Favorite Websites:

Facebook    YouTube    Yahoo!    Gmail    Cartoon Network    Google    Formspring

Understanding Prior Knowledge of Teens’ Mental Models of Public Library Websites for Teens

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Agenda

- Introduction
- Related Literature
- Research Design
- Results & Findings
- Conclusion
- Questions
Introduction

Public Library Websites for Teens (TLWs)

- Teen-focused space on the public library website
- Devoted to the teen population and no other population group

Research Questions

- What are teens’ visual representations of mental models of public library websites for teens (TLWs)?
- What is the role of teens’ favorite websites in determining prior knowledge and experience as it relates to teens’ design and use preferences for TLWs?
Related Literature

**Teens (ages 12-17) Internet Use** *(Pew Internet and American Life project)*
(Lenhart, 2012; Lenhart, Madden, & Hitlin, 2005; Lenhart, Purcell, Smith, & Zickuhr, 2010; Lenhart, Purcell, et al., 2010; Lenhart et al., 2011)

- Laptops, desktops, mobile devices and gaming consoles
- Use of social networks (e.g. Facebook) ↑80% (2012)
- Cell Phones: 75% (2010) → 77% (2012)

**Mental Models**
(Craik, 1943; Johnson-Laird, 1983; Norman, 1983; Westbrook, 2006)

- Small-scale model - internal representation of the external world
- Mental model is held by user
- User’s Mental Models of the Internet
  - Thatcher & Greyling (1998) - 50 South African university students
  - Papastergiou (2005) - 310 Greek public high school students
  - Zhang (2008a, 2008b) – 44 undergraduate students
Research Methods

3 New Jersey Public Libraries

<table>
<thead>
<tr>
<th></th>
<th>North</th>
<th>Central</th>
<th>South</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Library Type</td>
<td>municipal library; main and 9 branches (one branch used)</td>
<td>county library; main and 8 branches (one branch used)</td>
<td>municipal library; main and 0 branches (main library used)</td>
</tr>
<tr>
<td>Population</td>
<td>Over 200,000</td>
<td>Below 50,000</td>
<td>Below 25,000</td>
</tr>
<tr>
<td>Race/ Ethnicity</td>
<td>White - 32.7%</td>
<td>White - 54.9%</td>
<td>White - 81.1%</td>
</tr>
<tr>
<td></td>
<td>Black or African American - 25.8%</td>
<td>Asian - 37.7%</td>
<td></td>
</tr>
<tr>
<td>IMLS Public Library Service Population Range</td>
<td>100,000 – 249,999</td>
<td>25,000 – 49,999</td>
<td>10,000 – 24,999</td>
</tr>
</tbody>
</table>

U.S. Census Bureau, 2012

Data Collection
(~2 hours per participant):
- Written Questionnaire
- Drawing
- Semi-structured Interview

Recording Tools:
Audio & Screen Recorders, Notes
Results & Findings

Participants: 30 Teens 13 – 15 years old

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th># of Participants</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Public Library</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian and Alaska Native</td>
<td>1</td>
<td>37%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>10</td>
<td>33%</td>
</tr>
<tr>
<td>Central Public Library</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>11</td>
<td>37%</td>
</tr>
<tr>
<td>Other race/ethnicity</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>South Public Library</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other race/ethnicity</td>
<td>5</td>
<td>17%</td>
</tr>
<tr>
<td>White</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>Overall Total</td>
<td>30</td>
<td>100%</td>
</tr>
</tbody>
</table>

Participants by Age, Location & Grade
Results & Findings

Public Library and Internet Experience

<table>
<thead>
<tr>
<th></th>
<th>Online Internet Access</th>
<th>Public Library Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>North</td>
<td>Central</td>
</tr>
<tr>
<td>A couple times a week</td>
<td>3 (10%)</td>
<td>1 (3%)</td>
</tr>
<tr>
<td>Daily</td>
<td>3 (10%)</td>
<td>2 (7%)</td>
</tr>
<tr>
<td>More than once a day</td>
<td>5 (17%)</td>
<td>9 (30%)</td>
</tr>
<tr>
<td>A couple times a month</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once a month</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Method of Online Access

- Hardware Used - Place of Access
  - Desktop computer - Home
  - Desktop computer - Public library
  - Laptop computer - Home
  - Laptop computer - Public library
  - Laptop computer - School classroom or computer lab
  - Mobile phone - Home
  - Mobile phone - Public library

Do you use the public library website?

Research Locations

<table>
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<tr>
<th></th>
<th>North</th>
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<th>South</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>6</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Yes</td>
<td>5</td>
<td>7</td>
<td>2</td>
</tr>
</tbody>
</table>
Results & Findings

Mental Models

- Single Functional - *task-oriented and goal specific*
Results & Findings

Mental Models

- **Single Functional** - task-oriented and goal specific
- **Process** - Search-focused
Results & Findings

Mental Models

- **Single Functional** - task-oriented and goal specific
- **Process** - Search-focused
- **Social Connection** - communication-focused
Results & Findings

Mental Models

- **Single Functional** - task-oriented and goal specific
- **Process** - Search-focused
- **Social Connection** - communication-focused
- **Portal** - category-based
Results & Findings

Mental Models

- **Single Functional** - task-oriented and goal specific
- **Process** - search-focused
- **Social Connection** - communication-focused
- **Portal** - category-based
- **Information Discovery** - click-free instant updates
Results & Findings

Mental Models

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- **Process** - Search-focused
- **Social Connection** - communication-focused
- **Portal** - category-based
- **Information Discovery** - click-free instant updates
Results & Findings

Teen's Favorite Websites

Facebook 14
YouTube 9
Yahoo! 4
Google 2
Cartoon Network 2
Formspring
Results & Findings

Favorite Websites: All visited daily or weekly 77% (23) visited at least once per day

Reasons for Visiting
- Social Connection
- Entertainment and Learning

Likes
- Simplicity and Organization
- Opportunities

Dislikes
- Advertisements (Ads)
- Inappropriate Content

Change: varied to no changes

It’s really easy to use, you know. Like everything is there for you. You don’t really have to like figure out anything. (PID016: Gmail and Yahoo)

I get to talk to the author as well. So, she's on it daily. We get to talk to her and ask her about her inspiration and how she learn [sic] from the books. (PID003: Christian Feehan)

Obviously, I'd try to remove the advertisement, but I guess that doesn't really count. (PID015: Yahoo and Google)

How would I change it? Put more color into it. And make Facebook not blue but green. … Why green? Green because, blue is not that interesting. I don't think it's that interesting. (PID019: Facebook)
Results & Findings

**Single Functional** - task-oriented and goal specific

**Portal** - category-based

**Information Discovery**
*click-free instant updates*

**Process** *Search-focused*

**Social Connection**
*communication-focused*
Conclusion

Study Limitations

- Not generalizable, but transferable
- Self-selected, frequent public library users

Future Research

- Expand study parameters to include larger teen population
- Explore web objects of mental models and favorite websites
Questions?

Thank You!