Module 9: Planning your usability testing

HTTP5221: Security & Usability

1

HTTP5221 Schedule

| Week	Topic	Activity	Assigned	Due
9	Introduction: Definitions, Heuristics		Group assignment	
10	Planning and preparing Usability Testing	Lab I	Report	Group assignment
11	Collecting data - Conducting Usability Testing	Lab II		
12	Usability Test Analysis and Reporting	Lab III		Report check-in
13	Accessibility: The DOM and assistive devices	Quiz I		
14	Content & Inputs	Quiz II		
15	Presentations	Presentation		Report

2

Today's concepts

1. What is **The Final Report? 2 Parts**
2. What goes into a test plan
3. Component of the Week: Links

3

Usability testing
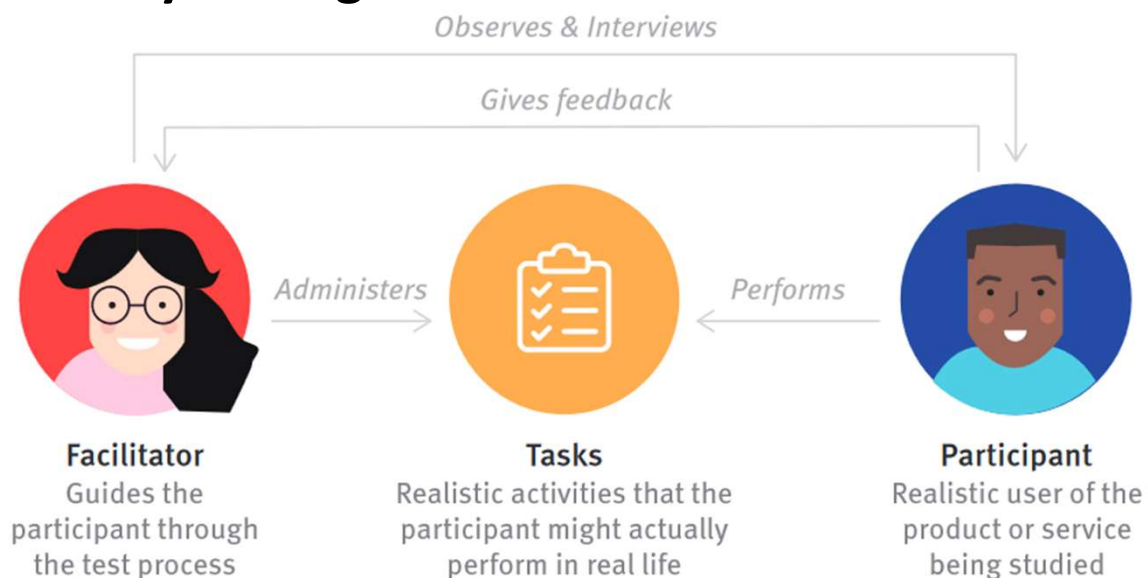
4

The Report:

Part I : Report I is _your plan for usability testing_.

Due Week 12

Part II : Report and presentation. Run a usability test with real users, and report on your findings.

Due Week 15

Two examples:
   Pet Project (for Sean
   Passion Project (for Christine).

You will **gain insights into your own assumptions** about the user.

5

here's the plan

Usability Report: Part I

a.k.a a The test plan

6

The Brief: Scope

- You will **test 5 people**; either 5 classmates or 5 people outside the class, **not a mix of the two**
- Participants must **only** use a keyboard (no mouse).

7

What goes into a test plan?

The goal of a test plan is to **convince people it's a good plan**

I LOVE THIS PLAN! I'M EXCITED TO BE A PART OF IT!
LET'S DO IT!!!

8

Everything that you write in your test plan needs to have the 'why' explained.

9

Table of Contents

Test plan at Usability.gov

https://www.usability.gov/how-to-and-tools/resources/templates/usability-test-plan-template.html

10

Here are the things you need in your test plan.

11

But first… what is a good report?

12

A "good" report has the 3 A's

1. Attention grabbing
2. Actionable
3. Audience

13

1. Attention-grabbing

Images, tables, videos, audio clips
Direct quotes from participants
Interactive content

14

2. Actionable

- Reader should have clear understanding of what actions they need to take based on the **insights**.
- Example: "users are unhappy" is not an actionable insight
  - Rewrite as : "Users are unhappy with the information architecture of our website; they're struggling to find the support pages."

- Recommendations to improve the application
- Next steps to resolve any issues with the application
- Insights to any unanswered questions

15

3. Audience

- Tailor your report to your audience's communication style and interest so they remember your findings
- Ask yourself
  - **Who is your audience?**
  - **What kind of information do they care about?**

16

The Report: Basic Structure

1. **Objective/Scope/Questions**: what are you going to accomplish? What are you NOT going to accomplish? What are you trying to find out in order to accomplish your objective?
2. **Participants**: who is going to take the test (and why have you selected them)?
3. **Methods**: how are you going to generate data to answer your questions?
4. **Metrics**: how are you going to measure your data?

17

A step beyond the basics

1. **Executive summary**: the whole plan, summarized in a couple paragraphs.
2. **Schedule and location**
3. **Equipment**
4. **Scenarios**

Here is Steve Krug doing a usability test in a video on YouTube. This will give you context for the plan that you are creating.

18

1. Objective

19

Objective/Scope

Test a set of features,
Test for a set of issues.
Define **what these are** and **why you're investigating** them.

20

Start with a question….

- Can users navigate the mobile version of my application?
- How quickly can users find information on my website?
- Do users notice the important elements of my website?
- Can users complete a task in my software interface?
- Can users find important pages on my website?
- Can users complete a purchase on my e-commerce store?

21

Questions

Can users find *X*?

Does *A* work better than *B*?

Do users learn the interface in under *Y* amount of time?

You need to explain what questions you're trying to answer, and **why they matter**.

22

Objectives must be specific

To formulate test objectives, try thinking about:
- Any aspects of the site/application that are of concern.
- Tasks that you think might be difficult.
- Groups of users you are worried about.
- Feedback from users: emails, phone calls, requests for help.
- Concerns of your client/management.

23

Test Tasks → Task Scenarios

24

What are the most important things that every user must be able to accomplish on your application?

25

How to write usability testing questions and tasks

- **Create tasks that address your goals**
    - *What do you want your users to do?*
    - *What do they usually look for on your website?*

26

3/14/2024

Test Tasks

Short, one-sentence descriptions of an activity that real users will carry out

Example:
- Book a train ticket for solo trip during spring break
- Rent a car for the weekend with your family
- Find a holiday apartment for a family reunion

These are not test tasks:
- Look at the home page and see if you like the design.
- Browse the web site to see if there's anything interesting.
- Decide if this app belongs to a brand you want to be associated with.

27

Write Tasks that Match the Goals of the Study

1. Exploratory tasks: open-ended tasks.
- Example: *You are interested in booking a vacation for your family. See if the site offers anything that you might suit your needs.*

2. Specific tasks: focused and have a correct answer or end point.
- Example: *Find the Saturday opening hours for the Toronto public library.*

28

3 task-writing tips will improve the outcome of your usability studies

1. Replicate real life scenarios
2. Make the Task Actionable
3. Don't give away the answer

29

1. Replicate real life scenarios

User goal	Browse product offerings and purchase an item
Task:	"Buy a digital camera"
Scenario:	"You are looking to purchase a new digital camera. Find the one you like best, then complete the purchase"

30

"You are looking to purchase a new digital camera, Find the one you like and make the purchase"

Analyzing the results of this task will lead to the following insights:

- How many people have successfully bought a new camera?
- How long did it take them to make a purchase?
- What was the buyer's journey?
- Did they face any difficulties when trying to make a purchase?

31

2 Make the Task Actionable

Ask the users to do the action

User goal: Find movie and show times.

Poor task: *You want to see a movie Sunday afternoon. Go to www.fandango.com and tell me where you'd click next.*

Better task: *Use www.fandago.com to find a movie you'd be interested in seeing on Sunday afternoon.*

32

3. Don't give away the answer
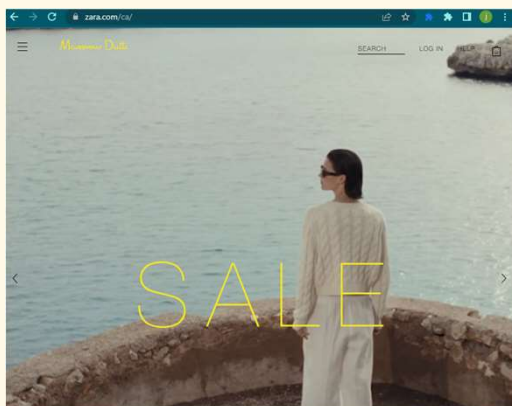
| Goal	To test whether users can find the contact form
Expectation	User clicks "Contact us"
Bad task	"Find a way to contact us"
Good task	"You have a question about our pricing for your company. Find a way to get more information

33

Usability testing example: Zara

Test tasks:

- It's been cold lately and you're looking for a winter coat. What do you do?

- You see a coat you might like. Can you walk me through how you would decide whether this is a coat for you?

- You added the coat to your cart, but you realize the size is wrong. How do you fix that?

Soure: https://uxdesign.cc/zara-a-usability-case-study-981b7ca93db8

34

Usability testing task example #2: Quora
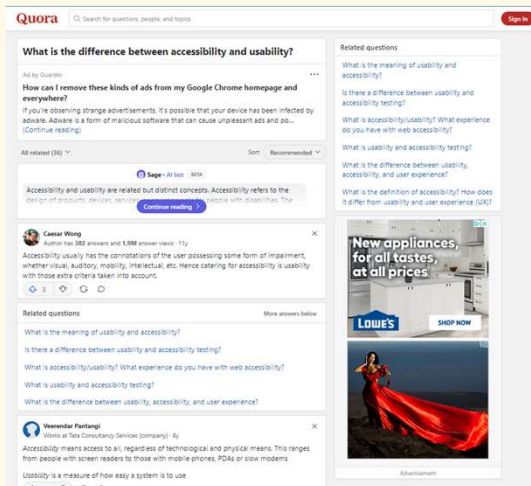
Task Scenarios:

- *"You're just starting out investing in stocks. But you are confused about what stocks are suitable for beginners. Then you decide to ask questions on Quora. Show us how you can ask a question on Quora."*
- *"You are an article writer. To fill your spare time, you would like to share a link that you have written on Quora. How do you share a link in Quora?"*
- *You're reading a post on Quora, and then you come across an answer that is so smart and interesting that you decide to support the answer. Show us how you do it.*

Source:

https://bootcamp.uxdesign.cc/quora-usability-testing-ux-case-study-f3468fd46c1f

35

Write 3 task scenarios for your application

5 minutes

36

2. Participants

37

Participants: Some magic numbers

- Who is your target audience?
- What are the demographics?
- How many people are you testing?

38

Target : Recruit the Right Participants

- Insights are derived from gathering feedback from real users
- Identify people who match your demographics
- How many participants do you need for a qualitative test?

39

How many participants do you need for a qualitative test?

- 4- 5 participants of a target user profile will expose the majority of usability issues (Rubin & Chisnell, 2011, p. 126).

- Jakob Nielsen reports the **ROI thresholds** in different usability testing methods:

Quantitative	>20
Card sorting	>15
Eyetracking	39
Heuristics	4 experts
Qualitative	**5**

40

Demographics : determining a target user profile

- Name
- Gender
- Age
- Address
- Technology level
- Hobbies
- etc

41

Participants: Communicating clearly

42

3 facilitation techniques

1. **Echo**
2. **Boomerang**
3. **Columbo**

https://www.nngroup.com/articles/talking-to-users/

43

3 facilitation techniques : Echo

Repeat the last phrase or word the user said, while using a slight interrogatory tone

User: This table is weird, well, hmmm, not sure what, uh…
Facilitator: Not sure what?
Or
Facilitator: Table is weird?

https://www.nngroup.com/articles/talking-to-users/

44

3 facilitation techniques : Boomerang

• a **generic, nonthreatening question so that participant answers back**

User: Do I have to register to buy this?
Facilitator: What do you think?
Or
Facilitator: What would you do if you were at home now?
Or
Facilitator: What would you do if you were really doing this on your own?

https://www.nngroup.com/articles/talking-to-users/

45

3 facilitation techniques : Columbo

• **be smart but don't act that way.**

• Say **fewer words means less likely to teach or sway the user.**

- **User:** If I close here will I lose my work?
- **Facilitator:** Uhm, you are wondering if [pause] you might [pause.]
- **User:** I am just not really sure if I should pick "close" or "cancel" or "ok." I guess I don't know the difference between these buttons.

46

Communicating with participant: "Things a therapist would say"

When this happens:	Say this:
You're not absolutely sure you know what the participant is thinking.	"What are you thinking?" "What are you looking at?" "What are you doing now?"
Something happens that seems to surprise them. For instance, they click on a link and say "Oh" or "Hmmm" when the new page appears.	"Is that what you expected to happen?"
The participant is trying to get you to give him a clue. ("Should I use the _____?")	"What would you do if you were at home?" (Wait for answer.) "Then why don't you go ahead and try that?" "What would you do if I wasn't here?" "I'd like you to do whatever you'd normally do."

Steve Krug https://sensible.com/downloads/things-a-therapist-would-say.pdf

- Be sure to **maintain neutrality** when communicating with users.

47

Participants : Summary

- Recruit realistic participants who would perform the tasks in real life
- 5 participants for qualitative testing
- Avoid influencing participants during testing
- Ask open-ended, neutral questions

48

Really good results from a couple terms ago

- A web-based game prototype using JavaScript
- Purpose was to move a rat through a randomized maze. The faster you complete the maze, the higher your score.
- Tested with parents and aunt and performed fairly well
  - Took some time to get used to the controls (the arrow keys).

49

Really good results from a couple terms ago

- 2 other participants were not able to make it so she got her children, aged 7 & 9, to play the game.
  - Scored much higher scores than the adults by "button smashing" - hitting lots of keys very quickly.
- A questionnaire was given asking the participants how they liked the game, whether it behaved as they expected, and what, if anything, they'd like to see improved.

50

The "takeaways" included:

Older users would benefit from an optional "tutorial" level, to get used to the controls faster.

Younger users expected to be able to use key combinations (like ⬆️ ➡️ to move diagonally)

Button smashing would slow down game performance due to unoptimized code.

51

What made this test & report so successful was the following:

- She started with a well-defined plan.
- She adapted the plan to her situation.
- She used a test script...
- ...but also had open-ended conversations to better understand what her users expected and wanted.
- She was humble about the ways her application could be improved.

52

To summarize:

- In Week 12, you'll submit a written plan for testing some feature, or set of features – your pet project.
- You can test 5 people, preferably non-classmates while they use a keyboard (no mouse).
- The goal of the plan is to convince people that the plan will find out stuff that will make things better for users.
- You've got a lot of options for how to write your test plan, but this would be a good structure:

53

The Brief: Structure

- **Executive Summary**: here's a <u>summary</u> of everything in the plan
- **Objective**: this is why we're testing
- **Scope**: this is what we're testing and what we're not testing, both in terms of website features, and in terms of the data we're generating
- **Scenario**: the goal a user would have when using the feature
- **Methods**: we'll read to the user from the script (attached), asking them to complete the scenario, then record their task.
- **Metrics**: critical error rate, non-critical error rate, time on task.
- **Equipment**: what operating system and browser are each of the individual participants using during the test?

54

Minimize bias by using a script

- A key reason we write our test plan is for transparency. We need to make our work **reviewable** so that our **unconscious biases can be recognized**. The more we can script, the better.
- Steve Krug is one of the big names in usability, and he has given us a wonderful sample script to work from. Let's take a look Steve Krug's sample script.

https://a11ycourse.ca/supplemental/test-script.html

55

Component of the Week: Links

56

Component of the Week: Links

```
<a href="the internet">You're welcome.</a>
```

57

Link should not be URL

```
<a href="guesswhat.co.uk">
https://www.guesswhat.co.uk/I/sound/super/
annoying.php?so=don-t&do=this&to=your&user=ok</a>
```

58

Link text can be a full sentence, but avoid any longer

```
<a href="guesswhat.co.uk">
You know what? Large volumes of text inside
links are also not a great idea. We can't put long,
rambling text in our links like we used to,
but we have our ways. One trick is to tell 'em stories
that don't go anywhere - like the time I caught the
ferry over to Shelbyville. I needed a new heel for my
shoe, so, I decided to go to Morganville, which is
what they called Shelbyville in those days. So I tied
an onion to my belt, which was the style at the time.
Now, to take the ferry cost a nickel, and in those
days, nickels had pictures of bumblebees on 'em. Give
me five bees for a quarter, you'd say. Now where were
we? Oh yeah: the important thing was I had an onion on
my belt, which was the style at the time. They didn't
have white onions because of the war. The only thing
you could get was those big yellow ones...</a>
```

59

Avoid link text like "Read more" or "Click here" or "More"

```
<a href="/somewhere-else">Read more</a>
```

60

Avoid being redundant for link text:

```
<a href="https://en.wikipedia.org/wiki/Redundancy">
Link to Read More about Redundancy</a>
```

61

Avoid link opening in a new window or tab without warning

```
<a
href="https://en.wikipedia.org/wiki/Tab_(interface)"
target="_blank">Read about Tabs on Wikipedia
<span style="font-size: 0"> Opens in a new tab</span>
</a>
```

62

Underline your links

```
Links are usually in a <a href="https:/differntcolor.co/"
style="color:■#007FA3; font-weight: bold; text-decoration: underline;
">different color</a> but also should be underlined.
```

Links are usually in a **different color** but also should be underlined.

63

Links be used for their intended use – not as a button

```
// There is a temptation to use links as buttons.
// That's bad, because the user is told it's a link.
<a onclick="tooLazyToStyleAButton()">
Why can't buttons be buttons?</a>
```

64

Avoid images as links

```
// But I want my image to be linked!
<a href="/image-destination">
    <img src="this-totally-works.jpg"
        alt="The user will be read the alt text
        as the link text!" />
</a>
```

65

Emulating links

Other elements such as <div> or <span> or JS click listeners can also serve as links

These links need to be treated with care.

Add role = "link" – assistive technologies will recognize it as a link

Add tabindex="0" – keyboard focusable

Add styling cursor: point so that mouse users will recognize as a link.

```
<span role="link" tabindex="0" style="cursor:pointer;text-
decoration:underline;color:blue;">This is an emulated link</span>
```

66

Module 9 Usability Lab 1

Fill out usability plan dashboard and provide screenshots of your application (Pet project from JavaScript class)

Due: End of class

Submit to BlackBoard the following:
Usability dashboard
Objectives
3-5 Task Scenarios
5 participant overviews

Reference files:
Overview of the The Brief : HTTP5211_handout_The Brief_An Overview.pdf
Usability dashboard : handout_usabilitydashboard.doc
Usability.gov – the standard for usability testing report format: usability-test-plan-EXAMPLE.doc

67

68

Resources

Steve Krug –

usability scripts : website, mobile app (PDF)

"Things a therapist would say" (PDF)

Instructions for Observers (PDF)

https://sensible.com/download-files/

69

Next week: Collecting data and conducting usability testing

70