Testing on the Tablet

Usability of an Academic Library’s Mobile Site

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OUTLINE

• WHAT IS USABILITY TESTING
• USABILITY AND LIBRARIES
• MOBILE USABILITY TESTING VS DESKTOP USABILITY
• BACKGROUND OF CITY TECH AND MOBILE WEBSITE
• MOBILE WEBSITE USABILITY STUDY
• TASK SCENARIOS
• PARTICIPANTS, TESTING, AND RECORDING INSTRUMENTS
• FINDINGS AND MODIFICATIONS
• FUTURE CONSIDERATIONS
WHAT IS WEB USABILITY?

EASE OF USE OF A WEBSITE

FEEDBACK AND ERROR CONTROL

“MAKING SURE THAT SOMETHING WORKS WELL”
- Steve Krug
I CAN BARELY WALK IN THIS THING

WHO DID THE USABILITY TESTING?!?!
USABILITY AND LIBRARIES

USABILITY DETERMINES USER NEEDS OVER LIBRARY NEEDS

CAN BE USED TO MAKE INFORMED DESIGN DECISIONS

CREATES EMPATHY FOR THE USER
USABILITY AND LIBRARIES

USABILITY TESTING IS AN EFFECTIVE USE OF RESOURCES

IT PROVIDES USER INPUT TO IDENTIFY ERRORS

IT ALSO HELPS TO CREATE A POSITIVE USER EXPERIENCE
EXPERIENCE THE LIBRARY AS THE USER
MOBILE VS DESKTOP USABILITY TESTING

MOBILE DEVICES: SMARTPHONES, TABLETS, OR E-READERS

TOUCH ENABLED INTERFACES FOR DATA ENTRY

SMALLER SCREEN SIZES, RESOLUTIONS, AND SLOWER NETWORK SPEED
MOBILE VS DESKTOP USABILITY TESTING

CONTEXT OF USE IS DIFFERENT BETWEEN MOBILE DEVICES AND DESKTOP WORKSTATIONS

MOBILE DEVICES CAN BE USED ANYWHERE AND AT ANYTIME

BROADBAND CONNECTIVITY VS WIFI OR CELLULAR NETWORK CONNECTIVITY
MOBILE LABORATORY TESTING

VS.

MOBILE FIELD TESTING
MOBILE LABORATORY TESTING

CONTROL OVER NETWORK CONNECTIVITY

EASIER TO RECORD USERS DATA DURING TESTING

DEVICES CAN BE PROVIDED
FIELD TESTING IS DONE IN CONTEXT OF A REALISTIC SETTING

UNCERTAINTY OF CONNECTIVITY OVER WIFI AND CELLULAR CONNECTIONS

HARDER TO TROUBLESHOOT HARDWARE PROBLEMS
NEW YORK CITY COLLEGE OF TECHNOLOGY

COMMUTER SCHOOL LOCATED IN DOWNTOWN BROOKLYN

PART OF THE CITY OF NEW YORK (CUNY) 23 CAMPUS SYSTEM

17,000 FTE SPACE AND LEGACY INFRASTRUCTURE ISSUES
GOOGLE ANALYTICS: 5% OF VISITORS USE MOBILE DEVICES

CASUAL OBSERVATION OF STUDENTS USE CELLPHONES AND TABLETS FOR RESEARCH

63% OF ADULT CELL PHONE OWNERS USE THEIR DEVICES TO GO ONLINE - PEW INTERNET (2013)
NEW YORK CITY COLLEGE OF TECHNOLOGY LIBRARY MOBILE WEBSITE
MOBILE WEBSITE

“STRIPPED” VERSION OF THE DESKTOP WEBSITE

MOST USED TASKS FOR USERS BASED ON WEB ANALYTICS

OPTIMIZED FOR MOBILE CONSUMPTION
MOBILE WEBSITE

DRUPAL 7 BACKEND

JQUERY TOUCH FRONT-END THROUGH DRUPAL THEMES AND MODULES

AT THE TIME, MAXIMIZED FOR COMPATIBILITY WITH MOST MOBILE DEVICES
MOBILE WEBSITE STRUCTURE

USED GOOGLE ANALYTICS/PIWIK FOR MOST USED INTERACTIONS

CONTAINS BASIC LIBRARY INFORMATION: HOURS, CONTACT, LOCATION

FIND BOOKS
FIND ARTICLES
FIND EBOOKS
FIND APPS
MOBILE SITE PROVIDED A LINK TO THE FULL DESKTOP SITE.

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WHY TEST?
OBJECTIVE

The objective of the test was to assess if the mobile site could support students’ research needs.
PARTICIPANTS, TESTING, AND RECORDING INSTRUMENTS
DRY RUN TESTING

DRY RUN CAN POINT OUT TESTING PROBLEMS

LIBRARY COLLEGE ASSISTANTS WERE PARTICIPANTS

TESTED TECHNICAL ASPECTS OF THE STUDY
PARTICIPANTS

N = 5
OPEN TO CITY TECH STUDENTS

INCENTIVE:
$5 BOOKSTORE GIFT CARD

USERS HAD MIXED XP WITH MOBILE DEVICES
PARTICIPANTS

TEST WAS PROMOTED VIA EMAIL AND SOCIAL MEDIA

FLYERS

WORD OF MOUTH
TESTING TOOLS

TESTING SCRIPT TO ENSURE CONSISTENCY

IRB APPROVAL OF STUDY WITH CONSENT FORMS

PSC-CUNY GRANT FUNDED STUDY
<table>
<thead>
<tr>
<th>METRICS</th>
<th>SUCCESS RATE</th>
<th>TIME TO COMPLETE TASK</th>
<th>TAPS</th>
</tr>
</thead>
</table>
2 ROUNDS OF USABILITY TESTING

TESTING CONDUCTED IN THE LIBRARY

COLLEGE WIFI CONNECTION
TESTING TOOLS

APPLE IPAD

RECORDING DEVICE:
MACBOOK AIR
BLUE SNOWBALL MICROPHONE

iPHONE TIMER
CLICK COUNTER FOR TAPS
TEST FUNDING

PROFESSIONAL STAFF
CONGRESS – CUNY GRANT

EXPENSE OF RESEARCH EQUIPMENT AND TESTING TOOLS

INCENTIVES FOR STUDENT PARTICIPANTS
TASKS WERE SELECTED BY GOOGLE ANALYTICS AND PIWIK DATA

8 SCENARIOS WERE WRITTEN TO GIVE USER CONTEXT
T1: FIND THE LIBRARY’S ONLINE CATALOG

Most used interaction on the website according to analytics

Task specifically states to find just the catalog

Recently changed language on catalog to find books
T2: FIND A BOOK BY MARK TWAIN

T3: FIND AN ARTICLE DATABASE

T4: FIND IOS APPS
T5: CONTACT A LIBRARIAN BY PHONE

T6: CONTACT A LIBRARIAN BY EMAIL

T7: FIND DIRECTIONS TO THE LIBRARY

T8: FIND THE LIBRARY’S HOURS
BEFORE AND AFTER
<table>
<thead>
<tr>
<th>Success Rate</th>
<th>Round 1</th>
<th>Round 2</th>
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<tbody>
<tr>
<td>Find the Catalog</td>
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<td>60%</td>
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<tr>
<td>Find a Book</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
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<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Find Apps</td>
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<td>80%</td>
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<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Email Contact</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Find Directions</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Find Hours</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Timings in Seconds</td>
<td>Round 1</td>
<td>Round 2</td>
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<tr>
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BEFORE AND AFTER

<table>
<thead>
<tr>
<th>Average Number of Taps</th>
<th>Round 1</th>
<th>Round 2</th>
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<tbody>
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<tr>
<td>Find Hours</td>
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</table>
OTHER RESPONSES

USERS FOUND THE SITE STRAIGHT FORWARD AND EASY TO USE

USERS PROVIDED COMMENTS ABOUT SITE AESTHETICS

USERS EXPECTED SPELL CORRECTION AND THE CATALOG TO ACT AS A SITE SEARCH
FUTURE CONSIDERATIONS

MULTIPLE PLATFORMS FOR TESTING
SCREEN CAPTURES AND RECORDINGS OF DEVICES IN USE
STANDARD USABILITY SCALE (SUS) FOR QUANTITATIVE ANALYSIS
WRAPPING UP

The mobile site did support most tasks for users. Apparent usability problems were resolved. Participants were able to complete tasks with the post-test site.
QUESTIONS?
THANKS!
"Support for this project was provided by a PSC-CUNY Award, jointly funded by The Professional Staff Congress and The City University of New York."