CS5340

Assignment 5

Preliminary Usability Test Plan

Scope and Purpose of Tests

- Three simple tests will be conducted for this preliminary usability test. The purpose of which is to gauge the usability of the new software design and the user experience.

Performance Objectives

- Subjects should be able to complete the three tasks, without any instruction from the staff
- Usability and findability of features are going to be our first priorities for testing performance. The reason for this is because they are far easier to measure based on clocks and performance counters and can inform design decisions down the line as our product develops.
- # of clicks/actions to complete task
- Note any inefficiencies/trouble completing tasks

Participants

- There will be 4 - 6 participants for the initial round of testing. The participants will be recruited from Northeastern University's Silicon Valley campus. The participants will be among the people who use email service on a regular basis. To help increase the diversity of the participants at least one participant will be of an opposite gender and at least one will be a staff member, not a student.
- Roles are :
    1. 1 person will act as a moderator, this person will be responsible for keeping everyone within the scope of the study while making the experience realistic by allowing them to drive
    2. 1 person will be the usability specialist, is responsible for the overall test
    3. 1 person will be the note-taker, will be recording the participant's behavior, reactions, and responses, and coding the worksheet.
    4. 1 person acts as the camera operator

Scenarios

- Subjects will be asked to create a new email account
    - Measuring performance metrics for creation of a new account is crucial to the success of our product.
    - It will usually be the first interaction that a potential customer will have with our product and we want to optimize it to be a fast and efficient process to sign up for a new account and log-in.
- Set up an auto-archiving instruction

    - Auto-archiving email will be a prominent feature of our product and thus should be fairly intuitive to use for users of EasyEmail
    - Our goal for this test will mainly focus on findability, because as our prototype stands now, auto-archiving is only accessible through a right-click menu. Based on how users interact with it, we may need to make it more obvious or clear to use.
- Compose and send an email
    - This is the most basic functionality of an email service and so composing and sending email should be easy, obvious and straightforward.
    - The time it takes to get to the 'compose' screen and to send the email will be measured to make sure there aren't any glaring mistakes in the implementation of this feature

Specific Tests and Documentation

Test 1: Create a new email account

- User starts at the website login page and their goal will be to create an account and log into it.

Test 2: Set up an auto-archiving instruction

- User starts at their inbox page (which is where they should be immediately after logging in)
- Their goal is to set up auto-archiving of email from any one of the email-addresses in their inbox to a custom folder.

Test 3: Compose and send an email

- This basic functionality test will begin from the inbox view
- The user's goal is to compose an email, and send it to a specified email address successfully

For documentation, the user's interaction with the prototype for EACH test will be recorded via video, so that measurements like # of clicks or time frame can be accurately measured as opposed to trying to measure them in real time.

- It would be important to protect our users' privacy, so we will record as little of the person as possible, and focus the video on the prototype, and maybe just the user's hands if it is a paper prototype where that would be unavoidable.
- Also important, once the data is extracted from the video, the participants have the option to have the video permanently deleted to protect test subject privacy.

In addition to measurements of performance of our prototype, we will also give a survey to our participants to get any feedback of likes and dislikes of their user experience. The survey will also include specific questions regarding the three tests listed above.

Equipment and Physical Conditions

- The testing will take place at Northeastern University's Silicon Valley campus. The subjects will be using a paper model to enact the tests
- The user will sit at a desk and use the paper prototype, with the moderaterator sitting next to them.
- A camera will be set up so that it records the paper prototype being used so we can go back and collect measurable quantitative data of the user using the prototype.

Staff roles during testing

For each testing session, we plan to keep 4 people serving as the moderator, the detailed notes taker, and the camera operator. If possible each staff member will switch roles for each test subject. The decision to rotate roles is to serve the different types of people that could ask different types of questions and we could obtain a non-bias and a well rounded result.

Before we begin the usability test, the moderator will give an introduction about our project to the subject and the purpose of the prototype testing. The moderator will give out the consent forms and request the user consent. During the testing phase, each participant will be encouraged to think out loud and detailed notes will be collected by a staff member.

Test Metrics

The tests would be evaluated based on certain qualitative and quantitative metrics which would be calculated using questionnaires, post test interviews, reviews, etc. Some of the metrics that we plan to gather include:

Qualitative Metrics

1. Observations about how different subjects interacted with the system
2. Subject's comments and recommendation
3. What worked, what didn't work & problems experienced.
4. Questionnaire results.

Quantitative Metrics

1. Task Time
2. Completion rate
3. Number of Errors
4. Success rate - number of tasks the user was able to complete successfully

The combination of this qualitative and quantitative data would be compiled & analysed to develop a final conclusion

Analysis Plan

Observation notes

- Code errors, note any tasks that were not complete, document any parts that were confusing or not easy to understand by the subject
- Organize issues by type and frequency

Video

- Note the observed time for each subject and task
- Make sheet with task and issue times for each task

With the metrics collected from the test, analysis would become simple.
The next steps would be :

1. Meetup with the note takers and discuss how they each rated certain qualitative metrics differently. Also discuss, if any metrics were rated differently and why and then select which metrics fits the observation
2. We would then create a table where we would enter a breakdown of the ratings. We would take into account the subjects having mismatched behaviour. With the notes from the observer, we would highlight if the subject rated the task as easy but was struggling to perform that same task, etc.
3. We would calculate each task's overall score and percentage.
4. We would then decide upon an overall rating of the performance on a scale of Great, Good, Acceptable, Poor, Very Poor, to get a very high level view of how the design performed.

Example table

Participants	**Observed success**	**Perceived success**	**Ease of use**
p1	Confident	Struggled	3
p2	Struggled	Struggled	2
Overall	**50% confident** **50% struggled**	**100% struggled**	**Avg - 2.5**

Overall Performance - **Poor**

Pilot Usability Test Study Plan

1. The testing session:

We plan to conduct the Pilot Usability Test Study among ourselves at Northeastern's campus. We plan to do four testing sessions, where in each one of us will serve as the subject in every turn while the other three will serve as a moderator, a note taker and a cameraman. Everyone of us use the email system on a daily basis, so we would be a good fit for the pilot test's subject.

Each session will be of 45 minutes. The test would include:

- Welcome from the moderator and signing the consent form (10 minutes)
- Task scenarios and post test questions asked by the moderator to the subject (25 minutes)
- Survey and Questionnaire filled by the subject. (10 minutes)

We plan to use the tasks defined in our usability test plan for conducting this pilot study in order to verify that the tasks that we have planned make sense.

2. We plan on getting the following information from our pilot testing sessions:

- The test session would help us confirm whether we were ready for conducting a full-scale usability test on our prototype.
- It would help us to better plan the allocation time assigned to the tasks.
- We plan to discuss on the notes taken by the different note takers and decide on a template to achieve the maximum output from the subjects during the test.

Supporting Documents

1. Consent Form
   https://docs.google.com/document/d/1el4Eki50Cdz_TKbLOcUYJCaWgCiizVpe7hBWNfwA17w/edit?usp=sharing
2. Test scripts
   https://docs.google.com/document/d/1WNSD_gvx-subsh5icaBCPIqozICs9SWwGXTjUAPwqfM/edit?usp=sharing
3. Test Results Worksheet
   https://docs.google.com/document/d/1J98KJiNEUVchENeS6NFX3ypHYL-5bSkssKVgfebb3_A/edit?usp=sharing
4. Post-testing Survey
   https://docs.google.com/document/d/1UO03hGIkB0PhGSi088E4D_-njY2jT9hS5tlThkPCh6M/edit?usp=sharing

References:

1. https://www.usability.gov
2. https://xtensio.com

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