Transforming Information Literacy: Do we have the skills?

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What skills do teachers and learners need to be 21st c. fluent?

What are “21st century literacies” or “fluencies”?

How do they relate to information literacy?

How can new technologies and online/immersive environments help build them?

Case study: World of Warcraft
At the end of this workshop, you will be able to:

1. Discuss recent findings on the 21st c. fluency levels of students

2. Discuss the relationship between information literacy and 21st century fluencies in order to evaluate the relevance of each for today’s students

3. Describe how games, simulations and virtual worlds address best practices

4. Analyze how online learning tools such as games foster 21st c. fluencies
The Truth is Out There: NetGen Needs and 21st Century Fluencies
21st Century Fluencies

- Scientific Literacy
- Numeracy
- Economic Literacy
- Media Literacy
- Digital/ICT Literacy
- Visual Literacy
- Information literacy
“...A significant number of students believed their basic academic and learning skills were weak, in particular for study, test taking and math skills. ... An equivalent number reported they could use help in developing these skills areas...”. (ACCC& HRSDC, 2007)
21st Century Fluencies

Students need work in all fluencies

Starting to see libraries take steps to address

- Atwater Digital Literacy Project
- London Public Library Media Literacy
What Should We Teach?
Transforming Information Literacy

21st century fluencies
Liaison program pairs librarians with faculty

by Catherine Baird
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McMaster University Libraries are launching an exciting new initiative, Library Liaison @ Mac, that will match librarians with academic departments, schools and programs to ensure that library services and collections are closely aligned with teaching and research priorities.

Liaison librarians will work collaboratively with faculty and in the upcoming year will focus on achieving four key priorities:

- Building partnerships between liaison librarians and their assigned departments, schools or programs
- Partnering to teach 21st century fluencies
- Managing access to scholarly literature
- Providing research consultations for faculty, graduate students and research assistants
21st Century Fluencies

- Scientific Literacy
- Numeracy
- Economic Literacy
- Media Literacy
- Digital/ICT Literacy
- Visual Literacy
- Information Literacy
- Multicultural literacy/global awareness
Literacy

“Just as literacy embodied the ideals of an Industrial Age, technology is positioned as a symbol of enlightened progress in the Age of Information.” (Tyner, 1998)
Common Themes

- Technology
- Cognitive skills and critical thinking
- Creativity
- Risk-taking
- Productivity
- Lifelong learning
Information Fluency

(Associated Colleges of the South, 1999)
Stages in Information Fluency
(ACS, 2002)

- Basic skills & critical analysis
- Disciplinary tools & resources
- Advanced research strategies & project designs
- Reorganizing & reframing information for "publication"

- First-year
  - Basic skills & critical analysis
  - Audience
  - Instructor
  - Class
  - Campus

- Sophomore
  - Instructor
  - Class
  - Campus

- Junior
  - Disciplinary tools & resources
  - Class
  - Campus
  - Community

- Senior
  - Advanced research strategies & project designs
  - Community
enGauge 21st Century Skills

Academic Achievement

Digital-Age Literacy
- Basic, Scientific, Economic, and Technological Literacies
- Visual and Information Literacies
- Multicultural Literacy and Global Awareness

Inventive Thinking
- Adaptability, Managing Complexity, and Self-Direction
- Curiosity, Creativity, and Risk Taking
- Higher-Order Thinking and Sound Reasoning

Effective Communication
- Teaming, Collaboration, and Interpersonal Skills
- Personal, Social, and Civic Responsibility
- Interactive Communication

High Productivity
- Prioritizing, Planning, and Managing for Results
- Effective Use of Real-World Tools
- Ability to Produce Relevant, High-Quality Products

21st Century Learning
“It is learning rather than information, and sociotechnical fluency rather than literacy, that comprise the agenda for tomorrow.”

(Marcum, 2002)
Essential Skills: Reading text, Document use, Numeracy, Writing, Oral communication, Working with others, Problem solving, Decision making, Critical thinking, Job task planning and organizing, Significant use of memory, Finding information, Computer use, Continuous learning
ICT Literacy

“While learning technology skills can be the easy part, a lack of literacy, numeracy, problem solving, and teamwork skills in new and existing workers reflects the gap between technology proficiency and ICT literacy.”

(ICT Literacy Panel, 2007)
Complexity of knowledge and expertise

**Literacy, numeracy, problem solving, and spatial / visual literacy**

**Digital literacy**
(hardware, software applications, networks, digital technology)

*(ICT Literacy Panel, 2007)*
21st C. Literacy

“...the set of abilities and skills where aural, visual, and digital literacy overlap. These include the ability to understand the power of images and sounds, to recognize and use that power, to manipulate and transform digital media, to distribute them pervasively, and to easily adapt them to new forms.”

(NMC, 2005)
New Media Literacies

“...A set of cultural competencies and social skills that young people need in the new media landscape. ...These new skills build on the foundation of traditional literacy, research skills, technical skills, and critical analysis skills taught in the classroom.” (Jenkins, 2006)
Figure 5

Communication Skills Map
Communication Skills Constellation

INFORMATION LITERACY
- Definition and articulation of information need
- Location and access of information
- Assessment of information
- Organization of information
- Use of information
- Communication and ethical use of information
- Other information skills

ICT SKILLS - MEDIA LITERACY
- Digital technology use
- Use of communication tools
- Use of networks
- Sift media messages
- Analyze media messages
- Other ICT/media skills

LITERACY
- Reading
- Writing
- Numeracy
- Other basic skills

ORAL COMMUNICATION
- Speaking
- Listening

REASONING
- Thinking skills

(REEFF, ZABAL, & BLECH, 2006)
Essential Learning

• Intellectual and practical skills:
  – Inquiry and analysis
  – Critical and creative thinking
  – Written and oral communication
  – Quantitative literacy
  – Information literacy

• Intercultural knowledge and competence

• Foundations and skills for lifelong learning
  (AACU, 2008)
“Literacy, at bottom line, has to be about being able to read and write because of the access this gives us to the world of knowledge and culture. But it is more about people engaging with this knowledge and culture than it is about a string of measurable skills or competencies.”

Wendy Earle, IoI
Education Forum, 2005


**Discussion**

- **Information literacy, information fluency or 21st c. fluencies: does the change in terminology matter?**

- **What are we currently teaching?**

- **What should we be teaching?**
DO WE HAVE THE SKILLS?
TECHNOLOGIES AND FLUENCIES

TECHNOLOGY AS A LEVER
Teaching and Technology

Learning Management Systems

Audience Response Technology

Games/simulations/virtual worlds
Learning 2.0

- Student-centered and Technologically Enriched

- Active Learning and Participation

- Info Lit, Technological Fluency and Subject Knowledge Blended

- Pedagogy first, then Technology
Best Practices for Undergraduate Education

- Encourages student-faculty interaction
- Encourages cooperation among students
- Encourages active learning
- Provides prompt feedback
- Respects diverse talents and ways of knowing
- Communicates high expectations
- Emphasizes time on task
Games

Voluntary activity, creating an imaginary or immersive world, played within a specific time and place according to established rules.

Simulation

Representations of real-world systems, contain rules and strategies that allow activity to take place flexibly and with variable conditions.

Virtual worlds

Persistent spaces, may be reality or fantasy based, may have gaming or social elements.
Why Gaming, Simulations and Virtual Worlds?

- Universities recognize link between teaching best practices, student needs, and student outcomes
- Over 130 colleges and universities in Second Life
- Provides immersive, collaborative, creative learning experience
Learning Styles

- Visual
- Kinesthetic
- Constructivist/Exploratory
Student Advantages

- Many students comfortable with computers and gaming
- Learn through exploration, collaboration, creation and construct innovative solutions
- Anonymity takes away fear of failing, try until they get it right
- Increased motivation, become invested
- Learning becomes fun
Best Practices for Undergraduate Education

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An Ideal Learning Environment?

- Customized to specific student needs
- Immediate feedback
- Constructive
- Motivates beyond externally imposed requirements
- Builds enduring conceptual structures
WHAT ABOUT LIBRARIES?

- Support the educational mission of the university
- Support undergraduate education best practices
- Explore potential of games/simulations for information literacy and other 21st century fluencies
21st Century Fluencies And MMORPGs!?!?!
What is an MMORPG?

- Massively Multiplayer Online Role Playing Game
- Virtual worlds
- Many simultaneous players
World of Warcraft

- MMORPG created by Blizzard (Starcraft, Warcraft, Diablo)
- Released November 2004
- Largest MMORPG: 10 million players worldwide
THE GAME OUTSIDE THE GAME

- Web sites - worldofwarcraft.com, wowinsider.com, mmo-champion.com

- Forums - elitistjerks.com, worldofwarcraft.com

- Databases - wowhead.com, thottbot.com

- Wikis - wowiki.com

- Machinima - warcraftmovies.com, youtube.com
Summary