

1. TOPIC:

Public Library Statistics Explorer

When I was a child, my family went to our local library branch at least once a week. Smartphones didn't exist yet, and we had dial-up internet and a single desktop computer in my mom's home office. Do Americans still use Public Libraries? Do they only go for the free wifi? Is the print book dead? (Do people even read things that don't have screens anymore???) How has digital engagement facilitated by local libraries changed as technology in daily life has evolved? These are the questions I ponder as I drive by the library...

Tentative map title: Checking Out The Library

Tentative subtitle: *The Current State of Paper Books and Public Libraries*

2. MAP OBJECTIVES/USER NEEDS:

User scenario

Molly, a young mom and not-too-long-ago college graduate has many fond memories of weekly visits to the local library. She often takes her pre-k aged son and his playmate to the library to pick out bedtime books, and hopes that making a habit of library visitation will encourage them to read once they are a bit older. She's noticed during these visits that the children's librarian has been replaced by a computer-based "suggestion station" - an online application that generates book suggestions based on a user entering the title of a book (conveniently also available as a mobile app).

She's also noticed that many of the new books are only available as e-books, which is problematic because she is trying to enforce a no ipads after 6pm rule (and reading a bedtime story from an ipad screen is just

not the same as turning the pages in a book). Additionally, there are hardly ever other patrons perusing books; everyone inside the library seems to be congregated at or near the computer stations or using a wireless device (phone, laptop, or tablet). She wonders how much funding the library is receiving compared to when she was a child, and how many people come for the books or for the technology. Or the e-books? There's no need to even come into a branch to find or obtain them. But do people check them out?

Many librarians, educators, and policymakers are wondering the same things. The Institute of Museum and Library Services collects data about Public Libraries in the United States in their annual Public Library Survey, and the Pew Research Center has been studying Libraries and Library usership; their data is available for public use but dense and not easy to understand at a glance. A nonprofit has volunteered to create a map application that visualizes some of their data in a single interface.

Molly, researching the topic at her home, stumbles across their interface and is intrigued; she is able to see the distribution of libraries, and even to filter out urban libraries and examine where rural branches exist. Interested in technology use at libraries, she selects "Technology Use" from the Topics drop-down menu, and is interested to see the bar graph displayed in the info window when she hovers over her home state with the mouse.

Why make this map?

To help visualize the answers for questions about the current/recent state of public libraries. How many libraries are there in the United States? Where are they? Do people still use the library?

What do I want to gain from this map?

Insight into: 1. where library locations survive in relation to the populations, 2. which regions still allocate funds to their libraries (since funding can be a good indication of local priorities), 3. who still uses libraries, and 4. what library services are used (digital vs. physical). But specifically a visual tool to help gain that insight.

Map Objectives:

- a map that works
- an interface that is useable and easily understandable
- a visually pleasing design
- data presented in a different manner than it currently exists

Content Requirements

- dot density layers of:
 - all existing public library locations
 - small libraries
 - rural libraries
- choropleth or heatmap layer of US population data
- choropleth layers of library data per capita, by state:
 - Visitation
 - Circulation
 - Operating Revenue
 - Expenditure
 - E-book offering (?)
 - E-book usage
 - Electronic materials expenditure
 - Public Access Computers available
 - Librarians (& /or MLS Librarians)
- Popup for library dots with Name, Governing Library
- Info window with visualization of Pew stats for that state:
Two tabs (goes with Visitation Layer)
 - Library Visitation
 - o % ppl visited ever

- o % ppl visited in past 12 months
 - o % ppl visiting once a month or more
- Virtual Visitation
 - o % ppl visited library website
 - o % use lib website x1 month or more

goes with Public Computers Layer

- technology use
 - o % wifi device ownership
 - o % used public computers or connected to wifi

goes with e-book layer(s)

- % checked out e-book
- % know if their library has e-books
- % checked out print books in past 12 months

goes with e-book layer(s)

- % checked out print books in past 12 months

Functional Specifications

- load choropleth data dynamically from csv
- load Pew stats from csv
- info window content layer-dependent, and available on hover
- visual affordances on hover
- info window summarize state-specific data on layers w/o specific Pew data
- radio button selector for dot density; on/off toggle for dot layers
- drop-down menu box for choropleth layers
- basemap includes state borders
- legend

Tentative Reach Goal: state examination feature

- extent and zoom level of map changed based on drop-down menu selection; only dot density, pop density by county, Pew summaries show
- drop-down menu of states, or all states to view map detailed above

3.DATA SOURCES:

Institute of Museum & Library Services

<http://imls.gov>

Pew Research Center

<http://pewinternet.org>