

CS449/649: Human-Computer Interaction

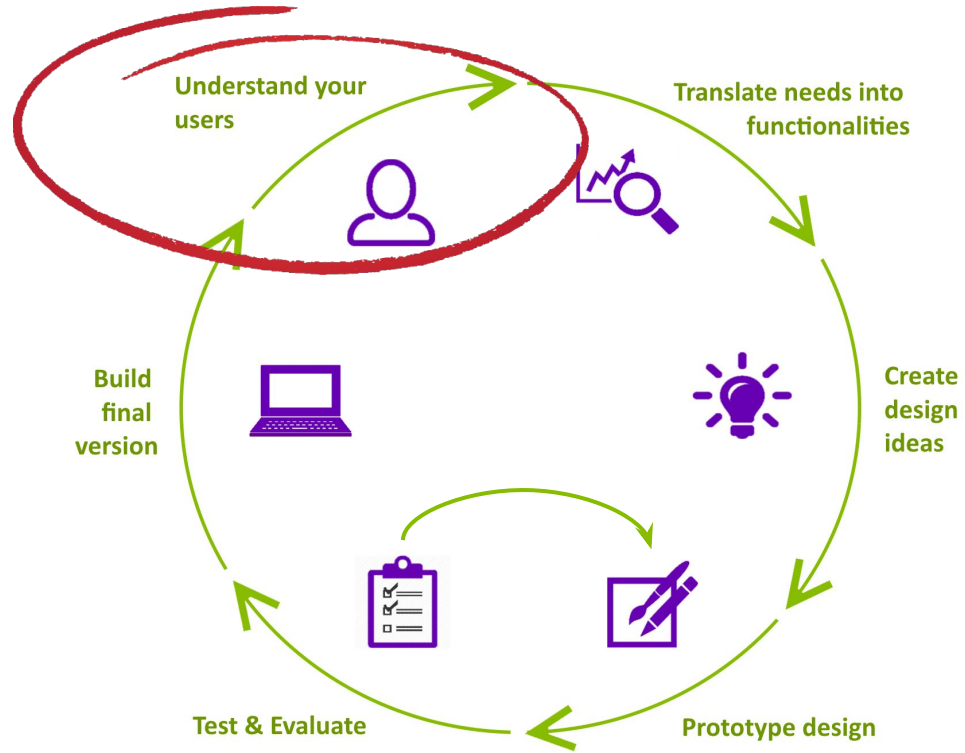
Spring 2019

Course website:

<https://www.student.cs.uwaterloo.ca/~cs449/s19/>

Lecture III

Anastasia Kuzminykh and Edward Lank





Your Users

Participants



Your Users

Representation of
user groups

Diverse but
generalisable

Participants

Balanced around
key differences

How many?



Your Users

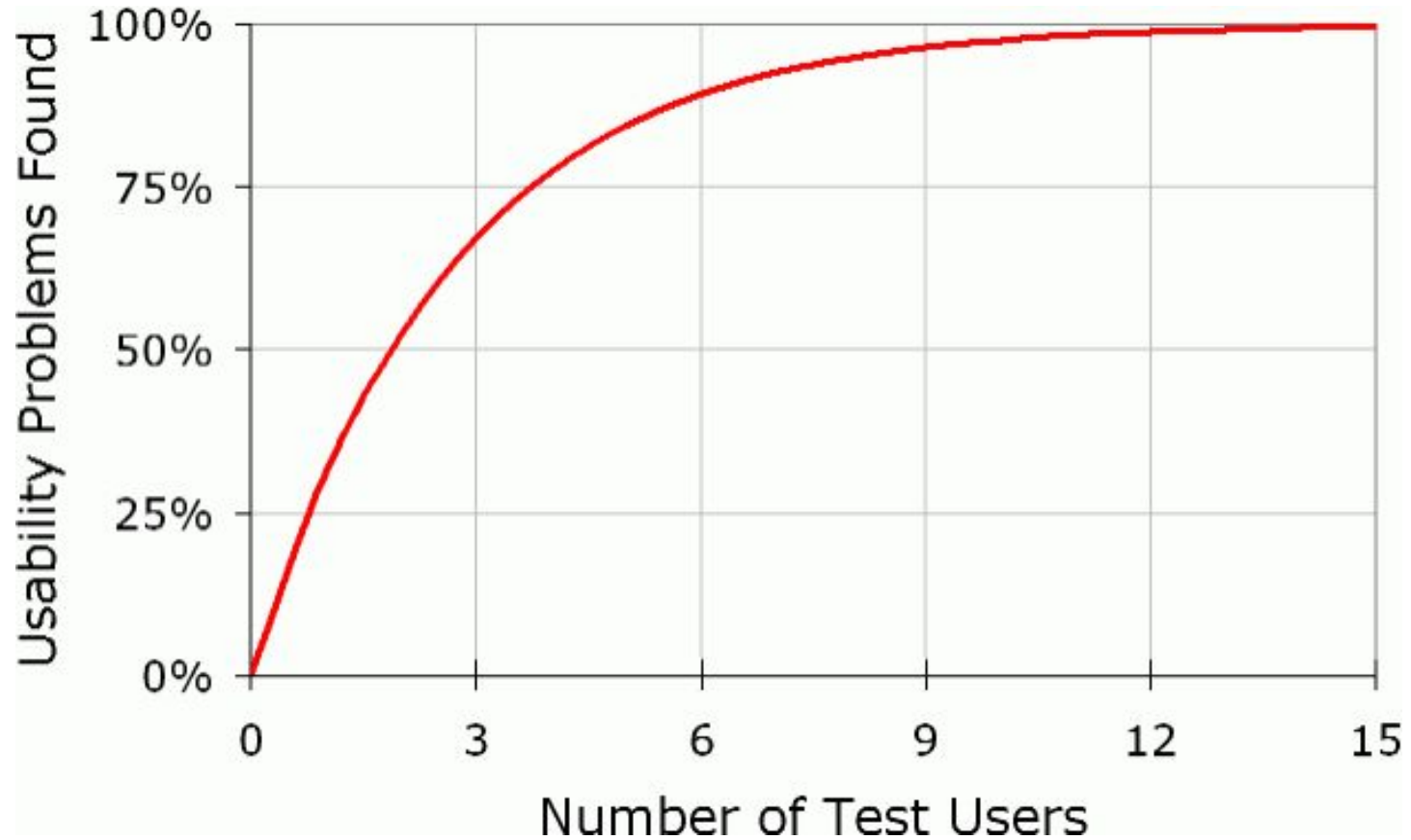
Participants

Why You Only Need to Test with 5 Users

by Jakob Nielsen

$$N (1-(1- L) ^ n)$$

Where **n** is a number of users, **N** is the total number of usability problems, **L** is the proportion of usability problems discovered while testing a single user. The typical value of **L** is 31%



[Why You Only Need to Test with 5 Users](#) by [Jakob Nielsen](#)



Your Users

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Diverse but
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How many?

For this course 3-5 participants



Your Users

Ethics



Your Users

Ethics

Why would the university have ethics requirements for a course?

Always respect participants!

Including their:

- Time
- Attitude and environment
- Desire for privacy

University has a formal process for Ethics.

They consider:

- **Recruitment**
- **Voluntary participation**
- **Confidentiality and anonymity**
- **Risks/benefits**
- **Fully informed consent**

Process and protections ensure study is done correctly with proper forethought



Your Users

Ethics

Principles:

- Respect for human dignity
- Respect for free and informed consent
- Respect for vulnerable persons
- Respect for privacy and confidentiality
- Respect for justice and inclusiveness
- Balancing harms and benefits
- Minimizing harm
- Maximizing benefits

Research Ethics Board (REB) at Waterloo can:

- Approve, reject, propose changes, or terminate any work with human subjects by members of the university. **This includes you.**
- REB consists of five members (both men and women)
 - One member knowledgeable in ethics
 - Two members have expertise in fields covered by REB
 - One member knowledgeable in biomedical law
 - One member from outside university

Goal is breadth – want a balanced perspective on projects being examined



Your Users

Ethics

Informed Consent:

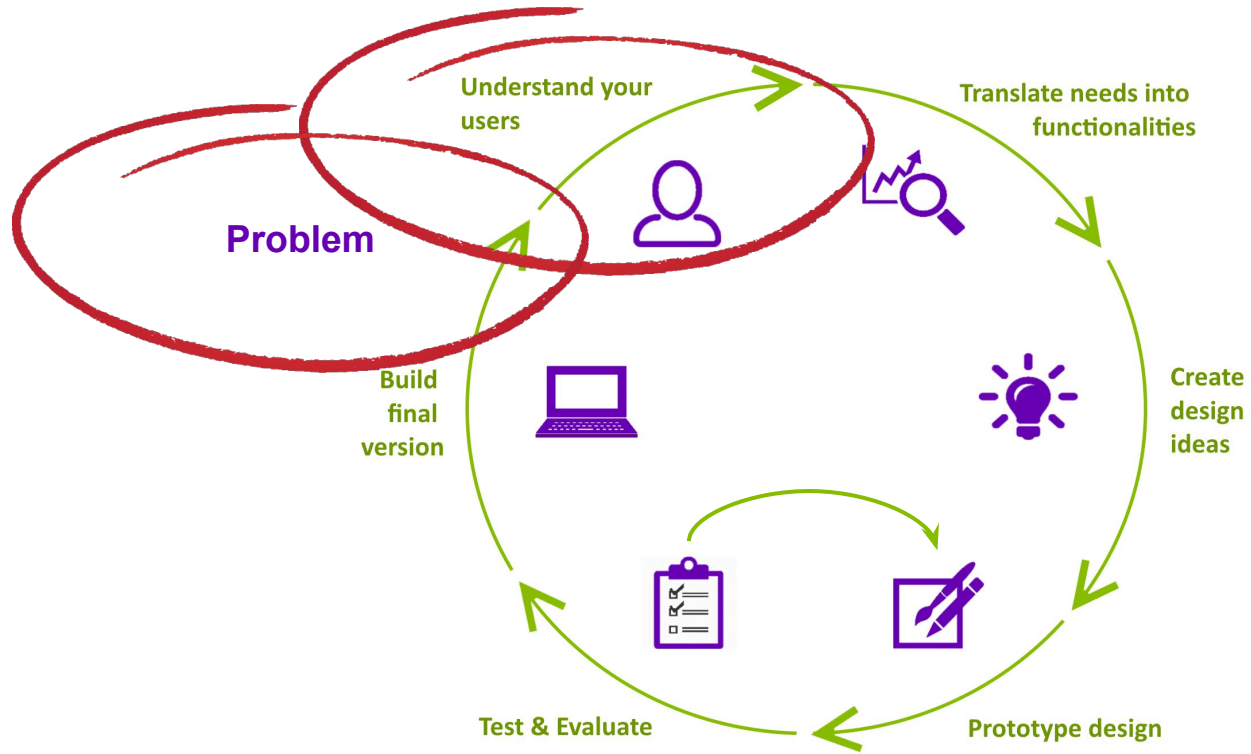
- Full Disclosure
- Comprehension
- Voluntariness
- Competence
- Agreement

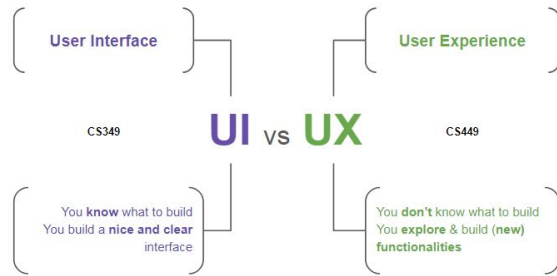
Voluntariness:

- Subjects can refuse to answer and can stop participating at any time
- If they say they don't want to participate, their involvement is done
- Never, ever push subjects for information they cannot or do not want to disclose

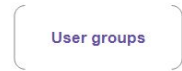
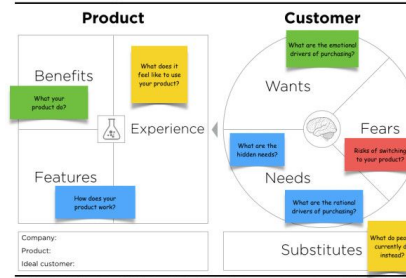
Partial consent:

- They can consent to all or part of process
- Consider consent forms
- Make them aware of selective exclusion





Value Proposition Canvas



Set of characteristics
Based on statistics
General



Demographics:

- Age & Gender
- Country & Language
- Education
- Occupation
- Residence
- Income
- Family status
- Size of a family
- ...

Other Characteristics:

- Means of transportation
- Music preferences
- Hobbies
- Food preferences
- Device preferences
- Fashion & clothing style
- Haircuts
- Sport preferences
- ...



Bill

- 52 Years Old
- University Professor of English
- Lives in Bradley Marine
- Married 28 years
- 2 Children (One in college)
- His son, Jeremy is 26 years old and has Down syndrome.

Bill and his wife both work full time. They each make 5 figure incomes that allow them to travel during the holidays with his wife and two kids.

"I need to find the information fast. I have classes to teach."

"The internet is a tool to help find experiences that enrich my life as well as my kid."

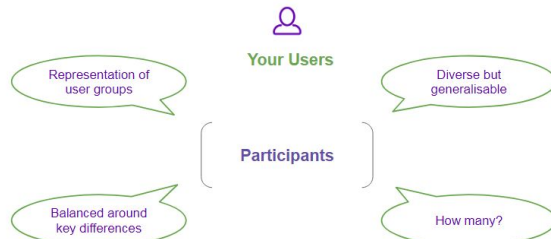
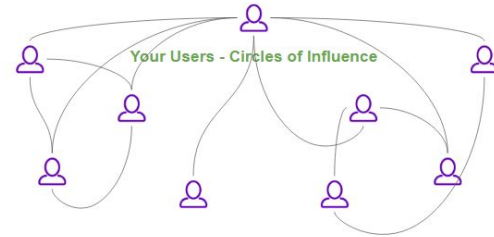
Typical Web Tasks

- Checks email
- Plans holiday trips
- Looks for local events and ways to help Jeremy.

Bill uses the web for work and home. He checks his email and administers online classes. He also looks for events and places that the whole family could visit. He is impatient with the internet because his back gets sore if he sits at the computer too long.

Bill feels fine though he has high blood pressure. He eats healthy and tries to exercise at least two or three times a week.

He uses glasses when he reads and surfs the web. He hates sites with small print because they make him feel old.



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