UX Study, January - March, 2017:
Exploring student information strategies

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Purpose: The focus of this study was to explore choices and strategies students make in completing tasks on the web, either practical or research based. Is there a tendency to start with Google or other search engines rather than the Library’s website? How effective is Google in locating RULA related content? While task completion processes are of interest we are particularly focused on student strategies and preferences in their information searches without privileging RULA in the testing.

The method employed here was somewhat inspired by:
This longitudinal study shows how students changed over the course of their undergraduate degree in terms of research strategies. It also highlighted how difficult it is to maintain subjects in a longitudinal study.

Methodology:

- We recruited subjects through convenience sampling at three sites - randomly asking students to take part in the lobbies of the Library, Ted Rogers School of Management and the bridge area of the SLC. In total we recruited 12 students. The subjects received a Starbucks gift card. UX librarian, Diane Granfield, conducted the testing and Library Technician, Sonya Panangaden, recorded the sessions.
- Students were charged with completing several tasks noted below.
- We gathered background information on the students.
- Students were asked to choose the browser they prefer (not the RULA website) and asked to conduct the tasks based on their every-day methods for finding information, conducting research and other library related tasks.

The Tasks - Two rounds of 6 students each were tested, Round 1 in January/February and Round 2 in March. Tasks were mostly the same for both groups. Some of the tasks were deleted and changed in Round 2 to make them more effective.

1) You need to write a paper using the Chicago Manual of Style (Round 1) or APA (Round 2). Where do you find information on that? Secondary probe: Would you use the Library’s website? If so, how?
2) How would you look for a particular documentary or clip on a particular topic? Secondary probe: would you use the Library’s website? (Round 1)
3) Your professor has directed you to watch the film, *The Battle of Algiers*. She indicated it was in the Library. You need to view it as soon as possible. How would you find it? (Round 2)

4) You have an assignment that requires you find peer-reviewed articles on the topic of homelessness in Canada. Find two peer reviewed articles. Find two peer reviewed articles using the Library’s website.

5) You need research help (elaborate, if necessary) for an essay, where do you go?

6) You want to directly access a librarian for your program - the subject librarian, where do you look?

7) You have an assignment that requires GIS for map making. Secondary probe: Can the library provide support? (Round 2)

8) Your instructor has told you that a required reading is on reserve at the library for the course ITM107. (Mathematical applications for the management, life, and social sciences.) How would you go about finding this? (Round 1)

9) How do you renew a library book?

10) You’d like to hold a group study session; how do you book a study room in either the Library or the Student Learning Centre?

11) You have the (following) title of an article and you would like to find the full citation and you would like to find the full text. How do you go about doing this? Give the student the title of this (full) citation: Lau, W. W. F. (2017). Effects of social media usage and social media multitasking on the academic performance of university students. *Computers in Human Behavior, 68*, 286-291. (Round 2)

**Background and Debrief Questions**

1) Program enrolled in?

2) Which classes, if any, required research papers?

3) How often do you come to the Library? TRSM subjects did not come to the Library; subjects tested in the Library use the Library frequently as a place to study;

4) Have professors required certain types of resources? D2L readings in some cases; otherwise, no.

5) How experienced are you in library research?

6) Have you attended a library research class as part of your program? One student attended BUS100.

7) Have you attended other library research sessions? No

8) Have you used the library’s research help desk, appointment service or chat reference service? None of the students had used our research services though one student had used chat.

9) What is starting preference for doing library research? Google/Google scholar; RULA in two cases.
Observations and Conclusions

1) Google Chrome is the preferred browser.
2) Google Scholar is generally preferred (or considered adequate) though some students were aware of the quality of RULA as a research stop, and used it together with Google Scholar.
3) Citation styles are supported by google searches and known internet resources like Owl, Citation Machine, etc.
4) Some students mentioned high school as a significant influence in their research habits.
5) Book borrowing is not strong among these students and, if they had borrowed a book, many would go directly to the Circulation desk to renew a book (rather than seek out an online solution).
6) Librarians are not on students’ radar as a resource for assistance. Confirms known research about library anxiety, approachability, help-seeking behaviours, convenience, and promotion/awareness. Students think of professors, classmates, friends and family as main resources.
7) Most students were not able to find subject librarians when directed to do so. Either starting at Google or the RULA page resulted in failed searches. Most students did not know they had subject librarians.
8) Finding the Battle of Algiers (film) was not consistent when entered into “media tab” in Search Everything. Why? Follow up with Lisa. Most students fall back to using youtube or it is their first choice to find A/V materials.
9) Students use the library building for study and computers. They do not see the building as a site for services (beyond study rooms and printing) or collections.
10) TRSM students were not strong on visiting the library. It may be interesting to see if there is a correlation between where we do the testing and how students answer the question of library building use.
11) One student took BUS 100 and an engineering student had received library instruction; otherwise, these students were not exposed to library instruction.
12) GIS was not meaningful to the first round of students and we decided to take it off the list of tasks for the second round.

Questions, Issues, Future Considerations:

1. **Help to define further directions for UX studies.** Student help seeking strategies and their methods for finding information should be further studied using qualitative methods such as journey mapping and journalling - this will allow for more subjective understanding of student behaviours, also known broadly as auto-ethnographic methods. Comparing different groups such as faculty, graduate students and undergraduates would also yield useful information in terms of deepening librarian skillsets, promotion, and information literacy threshold planning and applications.

2. **Test the methodology.** This particular method was effective for UX testing going forward. Input from the Web Committee will be needed to prioritize web UX testing. An offshoot of this method should employ more conversational techniques and should be audio recorded. This way, way we can gather more details regarding students’
subjective experience of the library, their research needs and strategies, and how they have learned what they have learned regarding research processes.

3. **How helpful are the background questions? Can we suggest relationships between strategies, search success, and some of these questions?** As noted in #2, audio recording and expanding questions to reflect more details regarding their academic experience would be helpful.

4. **The study should help with making improvements to the Library’s website regardless of where students begin their search.** For example, in the case of Google searches (or other search engines) **how effective are they in finding relevant RULA pages?** This study should be thoroughly discussed with the Web Committee.

5. **Insights into more effective approaches to information literacy.** Students do not see the Library as a source of research support for improving their strategies; they see the library as a site for collections and as a site for study space and IT services.

6. **Expand the dialogue between liaison librarians and faculty - including collaborating on more effective assignments; and critically thinking about better information literacy strategies.**

7. The Perruso study noted previously found that 70% of undergraduates started with google but this changed over the years at school. How do these strategies differ from expert researchers like faculty and grad students? (Ithaka study does not track this, only resources used by faculty). Consider distinct populations going forward.

**Specific observations**

**ROUND 1 (January/February)**

All students’ preference for browser was Google Chrome.

6 Subjects in Round 1: 1st year social work; 4th year civil eng; 2nd year biomedical science; 1st year aerospace; 3rd year graphic communication mgmt; 1st year chemical eng. The UX testing took place in the Library Lobby across from the circulation desk.

**You need to write a paper using the Chicago Manual of Style. Where do you find information on that?** Strategies: directly to OWL (in 2/6 cases); google search; D2L (if posted by professor); Citation Machine [http://www.citationmachine.net/](http://www.citationmachine.net/) (mentioned 3 times); [http://easybib.com](http://easybib.com); or generally “a citation machine”

**How would you look for a particular documentary or clip on a particular topic?**
**Secondary probe: would you use the Library’s website?**
Strategies: youtube (in all cases); google video search; youtube video convertor

You’ve been directed to find a film by Max Von Sydo by your instructor. Only asked this of a couple of students but they did think to look in the Media tab in Search Everything.

You have an assignment that requires you find peer-reviewed articles on the topic of homelessness in Canada. Find two peer reviewed articles. Find two peer reviewed articles using the Library’s website.
Strategies:
Student 1: Start with RULA; homelessness in Search Everything; used limiters: full text, peer reviewed
Student 2: found RULA via google search; or search “peer reviewed articles on homelessness” (surprisingly yields some results); went to articles tab and searched: homelessness in canada and checked off scholarly box; clicked on first result on the list.
Student 3: RULA directly (student has the page bookmarked at home); uses Articles tab and checks off Scholarly box; “homelessness in canada”; liked the article that had “research” in the title and not the one that had “comparative”.
Student 4: google search for RULA; clicked on the google result: articles and databases; entered homelessness in search box; clicked off peer review in limiters section of search everything result page.
Student 5: Started at RULA and entered homelessness in canada in the journals/newspapers tab; realizes this is not correct; uses the keyword search everything and clicks on first result; also indicates that she uses Google Scholar and demonstrated a search there.
Student 6: started with a google search on “articles on homelessness”; does a google search on “peer reviewed articles on homelessness”; checks authors qualifications to determine which articles to use

You need research help for an essay, where do you go?

This was interesting and something I have been aware of through previous studies: students ask family (“siblings”, “sister”) and friends, their professors, the writing centre, “I am an independent researcher”, don’t need help due to the curriculum (lab reports), youtube, lynda.com (GCM students), public library. 2 students indicated they were aware of the Research Help desk but had not used it. The 4th year civil student has had to write 4 essays and said he had used chat reference otherwise has used RULA independently and had attended a library instruction session.

You want to directly access a librarian for your program - the subject librarian, where do you look?
Strategies: None of the students were aware they had a subject librarian. Google search for “ryerson faculty librarian” (clicks on services for faculty and found it there); go to the office of GCM; ask at circulation desk; RULA>services>faculty>subject librarian; google RULA>book a
library>subject librarians; various google searches and attempts on the RULA page (student had an orientation with the librarian).

You have an assignment that requires GIS for map making. Secondary probe: Can the library provide support? This question stumped everyone and most thought of google maps.

How do you renew a library book? Come into the library (3); click on link in email; RULA homepage>renew; one student used various strategies to find online via RULA.

You'd like to hold a group study session; how do you book a study room in either the Library or the Student Learning Centre? All students had used study rooms and were able to find the link on the page.

General Comments:
GCM student was shown how to find articles by professor and she prefers google scholar. Most students were in the library to study.
It would appear that google/google scholar is the preferred way to do research by majority.

ROUND 2 (March)

6 students: 1st year accounting and finance; 2nd year politics; 1st year social work; 3rd year business management (HR); 4th year business management (HR); 1st year business management (undeclared major). UX testing took place in TRSM (3) and the SLC bridge (3).

You need to write a paper using the APA Format. Where do you find information on that? (Secondary probe: Would you use the Library’s website? If so, how?)
- Citation Machine (1); OWL Purdue (4); website bookmarked at home; most indicated that a google search suffices.

Your professor has directed you to watch the film, The Battle of Algiers. She indicated it was in the Library. You need to view it as soon as possible. How would you find it?
- RULA media tab (2); RULA search everything (2); Google (freely available on web); Fail (tried the DME tab)

You have an assignment that requires you find peer-reviewed articles on the topic of homelessness in Canada. Find two peer reviewed articles. Secondary probe: Find two peer reviewed articles using the Library’s website.
- Articles tab and search box (1); Google scholar (1); google search (1); Search everything and peer review refinement (3)
You need to know how to research an essay; that is, find articles, books and other materials for an in-depth paper. When you need help where do you go; or where do you start?

- As in Round 1 none of the students mentioned librarians our library services as a source of assistance. They noted professors, classmates, friends and family as sources of assistance.

Your professor has told you to seek out the librarian for your program. Are you aware you have a subject librarian? How would you find out who they are or where would you look for them?

- None of the students were aware of subject librarians. 2 of the 6 subjects eventually found their subject librarians via google or navigating the website. Finding subject librarians is not straightforward. The majority failed at finding their librarian using the usual strategies (google, etc.)

How do you renew a library book?

- Only one of the six subjects had borrowed a book at this point. 3 were able to find the renew button; 2 said they would go to the staff (circulation desk); 1 subject failed altogether.

You’d like to hold a group study session; how do you book a study room in either the Library or the Student Learning Centre?

- Four of the subjects did successful google searches; one said they use the mobile app; one subject failed.

You have the (following) title of an article and you would like to find the full citation and you would like to find the full text. How do you go about doing this? Give the student the title of this (full) citation: Lau, W. W. F. (2017). Effects of social media usage and social media multitasking on the academic performance of university students. Computers in Human Behavior, 68, 286-291.

- 4 subjects used google; 2 subjects used search everything.