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COMMON GROUND, DIVERGENT ECO-SYSTEMS:

Mediating New Learning in the 21st Century

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What do we know?

COMMON GROUND

A few facts and figures

- about paper reading

- about electronic reading

The book count – January 23-29, 2012

- In one week, Canadians bought and borrowed more than

  3,405,687 books

  - more than 5 books sold or circulated every second
    - count organized for the TD National Reading Summit

The book count – January 23-29, 2012

- 1,153,081 print books bought
  - in English and French
  - from a variety of sources
    - over 260 independent bookstores
    - the Chapters-Indigo chain
    - amazon.ca

  - covering 80% of English retail market
  - covering 45% of French retail market

    - English language print book sales increased 4% over the equivalent week in 2011

The book count – January 23-29, 2012

- 111,053 English language e-book sales
  - not counted last year but publishers report a "significant" increase from 2011

The book count – January 23-29, 2012

- 2,141,553 print books borrowed
  - from 28 urban library systems
    - covering over 13.7 million Canadians
  - 63,196 e-books downloaded
    - circulation increase of 8% print, 50% digital
      - 9% total circulation increase

The shift to digital is accelerating

- in the United States
  - e-book ownership nearly doubled between mid-December 2011 and early January 2012
    - tablets
      - 10% -> 19%
    - e-readers
      - 10% -> 19%
    - owning either one or the other
      - 18% -> 29%

(Schroeder, January 23, 2012)

The picture is changing rapidly

- In mid-December 2011, 17% of American adults had reported they read an e-book in the previous year; by February, 2012, the share increased to 21%.

(Rainie *et al.*, April 4, 2012)

But the numbers get bigger

- "Some **43%** of Americans age 16 and older say they have either read an e-book in the past year or have read other long-form content such as magazines, journals, and news articles in digital format on an e-book reader, tablet computer, regular computer, or cell phone."

(Rainie *et al.*, April 4, 2012)

Kindle sales outstrip paper on amazon.com

- "Since April 1 [2011], Amazon sold 105 books for its Kindle e-reader for every 100 hardcover and paperback books, including books without Kindle versions and excluding free e-books."

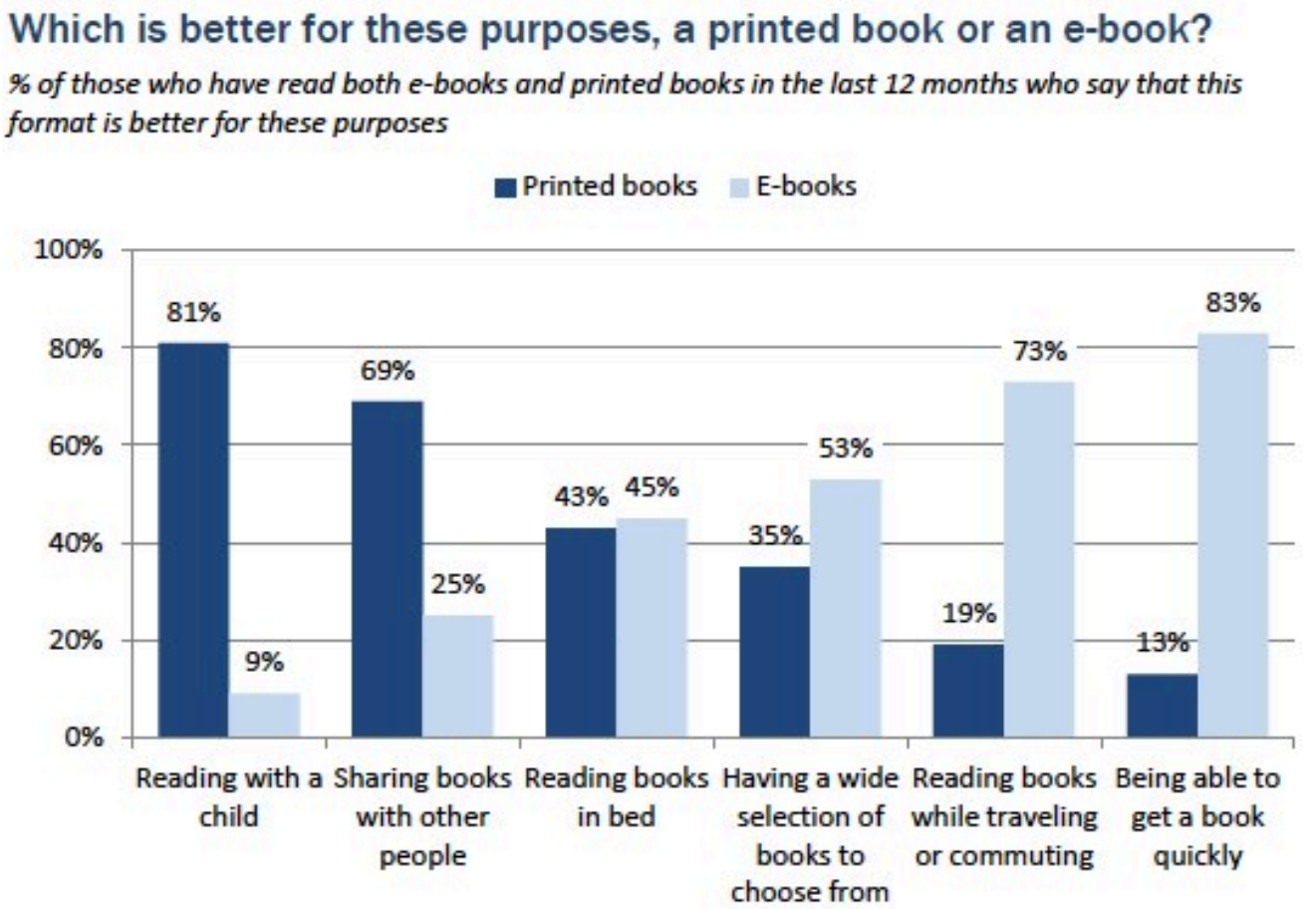
(Miller & Bosman, May 19, 2011)

Best-sellers are switching formats

- "In the final week of 2011 the e-book version of 42 of the top-selling 50 books on USA Today's best-seller book list was outselling the paper version of the same book."

(Rainie *et al.*, 2012, 13)

Yet readers think differentially



Source: Pew Research Center's Internet & American Life Reading Habits Survey, November 16-December 21, 2011. N=2,986 respondents age 16 and older. Interviews were conducted in English and Spanish and on landline and cells. N for those who have read both printed books and e-books in the past 12 months is 701.

Readers are still making up their minds

- Sales of paper magazines in Canada are declining (down 7% in 2011) but the situation is far from clear-cut
  - "Those who do read magazines overwhelmingly prefer to read on paper, despite the ever-widening list of digital alternatives made available by publishers anxious to keep them reading.
  - Those who do buy digital editions are nearly twice as likely as the average reader to buy additional printed magazines in any given month."

Ladurantaye, 2012, B3

Why do these figures matter for academic libraries?

- because recreational reading supplies the essential matrix for developing fluency
- because comfort with electronic forms leads to ease with experimenting
- because expectations are changing

A time of flux

HOW DO WE THINK ABOUT READING AND LEARNING?

The terms of the discussion

- the notion of "digital natives" and "digital immigrants" is a straightjacket
  - doesn't describe young people accurately
  - doesn't describe older people accurately
- generational boxes are not helpful

A more useful set of terms

- digital rule-followers
  - where's the instruction book?
  - who can help me?
- digital improvisers
  - comfortable enough to experiment
  - higher levels of automaticity and fluency with digital options
- stances may shift through time, circumstance, and platform

Getting to improv

- the importance of tacit as well as explicit understanding
- head knowledge and hand knowledge
- multiple meanings of the word *practice*

Getting to improv

- fluency counts
- courage counts
  - a question of mindset
- the ability to know your limits and scale up over time also counts

How do libraries fit into this world where:

- "books" are changing their nature;
- newspapers draw bigger audiences online than in print;
- maps are becoming multimedia productions;
- magazines and journals are structured to facilitate conversations;
- historical artifacts can be understood in new ways;
- digital databases can be accessed on the fly from smartphones and tablets;
- knowledge-creation itself is becoming a crowdsourced activity of aggregating networked information?

(Rainie *et al.*, 2012, 13)

Three key questions

- What does learning look like in the 21st century?
- What does literacy look like in the 21st century?
- What is knowledge in the 21st century?
  - (Or, what does it mean to *know* something in our mediated culture?)

Parker, 2010, 2

The first question:

WHAT DOES LEARNING LOOK LIKE IN THE 21ST CENTURY?

21st century learning

- platform-neutral
- hybrid
- self-assembled
  - what role is played by learning the rules?
  - what is "picked up" tacitly?

21st century learning

- five significant steps
  - developing and identifying important questions
  - locating possible answers
  - critically evaluating possible answers
  - synthesizing findings
  - developing ways to communicate findings

based on Leu *et al.*, 2011, 7

21st century learning

- developing and identifying important questions
  - not new but still vital
  - do new and plural data sources affect the kinds of questions that can be asked?

21st century learning

- locating possible answers
  - search skills
  - mindset that is open to wide variety of data
  - role of personal connections
    - what is information in the age of social media?

21st century learning

- critically evaluating possible answers
  - skills to evaluate authority of sources
  - how can these elements be disentangled:
    - ideologies?
    - advertising?
    - personal and political agendas?
    - what is possible/sayable in different media forms?

21st century learning

- synthesizing findings
  - finding forms to sift, shape, and construct meanings that are true to the sources and/or critique those sources
  - recording the traces of the search, since it cannot simply be returned to or readily recreated

21st century learning

- developing ways to communicate findings
  - making use of all available media forms where appropriate
  - dealing with variable copyright conditions that currently offer fair dealing only for certain kinds of quotation

21st century learning

- digital rule followers and digital improvisers will take on all these challenges in different ways

The second question:

WHAT DOES LITERACY LOOK LIKE IN THE 21ST CENTURY?

Is this a literacy term?

How many media affordances comprise contemporary literacy?

Is this a literacy term?

How do interactive materials affect our understanding of literacy?

Is this a literacy term?

How do other people's opinions affect our assessment of information?

21st century literacy

- contingent and unique
  - each reader traces a separate online path
- suspended among different formats
  - reading as one part of crossmedia universe
- ideologically, commercially, and personally inflected

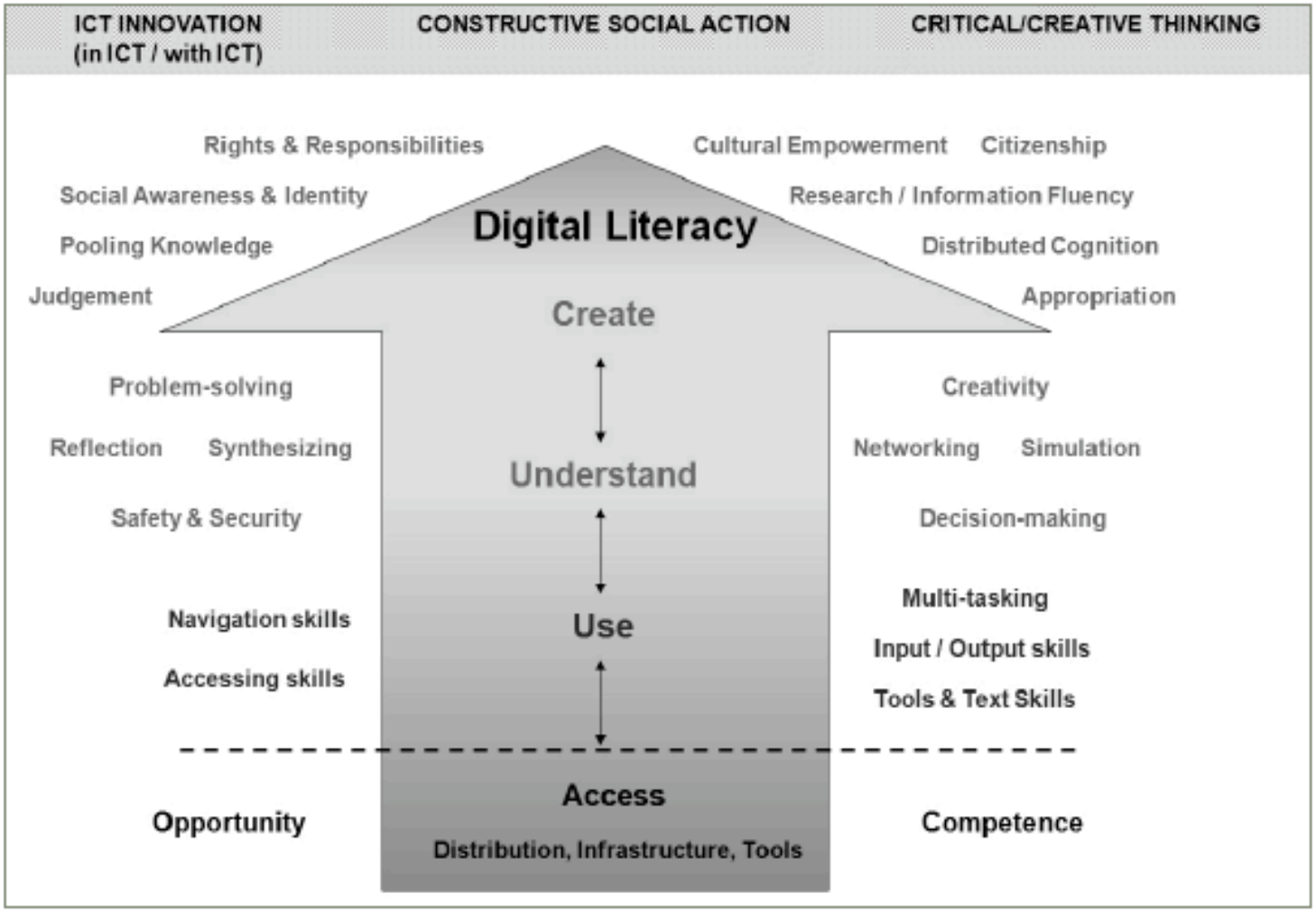
21st century literacy

- more sociable than ever before
  - networks of interpreters
- also more isolated than ever before
  - unique path through multiple texts
  - often difficult to recreate the text set

21st century literacy – a model

From Consumer to Citizen – Media Awareness Network, 2011, 11

A Model of Digital Literacy



21st century literacy

- important to note the potential for changed literacies
  - but important to register that individuals pick and choose among them
    - some individuals opt for conservative choices
      - e.g., the number of young people who won't look at the movie until they've read the book

What we don't know

- how does reading change as it goes electronic?
  - we lose spatial affordances (Changizi, 2011)
  - we may slow down (Nielsen, 2010)
  - we may struggle to remember (Szalavitz, 2012)
- much more research is needed

The third question:

WHAT IS KNOWLEDGE IN THE 21ST CENTURY?

21st century knowledge

- one vision of the world's knowledge – the contents of:
  - well over 1,000,000,000 web pages
  - approximately 129,864,880 books published in every recorded language since the invention of printing
  - every video uploaded to the Internet
    - currently increasing at the rate of nearly an hour of video per second

(Soar, 2011, 3)

21st century knowledge

- some (only some) of the information in Google's system
  - the location of businesses and other community institutions
  - the location of people
    - especially those who turn on their Google location service on their smartphone
  - store inventories
  - newspaper archives
  - the minute by minute performance of the stock market
  - the contemporary appearance of many streets
  - communications data for many individuals
    - contents of emails and voicemail messages included

(Soar, 2011, 3)

Knowledge by triage

- how to eliminate
  - on purpose as well as by accident
- how to refine
- how to shape and use

Knowledge by extension

- more breadth and more depth are always only a few clicks away
  - learning to stop!

What do we need to know?

DIVERGENT ECO-SYSTEMS

Knowledge management for beginners

Literate traces and knowledge building

- meaning created

  THROUGH

  and

  BETWEEN

  different media forms

Literate traces and knowledge building

- recording the path is part of the challenge
- the associated need to record and evaluate the echo-chamber set up between different versions of the same information
  - different witnesses
  - but also different media accounts

Literate traces and knowledge building

- and what about the echo-chamber that reverberates between my accumulated understanding of my pathway through the available information and yours?
  - no longer can we both turn to the same single page of the textbook for evidence
    - different sources, different material, different perspectives, different aggregations of information

Literate traces and knowledge building

- do we develop greater trust in those sources of evidence that appear in formats with which we are fluently and automatically comfortable?
  - or those for which the rules of access are simple and transparent?

Literate traces and knowledge building

- as we evaluate the authority of sources, how do we also make room to take account of our own comfort level?
  - how do we compare a YouTube video, easily accessed, vividly visual, versus a dense and argumentative written case - or a complex Twitter sequence?
  - the seduction of what we are good at interpreting may influence what weight we give to the interpretation

Literate traces and knowledge building

- similarly, do we choose the best available format for synthesizing and presenting a particular argument – or the best available format among those with which we are already comfortable?
  - a YouTube video may be easier to watch than to produce and upload

Literate traces and knowledge building

- how do we factor in a critical assessment of material that creates a persuasive case across a variety of media?
  - repeated (even with elegant variations) doesn't equal definitive
  - echo-chambers distort as well as expand

Literate traces and knowledge building

- how do we develop and apply a sharp sense of what really counts as evidence among multiple tellings?
  - especially when nobody else follows exactly the same path through these variant versions?

The role of the scaffolders

MEDIATING NEW LEARNING IN THE 21ST CENTURY

Mapping the eco-systems

Who scaffolds the scaffolders?

- librarians and instructors may also be digital rule-followers or digital improvisers
  - moving from rule-following to fluency takes time
    - important to remember what rule-following feels like!

Who scaffolds the scaffolders?

- not necessary or always possible to achieve automaticity in every possible format
  - distributed support network is essential
  - changing tools interfere with fluency

The importance of *practice* – in all senses of the word

- the necessity of "some kind of embodied hands-on engagement in the practice"
  - a "coming to grips with the technical aspects of a given DIY media practice"
  - "a commitment to obtaining a sense of 'insider' perspectives on the practice"

Lankshear & Knobel, 2010, 2

Questions for library scaffolders

- how is practice time built into the working day?
- what work responsibilities leak into recreational practices?
  - e.g., should we be doing our recreational reading in a variety of electronic ways, just to be responsible workers?
    - if so, who pays?

Questions for library scaffolders

- where is the line between a responsibility to facilitate productive use of current options and a responsibility to push back against commercial interests?
  - e.g., licensing terms for e-book use
  - e.g., outrageous costs for e-journals and databases
  - e.g., e-books that are uncomfortable and unproductive to use
    - if librarians can't make a difference, who can?

Questions for library scaffolders

- what is the role of librarians in the *production* of new knowledge?
  - not just in the field of LIS but working with researchers in a huge range of territories
    - with "professional" researchers in team research projects
    - with learning researchers/students in labs and libraries
    - with "amateur" researchers who have a good idea but need a lot of hand-holding

Questions for library scaffolders

- what kind of education and what kind of training are necessary for librarians to become research enablers?
  - who supplies it?
  - in what circumstances?
  - when?
  - how often is it renewed?

Where next?

- keep on top of new technologies
  - figure out budget implications
- re-think implications of knowledge retrieval and new knowledge creation
  - figure out budget implications
- re-think the need for librarians themselves to have time to think about all these changes
  - figure out budget implications!

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