Information Fluency in a Virtual World

Stephen Abram, MLS, FSLA
LOEX, Albuquerque, NM
May 1, 2009
What is at the **heart** of libraries?
Literacy

- Reading Literacy
- Numeracy
- Critical Literacy
- Social Literacy
- Computer Literacy
- Web Literacy
- Content Literacy

- News literacy
- Technology literacy
- Information literacy
- Media literacy
- Adaptive literacy
- Research literacy
- Etc.
What am I hearing?

- I hear that folks feel that something is not quite right....
- Question where functions fit....of roles....of responsibilities...
- Question whether collaborative technologies “belong” in “work”
- Question how to organize functions of a library when those functions are so engrained
- Question where a job starts and stops.... of where work starts and stops.....of skills required for jobs....
- Question if we’re preparing for what was or the future....
What are the Real Challenges?

• Scalability
• Retreading our colleagues - quickly
• Prejudice & Disrespect
• Demographic Change
• Lack of Accountability
• Reproducibility
• Coordination and Sharing
• Vision
• Leadership
• Financial Resources
PUBLIC LIBRARY
LIKE WIKIPEDIA, ONLY IT TAKES 4 HOURS

BAD CIVIC AD CAMPAIGNS #32
Can we keep up with change?
Build in Format Agnosticism
No Quick Fixes
What is the scariest scenario for libraries?
My First Tribble
Kids on Social Crack

Would you like to pick up a wizard hat?

Yes  No
Watching The Kids & Their Toys
### Millennial Characteristics

Be honest – They’re different

<table>
<thead>
<tr>
<th>Principled / Values</th>
<th>More Friends</th>
<th>More Diverse</th>
<th>Respect Intelligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimistic / Positive</td>
<td>Internet Natives</td>
<td>More Choices</td>
<td>Format Agnostic</td>
</tr>
<tr>
<td>Balanced Lives</td>
<td>Adaptive / Flexible</td>
<td>Civic Minded</td>
<td>High Expectations</td>
</tr>
<tr>
<td>Collaborative</td>
<td>Nomadic</td>
<td>Gamers</td>
<td>Experiential</td>
</tr>
<tr>
<td>Independent</td>
<td>Confident</td>
<td>Direct</td>
<td>More Liberal &amp; Conservative!</td>
</tr>
<tr>
<td>Multi-taskers</td>
<td>Inclusive</td>
<td>Patriotic</td>
<td>Entrepreneurial</td>
</tr>
<tr>
<td>Healthy Lifestyle</td>
<td>Family Oriented</td>
<td>Graphical</td>
<td>Achievement Oriented</td>
</tr>
</tbody>
</table>

Credit: Richard Sweeney, NJIT
Map of Online Communities and Related Points of Interest

Geographic area represents estimated size of membership.

(Spring 2007)

(Not a complete survey. Sizes based on best figures I could find, but involved some guesswork. Do not use for navigation.)
Reminder:
500,000
A DAY!
Hennepin County Library's Interests
General: library, css, rss feeds, books
Music: Check out the new music CDs on order or recently arrived at the library.
Movies: Want to reserve the new DVDs at the library? How about teen movies? We update them daily as we order them.
Groups: Teen Lit, YA/Teen Books Discussion Group
View All Hennepin County Library's Groups

Hennepin County Library's Details
Status: Single
Zodiac Sign: Capricorn
Smoke / Drink: No / No

Hennepin County Library's Friend Space
Hennepin County Library has 293 friends.
A sustainable social network for life.

95% of students in clients like U of Toronto, NCSU, Stanford, etc.

Over 80% of all college and University students in North America.
e.g. San Jose SU McMaster
5,000 Library visits every night!

Me
Reading is virtually fundamental in SL

By KATT KONGO
Staff writer

While most Second Life residents are aware of the variety of ways in which SL is used, from educational classrooms to treatment of mental illnesses, most would be surprised to learn that SL is now being used by an institution most think of as conventional — a library.

To be more exact, the Alliance Library System (ALS) is currently providing select services to the residents of SL. Initial services have, so far, consisted of book discussions and programs, such as one held Friday on the topic of “Getting Along with IT staff for Librarians and Educators.”

ALS, which is based in East Peoria, Ill., will team up with Online Programming for All Libraries (OPAL) and utilize the programs currently offered online to librarians and libraries within SL. The two entities eventually hope to offer a plethora of library services.

In a telephone interview, Kitty Pope, executive director for the ALS, said the goal of their programs within SL is to reach people who might not otherwise go to a library. In giving background information about the ALS, Pope said the organization provides services to 285 libraries and is partially funded by the state of Illinois.

She added that ALS is one of the most innovative organizations, technologically speaking, and their philosophy is to mine new technologies to spread the gospel of library usage. “Innovation equals risk, innovation equals growth,” she stated.

Lou Bell, the ALS’s director of innovation, read about SL in the blog of a librarian who was already a resident. She created an account, logged on with her avatar, Lorelei Junot, and saw a population of almost 200,000. She found that SL had a few libraries, such as Wandering Yaffle’s and blacklibrary, but thought that library services could be expanded. “Since there is web programming through OPAL, why not offer that in SL?” she asked.

Librarians from all over the country are gathering in SL to assist in setting up the virtual library. In fact, Pope expected criticism from many library blogs, but instead has found those in the field to be immensely excited about the possibilities afforded by SL.

Bell concurred, saying, “The response has been enthusiastic. People are volunteering and doing a

See BOOK, Page 20
What people are doing

- Creatives publish Web pages, write blogs, upload videos to sites like YouTube.
- Critics comment on blogs and post ratings and reviews.
- Collectors use Really Simple Syndication (RSS) and tag Web pages to gather information.
- Joiners use social networking sites.
- Spectators read blogs, watch peer-generated videos, and listen to podcasts.
- Inactives are online but don’t yet participate in any form of social media.

Who participates (U.S. online users)

<table>
<thead>
<tr>
<th>Category</th>
<th>Young Teens 12 to 17</th>
<th>Youth 18 to 21</th>
<th>Generation Y 22 to 26</th>
<th>Generation X 27 to 40</th>
<th>Young Boomers 41 to 50</th>
<th>Older Boomers 51 to 61</th>
<th>Seniors 62+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creatives</td>
<td>34%</td>
<td>37%</td>
<td>30%</td>
<td>19%</td>
<td>12%</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Critics</td>
<td>24%</td>
<td>37%</td>
<td>34%</td>
<td>25%</td>
<td>18%</td>
<td>15%</td>
<td>11%</td>
</tr>
<tr>
<td>Collectors</td>
<td>11%</td>
<td>16%</td>
<td>18%</td>
<td>16%</td>
<td>15%</td>
<td>16%</td>
<td>11%</td>
</tr>
<tr>
<td>Joiners</td>
<td>51%</td>
<td>70%</td>
<td>57%</td>
<td>29%</td>
<td>15%</td>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>Spectators</td>
<td>49%</td>
<td>59%</td>
<td>54%</td>
<td>41%</td>
<td>31%</td>
<td>26%</td>
<td>19%</td>
</tr>
<tr>
<td>Inactives</td>
<td>34%</td>
<td>17%</td>
<td>21%</td>
<td>42%</td>
<td>54%</td>
<td>61%</td>
<td>70%</td>
</tr>
</tbody>
</table>

Data: Forrester Research
Information Engagement Levels

- **Stimulate/Live**
- **Present/Teach**
- **Argue/Defend**
- **Act on/ Discuss**
- **Read/View**

*Dr. Thomas Davenport*
Learning Styles

- Visual/Spatial (Picture Smart)
- Verbal/Linguistic (Word Smart)
- Musical/Rhythmic (Music Smart)
- Logical/Mathematical (Number Smart)
- Bodily/Kinesthetic (Body Smart)
- Interpersonal (People Smart)
- Intrapersonal (Self Smart)

— Piaget, Bloom, Gardner, etc.
Information Fluency

• Standard Curriculum Components
  – Mathematics / Arithmetic
  – Science, Biology, Physics & Chemistry
  – English, Languages
  – History, Geography, Politics, Sociology
  – Music, Art, Phys ed.
  – Guidance, Religion
Information Literacy

K-12 Information Literacy Rubrics Defined. Where are the post-secondary rubrics?
### Serving Generational Diversity

<table>
<thead>
<tr>
<th>Baby Boomers</th>
<th>Gen. X</th>
<th>Echo Boomers</th>
</tr>
</thead>
<tbody>
<tr>
<td>74 Million</td>
<td>49 Million</td>
<td>78 Million</td>
</tr>
<tr>
<td>Diversity as a Cause</td>
<td>Accept Diversity</td>
<td>Celebrate Diversity</td>
</tr>
<tr>
<td>Idealistic</td>
<td>Pragmatic / Cynical</td>
<td>Optimistic / Realistic</td>
</tr>
<tr>
<td>Mass Movement</td>
<td>Self Reliant / Individual</td>
<td>Self Inventive / Individual</td>
</tr>
<tr>
<td>Conform to the Rules</td>
<td>Reject the Rules</td>
<td>Rewrite the Rules</td>
</tr>
<tr>
<td>Killer Job</td>
<td>Killer Life</td>
<td>Killer Lifestyle</td>
</tr>
</tbody>
</table>

The Beverly Hillbillies
Sexy New Technologies Arrive
Management Gets Excited

Oooooo! The Web and it’s free!
Sometimes You`re Miss Hathaway

Working with the Clampetts!
Bricks, Clicks and Tricks
Are we going to a totally build it yourself world?

Imagine IKEA merging with GM...
Newspapers: Assemble them yourself.
Now: Re-imagine the textbook, coursepack, etc.
Are we ready for the post book world?

http://www.flickr.com/search/?q=book+sculpture&page=44
Can we get our heads out of content?
Will Reading Matter?

Audiobooks and eBooks . . . And Google
Growing up from books,
But bringing them along…
Solve a Problem for Your Readers
Who Are Your Stars?

Do Your Users Know Their Names?
Embedded Technology
Filmmaker Rob Spence
Can the Modern Director Use Data?

I used to think correlation implied causation.

Then I took a statistics class. Now I don't.

Sounds like the class helped. Well, maybe.
It’s not this dangerous to just look into and experiment with change.
METABOLISM

The slower it gets,
the faster it catches up with you.
Have You Updated Your Training?
Be More Open to the Users’ Paths - Filtering
Describe how your training is evolving.
What's Your Bread and Butter?
The Emerging Economy

• 1800’s – Industrial Revolution arrived
• And so did a late century depression
• New laws and social modes emerged like unions, labour laws, licensure, etc.
• Nations could control their own destiny
• New professions rose to the top like scientists and engineers
The Emerging Economy

• 1930’s – Financial Revolution arrived
• And so did a mid-century depression
• New laws and social modes emerged like the SEC, Exchange Act, Williams Act, Bank Act, etc.
• Nations could still control their own destiny but integration of trade and finance starts
• Other professions rose to the top like Bankers, CPA’s, financial analysts, and MBA’s, etc.
The Emerging Economy

• Millennium – Information and Knowledge Economy arrives (Yes it arrived a decade ago)
• And so does another new century depression
• New laws and social modes are emerging like copyright, DRM, privacy, and social networking sites
• Nations are not in control but participate in a global mosaic
• New professions will rise to the top like librarians, information scientists, archivists, experience and learning software developers and CI pros, etc.
The Emerging Knowledge Economy

- It’s Global and International
- It’s interdependent
- Social neighbourhoods and nations
- Communities of practice and professional networks
- Interdisciplinary, cross-disciplinary discovery dominates (e.g. genome, life, stem cell, nano, etc.)
- Multi-ethnic, multilingual, multi-cultural
- Massive generational shift
- All major industries will be knowledge based
The Emerging Knowledge Economy

• Examples of Industries that are more knowledge dependent:
  – Agriculture – from R&D to market, Genetic engineers
  – Mining – from discovery through commodity trades
  – Energy – Petroleum, Hydro, Nuclear, Wind, Solar, etc.
  – Forestry, Pulp & Paper – Sustainability and Green
Professions

• Big desktop savings!
• Accountants
• Lawyers
• Doctors and Allied Health pros
• Lawyers
• Military
• Psychotherapy
Economic Exceptions

- Military (e.g. Gaming)
- Education (e.g. Gaming)
- Entertainment (e.g. Gaming)
- Cultural industries (art, museums, theatre, etc.)
- Competitive Intelligence
- Libraries of all types (academic, college, special, public, school, government, etc.)
People are Changing

• Or our understanding of them is improving!
• The new human genome (Shyness, dyslexia, math, music, etc.)
• Human understanding – Bloom’s taxonomy
• MRI’s of reading
• Eye tracking, etc.
• And of course increases in IQ and decreases in fact based knowledge.
Imaging techniques allow us to see which areas of the brain control these functions.
The BIG PICTURE Changes

How much of your activities related to information fluency and related to these and are your learners prepared?
Our Gaming Foundations
EverQuest / WoW – Their Gaming Adapted by the Military
The new Web 2.0 era distribution models remain largely untapped.
The Sharing Economy
“Web 2.0 generally refers to a second generation of services available on the WWW that lets people collaborate and share information online.” Wikipedia

- Shared Pictures = flickr
- Shared Knowledge = Wikipedia
- Shared Bookmarks = del.icio.us
- Shared News = Technorati
- Shared Videos = YouTube
- Shared Everything = myspace.com
Get Good at The Cloud

Yahoo!

AOL

Microsoft

News Corporation

Facebook

zotero

Zoho Docs

delicious

Google Chrome

Beta
Science Info on the Go:
Enhancing Traditional Sci-Tech Library Services w/ Mobile Devices

- Joe Murphy - Yale Science Libraries - joseph.murphy@yale.edu

Mobile devices help libraries meet the evolving information needs of the sci-tech community by expanding traditional services and exploring new opportunities.

Enhancing / Expanding Services

- Mobile Reference = Answers on the go

  Mobile librarians to meet the diffuse information needs of our specialized clientele.

  Email
  Instant Messaging
  Phone
  In person and outreach

New Opportunities

- Text Messaging Reference
  - Answers from anywhere by SMS
  - Expert assistance at point of need

Considerations

- Choosing a technology
- Identifying New Workflows
- Establishing Management Models: Staffing, Training
- Exploring Best Practices for a Quality Service (shifting communication styles and user expectations)

Social Networking

- Mobile devices facilitate library 2.0 and social networking initiatives.
  - Twitter
  - Facebook
  - Flickr
Be Where Your Users Are

orkut beta  facebook  bebo

mixi  myspace.com™  a place for friends

Ning

Linkedin®

plaxo

knol™  A unit of knowledge.

MySpace Developer Platform  a place for developers

opensocial
# LIBRARY 2.0 MATRIX

<table>
<thead>
<tr>
<th>Resource Environment</th>
<th>Web 2.0 as Platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library 2.0 user</td>
<td>Library 2.0 user</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Library catalogue - MARC compliant</th>
<th>E-learning 2.0 environment - LMS, ELGG, LAMS etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web 2.0 platform 24/7 - adaptable user interface</td>
<td>Social Networks</td>
</tr>
<tr>
<td>Information services - Online, Virtual Learning spaces</td>
<td>- MySpace/Facebook</td>
</tr>
<tr>
<td>Blended digital Web Collections</td>
<td>- Blogs &amp; Wikis</td>
</tr>
<tr>
<td>Blended digital repository</td>
<td>- Read/Write web functionality</td>
</tr>
<tr>
<td>Digital access for personal organisation</td>
<td>- Social Bookmarking</td>
</tr>
<tr>
<td>- E-reserve</td>
<td>- Images &amp; multimedia sharing</td>
</tr>
<tr>
<td>- Borrower loan access</td>
<td>- Podcasting &amp; vodcasting</td>
</tr>
<tr>
<td>Digital access for licensed collections</td>
<td>Folksonomy - Tagging for personalisation</td>
</tr>
<tr>
<td>- e-books, videos &amp; multimedia, images, learning objects, etc</td>
<td>Searching - Browser and desktop API</td>
</tr>
<tr>
<td>- specialist online databases</td>
<td>- Blogs &amp; social networks</td>
</tr>
<tr>
<td>Federated searching</td>
<td>- Visual &amp; metasearch engines</td>
</tr>
<tr>
<td>239.50</td>
<td>Mobile computing</td>
</tr>
<tr>
<td>Taxonomy - supported by global metadata standards</td>
<td>RSS feeds and Mashups</td>
</tr>
</tbody>
</table>

2.0 is about *play*
23 Learning 2.0 Things

- Week 1: Introduction and Adult Learning
- Week 2: Blogging
- Week 3: Photos & Images
- Week 4: RSS & Newsreaders
- Week 5: Play Week
- Week 6: Tagging, Folksonomies & Technorati
- Week 7: Wikis
- Week 8: Online Applications & Tools
- Week 9: Podcasts, Video & Downloadable audio
Five Weeks to a Social Library

• About Five Weeks to a Social Library
• Blogs
• RSS
• Wikis
• Social Networking Software and Second Life
• Flickr
• Social Bookmarking Software
• Selling Social Software @ Your Library
• Real mobile devices: iPods, MP3 players, video, smart phones, texters, Kindles, Sony Readers, etc.
• Podcasts, Streaming Media
• Special PC’s: disability compliance, streaming media, IM groups, VR (both kinds)
• Gaming stations

Build a Sandbox
Top 13 2.0 Apps for Librarians

- 1. Google Suite
- 2. Meebo/Chatango
- 4. Worldcat.org
- 5. Amazon.com
- 6. Del.icio.us
- 7. Bloglines
- 8. Zotero
- 9. Facebook
- 10. Wordpress
- 11. MediaWiki
- 12. Ning
- 13. Twitter

All FREE
Be a Lab Rat!
Experiment, continuously
Is that the Internet in your pocket or are you just really smart?
Being Globally Competitive

- On Target
- Minus 25K
- Plus 20%
- Target
Research and Insights

- Kent State U study of K-12 learners
- Huntsville Madison usability study
- Personas work
- Normative Data Project
- Visualization and Facets
- UCD User-centered Design
- Etc.
SchoolRooms

• **An Example of BIG vision and Collaboration**
• Built by Librarians and Teachers
• Every Lesson
• Every Grade
• Every Standard
• Every Subject
• Every State
• OPAC integration, localization
• Scalable – 10 states started so far plus Boston PL and Philadelphia After-School Program
• 5,000 K-12 Learners, 2600 schools in Ohio
• Award Winning: Scholastic Best in Tech Award
Earth Science Room: The Amazing Sun

- corona - the sun's atmosphere
- chromosphere
- photosphere – the light-producing layer
- core – where the nuclear fusion of helium and hydrogen takes place
- sunspot – dark patch that makes cooler gases

Explore a new learning portal for the K12 community

SchoolRooms™ by SirsiDynix is a new online portal that encourages K-12 students to explore, discover, and learn anywhere anytime.

Designed to meet students’ needs and to be a tool for parents who play an integral role in helping their children continue learning outside the classroom.

Using SchoolRooms, students can search (all at once):
Do no evil…or, Search, Ads and Apps

I ♥ my customers
Transformation

- Data
- Information
- Knowledge
- Behaviour

Different

SirsiDynix
We Are Important

EXPENDABILITY

Kirk, Spock, McCoy, and Ensign Ricky are beaming down to the planet. Guess who's not coming back.
Inventing the Future

• How much time do you spend having a clear view of it?
• How is it shared with your colleagues and clients?
• You can’t wait for everyone to change at once.
Re-Energizing Libraries
Be the Change You Want to See

Focus on Impact and Value
Be The Change We Want to See
A Third Path
"You have to sit by the side of a river a very long time before a roast duck will fly into your mouth."

— Guy Kawasaki
The world is going to change with or without you...

Get ready.
What are the Real Challenges?

- Scalability
- Prejudice
- Lack of Accountability
- Reproducibility
- Coordination and Sharing
- Vision
- Leadership
- Financial Resources
Context is King, not Content.
DRAFT: “Personal Network Member Bill of Rights and Responsibilities

1. I have the right not to be social 24/7 - either online or in person.
2. I have the right to time for reflection and responsibility for doing so.
3. I have the right to use only the tools that suit my learning style.
4. I have the right to stop using a tool when it is no longer useful.
5. I have the right to not be on the cutting edge all the time or feel I need to always know all there is to know.
6. I have the right to choose those with whom I learn in my personal learning network and responsibility to learn from those with whom I don’t always agree.
7. I have the right and responsibility to disagree and the responsibility to do it professionally.
8. I have the responsibility to become familiar with a tool before sharing it with others.
9. I have the responsibility to share my knowledge with others in my network.
10. I have the right and responsibility to not let online activities keep me from my friends, my family, my workplace, or my community.
11. I have a responsibility to keep up.
12. I have a responsibility to learn new things.
13. I am responsible for my own learning, I am not a child of my employer.
14. I am responsible to learn when I need to and not to wait until it’s an emergency. I have a responsibility to understand that technology evolves and evolves with my feedback.
15. I have a responsibility to respect all members of my network.
16. I have the responsibility to never stop learning.
17. I have the responsibility to understand and consider everyone’s POV.
18. I have the responsibility to interact, disagree and debate without making it personal.
19. I have the responsibility to present myself to my learning network - online and in the physical world - in a genuine, professional manner.
What is at the heart of libraries?

Learning
Interaction
Community
Innovation
Passion
Progress
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VP Innovation, SirsiDynix
Chief Strategist, SirsiDynix Institute
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