

Krab Shack App

Test Plan



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Computer User Interface Usability Testing

You are being invited to participate in a research study to determine the usefulness and usability of computer user interfaces. This study is being conducted by Dr. Robert Pastel of Michigan Technological University Computer Science Department and students in Dr. Pastel's Human-Computer Interaction (HCI) courses. The students are performing the usability tests as part of their project and to fulfill the HCI course requirements.

There are no known risks if you decide to participate in this research study. There are no costs to you for participating in the study. The information you provide and tasks that you will perform will determine the usefulness and usability of user interfaces. The questionnaires and the tasks should take less than an hour to complete. The information collected may not benefit you directly, but the information learned in this study should provide more general benefits.

The questionnaires and test are anonymous. Do not write your name on the survey. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study except for the instructor of the class that is giving you credit for participating. Should the data be published, no individual information will be disclosed.

Your participation in this study is voluntary. By completing the questionnaires and performing the tasks, you are voluntarily agreeing to participate. You are free to decline to answer any particular question you do not wish to answer or not to perform a task for any reason.

If you have any questions about the study, please contact Dr. Robert Pastel, Assistant Professor, Computer Science Department, Michigan Technological University, Houghton, MI 49931.

The MTU Institutional Review Board has reviewed my request to conduct this project. If you have any concerns about your rights in this study, please contact Joanne Polzien of the MTU-IRB at 906-487-2902 or email jpolzien@mtu.edu.

Participant signature and date:

Signature

Date

Pretest questions:

1. How many years have you used a computer? _____
2. Please indicate your level of agreement to the follow statement:

I am very interest in the testing of this application.

1. Strongly agree
2. Agree
3. Neutral
4. Disagree
5. Strongly disagree

Test scenario name: Test scenario 1 – First impressions

Test set up details:

- Set up the computer to have the website open.
- Set up the webcam/voice recorder/screen capture software.

Test goals for the scenario: To determine if the interface is intuitive and assists in the main task.

Scenario description: Introduce the participant to the app’s purpose and interface.

Say this to the participant:

“First we want to explain the purpose of the app. We are trying to help scientists catalog citizen science data. For this particular project, we are transcribing pictures of specimen labels. Hundreds of ordinary citizens viewed pictures, and attempted to transcribe the hand written labels. You will play the part of the scientists. You will view the original images, and 4 possible transcriptions submitted by the citizens. Your job, as the scientist, will be to select the correct transcription from the 4 options, or add in your own, for each of the fields. There are almost 1,000 specimens that will need to be consolidated, so speed is our main objective for usability testing. For the first scenario, we would like you to log into the website, and consolidate one specimen catalog. We would also like you speak out loud everything you are doing and thinking so we can follow your train of thought. Speed is not an issue for this test scenario, so there is no need to rush. Do you have any questions? Ok great.”

Task list:

- Start audio/video recordings
- Participant logs in to the site
- Participant catalogs one specimen log.
- Stop recording audio/visual and label the files with subject ID and scenario name.
- Ask them follow up questions

Qualitative measurement list: Audio and visual recording of the initial interaction. Hotjar if possible.

Potential observations of participant: I think they might say something like “the picture was too big compared to the field section”.

Post scenario interview or questionnaire questions:

- How do you feel about the website so far?
- Was it easy to find everything?
- Did you understand how to manipulate the zoom function?
- Did you have any difficulty finding the “correct” responses from the suggestions?
- Could you easily tell which fields were selected by you, opposed to automatic selections?
- Did you like how the fields were organized and grouped?
- Can you think of any changes to the layout or design that would make the task easier/faster/more intuitive?

Test scenario name: Test scenario 2 – Speed test A

Test goals for the scenario: To determine a user’s average specimens per minute cataloging rate.

Test set up details:

- Keep the website up.

Scenario description: 5 minute speed test.

Say this to the participant:

“OK for this next scenario, we want to measure how fast the system allows the user to catalog specimens. We will start a 5 minute timer, and your job is to consolidate as many specimen logs as quickly and accurately as you can in the time allowed. You do not have to speak aloud. Any questions? OK good.”

Task list:

- Start recording audio/visual
- Start a 5 minute timer and yell “Go!”.
- Participant consolidates as many specimen logs as possible.
- Stop recording audio/visual and label the files with subject ID and scenario name.
- Ask them follow up questions

Quantitative measurement list:

- # of specimens cataloged during the time allowed.
- HotJar mouse action recordings.

Potential observations of participant: I think they might say something like “too much time pressure! I kept miss-clicking”.

Post scenario interview or questionnaire questions:

- How do you feel about the website now?
- Was it easy to find everything?
- What information did you use to make your selections?
- Did you have any difficulty finding the “correct” responses from the suggestions?
- How efficient was the zoom functionality?
- Did you ever get confused as to which fields were automatically filled vs your own selections?
- Did you like how the fields were organized and grouped?
- Was the confirmation notification annoying?
- Can you think of any changes to the layout or design that would make the task easier/faster/more intuitive?

Test scenario name: Test scenario 3 – Speed test B

Test goals for the scenario: To determine a user’s average specimens per minute cataloging rate on a different layout to compare with.

Test set up details:

- Open up layout B

Scenario description: 5 minute speed test (alternative 1).

Say this to the participant:

“OK for this next scenario, we want to measure how fast another system allows the user to catalog specimens to compare it with. We will start a 5 minute timer, and your job is to consolidate as many specimen logs as quickly and accurately as you can in the time allowed. You do not have to speak aloud. Any questions? OK good. ”

Task list:

- Start recording audio/visual
- Start a 5 minute timer and yell “Go!”.
- Participant consolidates as many specimen logs as possible.
- Stop recording audio/visual and label the files with subject ID and scenario name.
- Ask them follow up questions

Quantitative measurement list:

- # of specimens cataloged during the time allowed.
- HotJar mouse action recordings.

Potential observations of participant: I think they might say something like “this one was way worse...I like the other layout better”.

Post scenario interview or questionnaire questions:

- What were some things that you liked and disliked about this layout?
- Was it easier, the same, or worse than the original layout?
- Was it easier, the same, or harder to find the correct answers in this layout?
- Did you like the vertical orientation of the options less, the same, or more than the horizontal layout of the original website?
- Did you like how the fields were organized and grouped less, the same, or more than the layout of the original website?
- Can you think of any changes to the layout or design that would make the task easier/faster/more intuitive?
- Can you think of any keyboard hotkeys/shortcuts to make this even faster?

Test scenario name: Test scenario 4 – Speed test C

Test goals for the scenario: To determine a user’s average specimens per minute cataloging rate on a “control excel spreadsheet” layout to compare with.

Test set up details:

- Open up layout C

Scenario description: 5 minute speed test (alternative 2).

Say this to the participant:

“OK for this next scenario, we want to measure how fast this task would be in a simple excel spreadsheet. You will be doing the same task as the previous two tasks, only you’ll just be making your selections per field by highlighting that particular cell in excel. We will start a 5 minute timer, and your job is to consolidate as many specimen logs as quickly and accurately as you can in the time allowed. You do not have to speak aloud. Any questions? OK good.”

Task list:

- Start recording audio/visual
- Start a 5 minute timer and yell “Go!”.
- Participant consolidates as many specimen logs as possible.
- Stop recording audio/visual and label the files with subject ID and scenario name.
- Ask them follow up questions

Quantitative measurement list:

- # of specimens cataloged during the time allowed.
- HotJar mouse action recordings.

Potential observations of participant: I think they might say something like “this one was way worse...I like the other layout better”.

Post scenario interview or questionnaire questions:

- What were some things that you liked and disliked about this layout?
- Was it easier, the same, or worse than the original layout?
- Was it easier, the same, or harder to find the correct answers in this layout?

Post test questions:

1. Please indicate your level of agreement to the follow statement:
Overall, this application was easy to perform the task.
 1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree
2. Please indicate your level of agreement to the follow statement:
I enjoy using this application.
 1. Very much 2. A little bit 3. Neutral 4. Not very much 5. Not at all
3. Please indicate your level of agreement to the follow statement:
I would use this application again.
 1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree
4. Which layout did you like the best?
 - A) First B) Second C) Third
5. Which layout did you think you were the fastest in?
 - A) First B) Second C) Third
6. Was there any element from the alternative designs that you would like to see in the original design?
7. Can you think of any keyboard hotkeys/shortcuts to make the original layout even faster?
8. What/where do you think would be a good place to provide tips or extra descriptions?
9. Do you have any other feedback you'd like to give regarding anything about the application?
10. What was your favorite feature of the website?
11. What was the most frustrating part of the website?
12. What part of the process took the most time?

