Evaluating The Usability of a Positive Behavior Reward App for Faculty and Students at a Local Elementary and Intermediate School

Learning Design and Technology
College of Education
University of Hawai`i at Mānoa
Evaluating The Usability of a Positive Behavior Reward App for Faculty and Students at a Local Elementary and Intermediate School

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Presentation Overview

- Background
- Design & Development
- Usability Study
- Findings
- Personal Reflection
Background
Poll

Have you heard of a positive behavior intervention support? PBIS, PBS, SWPBIS
Positive Behavior Support (PBS)

- Positive Behavior Intervention Support (PBIS)
- School-wide Positive Behavior Intervention Support (SWPBIS)

Background

- 80% of Students
- 15%

Primary Prevention: School-Classroom-Wide Systems for All students, Staff & Settings.

Secondary Prevention: Specialized Group Systems for Students with At-Risk Behavior

Tertiary Prevention: Specialized Individualized Systems for students with High-Risk Behavior

School-Wide Positive Behavior Support
Background
Teach and practice 4-6 specific behaviors

- Everyone receives monthly activities
- Weekly bucks for attendance
- Reward with explicit feedback
- School store
Background

Paper dollar system - Pros

- Reduce targeted unwanted behaviors
- Whole school involvement
- Purchase school items, snacks, and events
Background

Paper dollar system - Cons

- Time and Energy
- Bullying and Stealing
- Buying "Black Market" Items
The purpose of this **usability study** is to **create and evaluate** the ease of use of a **smartphone application** for faculty and students that awards and keeps track of student points for the school-wide positive behavior system.
Design & Development
Design & Development
Site Map Flowchart
Design & Development

Shneiderman's Golden Rules of Interface Design

- closure dialogue
- consistency
- easy reversals
Design & Development
Design & Development
Prototype 1
Design & Development

Prototype 1
Design & Development

- color gradient on the background
- flat color on the buttons
- larger buttons
- deletion of footer
- shortcuts were made
- modified workflows to decrease clicks
- user information button
- navigations to popups
Design & Development
Final Prototype
Design & Development
Final Prototype
Pop Quiz!

You are a middle school student, your favorite feature would be...

A. The student account page (so I can see my money)
B. The student store page (so I can spend my money)
C. The calendar page (so I can stay up-to-date on events)
D. The info page (so I can understand why I am getting money)
School Store
Usability Study
Usability Study

Research Questions

- How easy is it to navigate the smartphone application?
- What is the perception of the smartphone application as compared to the current physical PBIS system?
Usability Study

Participants

- Local public school
  - Pre-Kindergarten to 8th grade
- Island of O`ahu
- Title 1
  - low-income population
- 61% Native Hawaiian
Usability Study

Participant Characteristics

- Experience with smartphone applications
- Knowledge of the current SWPBIS system at the school
- Own or use a smartphone on their own time
Usability Study

Students
- Access their account
- Purchase an item from the school store
- Navigate the application

Faculty
- Locate a student
- Input a point value
- Navigate the application
Usability Study

Instruments

- Recruitment
  - Students from classes
  - Email to teachers
- Consent
- Assent
- Pre-survey Data
Usability Study

Usability Protocol

“it’s to get insights that enable you to improve what you’re building”

-Krug, 2010
Usability Study

Data Collection

- Time on task
- Number of clicks per task
- Post attitudinal survey
  - Likert scale
  - Open ended questions
Findings
Findings

Time on Task - Students

- Student Accounts
- School Store Tasks
- Event Calendar

Time (minutes : seconds : milliseconds)

- Round 1
- Round 2
- Round 3
Findings

Time on Task - Faculty

- Award Points
- Information Tasks
- Event Calendar

Time (minutes : seconds : milliseconds)

<table>
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<th>Task</th>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
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<tr>
<td>Event Calendar</td>
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<td>00:17.3</td>
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Legend:
- Round 1
- Round 2
- Round 3
Findings

Post-Study Student Survey

I could use the WEIS Buck app without instructions (13 responses)

The WEIS Buck app was easy for me to use (13 responses)
Findings

Post-Study Student Survey

My interaction with the WEIS Buck app was be clear and understandable

![Chart showing frequency of responses to the statement about interaction with the WEIS Buck app. The Likert Scale ranges from 1 (very unlikely) to 5 (very likely). The chart shows the number of responses for each Likert scale value across three rounds.]

- Round 1
- Round 2
- Round 3
Findings

Student Revisions

- Broken links
- Store Pricing
- Lack of Navigation Reversals
Findings

Faculty

Revisions

Broken links

Lack of confirmations

Place holders
Findings
Perceptions

01 Safety
02 Ease of use
03 Less time
04 Less energy
Personal Reflection
Personal Reflection

What worked

Bubble.is

My School

Feedback
Personal Reflection

Opportunities

Timing

Student Participants

Bubble.is
Personal Reflection

Opportunities
## Personal Reflection

### Opportunities

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<tr>
<th>Picture</th>
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<td>Feb 5, 2017</td>
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Personal Reflection

Next Time

Perfectionism

Student Specific

Scanning Feature
Thank You

- LTEC Community and Staff
- Dr. Fulford
- Critical Friends Group
- School Administration
- School `Ohana
Questions
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