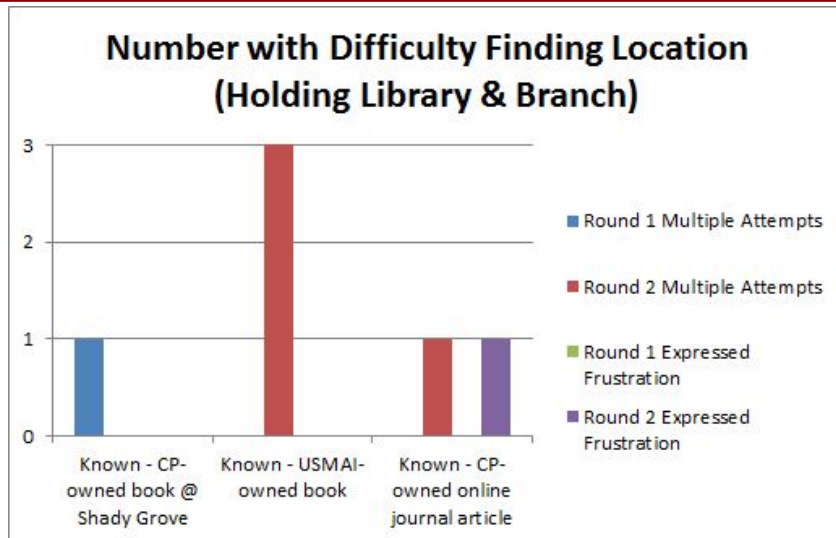
- Again, problems occurred most often with the USMAI-owned book, and also, to a lesser degree, with the CP-owned book and CP-owned article.

Results: Identifying Different Material Types (E.g., E-Books, Articles, Media)

Identifying Material Types (E-Book, Article, Media)

- Round 1 Found
- Round 2 Found
- Round 1 Multiple Attempts
- Round 2 Multiple Attempts
- Round 1 Expressed Frustration
- Round 2 Expressed Frustration

Categories: Unknown - e-book, Unknown - peer-reviewed article, Unknown - video/DVD

- Multiple attempts were needed for finding all unknown items
- Highest amount of frustration expressed in finding video/DVD

Results: Effectively use facets and limiters

Successes

Round 1

- During the search for book owned by USMAI, 2 used facets on search results.
- To find the unknown items, all 6 subjects used either limiters or facets; only 1 person used both limiters and facets together, though.

Round 2

- All 6 used either limiters or facets at one time or another; 1 subject only used limiters; 2 only used facets; other 3 used both (but not necessarily together).

Results: Effectively use facets and limiters

Difficulties

Round 1

- 2 subjects expressed frustration while trying to find an e-book with facets and limiters
- 3 subjects used the "visual materials" limiter rather than "DVD" limiter. Confusing terminology: "visual materials" actually refers to photography and other still images rather than moving images.

Round 2

- 1 subject expressed frustration relating to facets/limiters in the search for the known USMAI title
- 1 subject expressed frustration in using the facets/limiters with finding an unknown video or DVD.

Identify Online versus Print Materials

Task	Round 1	Round 2	Round 2 Notes
Known article - find format	N/A	5	4 people also said available in print
Unknown - e-book - find item	6	5	1 person found a print book
Unknown - e-book - multiple attempts	5	3	
Unknown - e-book - expressed frustration	1		

- Some confusion about the serials holdings statements: the article was online only; we had some print holdings, but not for the date in question.
- One person found a print book instead of an e-book.

Subject Confusion - Round 1

- Permalinks, which participants were asked to provide:
    - 2 commented that they didn't know what it was or what the point was
    - 5 out of 6 didn't know what it was on the first survey question
- Locations:
    - Subjects were not sure whether the Shady Grove location was correct, because the wording on our survey didn't match what was on-screen
    - Confusion about whether UMBC is part of "University of Maryland Libraries"
- Date ranges: 2 subjects didn't know to specify an end date in the date range limiter
- One subject was confused about which tab to select when looking for an article

Looking at video coding: points of confusion and frustration that came up

Subject Confusion - Round 2

- Location confusion persisted:
  - 1 subject commented on the location mismatch between "Shady Grove Library Stacks" on-screen and "Priddy Library (Universities at Shady Grove)" on survey form
  - 3 subjects confused about which schools are part of "University of Maryland Libraries", and one subject unable to determine how to get ahold of the book owned by USMAI libraries
  - 1 subject thought that clicking on the linked Holding Library would search the Holding Library's catalog; concluded that would have to drive to another campus to get the desired item.
- Facets:
  - One subject unable to determine how to get to peer-reviewed journal articles at first (did eventually find limiter)
  - One subject "un-faceted" wrong facet but didn't find the right facet

Again, from the video coding

Subject Frustration - Round 1

- Advanced search lack of "stickiness": 2 subjects commented that they thought that advanced search should have kept their search terms.
- 1 subject also did not like having to go to a different page to get to advanced search.
- Limiting/faceting:
  - One subject commented, "that wasn't very clear" regarding limiting the format to e-book
  - One subject gave up after getting 0 results multiple times in searching for a DVD.
- Construction of searches
  - One subject was frustrated that "KW:" kept being added in front of the title when the subject was not inputting it.
  - Subject also not sure whether WorldCat would keep search terms if subject selected date limiter.

Again, based on video coding

Subject Frustration - Round 2

- Slowness and lack of availability:
  - 3 subjects indicated at one point or another that the search was slow, and one indicated, "I might as well use Google Scholar, since it's quicker and still gives me the same amount of access as WorldCat."
  - 2 subjects suffered from the lack of availability error message and were unable to complete tasks successfully as a result.
- 1 subject: "took me quite some time to find permalink"
- Limiting/faceting:
  - Repeated searching for title led one subject to conclude that subject couldn't find the item in WorldCat, and subject let out a frustrated sigh.
  - "I couldn't find anything using 'Visual Material' for the format." (Although now Visual Material is a ways away from Video)
  - One subject indicated that "Search functionality should be better at onset" rather than requiring faceting.

Again, based on video coding

Subject Feedback Comparison

No change: Multiple Round 1 and 2 subjects commented that the tool is not intuitive.

Negative change: In Round 2, multiple comments about the system being slow and unstable (crashing). Round 1 had no comments about these kinds of problems.

Positive changes:
- Several Round 1 subjects commented on the lack of sticky searches. No such comments in Round 2.
- 2 subjects commented on the usefulness of "filters" in Round 2.
- 2 subjects in Round 1 commented that you couldn't return to same place in the search results list after making a selection. No such comments in Round 2.

Subject Feedback from Qualtrics survey, which asked What people liked and what they didn't like about the search experience.

Subject Feedback - What did you like?

What did you like about the WorldCat UMD search experience?

Round 1

- "The ability to **specify format**."
- "You can **sort the results** by different types of **media**."
- "It is easy to tell **whether or not UMD has access** to a given source/article..."
- "…It is easy to **find the item at other institutions** or through interlibrary loan."

Round 2

- "There are **plenty of filters** available to get to the resource that I was looking for"
- "I like to **see all of the possibilities,** and the sorts of holding institutions and availability."
- "I also like how...the list of **search results moves to the left side of the page** and the information regarding your chosen selection is seen on the right."
- "The search experience is **very effective, but only if you know where to go** and what to click."

Again, feedback from Qualtrics survey

Subject Feedback - What did you dislike?

What did you dislike about the WorldCat UMD search experience?

Round 1

- "The **advanced search options reset** to default every time."
- "The search interface could be more streamlined and user-friendly - for example, …**auto-populating search fields** when I move into/out of the **advanced search** window."
- "...I prefer to use the **[P]ubmed database** to look for peer-reviewed articles because what I get is **more pertinent** to the search."

Round 2

- "It **crashed** a couple of times (Unable to retrieve availability)....; sometimes even after putting the author name in search bar the **desired result was not in top 5**"
- "Someone needs to **teach you how to search for things**. It isn't very user-friendly. I also didn't know where to find the **permalink** until the last five minutes of this study."
- "**Slow**; **filtering** through results is cumbersome...; not sure **how to obtain materials** from other libraries"

Again, feedback from Qualtrics survey

Better in WorldCat Discovery?

- Format limiter in advanced search is a little improved
  - DVD/video is not displayed as a subset of visual material
  - E-book is a subset of "Book"
- Apparently easier to find unknown item - peer-reviewed article
- Users can now find their place in the list of results, when they choose a result to look at

Suggestions for Addressing Issues

Recommendations to OCLC

- Performance issues: is there anything that can be done?
- Relevancy ranking could use improvement
- Advanced search stickiness - still a problem, even if no one complained about it in Round 2
- Make it more obvious how to choose a range of dates in the Advanced Search limiter
- Less critical issues:
    - Putting "power search" data into the search string (e.g., "kw:") can be confusing to users; any way to suppress (perhaps optionally)?
    - Users who tried using "Journal source phrase" or "Subject phrase" instead of keyword in the Advanced Search had problems

These are just recommendations based on the findings of the usability study; we have other findings based on our experience of "known issues," see LibAnswer FAQs - http://umd.libanswers.com/search/?t=0&g=527&topics=worldcat%20umd%20known%20issue&adv=1

Suggestions for Addressing Issues

Recommendations to Libraries Instructors
- Emphasize locations: what constitutes University of Maryland, College Park; USMAI; CIC, other
- Help patrons understand the format that they're looking at
- Help patrons understand delivery options, USMAI borrowing

Questions?

Or contact us for further information:

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Thank you for attending!