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Omeka Everywhere 2.0 Usability Test Plan

Clarissa Ceglio, Andrew Wolf
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Document Overview

This document describes the research plan for conducting a usability test during the development of Omeka Everywhere, a multi-touch, open-source software that binds Omeka 2.x and Open Exhibits. This test will analyze the new user interface that was designed and developed after receiving feedback from our testing and analysis of the first iteration in 2015- and will include assessment of a new mobile application. Through this research the project team is establishing and validating user performance measures, finding bugs in the software, and identifying design concerns to be addressed in order to improve the efficiency, productivity, and satisfaction of the end-user experience. The data we produce will help guide the next phase of development for Omeka Everywhere.

Goal

To reveal critical usability issues that need to be addressed before the final release of Omeka Everywhere such that it promises a gratifying museum experience and influences interaction with the archives.

Objectives

- To determine design inconsistencies and usability problem areas within the user interface and content areas. Potential sources of error may include:
    - Navigation errors – Consistent difficulty of respondents to locate functions, excessive touches to complete a function, difference of screen flow between the correct way and the respondents.
    - Presentation errors – Selection of wrong task or material due to labeling ambiguities, ignoring critical steps
    - Control usage problems – improper filtering or entry field usage

- To observe how users respond to the mobile app compatibility and test its performance to learn how to make the process more intuitive and efficient

- Establish baseline user performance and satisfaction levels of the new interface to compare past and future usability evaluations.

- To reveal the user's conceptual model of the interface and learn how it interferes with the designers model

- To determine features that users desire to make the software more proficient

- Explore how the software affects the user's understanding of the exhibit, the digital collection.

Omeka Everywhere will be dispersed in museums across the world; therefore the target user group is quite broad since ranges of people visit museums. The users that we run the usability test on should illustrate the diversity of people that can use the software and app. It should include people from different education backgrounds, ages, ethnic groups, genders, and socio-economic groups. A secondary user group

consists of people who would use the software for scholarly purposes, such as using the mobile application to store and access sources. We would like to recruit and do testing on 16 people.

Methodologies

Remote Mobile Application Testing

Through using LookBack to record the user's phone screen and their reactions, we will conduct a usability study to analyze the intuitiveness, utility, and overall experience of the Omeka Everywhere mobile application.

Research Questions

- Can users figure out how to use the app? How do they navigate through it?
- Do users notice all the functionality of the app, including full screen mode, liking, filtering, and changing feed style?
- How do the user interface elements help or prevent them from using the app?
- Do users understand the context of the app, such as the type of pieces in the feed and what collection they are viewing?
- Do users understand the relationship between the main feed, tag/search feed, and like feed?
- Do users feel that their action effort doesn't exceed the value of what is achieved?
- Do users want to be able to share their favorites? In what way or ways?
- How does this app enhance their understanding of and empathy for the collection?

Participants

Participants' responsibilities will be asked think aloud their thoughts while initially exploring the app and as they attempt to complete a set of representative task scenarios presented to them in as efficient and timely a manner as possible, and to provide feedback regarding the usability and acceptability of the user interface. The participants will be directed to provide honest opinions regarding the usability of the application, and to participate in pre & post-session subjective questionnaires and debriefing.

Participants will be recruited through an email sent out to the UConn community and by word of mouth. This email will ask potential participants if they have an Android phone. If the user does own an Android phone, they will

have the option to run the test on their own and give feedback at their desired location and time remotely. Having the online forms and Lookback recording software enables us to obtain all the data we need without researchers being present. For participants without an Andoid phone and/or want to run the usability test in-person, we will have an Andoid phone available with the Omeka Everywhere app installed and a moderator who will assist the participant through the test.

Participants should represent a range of ages and technology experience. To illustrate this array of potential users in the test we will directly recruit university students who grew up with technology, middle aged adults who use technology on a normal basis, and older people who aren't very comfortable using technology. We also plan on recruiting participants who have a special interest in museums, archives, and history because they will be the primary users of Omeka Everywhere.

Training

The participants will receive an email with instructions on how to download the LookBook App and the Omeka Everywhere app. They will also receive instruction on how to start recording their app experience with Lookback and document it in an online form.

Equipment

Android phones, LookBack, email, laptop, Google forms

Procedure

Participants will be brought to our initial sign up form by word of mouth or email where they will choose to conduct the in-person or remote mobile app testing. This initial form will complete a pretest demographic and background information questionnaire. It will ask them their age, experience with touch-table technology, how familiar they are with archives, museum technology experiences, and how likely they are to use an app with the purpose of Omeka Everywhere's.

After over N=10 people commit to the study and they fit the needs of the study, an email will be sent to the participants informing them if we have chosen them to be part of our study. The participants who chose the remote testing option will also receive instructions for setting up their testing environment on the phone and following test procedure. For participants who chose in-person testing, they will be sent a form with available time slots to run the testing.

A new test script form will be sent to the remote participants and available on a laptop for the in-person test. The start of the script will brief the participants on the application and instruct the participant that they are evaluating the application, rather than the researchers evaluating the participant. Participants will give their electronic signature that acknowledges: the participation is

voluntary, that participation can cease at any time, and that the session will be videotaped but their privacy of identification will be safeguarded. They will be informed that if they have any questions they can reach out to the UConn team conducting the study.

The instructions will tell the participant to 'think aloud' so that a verbal record exists of their interaction with the application. The think aloud will last until the user has completed the task. They will also explain that the amount of time taken to complete the test task will be measured and that exploratory behavior outside the task flow should not occur until after task completion. At the start of each task, the participant will read aloud the task description from the email and begin the task. Time-on-task measurement begins when the participant starts the task.

After each task, the participant will complete the post-task questionnaire and elaborate on the task in the online form. The form will ask on a 0-5 scale how pleased he or she was with the interaction; their reactions to it, and how they believe the task can be improved.

After all task scenarios are attempted, the participant will complete the post-test satisfaction questionnaire and submit their results and LookBack recording. The post survey will consist ask where they were pleased, confused, what they think can be improved, and to again rate how likely they are to use an app with the purpose of Omeka Everywhere's.

After all N=10 participants have completed the test, researchers will observe and enter user behavior, user comments, and system actions in a data logging document after reviewing the forms and videos from the in-person and remote test. This document will compile all of the form data, analyze user's attempt at the task while making note of critical and non-critical errors, include an emotional analysis, and make not of any bugs.

User Task & Scenarios

1. Explore the home page and describe initial thoughts
2. Seek more information about an item on the homepage
3. Zoom in to see item details
4. Save several items so that you can access them later
5. Find your saved favorites
7. Filter by a specific tag
8. Search and watch a specific video in the collection
9. Change the way items are displayed

Metrics

-Record what the user first clicks on
-Count specific facial expressions and where happened (Contempt, Anger, Confusion, Excited, Surprised, Fear)
-Scenario completion rates
-Critical Errors
-Non-critical Errors

-Bugs

Documents Needed

-Sign Up form with pre survey
-Email to acknowledge chosen remote participants with instructions for downloading LookBack and App
-Calendar form for in-person participant sign ups
-Test script form and instructions
  -Permission/Electronic Signature
  -Task with satisfaction input
  -Post Test Survey
-Compiled data form

Solo Moderated In-Person Table & Mobile Application Testing

The purpose of this test is to collect direct qualitative and quantitative data through observation of the user's experience with the table and mobile pairing process. It will reveal areas in the UI that are unclear, not effective, or lacking proper signals.

Research Questions

- Are users attracted to the screen/table? What caught their eye first? Can the start screen be arranged to increase table traffic?
- Can the user navigate through the collections and items efficiently?
- How do users interpret the organization of the items on the stage, pool, and carousel? Are there ways to make the distinctions clearer?
- Does the users find everything the table affords and understand the context of their actions? i.e Filtering collection, send to mobile, placing items on screen, moving points of interest around.
- Do users download the mobile app on their own? Is the pairing process intuitive/pleasant for the user? Does there need to be more instruction?
- How do users react to viewing the collection up close? How does their experience on the table and app enhance their understanding of the collection and exhibit?

Participants

Participants' responsibilities will be asked think aloud their thoughts while using the app, to attempt to complete a set of representative task scenarios presented to them in as efficient and timely a manner as possible, and to provide feedback regarding the usability and acceptability of the user interface.

The participants will be directed to provide honest opinions regarding the usability of the application, and to participate in post-session subjective questionnaires and debriefing.

Participants will be recruited through an email sent out to the UConn community and by word of mouth. They should represent a random sample of museumgoers from many ages and technology backgrounds. The participants also need an Android phone- will look into leaving one in Benton for participants that don't have one.

Training

No training needs to take place for the test participants.

Equipment

Android phone, Omeka Everywhere Software, Timer, Touchscreen Table

Procedure

Participants will take part in the usability test at Benton Museum of Art in Storrs, CT. A touchscreen table with the Omeka Everywhere application and supporting software will be used in a typical museum environment. The facilitator standing by the participant's side will monitor the participant's interaction with the software. There will also be a data logger who will record activities such as task completion time.

The facilitator will brief the participants on Omeka Everywhere that they are evaluating the application, rather than the facilitator evaluating the participant. Participants will sign an informed consent that acknowledges: the participation is voluntary, that participation can cease at any time, and that the session will be recorded but their privacy of identification will be safeguarded. The facilitator will ask the participant if they have any questions.

Participants will complete a pretest demographic and background information questionnaire. In the pretest survey, it will ask if the participant was a Phase one test subject, their age, experience with touch tables, if he/she was drawn to table when walked into Benton and why, would having mobile app connectivity interest you, and their experience with technology at museums.

The facilitator will explain that the amount of time taken to complete the test task will be measured and that exploratory behavior outside the task flow should not occur until after task completion. At the start of each task, the participant will read aloud the task description from the printed copy and begin the task. Time-on-task measurement begins when the participant starts the task.

The facilitator will instruct the participant to 'think aloud' so that a verbal record exists of their interaction with the software. The facilitator will observe and enter user behavior, user comments, and system actions on a piece of paper.

After each task, the participant will complete the post-task questionnaire and elaborate on the task session with the facilitator and be asked what made them press what they did and rate interface on 1-7 scale. After all task scenarios are

attempted, the participant will complete the post-test satisfaction questionnaire.

The post-test satisfaction questionnaire will ask them to describe their experience using the table and app. If they were a phase one test subject, they will be asked to explain why they liked/disliked the changes.

User Task & Scenarios

Attract Screen
- -Open Pool item, open drawer

Stage
- -View an image on screen
- -Move point of interest around- drag, scale,
- -Get information on piece
- -Browse through collection
- -Place a collection piece on stage
- -Filter/Unfilter the collection

Mobile Pairing
- -Pair mobile phone
- -Drag content into phone
- -Find content in phone
- -Unpair Phone

Activity Analysis

This method will be used to reveal where the user is spending most of his or her time. The data reporter will tally the areas below when a user does that activity

-Touches Pool
-Looking at Point of Interest
-Looking at MetaData
-Expanding Image
-Organizing items
-Browsing through collection
-Filtering collection
-Pairing a phone
-Dragging content to phone
-Viewing phone content

Metrics

-Record what the user first clicks on – pool or touch button
-Count specific facial expressions and where happened (Contempt, Anger, Confusion, Excited, Surprised, Fear)
-Scenario completion rates
-Amount of clicks to complete task
-Time it took to complete task
-Activity Analysis – what the user spent time doing (see above);
-Critical Errors

-Non-critical Errors

Documents Needed

-Permission Form
-Schedule of Test Sessions Form
-Single User Testing Script
    -Facilitator copy (Task Completion Rates, Emotions during task)
    -Data recorder copy (Time spend doing task, activity analysis)
-Pre-test survey
-Post Test Survey

2's & 4's Unmoderated In Person Table & Mobile Application Testing

The purpose of this test is to learn more about the intuitiveness and satisfaction of the software and to receive feedback from the natural dialog between the users without a facilitator telling them what to do. This study will pay particular attention to the rates of system fail as well because there will be multiple users which can overstress the system.

Research Questions

- Does the table produce interaction between museumgoers?
- How do users interpret the UI with no guidance? Do they discover all the main task?
- Does the system gets too overstressed and crash with multiple users?
- Can users discover the task with no facilitation?
- How many of the users attempt to pair their phone?
- Do users imitate what others are doing?
- Can users recover from their errors with no guidance?

Participants

A random sample, representing of a wide range of ages and backgrounds. Recruited through email and word of mouth. Must be first time at Benton for Ellen Emmet Rand exhibit and have Android phone.

Equipment

Touch Table, Omeka Everywhere Software, Video Camera

Procedure

The facilitator will start the session off the same way as the previous methodologies, stating out we are testing the UI not the participants abilities, fill out pre survey, etc. Will ask participant to walk around museum and go to touch table when ready

Facilitator will start screen recording and observe the user interactions between each other and on the table and document them. After about a 15 minute

session of all the participants using the table, the session will stop and they will fill out a post test survey. After the survey the researchers will re-watch the video to obverse each participant's reactions in closer detail. The test will be done testing pairs, and quads. We want have in total 5 sessions of this.

Metrics

-Record what the user first clicks on or watches when at table
-Count specific facial expressions and where happened (Contempt, Anger, Confusion, Excited, Surprised, Fear)
-Task Discovery Rates
-Time it took to complete task
-Activity Analysis – what the user spent time doing (see above);
-Amount of time software lags
-How many times to users talk to each other
-How many times does a user help another user on the table
-Critical Errors
-Non-critical Error