
Crab Shack Kitchen Web Application

EVALUATION ASSIGNMENT 4

USABILITY TEST PLAN

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April 7, 2016

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1 Introduction

1.1 Web System Description

The primary focus of the Crab shack kitchen application is to provide a faster method of cataloging specimens compared to manually typing the specimen names into the database software. Keeping this in mind the goal of the system design is to be clear, simple and efficient to use. The design's main focus is the cataloging process which includes selecting 1 of 4 buttons for each specimen property.

2 Consent From

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 _____

3 Pretest Questions

List of Pre-test questions:

1. How many years have you used a computer?
2. Please indicate your level of agreement to the follow statement:
I am very interested in the testing of this application.
 1. Strongly agree
 2. Agree
 3. Neutral
 4. Disagree
 5. Strongly disagree

4 Test 1

1. **Test scenario name:** Preliminary Impression

2. **Test Goals for the scenario**

The goal of this test scenario is to observe the initial response of the participant. This test will reveal first impressions the participant has about the application and get overall feedback about the how intuitive and usable the layout is.

3. **Quantitative measurement list**

This test scenario will not have any quantitative measurements.

4. **Scenario description**

This will be read to the participant:

" The Natural History Museum of Los Angeles has a large set of crab specimens. They have used the help of a crowd sourced online transcription tool (Notes for Nature) to digitize a large number of handwritten crab specimen labels. Notes for nature provides the same specimen to 4 different users in order to account for mistakes. The final data set contains 4 catalogs of the same crab specimen. The scientists at the Natural History museum would like to aggregate these 4 transcription entries into one final data set. This is what the Crab Shack Kitchen application will be used for. The application allows the scientists to quickly select the correct version of the transcription from the 4 given choices. The primary focus of the Crab shack kitchen application is to provide a faster method of cataloging specimens compared to manually typing the specimen names into the database software. Keeping this in mind the goal of the system design is to be clear, simple and efficient to use. The main focus is the cataloging process which includes selecting 1 of 4 buttons for each specimen property. For the first test you will perform 6 tasks that runs through the entire application. You will need to say out loud what you are feeling and thinking as you perform these tasks. Be completely honest with your answers and your thoughts. Do you have any questions?"

5. **Task list** The participant will perform the following tasks.

- (a) Login to the application
- (b) Import new CSV catalog (if implemented)
- (c) Catalog a specimen
- (d) Search for recently cataloged item
- (e) Edit recently cataloged item

(f) Export the results (if implemented)

6. Qualitative measurement list

The screen and the participant will be recorded (both video and audio) in order to record their thoughts. The screen will also be captured using hotjar analytics.

7. Potential observations of participant

The participant might say something like "I can't find the catalog button" or "I don't understand how to search for a specimen ". Which will reveal weaknesses in the layout of the application.

8. Bug Report Form

| Bug number | Bug name | Bug uniqueness | Bug location | Bug description |
|------------|----------|----------------|--------------|-----------------|
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9. Post Scenario interview or questionnaire questions

- (a) What feature of the application frustrated you the most?
- (b) What feature of the application did you like the best?
- (c) Were all the functions/buttons easy to find? Please provide details about the functions/buttons you did AND did not like. At least one of each.
- (d) Did you intuitively understand what each function did? Please provide details about the functions/buttons you did AND did not understand. At least one of each.
- (e) What are your general thoughts about the cataloging process? Is it easy to use? What would you like to change specific to the cataloging process?
- (f) What one thing would you like to change the most in the application?
- (g) What part of the process do you think took the most time?
- (h) What part of the process do you think took the least time?
- (i) Is there a feature you would like to add OR remove from the application? Please provide details about the feature you want to add OR remove. At least one of each.
- (j) Please provide any additional feedback about the application.

10. Test set up details

Open the application in browser and navigate to main page. Start the web cam and the audio recording. Say name of the participant and test being performed in the web cam.

5 Test 2

1. **Test scenario name:** Speed test - Web App

2. **Test Goals for the scenario**

The goal of this test is to get a reference of the participant's average cataloging time per specimen.

3. **Quantitative measurement list**

A timer will be used to get the speed of each participant's cataloging speed. Hotjar analytics will be used to record the speed and get feedback on the heat maps of the participant. A video camera will also be recording the participants hands and click interactions.

4. **Scenario description**

This will be read to the participant:

"For this test we want to measure how fast a user can catalog specimens. I will start the timer and say GO, which is when you will start cataloging specimens. You will need to catalog 5 specimens. Once you are done with the fifth specimen I will stop the timer. Answer as accurately and as fast as possible. You will have a maximum time limit of 5 minutes after which I will stop the timer by default. Do you have any questions? "

5. **Task list** The participant will perform the following tasks.

- (a) I will start the timer and say GO.
- (b) Catalog as many specimen logs as possible.
- (c) I will stop the timer after 5th specimen

6. **Qualitative measurement list**

The post test questionnaire will provide insight about what process took the longest during the test.

7. **Potential observations of participant**

The participant might say something like "Five specimens was too much to catalog, I kept making mistakes ".

8. **Bug Report Form**

| Bug number | Bug name | Bug uniqueness | Bug location | Bug description |
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9. **Post Scenario interview or questionnaire questions**

- (a) What feature of the application frustrated you the most in this process?
- (b) What feature of the application did you like the best in this process?

- (c) Were all the functions/buttons easy to find in this process? Please provide details about the functions/buttons you did AND did not like. At least one of each.
- (d) Did you intuitively understand what each function did in this process? Please provide details about the functions/buttons you did AND did not understand. At least one of each.
- (e) What are your general thoughts about the cataloging process after using it now? Is it easy to use? What would you like to change specific to the cataloging process?
- (f) What one thing would you like to change the most in the cataloging process?
- (g) What part of the cataloging process do you think took the most time?
- (h) What part of the cataloging process do you think took the least time?
- (i) What part of the cataloging process do you think you repeated the most? What shortcuts if any would you have liked for these tasks?
- (j) Is there a feature you would like to add OR remove from the cataloging process? Please provide details about the feature you want to add OR remove. At least one of each.
- (k) Did you find the notifications useful or were they annoying?
- (l) Was the image big enough? Did you have to zoom a lot?
- (m) Please provide any additional feedback about the application.

10. **Test set up details**

Open the website to the cataloging page. Start the audio/video recording. Say participant name and test being performed in web cam.

6 Test 3

1. **Test scenario name:** Speed test - Excel Reference layout

2. **Test Goals for the scenario**

The goal of this test is to get a reference of the participant's average cataloging time per specimen in the excel layout.

3. **Quantitative measurement list**

A timer will be used to get the speed of each participant's cataloging speed.

4. **Scenario description**

This will be read to the participant:

"For this next test we want to measure how fast a user can catalog specimens in an excel layout. You will be given a trial run to catalog one specimen. You will need to highlight the correct specimen field in the excel sheet. Once you are familiar with the layout, I will start the timer and say GO, which is when you will start cataloging specimens. You will need to catalog 5 specimens. Once you are done with the fifth specimen I will stop the timer. Answer as accurately and as fast as possible. You will have a maximum time limit of 5 minutes after which I will stop the timer by default. Do you have any questions? "

5. **Task list** The participant will perform the following tasks.

- (a) Catalog one test specimen to get familiar with new layout
- (b) I will start the timer and say GO.
- (c) Catalog as many specimen logs as possible.
- (d) I will stop the timer after 5th specimen

6. **Qualitative measurement list**

The post test questionnaire will provide insight about what process took the longest during the test.

7. **Potential observations of participant**

The participant might say something like "This layout is horrible, the other one was easier to use".

8. **Bug Report Form**

| Bug number | Bug name | Bug uniqueness | Bug location | Bug description |
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9. **Post Scenario interview or questionnaire questions**

- (a) What features of the new layout frustrated you the most?

- (b) What feature of the new layout did you like the best ?
- (c) Was the new layout better, the same, or worse than the original layout? Why?
- (d) What feature did this layout have that should be included in the original layout?
- (e) What one thing would you like to change the most in the cataloging process in the new layout?
- (f) What part of the cataloging process do you think took the most time in the new layout?
- (g) What part of the cataloging process do you think took the least time in the new layout?
- (h) What part of the cataloging process do you think you repeated the most in the new layout?
- (i) Is there a feature you would like to add OR remove from the cataloging process in the new layout? Please provide details about the feature you want to add OR remove. At least one of each.
- (j) Please provide any additional feedback about the new layout.

10. Test set up details

Open the website to the cataloging page. Start the audio/video recording. Say participant name and test being performed in web cam.

7 Test 4

1. **Test scenario name:** Speed test - Alternate Web Reference layout

2. **Test Goals for the scenario**

The goal of this test is to get a reference of the participant's average cataloging time per specimen in the alternative web layout.

3. **Quantitative measurement list**

A timer will be used to get the speed of each participant's cataloging speed.

4. **Scenario description**

This will be read to the participant:

"For this test we want to measure how fast a user can catalog specimens in an alternative layout. You will be given a trial run to catalog one specimen. Once you are familiar with the layout, I will start the timer and say GO, which is when you will start cataloging specimens. You will need to catalog 5 specimens. Once you are done with the fifth specimen I will stop the timer. Answer as accurately and as fast as possible. You will have a maximum time limit of 5 minutes after which I will stop the timer by default. Do you have any questions? "

5. **Task list** The participant will perform the following tasks.

- (a) Catalog one test specimen to get familiar with new layout
- (b) I will start the timer and say GO.
- (c) Catalog as many specimen logs as possible.
- (d) I will stop the timer after 5th specimen

6. **Qualitative measurement list**

The post test questionnaire will provide insight about what process took the longest during the test.

7. **Potential observations of participant**

The participant might say something like "This was better than the excel but I had to scroll a lot ".

8. **Bug Report Form**

| Bug number | Bug name | Bug uniqueness | Bug location | Bug description |
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9. **Post Scenario interview or questionnaire questions**

- (a) What features of the new layout frustrated you the most?
- (b) What feature of the new layout did you like the best ?

- (c) Was the new layout better, the same, or worse than the original layout? Why?
- (d) What feature did this layout have that should be included in the original layout?
- (e) What one thing would you like to change the most in the cataloging process in the new layout?
- (f) What part of the cataloging process do you think took the most time in the new layout?
- (g) What part of the cataloging process do you think took the least time in the new layout?
- (h) What part of the cataloging process do you think you repeated the most in the new layout?
- (i) Is there a feature you would like to add OR remove from the cataloging process in the new layout? Please provide details about the feature you want to add OR remove. At least one of each.
- (j) Did you prefer the vertical display (in this layout) OR the horizontal display of fields in the original layout?
- (k) Please provide any additional feedback about the new layout.

10. Test set up details

Open the website to alternative cataloging page. Start the audio/video recording. Say participant name and test being performed in web cam.

8 Post-test questions

List of 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