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

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Next Generation of Students

Tech Crates Bubble for Kids
Alejandro Gonzalez, USA TODAY, Updated 6/26/2006 10:34 AM ET

INFORMATION TECHNOLOGY

STUDENT 2.0

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 Shizuu Yusa (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.
Are you addicted???

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."

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-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!

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)
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.

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.)

Beyond Google: How do students conduct academic research? by Alison J. Head
First Monday, volume 12, number 8 (August 2007), URL:
http://firstmonday.org/issues/issue12_8/head/index.html

The study, which surveyed only students majoring in the humanities and social sciences, found that 63 percent of students began their research with the library Web site or course readings, while only 16 percent began with Wikipedia or a search engine.

Google and Other Search Engines (Sergey Brin, Co-Founder)
Google to Impact Chip in

Google Working on Timeline and Map Views
All of Darwin's and Shakespeare's Works are Online

The Scanning Process is Not Perfect! (includes someone's fingers!)

eBooks: Thinner, Crisper, and Cheaper

Digital History Project (University of Houston)
The Carlyle Letters Online: Exploring Victorian World Through Letters

New Forms of Digital Literacy (new tests from ETS)

The Ten Forces that Flattened the World
2. Enormous E-Learning and Blended Learning

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

The Open Univ Malaysia
(Almar Kheat, 2005, EdMedia)
- Started August 2001: approx. 800 students
- Total students (2005): approx. 33,000
- Total full-time academic staff: 60
- Total part-time academic staff (tutors): approx. 3,000
- 33 Learning Centres (7 Regional Centres)
- Pedagogical approach: Blended Learning
3. Availability of Open Source and Free Software (e.g., Linux, Apache, Moodle)

1. eduCommons

2. Moodle

Moodle

The Sakai Project
The Ten Forces that Flattened the World

4. Leveraged Resources and OpenCourseWare (OCW) (e.g., free courses from MIT, Utah State, CORE, OOPS)

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?

Most are Scared to Share!!!

Tufts OpenCourseWare Project

Vietnam Fulbright Economics OCW

Open Source Courseware
"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 Ten Forces that Flattened the World
5. Online Learning Object Repositories and Portals (shared content)

Many Portals of Contents  
(e.g., Museum of Online Museums)
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

Pubcasts!

NSF, the Public Library of Science, and the San Diego Supercomputing Center created a YouTube for scientists to help demystify important research papers. See SciVee
http://www.scivee.tv/

A. MERLOT.org

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

D. 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 enrolls teachers to spread work 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.

E. National Repository for Online Courses (NROC) Commons

The Ten Forces that Flattened the World

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

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

Everything is submitted and voted on by the Digg community. Share, discover, bookmark, and promote stuff)  
http://digg.com/

USA TODAY, October 24, 2007, Traffic rose about 330% to 5.6 million visitors in September from 1.7 million the prior
Global Nomads Group
http://www.gng.org/home.html

NomadsLand
http://nomadsland.com/

Make Videos Available for World (see dotSUB)

Wikis: Wikipedia and Wikibooks

U.S. senator: It's time to ban Wikipedia in schools, libraries
Canada in Wikipedia

Wiktionary

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

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

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 (e.g., Language Learning)

Online Mentoring (1k More project in China; http://www.1kg.org/)
- 1kg More (short for "1 kilogram more in your travel pack") is a non-official cause of charity crossing over travel.
- It runs behind the idea of travelers bringing 1kg of inexpensive educational materials in addition to their package to give away to someone that needs it along their journey, e.g. kids that cannot even afford a pencil rubber.
- 1. Passing - Prepare 1kg of books or stationeries for underprivileged kids you may meet in your journey;
2. Communicating - Talk to and play with kids and get to know them;
3. Sharing - Share your travelogues with people via 1kg forum and spread the words among friends and around.

1 KG Project (i.e., one kilogram more in your travel packet)
Twinbooks:  
http://www.twinbooks.cn/

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

Teleportec Conferencing

MICHEL MARRIOTT  
Published: February 24, 2005

Cutting Edge - Dr. James Clarence Rosser Jr., chief of minimally invasive surgery at Beth Israel Medical Center in Manhattan, trains other doctors to use gaming to improve their operating-room skills.

http://www.nytimes.com/2005/02/24/technology/24doc.html?_r=1


Choi Seang Rak (left), an economics and public policy professor at Dongguk University in Seoul, South Korea, and his Lineage II avatar, Urow Ahs. "Because I'm very polite, people think I really am a little girl," he says. Copyright Robbin Cooper/Chris Boute

Go Get a (Virtual) Life, NPR, Sept 11, 2007
Kaneva, a new virtual world

The Ten Forces that Flattened the World
9. Real-Time Mobility and Portability (e.g., iPhone, low cost wireless devices)

Audacity

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

$100 Laptop

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

Computers for Peace
By Grace Rubenstein
GLEF
OLPC in Nigeria: School Galadima
One Laptop Per Child foundation (OLPC) provided School Galadima in March 2007 with an XO laptop for each child in Primary 4, 5 and 6 and also for each member of the staff.

Drawing of his future house by a primary 5 student who wants to be a banker.

Teachers also do artistic work on their XO laptops, like this teacher's local scene.

Simple as it may seem, this graph is the result of a complex process: primary 6 worked together, made a census of themselves and of the whole school, and understood both population and mathematical graphing concepts.

Uruguay youngsters receive batch of OLPC XOs
Posted May 14th 2007 3:34PM by Darren Murph

Robert Kozma

Nakaseke community radio station
Nakaseke village telecenter

One Laptop Per Child News
http://www.olpçnews.com/

Nigerian school
OLPC XO usage

The Age of Wireless

Most Unwired Schools?
CNET and US News asked the world's top
100 K-12 schools for the 50
networked tech tools
that are most widely
used in each.

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

The Learning World is Flat
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?

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)
For hot author’s latest, get out your headphones, Sept 12, 2007, USA Today, David Lieberman

Audible says the novel— which Deaver describes as "The Day of the Jackal meets The Da Vinci Code" — will be the first major work of fiction created to be introduced only as an audio download.

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

World Bridges and EdTechTalk

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)

Get Lectures from Stanford and Berkeley on iTunes

Language Learning
(ChinesePod—learn Mandarin)

Jenny Zhu
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?

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/

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

By Jefferson Graham, USA TODAY, September 5, 2007
Facebook's Mark Zuckerberg, at his office in Palo Alto, Calif., is in no hurry to sell the popular social networking site. (23 years old)

Facebook could be worth as much as $6 billion today, Bear Stearns (BSC) analyst Robert Peck says. He expects privately held Facebook to post a profit of about $30 million on revenue of $140 million this year, and register a $170 million profit on revenue of $356 million in 2008. He predicts $6 billion in revenue by 2016.

Social Networking Software (Web 2.0)

Facebook (from 2 friends to 50 seemingly overnight)

Recent Growth of Facebook and MySpace

Combining Web 2.0 and Technology Trends (Ten Examples)
1. Flat Schools and Flat Classroom Projects!!!

2. Michelle Selinger, ALT-C Keynote, September 2007, Univ of Nottingham

3. Wikis in Higher Education

4. Elliott Masie, Learning 2007

5. Archive Last Lectures (Randy Pausch, Carnegie Mellon University)

6. Combining The Web 2.0 (e.g., Second Life, Blogging, and Photo Posting) Stephen Mandelbrot
7. Indexing Sounds in Cities with Google Maps

8. Cluster Maps (who is reading your blog or using your product): Blog of Will Richardson, famous K-12 blogger

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

Michael Orey's Learning Theories Book
(who is reading it?)

Andy Curvin's Waste of Bandwidth
(Who is reading it?)
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!!!