How the Learning World Became Flat: Ten Knowledge Sharing and Technology Trends Equalizing Access to Learning

Curtis J. Bonk, Professor, Indiana University
President, SurveyShare
cbonk@indiana.edu
http://php.indiana.edu/~cbonk

Effects of interactive multimedia in distance learning

“The advancement in technology is shaping every aspect of our life, including education. One decade ago, the Internet was not critical to education. However, now, it has become an integral part of learning process. Internet technology is having a dramatic effect on colleges and universities, producing what may be the most challenging period in the history of higher education.”

Do You Share?
1. Who has shared music in an iPod or MP3?
2. Who has used collabor software? (FirstClass, Yahoo Groups, Sharepoint)
3. Who has used online phone services such as Skype or Google Talk?
4. Who has assigned teams online?
5. Who has embedded international exchanges or expert guests?
6. Who has used MERLOT, Connexions, or the MIT open courses?
7. Who has used Wikipedia?

Why Share?

Most are Scared to Share!!!
The Ten Forces that Flattened the World

1. 11/9/89: Berlin Wall came down
2. 8/9/95: Netscape went public
3. Work Flow Software (e.g., PayPal and eBay)
4. Open-Sourcing (Self-organizing collaborative communities; Mozilla, Apache, Wikipedia, Linux, Mozilla/Firefox)
5. Outsourcing (e.g., China, Mexico, Thailand)
6. Offshoring (e.g., China, Mexico, Thailand)
7. Supply-Chaining (e.g., Walmart)
8. Insourcing (UPS fixing Toshiba laptops)
9. In-forming (e.g., Google, Yahoo, MSN Web Search)
10. The Steroids: Digital, Mobile, Personal, and Virtual (e.g., wireless, file sharing, VoIP, video camera in phone)

The Learning World has become Flat!

The learning world is flat for who?

Telegraph: Flattening the world in 1860

Eighth-grade students Tayler Bernholtz, left, Amy Losroth and Kelsey Cardiff check out a weblog discussion related to the Civil War historical-fiction book 'Guerrilla Season' At South Valley Junior High School in Liberty, Mo. (Blogging now begins young USA Today, by Ashley Kleines, USA TODAY, November 15, 2006, 12D). http://www.usatoday.com/life/2006-11-14-blogs-education_x.htm
Entice Students with Technology Giveaways

The Ten Forces that Flattened the Learning World

1. Tools for Searching/Find Media and Information Resources
2. Availability of Quality Online and Blended Learning Environments
3. Free and Open Source Software for Learning
4. Open CourseWare (free content)
5. Online Learning Object Repositories and Portals (shared content)
6. Virtual Collaboration Software (synchronous and asynchronous)
7. Online Massive Gaming, Simulations, and Virtual Worlds (e.g., Second Life)
8. Learning Mobility and Portability (low-cost mobile devices, wireless communication)
9. Personalized Learning Tools (Blogs, Podcasts, MySpace, Flickr, and RSS)
10. Open Information Communities (Wikipedia, Slashdot, Digg)

Three Larger Trends

- The availability of online tools and infrastructure for learning (e.g., search_).
- The availability of free educational content and resources (OER—Open Educational Resources).
- A move towards a culture of open access to information, international collaboration, and global sharing.
Yahoo News
Love me, love my blog," as Netorati couple-surf
BY SARA LEDWITH Thu Aug 3, 8:30 AM ET

- Nick Currie and his girlfriend Shizu Yuasa (R) surf the
internet over breakfast in Tokyo in this handout
photo. As the Internet evolves -- with its webcams,
iPods, Instant Messaging, broadband, wi-fi and
weblogs -- its image as a relationship-wrecker is
changing. Now a sociable habit is emerging among the
Netorati: couple-surfing. (Nick
Currie/Handout/Reuters)

"For my birthday, he upgraded my RAM
and I thought it was incredibly romantic," writes Jess.

Monday April 30, 2007, USA Today
Top 25 Things that Shaped the Internet
- 747 Million adults logged on in Jan, 2007
- 97 billion e-mails are sent each day
- Google had 500 million visitors in Dec, 2006
- USA: 1% broadband in 1998; 78% in 2007
- YouTube bought by Google for $1.7 billion
- Adobe's Flash player on 98% of machines
- There are 75 million blogs!!!
- 19 million people play MMOG!
- 173 million personalized pages in MySpace
The Ten Forces that Flattened the World

1. Tools for Searching/Finding Media and Information Resources: (e.g., Google, Yahoo!)

Search for Free Books (e.g., Google Book Project)

The Ten Forces that Flattened the World

2. The Availability of Quality Online and Blended Learning Environments

Growth of Online Learning in Secondary Schools (Education Week, May 2007)

Growth in Student Enrollments
The OUM
(Adhar Kaur, 2005, Ed Media)

Enrollment Growth at the UOM

Year (2001 to 2005)

The Ten Forces that Flattened the World

3. Free and Open Source Software for Learning

1. eduCommons

2. The Learning World is Flat

The Ten Forces that Flattened the World

4. Open CourseWare (MIT OCW, Utah State, Japan, CORE, OOPS)

Tufts OpenCourseWare Project

225 CFAE 55, 00 International Relations

- Data
- Methodology
- Findings
- Discussion
- Implications
Per David Wiley, Utah State University (October 2005)

“This is a message that should probably get out, also - not only is this movement worldwide and gaining momentum every day, it is also becoming a key part of international strategy to achieve equitable access to education for people everywhere.”
"Collective Minds is better than a single genius translator... Perfect Translation doesn't exist."
Lucifer Chu, Chairman and Janitor of OOPS, Taiwan
Coordinates over 2,000 Volunteer translators

The Ten Forces that Flattened the World
5. Online Learning Object Repositories and Portals (shared content)

Trend 5, Part 2: Portals: Free Government Resources!

Public Library of Science

Museum of Online Museums

Trend 5, Part 2: Reusable Content Objects
- "Learning Objects are small or large resources that can be used to provide a learning experience. These assets can be lessons, video clips, images, or even people. The Learning Objects can represent tiny "chunks" of knowledge, or they can be whole courses."
Claude Ostyn, Click2Learn
A. MERLOT.org

MERLOT People Metrics
(Gerald Hanley, October, 2005)

<table>
<thead>
<tr>
<th>Category</th>
<th>Birthyear</th>
<th>Last Year</th>
<th>This Year</th>
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<tr>
<td>Students</td>
<td>7,036</td>
<td>3,652</td>
<td>5,010</td>
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<td>Faculty</td>
<td>2,894</td>
<td>11,563</td>
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<td>735</td>
<td>2,522</td>
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<td>Administrators</td>
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<td>280</td>
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<td>Librarians</td>
<td>-</td>
<td>146</td>
<td>260</td>
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<tr>
<td>Other</td>
<td>421</td>
<td>1,867</td>
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<td>TOTAL # of Members</td>
<td>4,727</td>
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B. Connexions (Rice University)

http://cnx.rice.edu/ Richard G. Baraniuk

Connections Growth

>3500 modules (3-5 pages)
>180 courses (October 2006)
multiple languages
engineering, computer science, nanotech, physics, statistics, math, history, music, bio-diversity, botany, bio-info, IP, BRIT, UNESCO, UN, Sigma Xi, ...
from authors worldwide

Usage September 2006
1.7 million hits
1.2m page views
520k unique users
from 157 countries

C. CAREO (from Canada)
Campus Alberta Repository of Educational Objects

Co-operative Learning Object Exchange (CLOE) and OntarioLearn
D. JORUM (from UK)

E. Curriki
(from Global Education and Learning Community (GELC)) (Kirkpatrick, Dec 22, 2006, CNN Money)

- The Global Education and Learning Community (GELC) aims to bring the principles of open source to education. Scott McNealy, former CEO of Sun Microsystems, is working to create a free universal curriculum from Kindergarten to 12th grade in every major subject. Any educator/researcher can contribute and it will be in any language.

F. Google School Resources
such as Google Docs and Spreadsheets, an open alternative to Microsoft's Word and Excel

Google enrolls teachers in online software crusade

Dec 3, 2006, USA Today
Michael Liedtke, Associated Press
Google enrols teachers to spread work online software crusade
Palo Alto High School journalism teacher Esther Wojcicki helps student Allison Wyndham at a computer during morning class in Palo Alto, Calif. Wojcicki is helping Google bring its online suite of software applications to classrooms across the country

The National Repository for Online Courses (NROC) Commons

The Ten Forces that Flattened the World
6. Virtual Collaboration Software (async and sync)
The Ten Forces that Flattened the World

7. Online Massive Gaming, Simulations, and Virtual Worlds

Virtual Worlds/Virtual Reality/MMOG

The Ten Forces that Flattened the World

8. Learning Mobility and Portability (low cost wireless devices)
Singapore and Taipei
(Intel Press Release, 2006)

- Singapore, the island city-state in Southeast Asia, is about to complete a major new public/private project that will see large chunks of the 279 square mile city provided with Wi-Fi access by the end of 2008. The entire city, indoors and out, is due to be covered by 2015.
- In the coldest capital in Canada, the city residents of Iqaluit (pop. 6,000) enjoy free wireless from one free hotspot (with two more due soon to cover the suburbs), while Taipei, Taiwan (pop. 2.6 million) has a few more—over 4,000 hotspots that provide coverage for 90 percent of the city.

Digital Books
By Kim Rahn, March 7, 2007, Digital Textbook to

Wireless Technology

The Ten Forces that Flattened the World
9. Personalized Learning Tools (Blogs, Podcasts, MySpace, Flickr, RSS, etc.)
Blogging Questions
1. Who has a blog? Any for a specific class?
2. Who regularly reads other people's blogs?
3. Who assigns blogging tasks?
4. Who has created a video blog?
5. Who thinks it is an utter waste of time to blog?

Podcast Questions
1. Who has listened to a podcast?
2. Who listens to a certain podcast on a regular basis?
3. Who has created a podcast?
4. Who has created a vodcast?
5. Who thinks podcasting is simply more talking heads?

Vlogging (Video Blogging)
e.g., Andy Calvin's Waste of Bandwidth
Michael Wesch, Kansas State, The Machine is Using Us

Podcast
Learning TRENDS by Elliot Masie - September 18, 2006.
#402 - Updates on Learning, Business & Technology.
Fingertip Knowledge Podcast & Transcript: One of my focus points these days is Fingertip Knowledge. You and I and most of our colleagues are increasingly using search engines, from Google to Corporate Intranets, to "walk" our way to the information or knowledge that we need.

Podcast (and Transcript) about the implications of Fingertip Knowledge and the Learning Field:
* http://www.learning2006.com/university/ (Duration: 20 Minutes)

Vodcast for Medical Training and Learning Vocabulary Words!

Student Podcast
(in schools—kids have power!)

"Just the word 'podcast' scares a lot of teachers away," Ms. Schrock said. "There are a lot of misconceptions."
"All you need is a computer, access to the Internet and a microphone that you can buy at Toys R' Us," Mr. Warlick said. "I listen to podcasts on my computer." (NY Times, Jan 25, 2006)
Language Learning
(ChinesePod—learn Mandarin)

Online Photos, e.g., FLICKR
(Inc. Magazine, December 2006)

Social Networking Software
- Classmates: http://www.classmates.com/
- Facebook: http://www.facebook.com/
- Friendster: http://www.friendster.com/
- Friendzy: http://www.friendzy.com/
- MySpace: http://www.myspace.com/
- Orkut: https://www.orkut.com/
- Tribes: http://www.tribe.net/
- YouTube: http://www.youtube.com/

The Ten Forces that Flattened the World
10. Open Information Communities (e.g., Wikipedia, YouTube)

Wiki Questions
1. Who regularly reads Wikipedia articles just for fun?
2. Who regularly reads Wikibooks?
3. Who seeks Wikipedia for content?
4. Who has edited or written new articles on Wikipedia or Wikibooks?
5. Who thinks it is ok for college students to cite from Wikipedia?
Sharing Questions (today)

- For what purpose will people share?
- Who will continue to maintain or update such sites?
- Will online sharing become expected of all faculty members around the planet?
- How will copyright issues be addressed?
- What happens when one did not mean to share his or her course contents or ideas, or, at least, not as widely?
- How will such learning objects of today be viewed in 100 or 200 years?

Quote Continued...

A Final Quote:

It's a long, long road...
With many a winding turn.
That leads us to who knows where?

It's a long, long road
From which there is no return
While we're on the way to there
Why not share

(The Hollies, 1969; He Ain't Heavy, He's My Brother; B. Scott - B. Russell)

It's Over...

Poll: Ok, then, who wants more???
A. Yes
B. No
C. Not sure