The Changing Information Landscape: Implications for Public Libraries

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Trends

• Changes in information and data
  +
• Changes in technologies
  +
• Changes in demographics and Skills
  +
• Changes in Service Context
  +
• Changes in Services and Use
  +
  =
• The evolving public library
Changes in Information
Changes in Information

• Quantity and Availability
  ◦ An LoC of indexing everyday
  ◦ 72 hours of video loaded on YouTube every minute
  ◦ 400 million tweets per day
    • Over 1 billion every 72 hours
    • 340 million tweets per day in *March 2012*
  ◦ Data.gov is now up to about 450,000 datasets
    • It’s about big data

• Speed of information
  ◦ Within minutes, your tweet is indexed and searchable in Google
  ◦ What used to require effort is at your fingertips
    • Not reinventing the search - large scale FAQ
  ◦ Connection is instantaneous
Changes in Information

- Interacting in New Ways


- Data.gov datasets (and state and local versions) enable apps, new ways of engaging information for a range of purposes
Changes in Information

• Information is Social
  ◦ More is out there
  ◦ More is connected
    • Through social media
  ◦ More is shared
  ◦ Crowdsourcing enables more uses, sharing, problem solving through concentrated bursts of information sharing
    • Hackathons
  ◦ Data.gov is about creating data communities to use data to build apps and solve societal challenges – environment, health, etc.
Big data – local challenges

- Challenge: +100,000 people in Louisville have asthma (> state and national averages)
- Deployment of 500 tracking inhalers from Asthmapolis
- CDC data, City of Louisville, Asthmapolis, IBM, Norton Healthcare, University of Louisville
- Mashups of collected data with
  - Air quality
  - Pollen outbreaks
  - Traffic congestion
Summary

- More information, more directly to users
- Our ability to access, use, and interact with information is changing
- Information is increasingly enhanced and linked in a range of ways
- The social nature of information enables stronger ties between people, communities, information sources, information providers, governments, intermediaries
  - To solve a range of challenges
Changes in Technology
Some Major Trends

- **E-reading**
  - More e-reading
  - Across platforms – smartphones, tablets, computers

- **Mobile**
  - User-owned devices

- **Natural interfaces**
  - Motion sensing
  - Touchscreens
  - Voice activation - Siri

- **Online learning technologies**
  - Peer to Peer
    - Not just about connecting individuals to one another, but also
      - Learning communities/commons
  - STEM
    - MITx, TED-Ed, Khan Academy
Smartphones Devices

- 50.4% own a smartphone overall, up from 47.8% in December 2011 …
- …and growing

Tablet & E-reader Ownership

http://searchenginewatch.com/article/2142052/Tablet-E-Reader-Ownership-Doubled-Over-Holidays
Some Major Trends

- **Web apps**
  - Yes, native apps (apple, Google), but
  - Increasingly HTML 5
    - Non-device/OS dependent

- **Open**
  - Open source technology
  - Open source textbooks
  - Open educational resources
    - Journals
    - Repositories
  - Open data

- **Self serve**
  - Vending machines, print on demand
    - “in a box”
    - Espresso

http://www.ondemandbooks.com/
Some Major Trends

- It's social

Resources and Locators

- **Direct to Resource Apps**
  - ScienceDirect app
  - Worldcat.org/m
  - Gale – AccessMyLibrary
  - SirsiDynix BookMyne
  - LibraryThing

- **QR Codes, MS Tags**
Summary

• New technologies
  ◦ Increasingly mobile
    • Across demographics, but particularly younger generations
    • Income disparities exist
  ◦ Allow for different experience with information
  ◦ New understandings of information
  ◦ Offer “ready reference”
  ◦ User as creator and publisher
  ◦ Moving towards
    • Customization
    • On the go
    • From everywhere
    • Open
Changes in Demographics and Skills
Changing Demographics

- Population is increasingly diverse
  - Aging
  - Minority growth
- Nation on its way to being majority-minority population
  - Cities, regions, and some states already are or will be shortly
- Mixed literacy
  - Traditional literacy
  - Technology literacy
  - Information literacy
  - Data literacy
- Mixed access to broadband and computing technologies

The Changing Demographic Profile of the United States. CRS, 2011
www.fas.org/sgp/crs/misc/RL32701.pdf
Changes in Service Context
Declining Budgets

State and Local Workforce Cutbacks

High rates of public sector job losses

Local governments in the U.S. cut jobs in 10 out of 12 months in 2010. They did the same in 2011. Never before have local government workers been laid off at such a high rate.

- 586,000 fewer jobs than in 2008 at state and local government levels
Changing Communities

- More diverse population
  - Aging
  - Minority growth, particularly Hispanic
- Mixed literacy
  - Traditional literacy
  - Technology literacy
  - Information literacy
  - Data literacy
- Mixed access to broadband and computing technologies

*The Changing Demographic Profile of the United States. CRS, 2011*
  - [www.fas.org/sgp/crs/misc/RL32701.pdf](http://www.fas.org/sgp/crs/misc/RL32701.pdf)
Public Libraries


- Increased Public Use: 36%
- Technology Classes: 58%
- Electronic Resources: 60%
- Computers: 74%
- Wi-Fi: 57%
- Flat or Decreased Funding

Percentage represents number of libraries reporting

2012 Public Library Funding & Technology Access Survey
American Library Association and Information Policy & Access Center
Changes in Services and Use
Print Collections Decreasing

Figure 14. Public Library Collections: Print Materials Per 1000 People, FY2000-2009

Source: Public Library Survey, FY2000-2009, Institute of Museum and Library Services/National Center for Education Statistics
Non-Print Collections Increasing

Figure 15. Public Library Collections: Non-print Materials Per 1,000 People, FY2000-2009

Source: Public Library Survey, FY2000-2009, Institute of Museum and Library Services/National Center for Education Statistics
Reference Generally Down

**Figure 7. US Public Library - Reference Transactions Per Capita, FY2000-2009**

*Source: Public Library Survey, FY2000-2009, Institute of Museum and Library Services/National Center for Education Statistics*
American Public Libraries & Community Internet Access

99% of public libraries now offer free, public internet to the communities they serve. However, the increase of demand for this service and the decrease in funding is creating a problem for Americans.

Why is Library Funding Critical?

1 in 3 Americans use public libraries for free internet access.

1 in 2 people who visit the library use the internet.

2 in 5 low-income Americans rely on library internet access.

Library users span every demographic (age, race, income divides and more).

What do people do on the internet?

42% (12 million) use library internet for education and training help.

40% (10 million) use library internet to assist with careers and employment.

37% (8 million) use library internet to research health and wellness.

84% of Americans believe Internet access in libraries is important for communities.

Library patrons also use the internet for accessing government and legal services, participating in community life, managing household finances, and entrepreneurship.
Social Media in Libraries

Social Media Technologies Used by Public Libraries

2012 Public Library Funding & Technology Access Survey
Technology Training

- 44.3% of public libraries offer formal technology training
- 34.8% offer one-on-one training by appointment
- 82.7% offer informal point-of-use training
The Evolving Public Library...

...Is less about the number of resources and services and more about

• Just in time, as opposed to just in case
• Delivery of services, resources, and materials that are at fingertips, any time, any where
• Engaging users through social technologies
• Knowledge management, rather than collection management
• Digital and other literacies for diverse populations
• Building digitally inclusive communities
• Libraries and librarians changing their communities through innovative services
Innovation During Challenging Times

- Innovative solutions – seeing the bigger picture of needs (not mutually exclusive)
  - Access to food
  - Wealth management/building
  - Access to health information and creating healthy communities
  - Literacy/digital literacy
  - Early learning
  - Employment assistance
  - Education – GED, other
  - E-government
  - Language
  - Seniors
Innovative Services

- **Challenge:**
  - Helping immigrant populations become part of our communities and attain citizenship

- **Solutions:**
  - Hartford Public Library’s The American Place
  - Partnerships with USCIS, NGOs, public schools,
  - End-to-end services
    - Citizenship classes, ESL, early learning, story time, passports, and more
Innovative Services

• Challenge:
  ◦ Employment

• Solution:
  ◦ Partnerships between state library agencies, public libraries, and One-Stop Career centers
    • New Jersey
    • New York
    • North Carolina
    • Maryland
Innovative Services

• Challenge:
  ◦ Social services (child welfare)

• Solution:
  ◦ Alachua County Library District in Florida/
The Library Partnership
    • Part library, part social service center staffed by
      over 30 NGOs and state agencies focused on
      families and child welfare
Innovative Services

• Challenge:
  ◦ Life-long learning, creativity, entrepreneurship

• Solution:
  ◦ Sacramento Public Library’s I Street Press
    • Community Writing & Publishing Center
      • http://www.saclibrary.org/?pagId=1599
      • Learn to write – creative writing, how to publish
    • Publish own work – Espresso Book Machine
    • Print on demand – database of 3 million + titles
Innovative Services

• Challenge:
  ◦ Digital literacy

• Solution:
  ◦ Chicago Public Library (MacArthur Foundation)
    • YouMedia
      • http://youmediachicago.org/
  ◦ Connect young adults, books, media, mentors, and institutions
  ◦ Promote critical thinking, creativity, and skill-building
  ◦ Learn how to use a variety of technology to create digital artifacts
Changing Educational Needs

- Librarians who are
  - Entrepreneurial and innovative
  - Able to serve diverse populations
  - Focused on digital inclusion/literacy
  - Able to seek and form partnerships
  - Able to help users create and manage content
  - Understand data (big, community, library)
  - Understand space use
  - Flexible
  - Leaders, not just managers

- UMD MLS Program
  - Information and Diverse Populations
  - E-government
  - Digital curation
iPAC Projects

• Scholarship
  ◦ Digital government librarians (IMLS)
    • http://ipac.umd.edu/our-work/government-information-service-21st-century
  ◦ Information and Diverse Populations (IMLS)
    • http://ipac.umd.edu/our-work/diverse-populations-information-and-library-education

• Research
  ◦ E-government partnerships (IMLS)
    • http://ipac.umd.edu/our-work/egovernment-partnerships
  ◦ Public Access TechnologyBenchmarking (B&MGF)
    • http://www.libraryedge.org/
Conclusions

• It is how we innovate
  ◦ Knowledge
  ◦ Services
  ◦ Partnerships
  ◦ Space
  ◦ Technology

• To address community challenges, needs, changing demographics, digital and information skills that will create our future value
  ◦ And it may require *not* doing some things that your library has done in the past
Thank You

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