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

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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

Next Generation of Students

Tech Creations Bubble for Kids
Alejandro Gonzalez, USA TODAY, Updated 6/20/2006 10:34 AM ET

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.
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 collab software? (Google Groups, 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?

Creative Commons

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 (Y2K)
6. Offshoring (e.g., China, Mexico, Thailand)
7. Supply-Chainning (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!

Telegraph: Flattening the world in 1860

Three Larger Trends of WE-ALL-LEARN

- The availability of tools and infrastructure for learning.
- 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.

WE-ALL-LEARN:
Ten Forces that Opened the Learning World

- Web Searching in the World of e-Books (i.e., Darwin)
- Enormous E-Learning and Blended Learning
- Availability of Open Source and Free Software (e.g., Moodle)
- Leveraged Resources and OpenCourseWare (e.g., MIT)
- Learning Object Repositories and Portals (i.e., shared content)
- Learner Participation in Open Info Communities (YouTube)
- Electronic Collaboration and Interaction (sync and async)
- Alternate Reality Learning (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)
- Real-Time Mobility and Portability (e.g., iPhone)
- Networks of Personalized Learning (Blogs, RSS)

The Ten Forces that Flattened the World

1. Web Searching (e.g., Google, MSN, Yahoo!) in the World of e-Books (i.e., Darwin, Shakespeare, etc.)
The Search is on!

Google and Other Search Engines (Sergey Brin, Co-Founder)

Digital Books
By Kim Rahn, March 7, 2007, Digital Textbook to Debut Next Year, The Korea Times

- Students will be able to interact with teachers regardless of time and space and study according to their ability through computers as the nation plans to adopt the digital textbook.
- provides the multi-functionality of textbook, workbook, exercise book and dictionary.
- The digital textbook...can go beyond conventional paper textbooks by using such features as video clips, animation and virtual reality.

New Forms of Digital Literacy

The Ten Forces that Flattened the World
2. Enormous E-Learning and Blended Learning
Growth of Online Learning in Secondary Schools

University of Central Florida
Access, Quality, and Efficiency through Online Learning
Academic Year 2006-2007

The Open Univ Malaysia
(Ashar Kaur, 2006, Ed Media)

Blended Delivery: Mixing Modalities
Susan Lee, CLO, July 2007

Figure 5: Growth Index

The Ten Forces that Flattened the World
3. Availability of Open Source and Free Software (e.g., Linux, Apache, Moodle)

1. eduCommons

The Learning World in Flux

 eduCommons is a project of the OpenCourseware Consortium. The project is supported in part by grants from the Bill & Melinda Gates Foundation and the Andrew W. Mellon Foundation. The National Science Foundation also provided support through the Virtual Campus Institute.
Community Growth
Total Moodle.org users

The Ten Forces that Flattened the World
4. Leveraged Resources and OpenCourseWare (OCW) (e.g., free courses from MIT, Utah State, CORE, OOPS)

Tufts OpenCourseWare Project

Vietnam Fulbright Economics OCW

Open Source Courseware
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."

What's their Beliefs? (Chu, Jan 1, 2007)

- Collective Minds is better than a single genius translator.
- Perfect Translation doesn't exist.
- 2,012 Volunteer translators
  1,125 courses adopted
  639 courses near completion (level 1)
- 126 courses already finished

The Biggest OCW Localization Volunteer Group in the World

Lucifer Chu, Chairman and Janitor of OOPS, Taiwan

The Ten Forces that Flattened the World

5. Online Learning Object Repositories and Portals (shared content)

Free Government Resources!
Terry Anderson, Athabasca University (October 2005)

"Our Creative Commons licensed book Theory and Practice of Online Learning has been downloaded over 55,000 times (full text) and more by individual chapters. Parts have been translated into 6 languages and we are nearly sold out the 500 copies we printed at $50 a pop. So it is quite a success story."


Public Library of Science

Museum of Online Museums

MUSEUM COMPUTER NETWORK

Museum Sites Online

B. Connexions (Rice University)
http://cnx.rice.edu/

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C. Global Education and Learning Community (GELC)
(Kirkpatrick, Dec 22, 2006, CNW 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.

A. MERLOT.org

Search MERLOT
www.merlot.org/search/index.htm

Site Home | Search MERLOT Learning Object Repository

Site Home | Email Us | About Us | Terms of Use | Privacy Policy

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Google rolls out teachers in online software crusade

Dec 3, 2006, USA Today
Michael Liedtke, Associated Press

Google rolls out teachers to spread online software crusade

Palo Alto High School journalism teacher Esther Wojcicki helps student Allison Wyndham at a computer during journalism class in Palo Alto, Calif. Wojcicki is helping Google bring its online suite of software applications to classrooms across the country.

The Ten Forces that Flattened the World

6. Learner Participation in Open Information Communities (e.g., Slashdot, Digg, Wikipedia, YouTube)

Digg (all about user powered content. Everything is submitted and voted on by the Digg community. Share, discover, bookmark, and promote stuff) http://digg.com/

E. National Repository for Online Courses (NROC) Commons

Slashdot (News for nerds, stuff that matters) http://slashdot.org/
Individual Produced Videos


Make Videos Available for World (see dotSUB)

Wikis: Wikipedia and Wikibooks

Sony E5000 Off Paper-Thin, Bendable Video Display

TECHNOLOGY
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?

http://uncyclopedia.org/wiki/Main_Page

Sample Book (Learning Theories)
http://en.wikibooks.org/wiki/Main_Page

The Ten Forces that Flattened the World
7. Electronic Collaboration and Interaction (synchronous and asynchronous)

Skype says it is used by 136 million people worldwide
Online Mentoring
(1k More project in China; http://www.1kg.org/)

The Ten Forces that Flattened the World
8. Alternate Reality Learning
(Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)

Virtual Worlds/Virtual Reality/MMOG

The Ten Forces that Flattened the World
9. Real-Time Mobility and Portability (e.g., iPhone, 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 270 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.

$100 Laptop

The project aims to build peer-to-peer communications

Negroponte says the new laptop is designed to be kid-friendly

The OLPC aims to turn the tide of urban poverty
The Ten Forces that Flattened the World

10. Networks of Personalized Learning (Blogs, Podcasts, MySpace, Flickr, and RSS)

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 podcast?
5. Who thinks podcasting is simply more talking heads?

iPod’s More Popular than Beer?

Entice Students with Technology Giveaways

Consumer’s Guide to College Podcasts
(Daniel Coleman, Stanford, Chronicle of Higher Ed, June 4, 2007)

One of Michelle Tanner’s deaf students at Gerald Wright Elementary holds an iPod and watches a video of her signing the week’s vocabulary words. The iPods were purchased with a grant from Qwest. Classrooms go high-tech. By Erin Stewart, Deseret Morning News, March 6, 2007
Vlogging (Video Blogging)
e.g., Andy Calvin’s Waste of Bandwidth
Michael L. Wesch, Kansas State, The Machine is Using Us

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?

Online Photo Albums, 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/

Social Networking Software (Web 2.0)

Flat School Projects!!!
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?

Computers for Peace; By Grace Rubenstein; GLEF, Interview with Nicholas Negroponte, MIT

- In an ideal world, what is your single greatest hope for this project?
- A three-step hope: World peace through the elimination of poverty through education through learning. Education is the goal; learning is the means. A lot of learning can happen without teaching. We're banking on that.

It's Over...

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

The Learning is Flat!
The End (of Part I)!!!