


# Testing, Testing: Understanding Library Website UX at the University of Toronto Scarborough

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UNIVERSITY OF TORONTO SCARBOROUGH



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## Using the library



**University of Toronto Scarborough Library**  
1265 Military Trail, Toronto, ON  [Map](#)  
M1C 1A4  
416-287-7500  
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# Usability Testing

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What is usability?

“Usability focuses on the ways humans interact with an interface through **evaluating use, identifying problems**, and **researching potential solutions**. Results can determine if an interface is effective and if it should continue in its current state” – Emanuel, 2013

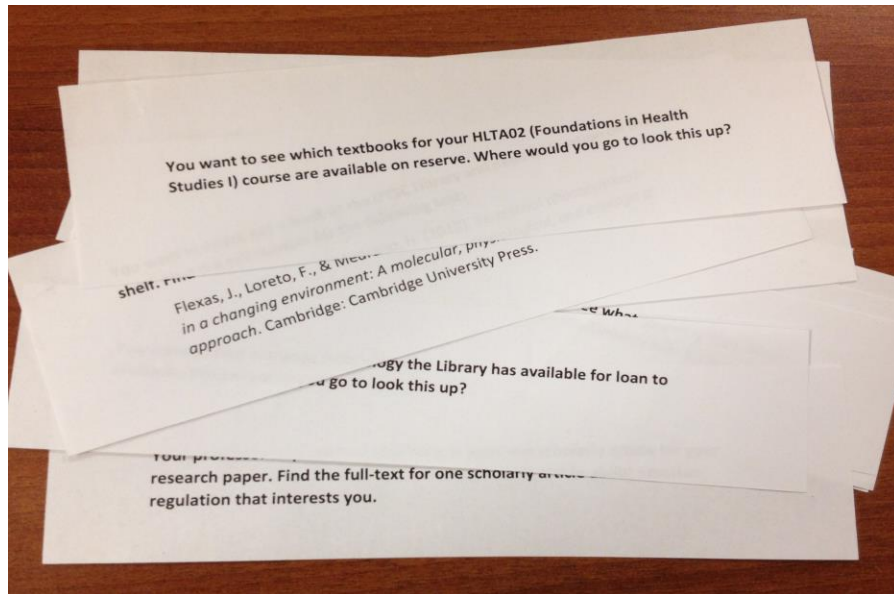
# Purpose

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- Goals for usability testing:
  1. Gain a better understanding of **user behaviours**
  2. **Make improvements** to the library website

# Usability Testing Methods

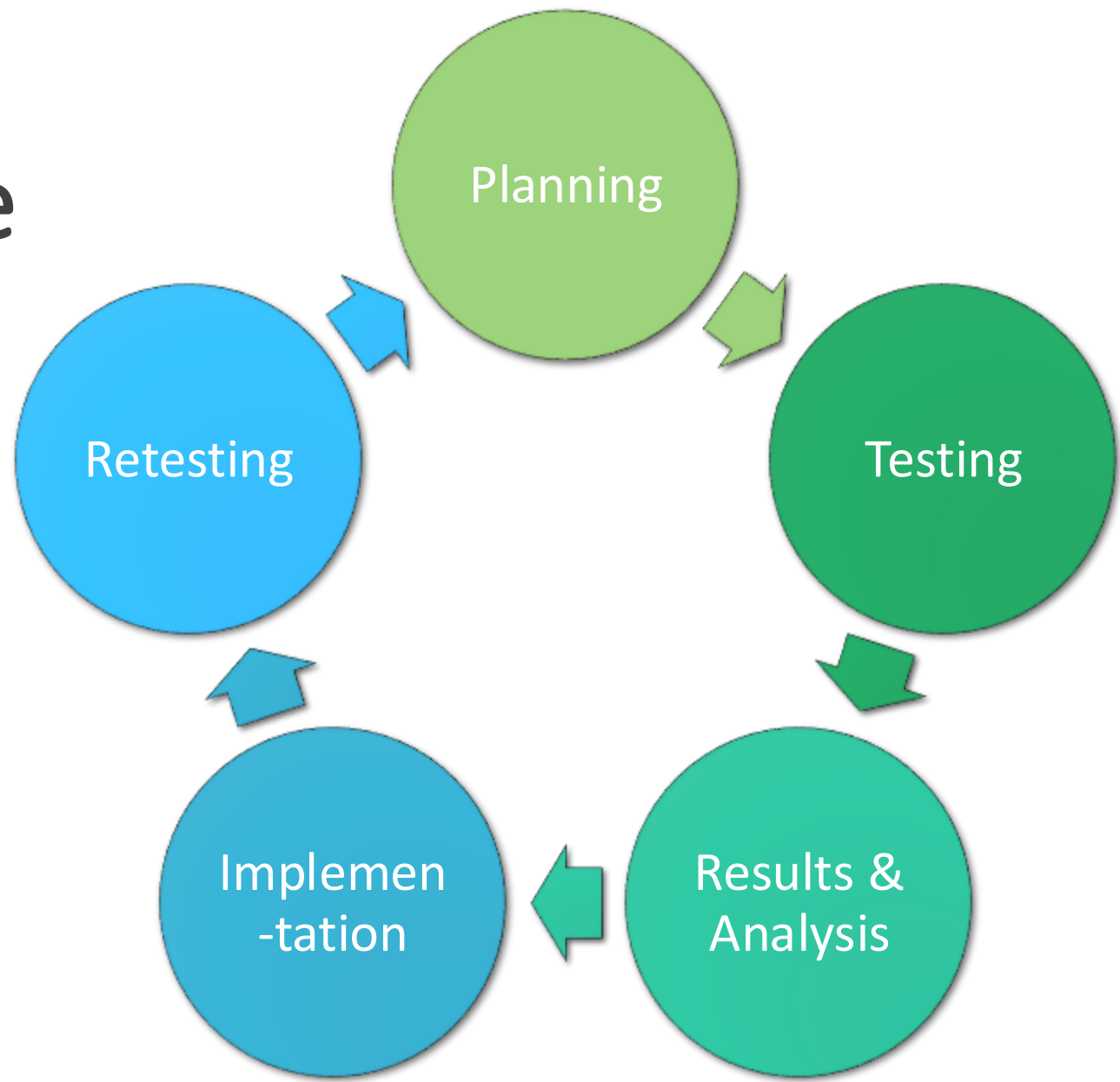
## 1. TASK SCENARIOS



## 2. CARD SORTING



# Usability Lifecycle



# Phase I: Planning

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- Determine purpose and method(s) of testing
- Define target audience and user tasks
- Recruit participants
- Prep materials (e.g. testing documentation)
- Plan sessions / schedule participants

# Target Audience and User Tasks

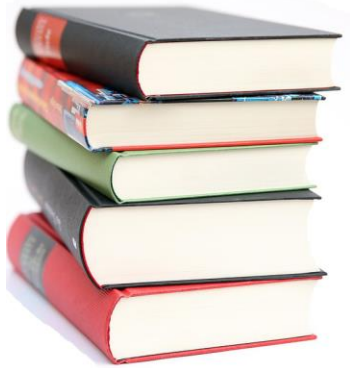
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- User profile
- What are our user needs?  
How are they using the website?
  - Library staff feedback
  - Participant feedback
  - Reference statistics
  - Website analytics

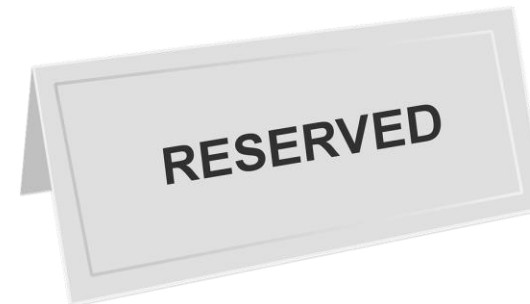
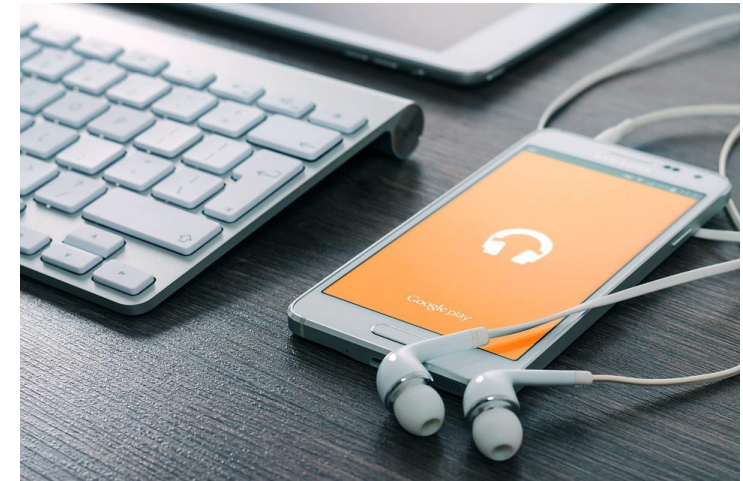




# Sample User Tasks



QUESTIONS				
1-	A	B	C	D
2-	A	B	C	D
3-	A	B	C	D
4-	A	B	C	D
5-	A	B	C	D
6-	A	B	C	D



# Recruitment

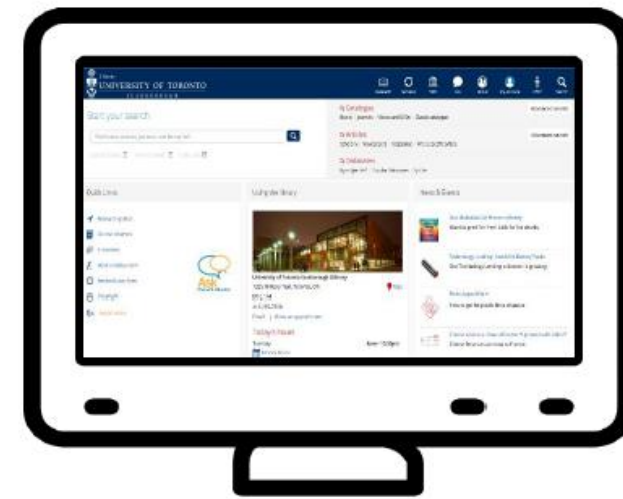
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- 20 undergraduate students:
  - 5 for Task Scenarios (Nielsen, 2012)
  - 15 for Card Sorting (Usability.gov, n.d.)
- Method: library flyers, social media, website posting
- Incentive: \$10 gift card
- Pre-screening survey

## HELP US IMPROVE OUR WEBSITE

Have an hour to spare?

Want to earn a \$10 T-Card gift card?



# Phase II: Testing

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- Let the testing begin!

...Almost.

# Pilot Testing

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- **Subjects:** 3 staff members with varying experience/familiarity using the website
- **Purpose:** Test readability of usability documentation
- **Outcome:** Minor modifications to task scenario instructions + wording in questionnaires

# Task Scenarios

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# Facilitator Script

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- Instructions for the activity
- Time commitment for participant
- Purpose of the testing
- Participant cannot do anything wrong!
- Be honest – we won't be offended!
- Encourage 'Think Aloud' as they complete tasks
- Can't guide them, but are available to answer questions



(Blakiston, 2015)

# Pre-Test Questionnaire

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- Before receiving any tasks, participants were asked to complete a user background survey with the following questions:
  1. Please take a moment to look over the library homepage. What are your general impressions of the website?
  2. Have you ever used the library website before, and if so, what have you used it for?
  3. Have you ever had any positive or negative experiences with the library website?



# Task Scenarios

## Task/Scenario/Success Criteria

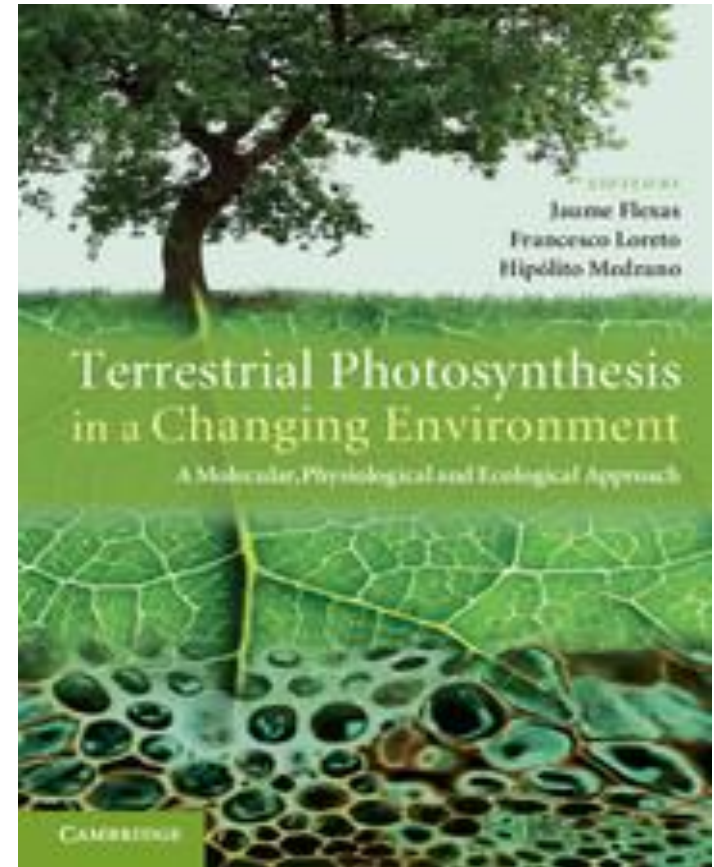
Original Task	More Specific Task	Definition of Successful Completion
Find a book	Look up the call number for the "Terrestrial photosynthesis in a changing environment" book	Find the call number: QH541.15 .E26 T47 2012
Borrow a book from UofT (ICD)	Find out how long an ICD takes	Navigate to the "Borrow from other UofT libraries (ICD)" page and find Delivery Time (2-5 business days)
Find library hours	Find library hours for UTSC Library on Saturday	Navigate to the "Hours" page and find the Saturday closing time (6:00 pm)
Find a group study room	Find out how to book a UTSC group study room	Navigate to the "Group study rooms" page and find the instructions for booking online (i.e. via Intranet)
Find course reserves	Check for textbook availability for HLTA02 course	Navigate to the course reserves search box and locate the 7 textbooks for HLTA02
Find what technology is available for loan	Locate the technology lending page for UTSC Library	Navigate to the "Technology lending service" page
Pay a fine	Pay a \$2.00 late fee	Navigate to the "Pay fines online" > "Pay Library Fines" pop-up box



# Task Scenarios

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- Sample task:
  - Find a book
- Sample scenario:
  - Look up the call number for the “Terrestrial photosynthesis in a changing environment”
- Sample success criteria:
  - Find the call number QH541.15 .E26 T47 2012



# Task Scenario Activity

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Take a moment to read over the following scenario:

**You want to pick up a book that's on hold for you at the UTSC Library, but can't stop by until the weekend. What are the library hours for information and reference on Saturday?**

Success Criteria: Navigate to the "Library Hours" page and find the Saturday closing time (6:00 pm)

**What problem(s) do you see with the scenario wording?**

# Task Scenario Activity

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Take a moment to read over the following scenario:

**You want to pick up a book that's on hold for you at the UTSC Library, but can't stop by until the weekend. What are the **library hours for information and reference** on Saturday?**

Leading language + doesn't reflect our success criteria!

# Task Scenario Activity



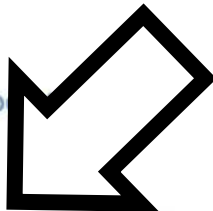
University of Toronto Scarborough Library

1265 Military Trail, Toronto, ON

M1C 1A4

416-287-7500

[Email](#) | [Book an app](#)



Library hours

**Positive  
Space**

Lesbian Gay Bisexual  
Transgender Queer



STUDY SPACE	INFORMATION	REFERENCE
8:00am - 10:30pm	8:00am - 10:30pm	11:00am - 6:00pm
8:00am - 10:30pm	8:00am - 10:30pm	11:00am - 5:00pm
12:00pm - 6:00pm	12:00pm - 6:00pm	12:00pm - 6:00pm

# Task Scenario Activity

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Revised scenario:

**You want to pick up a book that's on hold for you at the UTSC Library, but can't stop by until the weekend. **What time does the library close on Saturday?****

# Task Scenarios

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- 3 minutes allotted for each task
- Randomization of tasks
- Participant used “Think Aloud” data
- Observation form

**UTSC Library Website Usability**  
Observation Form

Date: \_\_\_\_\_

Session/Participant #: \_\_\_\_\_

*Interview Questions:*

**Scenario:** You want to check out a book at the UTSC Library and need its location on the shelf. Find the call number for the following text:

Flexas, J., Loreto, F., & Medrano, H. (2012). *Terrestrial photosynthesis in a changing environment: A molecular, physiological, and ecological approach*. Cambridge: Cambridge University Press.

Attempt 1:

Attempt 2:

Attempt 3:

Success?    Yes            No

*Time on Task:* \_\_\_\_\_

Comments:

Takeaways/Lessons Learned:

# Post-Task Questionnaire

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Please rate your level of agreement on the following:

**I was able to accurately predict where to go to find this information from the homepage.**

Strongly Disagree    1    2    3    4    5   Strongly Agree

**As I was searching for this information, I was able to keep track of where I was in the website.**

Strongly Disagree    1    2    3    4    5   Strongly Agree

**I was successful in finding the information I was looking for.**

Strongly Disagree    1    2    3    4    5   Strongly Agree



# Post-Test Questionnaire

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**How easily you could find the Library resources that you were looking for?**

Not at all Satisfied                  Very Satisfied  
1   2   3   4   5

**How quickly you could find the Library resources that you were looking for?**

Not at all Satisfied                  Very Satisfied  
1   2   3   4   5

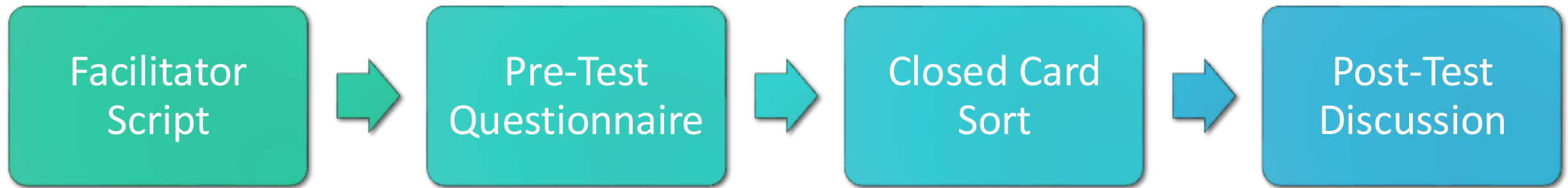
**Overall, how satisfied are you with your experience while using the website?**

Not at all Satisfied                  Very Satisfied  
1   2   3   4   5

**Did the scenarios and associated tasks match what you would typically use the Library website for?**

# Card Sorting

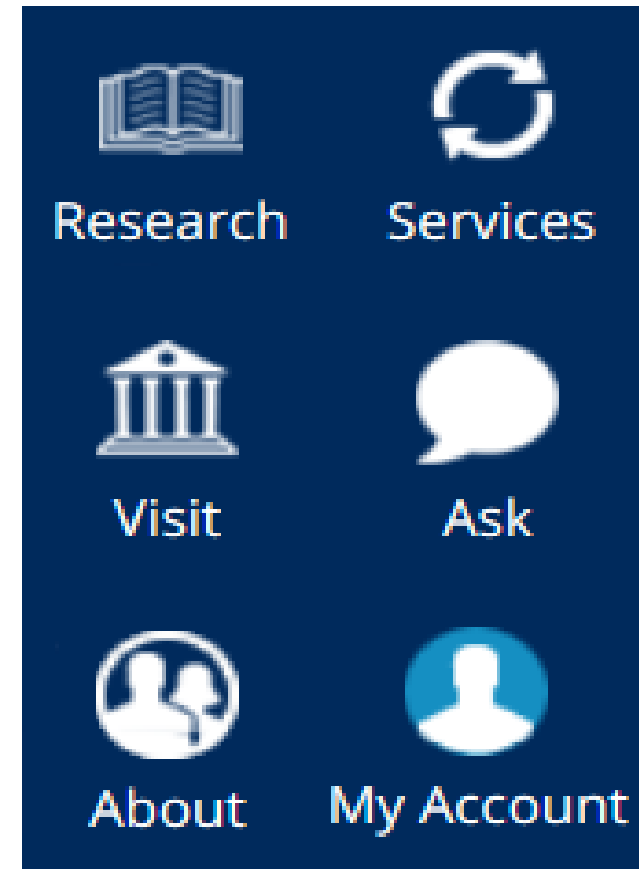
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# Card Sorting

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- Individual and group sessions
- 30 index cards for website pages
- Randomization of cards



# Card Sorting

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**Assignment  
Calculator**

(front)

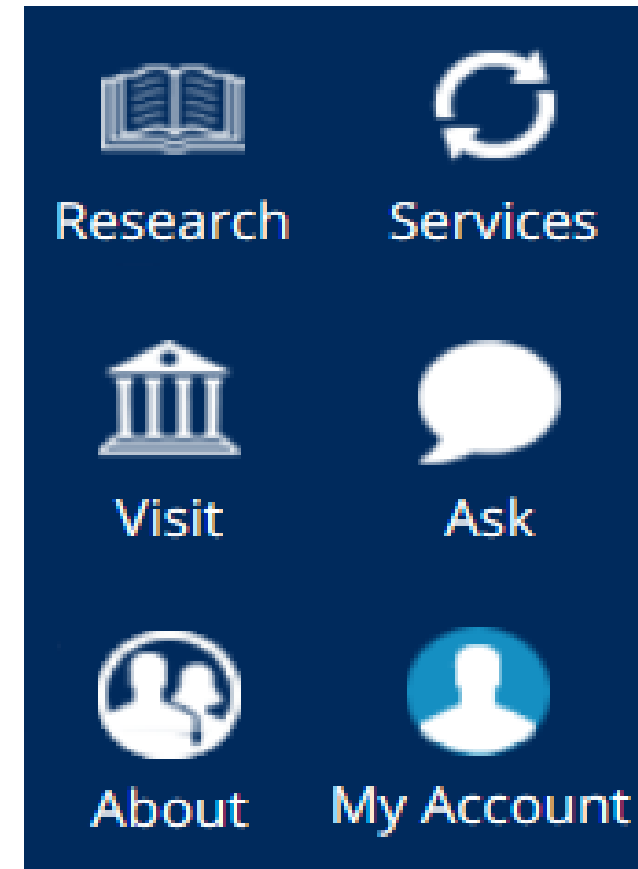
A tool which creates a  
schedule & recommended  
steps for completing your  
assignment

(back)

# Card Sorting

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- Instructions:
  - Duplicate cards allowed
  - Can create their own categories
  - Can use “unsortable” category
- Participants received copy of instructions
- “Think Aloud” encouraged



# Post-Test Discussion

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- Observation form:
  - Any easy cards? Hard cards?
  - Inclusion in more than one category? Any added categories?
  - How would you “label” cards or categories?

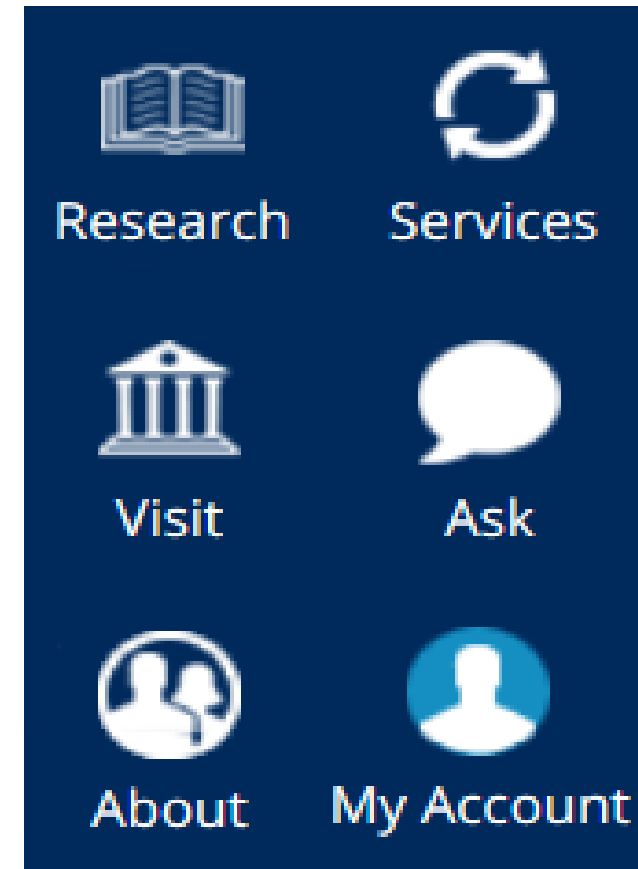
# Card Sort Activity

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A) Starting by yourself, **place the following pages into one or more categories listed to the right** (1 min):

- Makerspace
- Report Noise
- Technology Lending

B) **Discuss your choices with the group.** Were there similarities or differences at your table? (2 min)

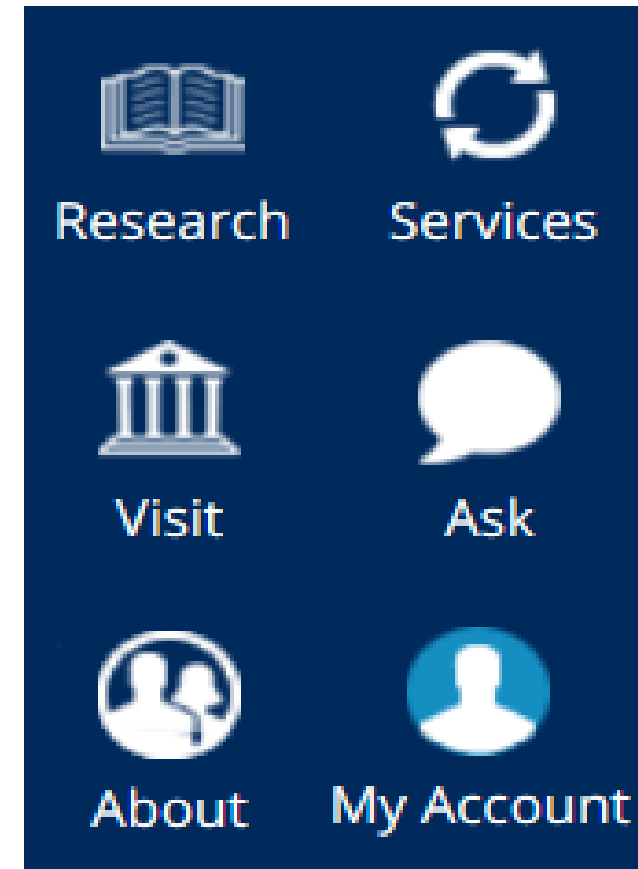


# Card Sort Activity

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## How'd it go?

- Makerspace:
  - Services (33%), Visit (27%), Unsortable (13%)
- Report Noise:
  - Services (33%), Ask (33%), Unsortable (7%)
- Technology Lending:
  - Services (87%)





# Phase III: Results & Analysis

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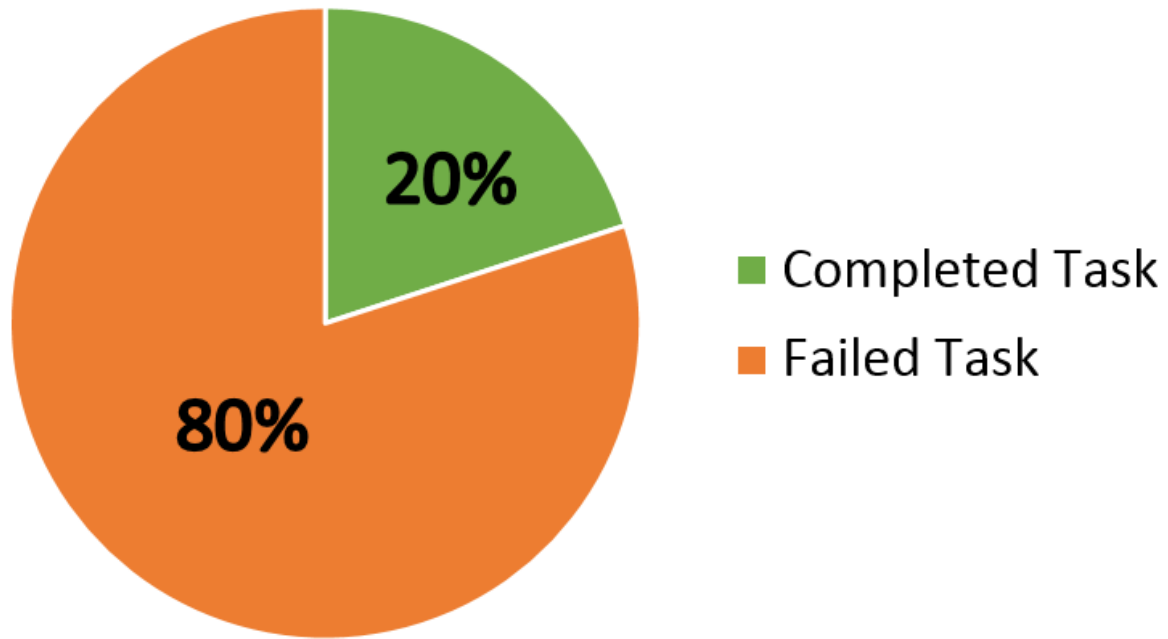


<http://blog.capterra.com/wp-content/uploads/2013/05/7-benefits-grant-management.jpg>

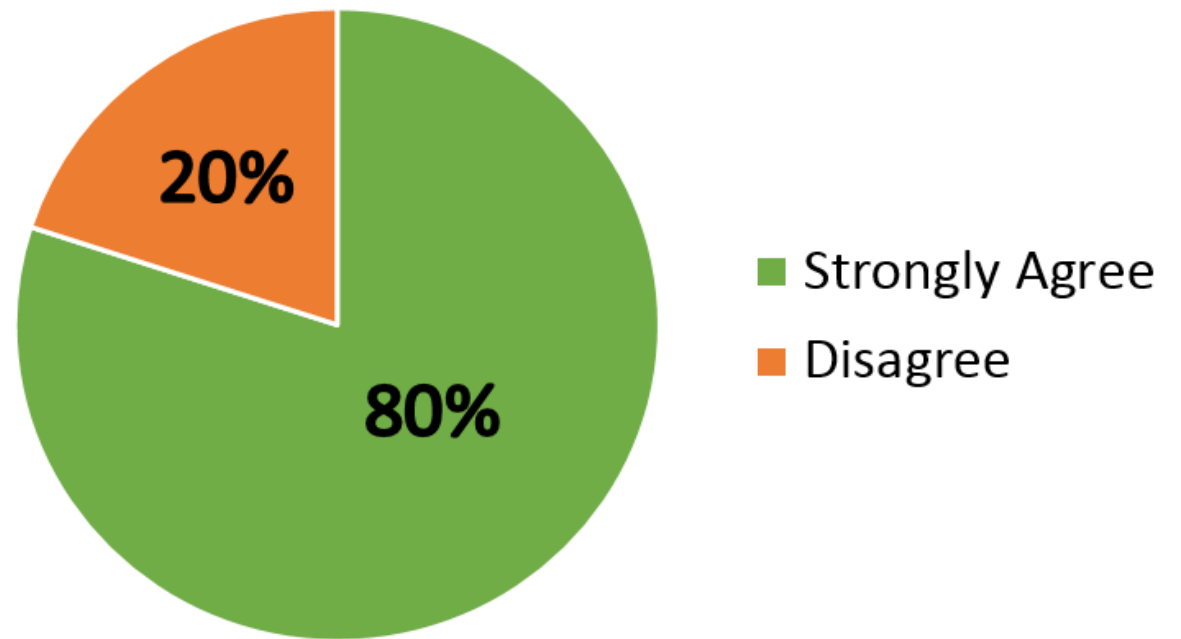
# Task Scenarios

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### Success on Database Task



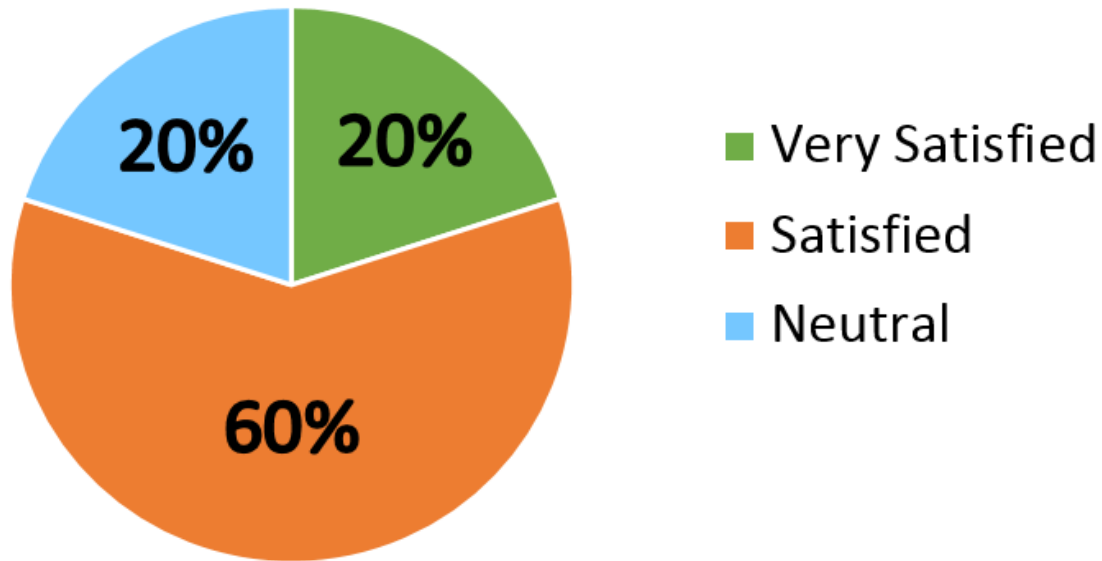
### Self-Reported Success on Database Task



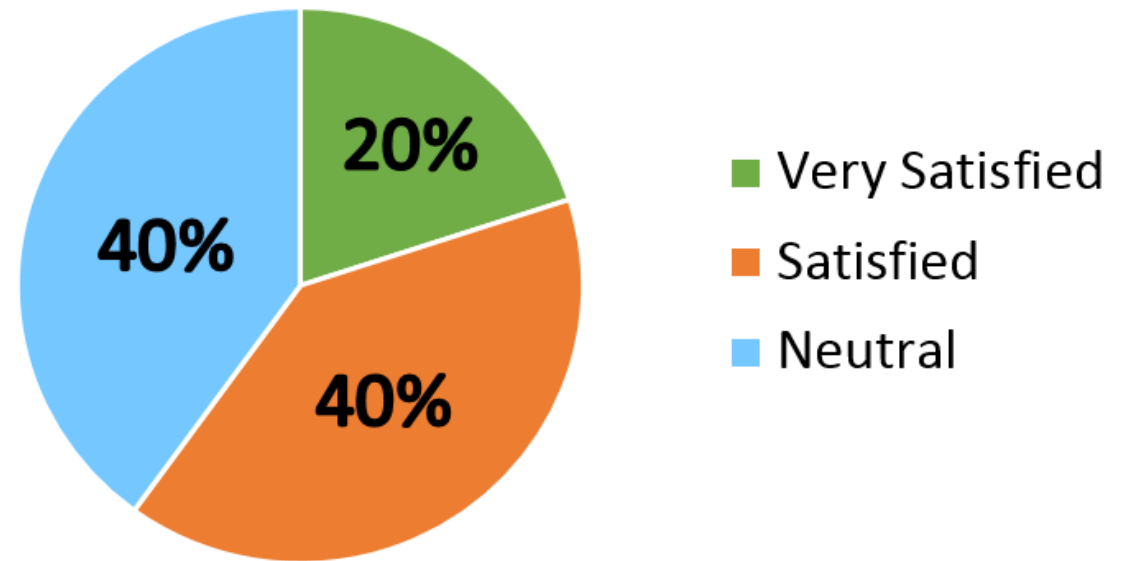
# Task Scenarios

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### Satisfaction with Ease of Finding Library Resources



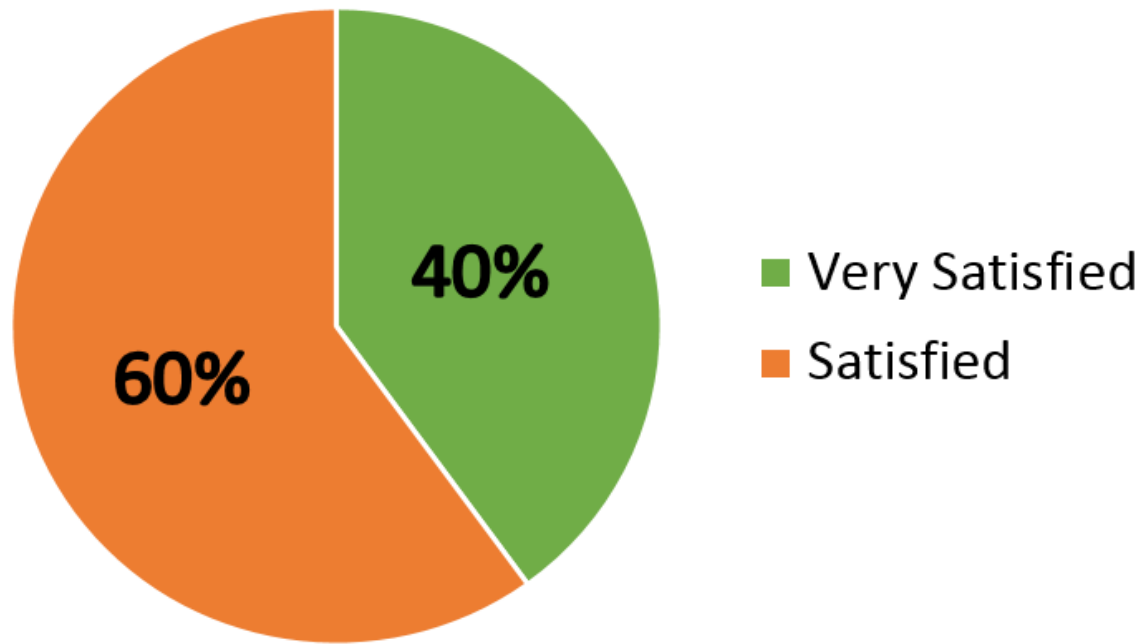
### Satisfaction with Speed of Finding Library Resources



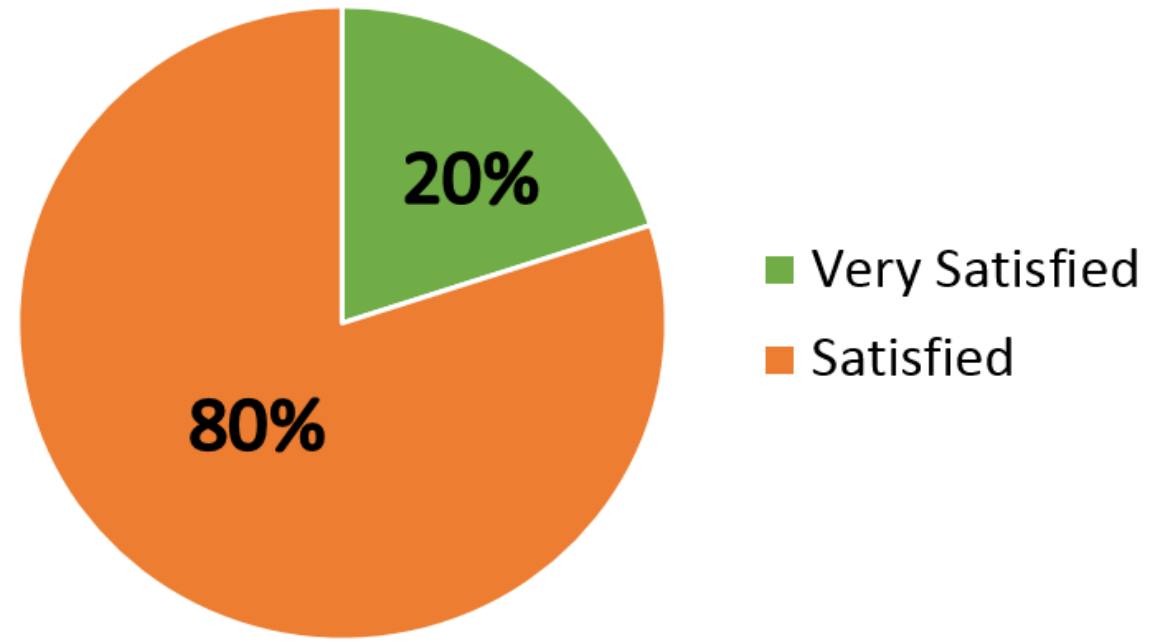
# Task Scenarios

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## Satisfaction with Website Navigability



## Overall Satisfaction with Using Website



# Task Scenarios

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The screenshot shows the University of Toronto Libraries Classic Catalogue interface. At the top, there is a dark blue header with the university's crest and the text "UNIVERSITY OF TORONTO LIBRARIES | CLASSIC CATALOGUE". Below the header, a breadcrumb trail reads "home >> catalogue". Navigation links for "Back", "Help", and "EXIT" are visible. The main heading is "Look Up Items on Course Reserve (Short Term Loan)". A search bar contains the text "psyc02". Below the search bar are three buttons: "instructor", "course code", and "course name". At the bottom, there is a link: "Faculty and instructors: find out how to [put items on course reserves](#)."

UNIVERSITY OF TORONTO  
LIBRARIES | CLASSIC CATALOGUE

[home](#) >> catalogue

[Back](#) [Help](#) [EXIT](#)

**Look Up Items on Course Reserve (Short Term Loan)**

Search for

Faculty and instructors: find out how to [put items on course reserves](#).

# Task Scenarios



home >> catalogue

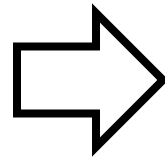
[Back](#) [Help](#) [Previous](#) [Next](#) [EXIT](#)

Course reserve search results

---

**List of Instructors**

- [PUGH,MARY](#)
- [PULWER,REMIGIUSZ](#)
- [PUNZALAN,DAVID](#)
- [PURTLE,JENNIFER](#)
- [QUAN FUN,GEORGE](#)
- [QUAN,VINH](#)
- [QUASTEL,JEREMY D](#)
- [QUINE,BEN](#)
- [QUINLAN,KRISTINA MARIA](#)



home >> catalogue

[Back](#) [Help](#) [EXIT](#)

Course reserve search results

---

2 Items on course reserve by RUOCCO,ANTHONY CHARLES for PSYC02

<b>1</b>	<b>BF 76.7 .P834 2010 Stud. Wkbk.</b> <b>Mastering APA style : student's workbook and training guide 6th ed.</b> American Psychological Association. Available for: STL3HR loan
<a href="#">Details</a>	
<b>2</b>	<b>BF76.7 .P83 2010</b> <b>Publication manual of the American Psychological Association Sixth edition.</b> American Psychological Association. Available for: STL3HR loan
<a href="#">Details</a>	

[Back](#) [Help](#) [EXIT](#)

# Task Scenarios

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The screenshot displays the University of Toronto Libraries Classic Catalogue interface. At the top, the university's crest and the text "UNIVERSITY OF TORONTO LIBRARIES | CLASSIC CATALOGUE" are visible. Below this, a breadcrumb trail shows "home >> catalogue". Navigation links for "Back", "Help", and "EXIT" are present. The main heading is "Look Up Items on Course Reserve (Short Term Loan)". A search bar contains the text "psyc02". Below the search bar are three buttons: "instructor", "course code", and "course name". The "instructor" button is circled in red. At the bottom, a link provides instructions on "put items on course reserves".

UNIVERSITY OF TORONTO  
LIBRARIES | CLASSIC CATALOGUE

home >> catalogue

[Back](#) [Help](#) [EXIT](#)

**Look Up Items on Course Reserve (Short Term Loan)**

Search for

Faculty and instructors: find out how to [put items on course reserves](#).

# Task Scenarios

---



The screenshot shows the University of Toronto Libraries Classic Catalogue search page. At the top, there is a dark blue header with the university's crest and the text "UNIVERSITY OF TORONTO LIBRARIES | CLASSIC CATALOGUE". Below this is a breadcrumb trail "home >> catalogue". A navigation bar contains "Back", "Help", and "EXIT" links. The main heading is "Look Up Items on Course Reserve (Short Term Loan)". A search input field contains "psyc02". Below the search field are three buttons: "course code", "instructor", and "course name". The "course code" button is circled in red. At the bottom, there is a link: "Faculty and instructors: find out how to [put items on course reserves](#)."

UNIVERSITY OF TORONTO  
LIBRARIES | CLASSIC CATALOGUE

home >> catalogue

[Back](#) [Help](#) [EXIT](#)

**Look Up Items on Course Reserve (Short Term Loan)**

Search for

Faculty and instructors: find out how to [put items on course reserves](#).



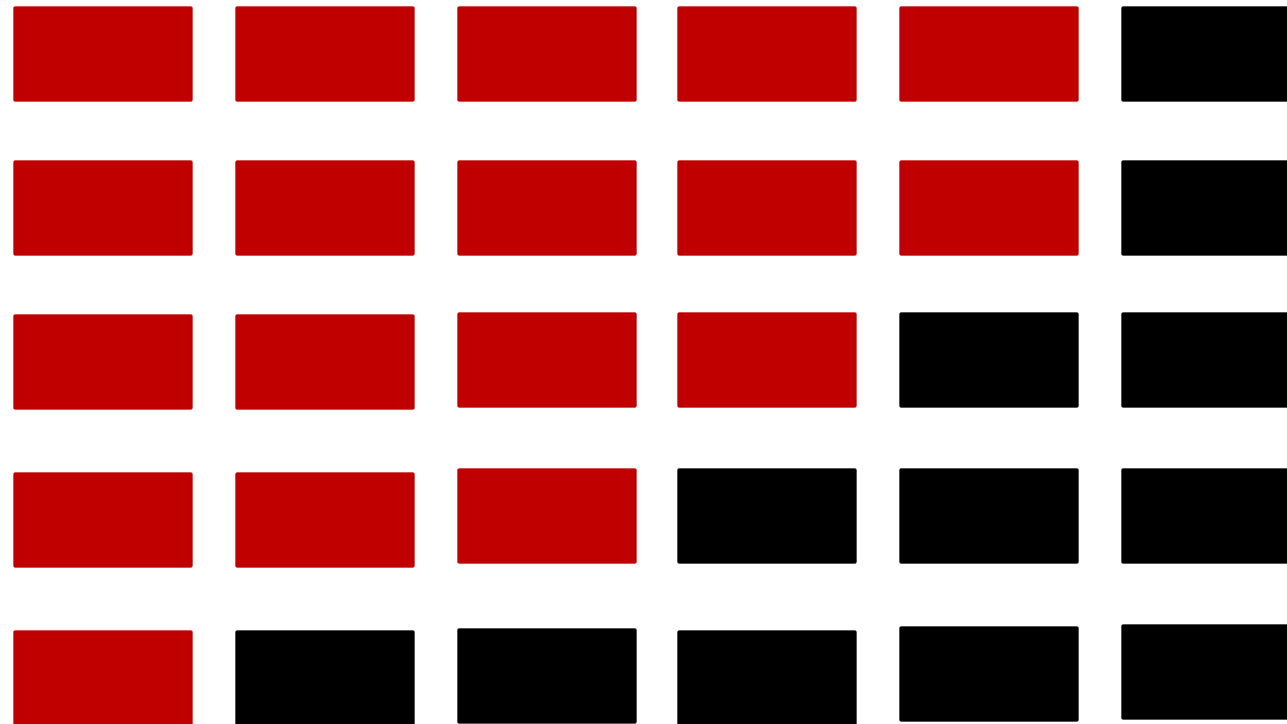
# Task Scenarios - Major Takeaways

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- Overall, users performed well
- Certain tasks (e.g. journals, databases) proved challenging
- Library jargon may contribute to difficulties
- Failed tasks vs. users' perceptions of success
- Disconnect between user expectations and website

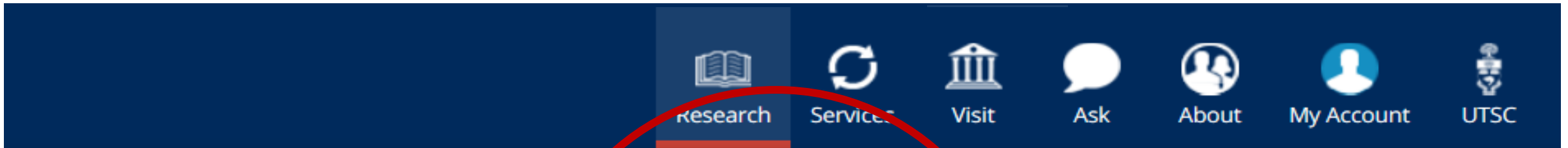
# Card Sorting

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# Card Sorting

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## Find

- Books, ebooks, journals, and more
- Articles and databases
- Data and statistics
- Geospatial data, GIS, and maps
- Newspapers
- Audio, images, and video
- Government information

## Collections

- Course reserves
- Old exams repository
- Technology lending
- U of T research repository (TSpace)
- Archives & Special Collections

## Tools

- Research guides
- How to cite
- RefWorks and citation management
- Peer review and Ulrich's
- Assignment calculator

# Card Sorting



## Borrow and request

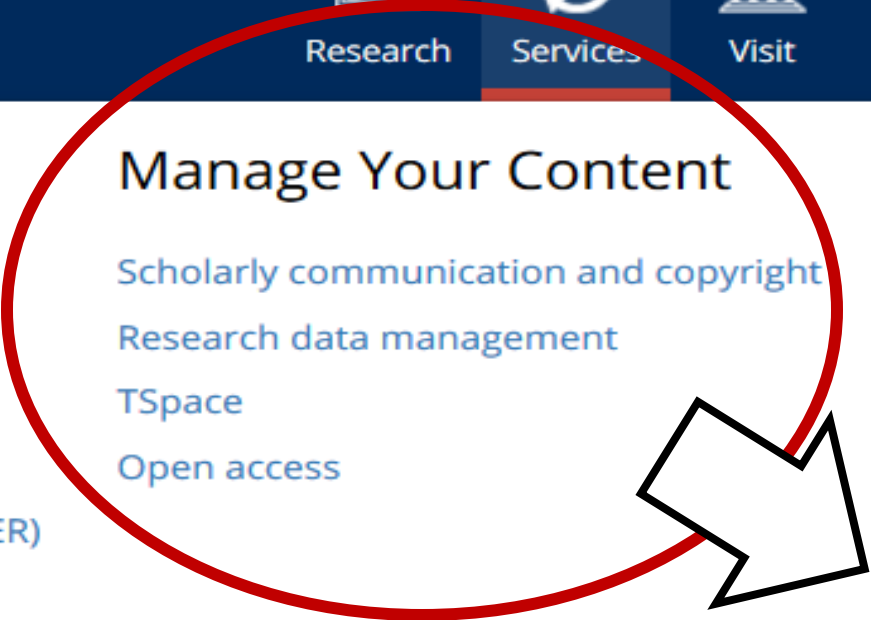
- Renew and pay fines
- Course reserves
- Borrowing and renewing
- Borrow from other U of T libraries (ICD)
- Borrow from other institutions (ILL/RACER)
- Services for people with disabilities
- Suggest a book, film, or other purchase
- Report a missing item

## Manage Your Content

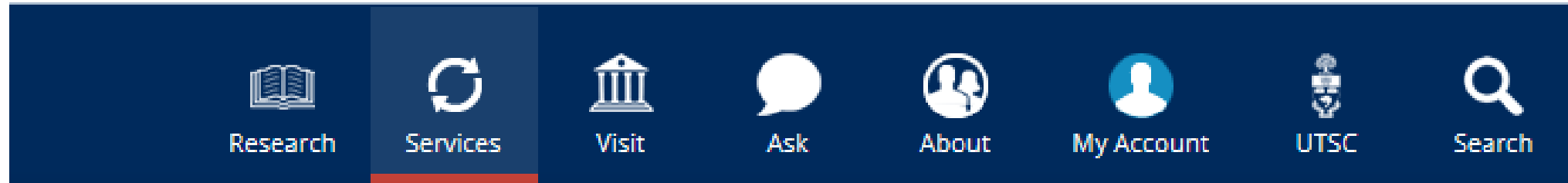
- Scholarly communication and copyright
- Research data management
- TSpace
- Open access

## Faculty

- Faculty library support guide
- Liaison librarians
- Course reserves - faculty requests
- Film reserves - faculty requests
- UTSC InfoExpress



# Card Sorting



## Borrow and request

- Course reserves
- Old exams repository
- Borrowing and renewing
- Borrow from other U of T libraries (ICD)
- Borrow from other institutions (ILL/RACER)
- Services for people with disabilities
- Suggest a book, film, or other purchase

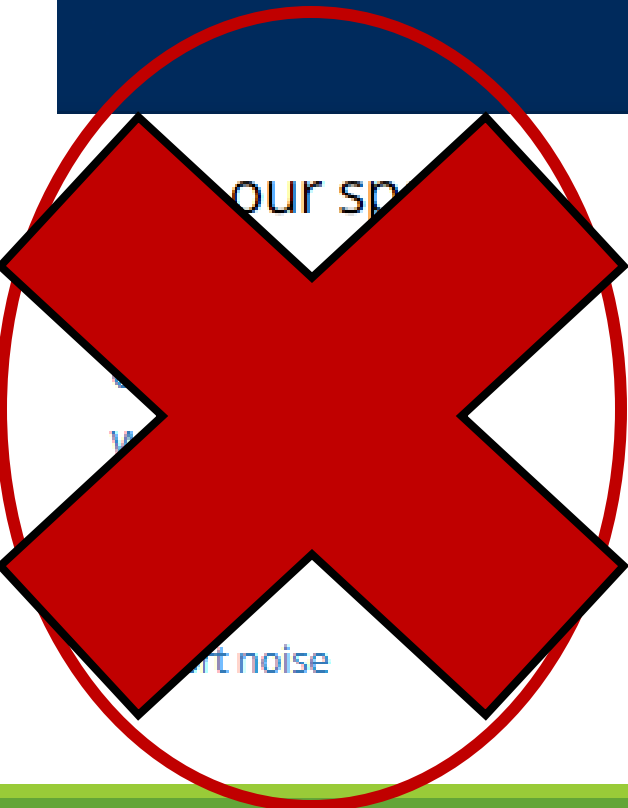
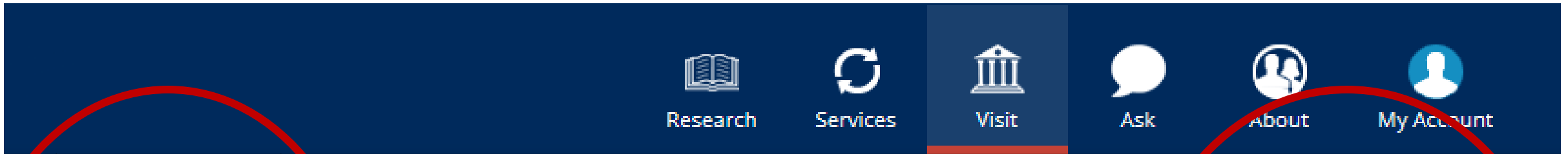
## Technology

- Technology lending
- Copy, print, scan
- WiFi and computers
- UTSC computer labs
- Computer help

## Faculty

- Faculty library support guide
- Course reserves - faculty requests
- Film reserves - faculty requests
- Researcher support
- UTSC InfoExpress

# Card Sorting



## Visitors

- Guest account for UTM and UTSG
- Alumni and other visitors
- External researchers
- International visitors
- Members of the public

## Library locations

- Cities lab
- Group study rooms
- Information and reference desk
- Library instruction lab
- Reading room

# Card Sorting - Major Takeaways

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- Substantial disconnect between library categorization and user categorization
- Labels were a source of confusion + differentiating the categories
- Prioritize! Focus on what changes are most important
- Set goals for these changes (short- and long-term)
- Figure out what needs collaboration (e.g. local vs. shared resources)

# Phase IV: Implementation

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PHASE IV: IMPLEMENTATION



# Phase V: Retesting & Future Directions

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- Next steps: re-test to see if major changes were effective
- Target additional problem areas we couldn't address during the first round of testing
- Future testing: mobile website

# Takeaways & Lessons Learned

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- Know your audience!
- Aim for less experienced users if possible
- Consider timing of testing – exams!!
- Assemble a usability team
- Set clear success criteria (task scenarios)
- Pilot test card definitions (card sorting)
- Data volume + manageability
- Prioritize what to test and what to change



# Questions?

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- Drop us a line!

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Sue Reynolds, [sreynolds@utsc.utoronto.ca](mailto:sreynolds@utsc.utoronto.ca)

**THANK YOU! 😊**

# References

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