

### INTRODUCTION

In January 2016, the UTSC Library launched a new website designed to be more user-friendly for our patrons. To test the efficacy of this new site, we carried out a user experience (UX) study in Summer 2016 with two key goals in mind:

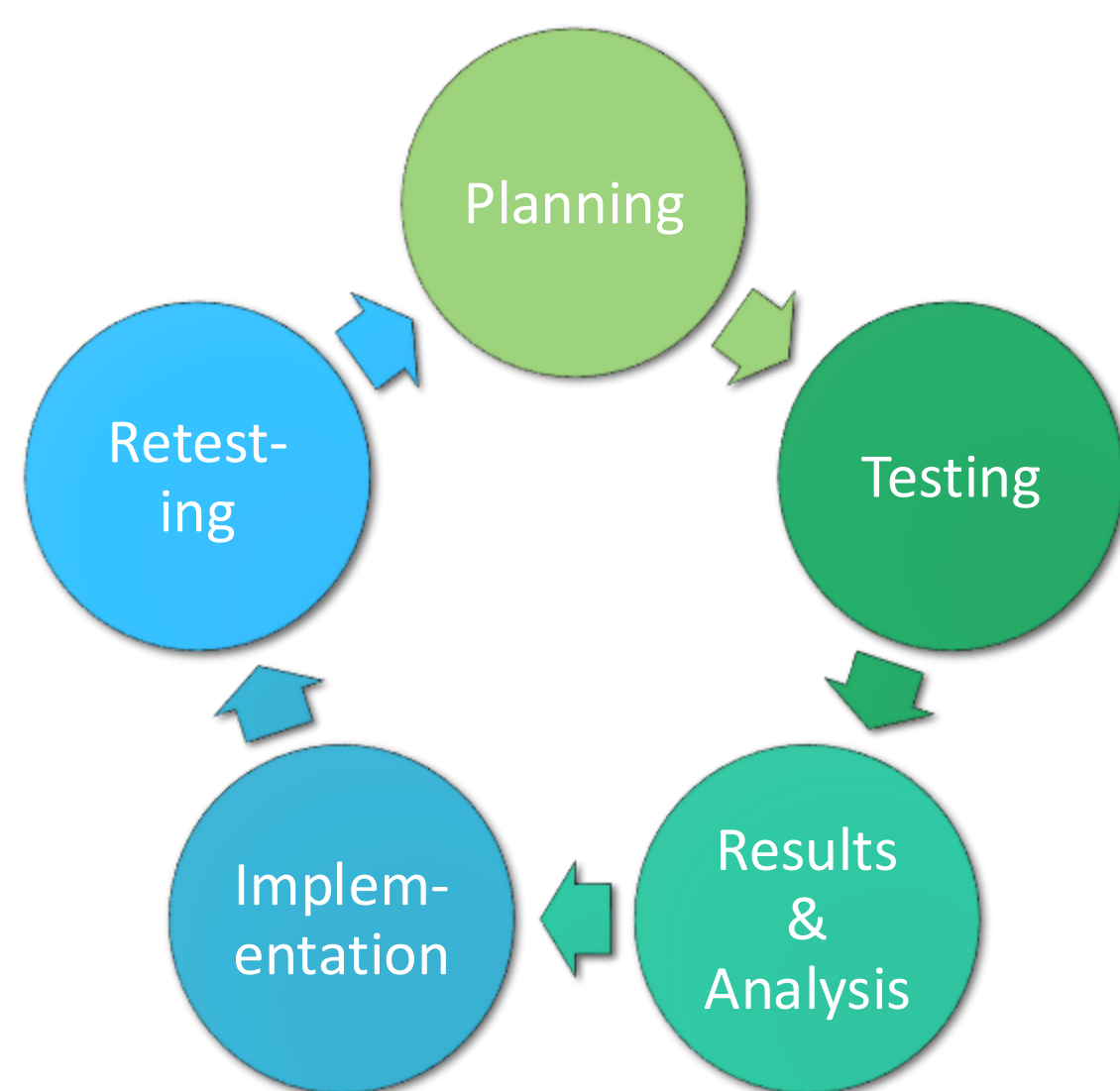
- (1) Gain a better understanding of user behaviours, and
- (2) Make improvements to the library website, particularly its information architecture.

In Summer 2018, we began phase two of this project, which was to re-conduct a similar study using a new cohort of students. Primary goals were the same, with one added goal:

- (3) Test whether changes made during Phase 1 were effective.

A key component of usability is its cyclical nature—i.e. it is not a one-time activity, but an ongoing effort to improve the user experience.

To help guide our process, we developed a usability lifecycle divided into five steps (pictured below), which is now used as the basis for all UX web projects at the UTSC Library.



In this poster, we outline key findings from our first iteration of this usability cycle and provide recommendations for future testing efforts.

### PLANNING

#### Target Audience & User Tasks

Before we could begin testing, our first task was to identify our target users and pinpoint their primary goals for visiting the website. We developed a target user profile and list of common tasks carried out on the site. To do this, we consulted with library staff members on frequently asked questions and combined this with our web analytics to target the key information needs of our patrons. Cumulatively, this feedback was used to inform the development of task scenarios and card sorting topics for the user experience studies.

#### Recruitment

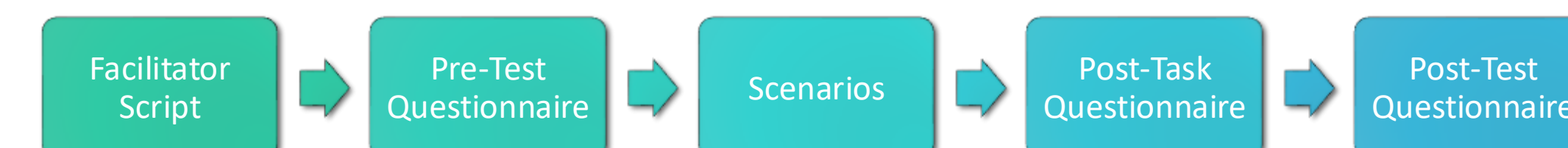
A total of twenty undergraduate students were recruited to participate in each phase of testing using flyers posted throughout the library, as well as through social media and library news channels.

A \$10 gift card was offered as incentive and all interested participants were required to complete a pre-screening survey to ensure they matched our target user group. Sample questions included the subject's age, enrolment status, academic department and year, and existing familiarity with the library website.

### TESTING

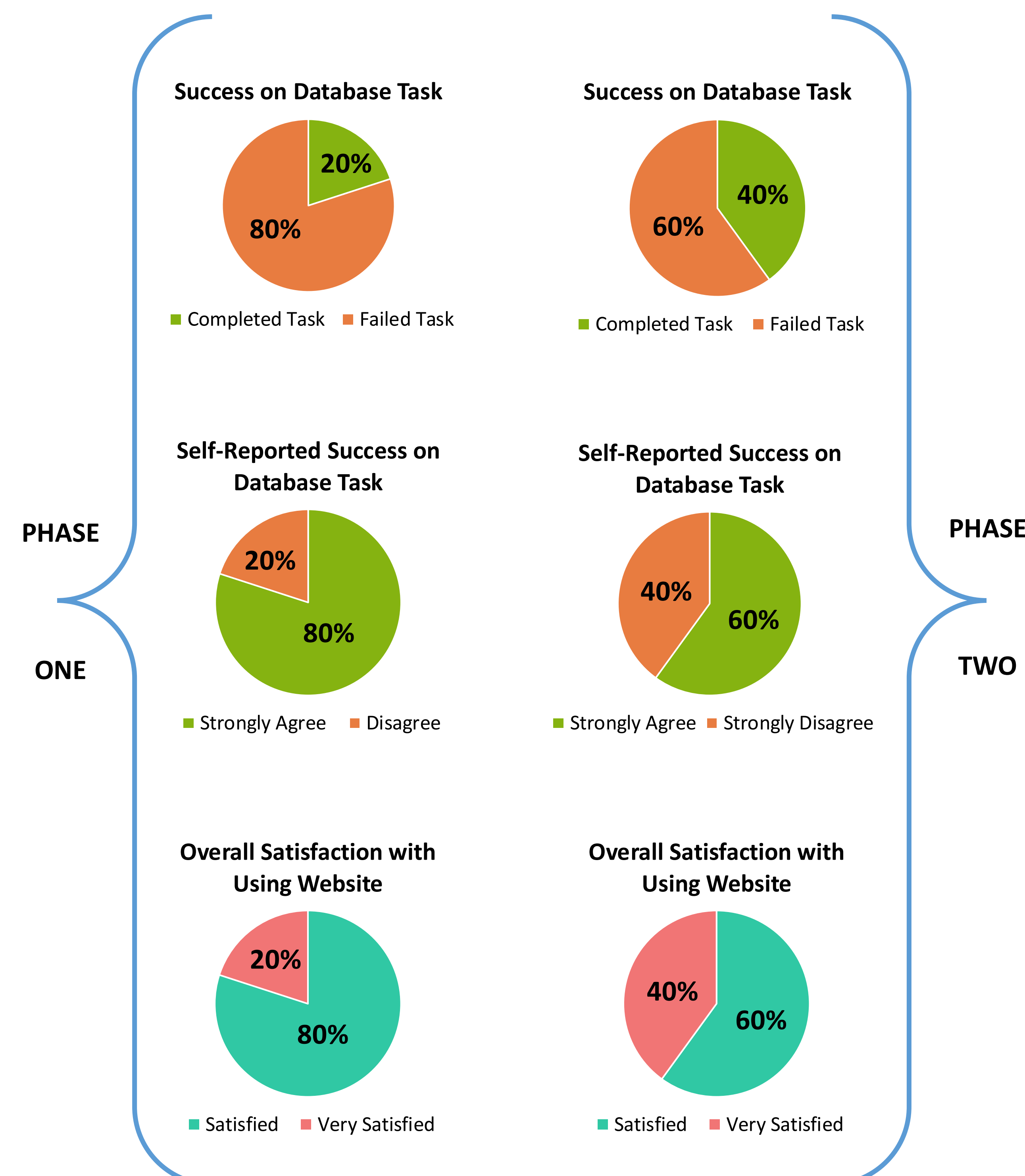
#### Task Scenarios

Five participants were read a script describing the activity and were also given a pre-test questionnaire to evaluate their existing use of and familiarity with the website. Following this, they were presented with a series of randomized tasks to complete on the website, during which a facilitator and note-taker observed and collected think aloud data. This method allowed us to better understand user behaviours and how users interact with the website (**Goal 1**). Each scenario was coupled with a post-task questionnaire, as well as a post-test questionnaire at the end of the session to rate overall satisfaction with the activity.



#### Task Scenarios

Quantitative measures for our task scenarios included rates of success, number of errors made, and total time per task. These were then compared against participants' self-ratings in the post-task and post-test questionnaires.



#### Card Sorting

The card sorting activity followed the same initial process as the task scenarios: students were read a facilitator's script and then asked to complete a website experience pre-test questionnaire. For the main activity, fifteen students completed a closed card sort activity to organize 30-35 randomized index cards into six predefined categories from our website's navigation menu. This would allow us to test the existing information architecture of our website (**Goal 2**). Once complete, facilitators hosted post-test discussions with users to discuss their experience with the activity and any points of confusion or hardship.



#### Card Sorting

Results from each card sort were compiled into a standardization grid highlighting areas of high, medium, and low agreement by participants. Problematic cards identified in Phase 1 were then relocated on the website and compared for improvements in Phase 2 of testing.

#### PHASE ONE:

Page	Research	Services	Visit	Ask	About	My Account
Articles and databases	87%		12%			
Ask a librarian chat	12%	12%		87%		
Assignment calculator	7%	33%	13			33%
Book a research appointment	12%	46%	7%	28%		28%
Books, ebooks, journals, etc.	46%	28%	28%		7%	
Borrow - ICD	28%	67%	28%	12%	7%	12%
Borrow - ILL/RACER	28%	67%	28%	12%	28%	12%
Borrowing and renewing		12%	7%	12%	28%	46%
Citation management	7%		28%			
Copy, print, scan						
Course reserves	7%	47%	28%		18%	28%
Group study rooms		66%	33%	7%		28%
Hours of operation			52%		52%	
How to cite	67%	7%	7%	27%		
Information & ref desk		27%	27%	33%	33%	
Library librarian program	7%	52%			28%	
Makerspace		33%	27%		33%	
Old exams repository		67%	12%			
Peer review & Ulrich's	86%			12%		
Policies and guidelines			7%		100%	
Renew and pay fines		37%		7%		66%
Report noise		33%	12%	33%	7%	
Research guides	100%					
Research help	47%	28%		23%		
Review my account		7%				100%
Suggest a book, film, etc.	7%	46%	7%	7%	7%	27%
Technology lending	7%	87%		12%		87%
UTSC						
WiFi and computers		66%	12%	7%		

#### PHASE TWO:

Page	Research	Services	Visit	Ask	About	My Account
Articles and databases	82%		9%			
Ask a librarian chat	9%	27%		64%		
Assignment calculator	33%					36%
Book a research appointment	58%	27%	9%	9%		18%
Books, ebooks, journals, etc.	64%		18%			
Borrow - ICD	18%	58%	9%	9%		
Borrow - ILL/RACER	18%	48%	9%	9%		
Borrowing and renewing		27%		18%	48%	
Citation management	58%			9%		
Copy, print, scan		58%	18%	9%	9%	
Course reserves	27%	27%	9%			36%
Group study rooms		48%	27%			9%
Hours of operation			27%		27%	
How to cite	72%	9%	9%	27%		
Information & ref desk	9%	9%	27%	36%	18%	
Library librarian program	18%	27%		9%	18%	
Makerspace		36%	48%		9%	9%
Old exams repository	9%	64%				
Peer review & Ulrich's	82%			18%		
Policies and guidelines			9%		91%	
Renew and pay fines		9%				82%
Report noise		9%	9%	18%	9%	37%
Research guides	91%					
Research help	48%	27%		27%		
Review my account						91%
Suggest a book, film, etc.		18%	9%	18%	9%	27%
Technology lending		48%		9%		36%
UTSC						36%
WiFi and computers		27%	27%	9%	18%	

\*Note: Phase 2 of card sorting is still in-progress, therefore the data represented here are incomplete (n=11).

### CONCLUSION

Both phases of UX testing were successful individually, however we also wanted to determine whether changes made as a result of Phase 1 were effective (**Goal 3**).

#### Task Scenarios

Results were mixed, indicating that some task performances improved (e.g. locate a database, identify the old exams repository) while others declined (e.g. locate a scholarly journal, find article full-text).

#### Card Sorting

Overall we found that the majority of pages moved as a result of Phase 1 were successful changes; others, such as the Information & Reference Desk and WiFi and computers pages, show positive trends.

#### Key Takeaways:

- Set clear success criteria and pilot test all materials
- Aim for less experienced users during recruitment
- Consider timing of the testing (avoid exams!!)
- Library jargon may contribute to difficulties
- Prioritize what to test and what to change

### RESOURCES

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