Cultural Connection and a Sense of Place – Virtual Tour: Usability Study

Paul Kalani “Bo-boy” Kaawa Flores, Jr.
University of Hawaiʻi at Mānoa
Learning Design & Technology
Spring 2018
BACKGROUND

1. About Me
2. Project Concept
3. The Problem
4. The Solution
USABILITY DESIGN

1. What and Why
2. Design Goals
3. Tools
4. Original Prototype
USABILITY RESULTS

1. Participants
2. Modifications
3. Results

Agenda...
MOVING FORWARD

1. Virtual Tour
   Future

2. Reflection

Agenda...
About Me

Nānākuli, Oʻahu
University of Hawai‘i
Employee for over 10 years

Honolulu Community College:
• Hawaiian Studies Instructor
• Title III Grant Coordinator
• Culture and Place-Based College Coordinator

Nānākuli, O‘ahu
Project Concept

- U.S. DOE – Title III Grant
Project Concept

- U.S. DOE – Title III Grant
- Hoʻāla Hou: Renewing a Pathway to Student Success Through Culture and Place-Based Learning
Project Concept

- U.S. DOE – Title III Grant
- Hoʻāla Hou: Renewing a Pathway to Student Success Through Culture and Place-Based Learning

Goal 1:

- Establish an enrollment pathway for Native Hawaiian students
Project Concept

• U.S. DOE – Title III Grant
• Hoʻāla Hou: Renewing a Pathway to Student Success Through Culture and Place-Based Learning

Goal 1:
• Establish an enrollment pathway for Native Hawaiian students
• Create a sense of place at the college: culturally significant and relevant for native Hawaiians.
Project Concept

Four Major Activities -
Project Concept

Four Major Activities -

Outreach & Recruitment
Project Concept

Four Major Activities -

Outreach & Recruitment

Peer Mentors
Project Concept

Four Major Activities -

Outreach & Recruitment → Peer Mentors → Hālau
Project Concept

Four Major Activities -

Outreach & Recruitment
Peer Mentors
Hālau
Virtual Historic/Cultural Tour

University of Hawai'i
HONOLULU Community College
Problem

No Virtual Tour Exist!!!
Problem

No Virtual Tour Exist!!!

- Google Maps
Solution

Create a prototype virtual tour for Honolulu Community College
Solution

Conduct a usability study to evaluate the efficiency and usefulness of the virtual tour prototype.
What is a Usability Study?
What is a Usability Study?

Basic Overview:
1. Observe Participants
2. Participants Perform Tasks
3. Note Usability Issues
4. Propose Recommendations
5. Iterate
What is a Usability Study?

Basic Overview:
1. Observe Participants
2. Participants Perform Tasks
3. Note Usability Issues
4. Propose Recommendations
5. Iterate
Why a Usability Study?
Why a Usability Study?

Purpose:
Evaluate the ease of use for:
- Accessing
- Navigating
- Locating native Hawaiian plants

~ Students and employees of Honolulu Community College to...
Design Goals
Design Goals

- Practical
Design Goals

Easy To Use and Update

Practical
Design Goals

- Easy To Use and Update
- Aesthetically Pleasing
- Practical
Tools
Tools
Tools

Pros:
• Easy to access
• Free
• Suitable for all types of devices
Pros:

- Easy to access
- Free
- Suitable for all types of devices

Boiano, Bowen, & Gaia (2012)
Pros:
• Easy to access
• Free
• Suitable for all types of devices

Cons:
• Single template format
• Limited editing capabilities
Tools
## Tools

### Data Collection Tool

**Observation/Interview Guide**

<table>
<thead>
<tr>
<th>Participant number:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting Time:</td>
<td>Ending Time:</td>
</tr>
<tr>
<td>Completed Consent form?</td>
<td>Yes</td>
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<th>Task</th>
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Tools

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University of Hawai’i at Mānoa
Cultural Connection and Sense of Place - Digital Tour

Mahalo nui for your participation in this usability study.

Please complete this post-questionnaire. Completing this questionnaire will provide information on overall satisfaction and feedback of the usability test and virtual tour app. Questions will be a combination of multiple choice, short answers, or based on likert scale.

Mahalo for your time.

1. To help with improvements, please answer the following questions based on a scale from:
   - strongly agree
   - Agree
   - Disagree
   - Strongly Disagree
   - N/A
   - The task for the usability study was clear to me
   - The questions during the usability was clear to me
   - The interview facilitator prompted me to think aloud and asked me questions while I was performing the tasks

2. Design Layout, answer the following questions based on a scale from:
   - strongly agree
   - Agree
   - Disagree
   - Strongly Disagree
   - N/A
   - The app features were easy to understand
   - The text is clearly written and easy to read
   - The images are appropriate
   - The app is visually appealing

3. Ease of Use, answer the following questions based on a scale from:
   - strongly agree
   - Agree
   - Disagree
   - Strongly Disagree
   - N/A
### Tools

#### Data Collection Tool
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Original Prototype
Original Prototype

Honolulu ...

STOPS

Administration and S

MISSION STATEMENT & INSTITUTIONAL STUDENT LEARNING OUTCOMES

Featured Media

Intro Video

FAQs

YOU | VISIT
Participants

Students and Employees of Honolulu Community College
Participants

Participant Recruitment Email

Subject Line: Invitation to Participate in a Virtual Tour Usability Study

Aloha mai keau e [Participant's First Name] e,

My name is Paul Kalani Flores and I am a Master's student in the Online Learning Design and Technology Department at the College of Education, University of Hawai'i at Mānoa. I am emailing you today to request your participation in my usability study.

As a requirement to graduate, my final project is a usability study on a new bilingual tour app of Honolulu Community College's (HonCC) cultural history and native plant collection. The purpose of this usability study is to evaluate the ease of use and efficiency for current/prospective students and employees at HonCC in navigating and utilizing the virtual tour. The completion of the usability study will provide critical feedback towards the enhancement and ease of use of the virtual tour. Participation in this usability study is strictly voluntary. Based on your status, you are a potential participant for this study.

The usability study involves an individual interview with you and will take no more than 45 minutes of your time. Individual interviews will be conducted on campus in a designated location. The interview will involve a 3-5 minute Pre-Questionnaire [Online Form], 10-15 minutes testing the tour app, and a 5 minute Post-Questionnaire [Online Form]. I will be conducting two rounds of interview during the following dates:
  - Round 1: 1/22 - 2/22
  - Round 2: 2/5 - 2/9

Upon the completion of each round, changes will be made to the tour app based on your feedback. All results of the study will be kept confidential and used for educational purposes only.

If you are interested, willing and available to participate in the study, please complete this Participant Questionnaire. Once completed, I will follow up with a confirmation email. A Consent to Participate form will be presented during the time of interview.

Mahalo nui loa for your time and consideration.

Me ke aloha nō,

Kalani Flores

Email Invite - 25 Prospects
Subject Line: Invitation to Participate in a Virtual Tour Usability Study

Aloha mai ke kua e [Participant's First Name]!

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Mahalo nui loa for your time and consideration.

Me ke aloha nō,

Kalani Flores
Background

Usability Design

Usability Results

Moving Forward

Participants

Participant Recruitment Email

Subject Line: Invitation to Participate in a Virtual Tour Usability Study

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Mahalo nui loa for your time and consideration.

Me ke aloha nō,
Kalani Flores

Email Invite - 25 Prospects

Recruited - 9 Participants

3 Rounds - 3 Participants
Participants

Students and Employees of Honolulu Community College
Participants

Students and Employees of Honolulu Community College

DEMOGRAPHICS

GENDER

Male 78%

Female 22%
Participants

Students and Employees of Honolulu Community College

DEMOGRAPHICS

GENDER

Male 78%
Female 22%

AGE

Range 35 – 44 (11%)
Range 18 – 24 (67%)
Range 25 – 34 (22%)
Participants

Students and Employees of Honolulu Community College

DEMOGRAPHICS

**GENDER**
- Male: 78%
- Female: 22%

**AGE**
- Range 35 – 44: 11%
- Range 18 – 24: 67%
- Range 25 – 34: 22%

**EDUCATION COMPLETED**
- High School Diploma: 67%
- Associate’s Degree: 22%
- Bachelor’s Degree: 11%
Participants

Tasks and Scenarios
Participants

Tasks and Scenarios

Task 1: Scan and Scroll App
Participants

Tasks and Scenarios

Task 1: Scan and Scroll App

Task 2: Navigate and Explore
Participants

Tasks and Scenarios

Task 1: Scan and Scroll App

Task 2: Navigate and Explore

Scenario 1: Learn the History of the College
Participants

Task 1: Scan and Scroll App

Task 2: Navigate and Explore

Scenario 1: Learn the History of the College

Scenario 2: Identify 3 Indigenous Hawaiian Plants on Campus

Tasks and Scenarios
Background

Usability Design

Usability Results

Moving Forward

Modifications
Modifications

Usability Study Interview
Modifications

Usability Study Interview

Post Questionnaire
Round 1
Improvements/Edits

Item 1
Add the text “History of Honolulu Community College” in the text box.
Round 1
Improvements/Edits

Item 2
Added more information on each native Hawaiian plant - i.e., common and scientific name, and short intro/background on each plant.

The Colocasia esculenta, also known as Kalo was essential to Native Hawaiians. This herb can grow up to 1m characterized by its heart shaped leaves and edible corn. Early Hawaiians grew 300 varieties and mainly grew it for poi production. Poi is produced by mashing the cooked corn (boiled or steamed) until it is a highly viscous fluid. Water is added during mashing and can achieve a desired...
Round 1
Improvements/Edits

Item 3
Enhanced the image quality of all native plants
Round 2 Improvements/Edits

Item 4
Added higher quality images and panorama image of the campus' entrance area
Round 2
Improvements/Edits

Item 5
Added a Māla o Niuhelewai section with information regarding the māla on the app.
Round 2
Improvements/Edits

Item 6
Reorganized the images, in stop #2, to display in the order of appearance.
Round 3
Improvements/Edits

Item 7
Retitled all of the images on the tour to ensure they do not display a tag number and JPG.
Round 3
Improvements/Edits

Item 8
Added more images of the wauke and lehua plants for identification purposes
Item 9
Relocated the lehua stop to its actual place on the map, in the building 5 courtyard.
Results

Prototype Layout

Usability and App Improvements
Prototype Layout

The App Features Were Easy To Understand?

- Strongly Agree: 7
- Agree: 2
Results

Prototype Layout

The Text Was Clearly Written And Easy to Read?

6  Strongly Agree
2  Agree
1  Disagree

Comment: It was difficult to find the history section on the app
Results

Prototype Layout

The Images Are Appropriate?

8  Strongly Agree

1  Agree
Results

Prototype Layout

The App Was Visually Appealing?

7  Strongly Agree

2  Agree
Results

Regarding Ease of Use:

1. The App Was Easy To Access?

2. The App Was Easy To Navigate?

3. Easy To Locate The Native Plant Section Of The App?
Results

Recommend the App?

8 Strongly Agree w/ no reservations

1 Agree after modification are made
Results

“Honolulu Community College has a lot to offer”

“Great Visuals that pulled me in”

“Concept of a Virtual Tour”
Future

1. Translate to ‘Ōlelo Hawai‘i
2. Add more Stops
3. Add more Videos that features semesterly and yearly activities and events

What Does The Future Hold?
Reflection
Reflection

Keep Your Schedule Open!!!
Reflection

Keep Your Schedule Open!!!

Keep On Schedule!!!
Reflection

Have A Well Developed Plan!!!

Keep On Schedule!!!

Keep Your Schedule Open!!!
Reflection

Have A Well Developed Plan!!!

Keep On Schedule!!!

Usability Testing Is Great!!!

Keep Your Schedule Open!!!
Reflection

- Have a well-developed plan!!!
- Usability testing is great!!!
- Use your CF and cohort classmates!!
- Keep your schedule open!!!
- Keep on schedule!!!
- Background
- Usability Design
- Usability Results
- Moving Forward
Mahalo

LTEC Program:
Dr. Ho
Dr. Menchaca
Dr. Paek
Dr. Leong
Dr. Hattori
Dr. Kimura
Dr. Lin
Kitty

Mahalo Nui Loa!!!
Mahalo

My Critical Friends:

Nozomi Ozaki

Louise Ito

Mahalo Nui Loa!!!
My Original Cohort

My Family

The Audience

Mahalo

Mahalo Nui Loa!!!
Cultural Connection and a Sense of Place – Virtual Tour: Usability Study

Email: pflores@hawaii.edu

Final Prototype: http://youvis.it/ETz8T

Paul Kalani “Bo-boy” Kaawa Flores, Jr.  
University of Hawai‘i at Mānoa  
Learning Design & Technology  
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