Design and testing of mobile library websites: Best practices in creating mobile library applications

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Introduction

- Desktop websites Vs. Mobile websites
- Web page on a mobile device often results in a poor or unusable experience
- Limited screen size
- Subject matter of the page may require considerable scrolling
- Input problems
- Bandwidth and cost
Library Home Page desktop vs Mobile

www.library.american.edu
Mobile Library Websites – Where to Start

- User inputs
- Interviews
- Page statistics of desktop website visits
- Mobile using habits of the users
- Mobile application vs. mobile website
Mobile Library Websites – The content

- Basic design recommendations of the mobile web best practices report
- Optimized output of mobile website design
- Platform independent website design
- Device independent website design
- Optimize the screen size
- Easy menu button selection
Separate Mobile URL and redirecting the users

- Separate website Vs separate mobile app
- Responsive web design (bend, flex and expand)
- Parallel websites for desktop and mobile users
- Server based PHP to detect device type – “UserAgent string”
- Screen size optimization
- Different navigation menus for desktop and handheld
- Limited graphics
- Separate Cascading Style Sheet (CSS) for specific devices to adjust without compromising the content (Google autoconvert)
Simple Design

- Concern for Data charges
- Single column design for mobile websites (to avoid automatic zooming all the way to fit the screen)
- Minimal navigation
- Input difficulties (Virtual keyboards)
- Absolute sizes instead of percentage sizes
- Avoid Flashy desktop technologies
- Unsupported file types (flash, java scripts, applets, frames, pop-ups, scrolling)
- Avoiding fancy items (to minimum)
Mobile Library Websites – Testing and Validating

- Preview options
- Standards and best practices
- mobileOk checker
- Random testing of checking
- W3C best practices guidelines
Useful mobile website testing tools: MobiReady

The MobiReady testing tool evaluates mobile-readiness using industry best practices & standards. The free report provides both a score (from 1 to 5) and in-depth analysis of pages to determine how well your site performs on a mobile device.
Useful mobile website testing tools: Gomez

**Mobile Performance Test**

- Understand mobile user experience
- Gain visibility into mobile carrier performance
- Determine the impact of third party services
Dotmobi emulator
Cross browser test your website in dozens of browsers with instant results.

- Watch a Demo or Start a Free Trial
- Over 1,000 combinations of browsers, OS, and plugins
Other useful mobile website testing tools

- Opera mini simulator
- Adobe Device Central CS5
- iPad peek
- Irphony
- W3C mobileOK Checker
- GoMoMeter
The starting point – user survey

Survey location
- JIIT University, Noida, India

Survey Population
- Doctoral
- Post-graduate (M.Tech. and MBA)
- Undergraduate programs (B.Tech.)
- Staff

Resources
- Learning Resource Centre (LRC)
- 27000 books and more than 14000, e-journals
The survey - Population

Survey Population  229  100%

- Faculty        22  9%
- Other Staff    4  2%
- Students       205  89%
Resource on mobile phone

- Yes 218 95%
- No 11 5%

Need for Mobile library

- Yes 94%
- No 6%
## Separate mobile library website for MobilePhones

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>216</td>
<td>14</td>
</tr>
<tr>
<td>No</td>
<td>6%</td>
<td>94%</td>
</tr>
</tbody>
</table>

![Pie chart showing 94% for Yes and 6% for No.](chart.png)
Type of Mobile phone ownership

- iOS (Iphones) 19
- Android Phone 148
- Windows mobile phones 20
- Other internet enabled phones 31
- Mobile phone without internet 11
Frequency of internet access through mobile phones

- Frequently 188 83%
- Rarely 30 13%
- Never 9 4%
Internet access of mobile phones

- Campus wi-fi 51 23%
- Wi-fi hotspots 44 20%
- 2G/3G datapacks 129 58%
Mobile website preferences

- More text and links: 33 (15%)
- More Graphics and texts: 28 (12%)
- Balanced: 164 (73%)
links preferred in the mobile library website

- OPAC (Book search facility) 188 (231) 81%
- E-Resource database link 150 (231) 65%
- Instructions on how to access databases 84 (231) 36%
- Library tours 57 (231) 25%
- Circulation related information 145 (231) 63%
- Library rules 46 (231) 20%
Results and Discussion

- Type of mobile phones owned
- Willingness to accept mobile solution
- Most users are familiar with using internet through mobile phones
- Separate website for library website
- Most users use datapack and pay for using (content creation)
- Balance content but preference is text
- OPAC as the important link followed by E-Resources and Circulation
Conclusion

- Decision to create a parallel website for mobile users (94% users wanted a new and separate website)
- With minimum graphics and using most of the recommendations of minimum design recommendations (most users use pay data packs)
- Provide OPAC, E-Resources and Circulation as main links
- Create a separate app for OPAC