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 Creates Bubble for Kids
Alejandro Gonzalez, USA TODAY, Updated 6/28/2006 10:24 AM ET

Technology for Tracking Eye Movements

Bonk’s Addiction Q’er
1. Who has 2 or more cell phones with Internet access?
2. Who has 2 or more laptop computers with wireless connections?
3. Who is on email in the morning? At noon? Who does it at night?
4. Who suffers from nervous tension when you cannot get on email?
5. Who is on the Web right now?
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.)

2. The Ten Forces that Flattened the World
3. 11/9/89: Berlin Wall came down
4. 8/9/95: Netscape went public
5. Work Flow Software (e.g., PayPal and eBay)
6. Open-Sourcing (Self organizing collaborative communities: Mozilla, Apache, Wikipedia, Linux, Mozilla/Firefox)
7. Outsourcing (Y2K)
8. Offshoring (e.g., China, Mexico, Thailand)
9. Supply-Chaining (e.g., Walmart)
10. In-Forming (e.g., Google, Yahoo!, MSN Web Search)
11. The Steroids: Digital, Mobile, Personal, and Virtual (e.g., wireless, file sharing, VoIP, video camera in phone)

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

Google Working on Timeline and Map Views

Read, Listen, etc. to "An International Episode" by William James

All of Darwin's and Shakespeare's Works are Online

eBooks: Thinner, Crisper, and Cheaper
The Open Uni Malaysia
(Almar Kaur, 2005, Ed Media)
- 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

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

1. eduCommons

2. 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

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 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 Video Lectures

Free Government Resources!
Alive and Online
From amebas to zebras, every living thing will get its own Web site, thanks to the new Encyclopedia of Life.

By Brian Braiker
Newsweek
Updated: 6:54 p.m. ET May 9, 2007

Yeti Crab: This recently discovered species already has its own sample page at eol.org

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.”


Pubcasts!
NSF, the Public Library of Science, and the San Diego Supercomputer 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

Slashdot and 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/
USA TODAY, Oct 24, 2007, Traffic rose about 330% to 5.6 million visitors in Sept, from 1.3 prior Sept,

The Ten Forces that Flattened the World

6. Learner Participation in Open Information Communities (e.g., Slashdot, Digg, Wikipedia, YouTube)
SplashCast: Create own TV Channel

CNN Videos

Global Nomads Group
http://www.gng.org/home.html

Make Videos Available for World (see dotSUB)

TECHNOLOGY
Sony Shows Off Paper-Thin, Bendable Video Display

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

By Preston Gralla on Wed, 22/4/2007, 7:30pm

Here's the story: Rock Star Sen. Ted Cruz, R-Texas, has described the internet as a 'cafe of ideas.' His Senate legislation would ban access to Wikipedia, Yahoo, and social networking sites from schools as of next year.

Canada in Wikipedia

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)

Sharing in Virtual Teams (e.g., Collanos, Groove, SharePoint)

Skype, Google Talk, Chinesepod, LiveMocha, VoiceThread, YackPack, Dotsub, Chinswing, and many other Collaborative Language Learning

Expert Mentoring Online in Art and Design (Omnium Project—online graphics and photomedia project)

Online Mentoring in Rural China (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)

Teaching English, History, Law, Business, Science, Accounting, etc.

The Ten Forces that Flattened the World

9. Real-Time Mobility and Portability (e.g., iPhone, low cost wireless devices)

New York Times reporter Andrew Revkin continues doing compelling multimedia work. He's now not only shooting photos and recording audio -- he's moved on to video and blogging.

In his latest trip, Andrew C. Revkin headed north to chronicle the shifts on Greenland and researchers' efforts to understand them. He periodically posted dispatches in a blog-like diary and also shot video himself.
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.

Video compression helps deaf people signing across low bandwidth networks to chat with friends! (BBC: 2/27/07)

$100 Laptop

The project aims to build peer-to-peer communication.

The CM1: Taking technology to the developing world
A revolution in a laptop
By Greg Norman
Sunday 13 August 2006, 18:49
Nakaseke Time, 15:49 GMT

Nakaseke community radio station
Nakaseke village telecenter

Nigerian school OLPC XO usage

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.

The Age of Wireless

MOST UNWIRED SCHOOLS?

Most US News and World Report get the top 30 sneakers in tech space and added those which correspond to their top 30 teachers and bests.

Lately wireless in campus
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 vodcast?
5. Who thinks podcasting is simply more talking heads?

Entice Students with Technology Giveaways

iPod’s More Popular than Beer?

iPods knock over beer mugs

Calhoun HTF tablet PC, Winona State University, Winona State University

The winners will receive the tablet computer or full-time laptops from previous programs.
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

Get Lectures from Stanford and Berkeley on iTunes
Language Learning
(ChinesePod—learn Mandarin)

Jenny Zhu

JapanesePod, Arabic online, etc.

Blogging Questions
1. Who has a blog?
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/
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...He expects privately held Facebook to post a profit of about $30 million on revenue of $140 million this year, and register a $70 million profit on revenue of $358 million in 2008. He predicts $6 billion in revenue by 2016.

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

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8. Cluster Maps (who is reading your blog or using your product): Blog of Will Richardson, famous K-12 blogger (left) and Learning Theories Book of Michael Orey, Univ of Georgia (right)

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

10. Video, Transcript, and Audio File:
- Watch, Listen, and Read

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?

What can we say about educational technology in education then???
- It is everywhere!!!!!!
- Resistance is futile!!!!!!
Ok, Million Dollar Question: How can you motivate learners online?

TEC-VARIETY Model for Online Motivation and Retention
1. Tone/Climate: Psych Safety, Comfort, Belonging
2. Encouragement, Feedback: Responsive, Supports
3. Curiosity: Fun, Fantasy, Control
   ...
4. Variety: Novelty, Intrigue, Unknowns
5. Autonomy: Choice: Flexibility, Opportunities
6. Relevance: Meaningful, Authentic, Interesting
7. Interactive: Collaborative, Team-Based, Community
8. Engagement: Effort, Involvement, Excitement
9. Tension: Challenge, Dissonance, Controversy
10. Yields Products: Goal Driven, Products, Success, Ownership

1. Tone/Climate: Scavenger Hunt, Expectations, Post commitments, Find friends in Facebook
Create a 20-30 item scavenger hunt
Post scores

2. Encouragement/Feedback: Paired Weblog Critiques
3. Curiosity, Fun: A. Games
e.g., Online Jeopardy Game
www.km-solutions.biz/caa/quiz.zip;
Games2Train: The Challenge; Thiagi.com

5. Autonomy, Choice:
A. Clickers; Innovation is but one click away...

7. Interactive: A. Text Messaging
Students at the Mennonite Centre for Newcomers are testing mobile learning - downloading an English grammar lesson, then answering a series of multiple choice, or true or false questions.
Friday, February 9, 2007; CBC News

8. Engagement:
B. Student Self-Testing
(e.g., Calm Chemistry)

10. Yields Products: Concept Maps, Video Papers, Virtual Timelines

99 seconds:
Which ideas did you like?
Framework III. Addressing Learning Styles

The R2D2 Method
1. Read (Auditory and Verbal Learners)
2. Reflect (Reflective Learners)
3. Display (Visual Learners)
4. Do (Tactile, Kinesthetic, Exploratory Learners)

1a. Online Audio Cases
Audio Dramas
eCollege Wales, Univ. of Glamorgan

1b. Podcasted Art and History Exhibits

1. Auditory or Verbal Learners
   - Auditory and verbal learners prefer words, spoken or written explanations.
2. Reflective and Observational Learners

- Reflective and observational learners prefer to reflect, observe, view, and watch learning; they make careful judgments and view things from different perspectives.

2b. Reflection Sheets and Scaffolds online (E-Reading First Ohio) (reflect, share, and compare)

3. Visual Learners

- Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.

3a. Online Anatomy and Physiology

3b. Anchored Instruction (using short videos from YouTube, BBC, CNN, etc.)
4. Tactile/Kinesthetic Learners

- Tactile/kinesthetic senses can be engaged in the learning process by role play, dramatization, cooperative games, simulations, creative movement and dance, multi-sensory activities, manipulatives and hands-on projects.

4a. Videoconferencing with Hearing Impaired Students Online

- College students tutoring high schools on their homework
- Instructors observing how teacher education students are doing in field placements (practice presentation and communication skills)
- Interpret speaker via Web cam

4b. Practicing Language Skills in Skype and Google Talk

Next up is:
Framework IV: The MATRIX!!!!!!!!!

- Mobile
- Auditory
- Thought-stimulating
- Reflective/Real-World
- Visually Interactive
- Extremely Hands-on

It's Over...

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

Learning is Now Flat/Open!!! The End!!!
Remember that WE-ALL-LEARN
Try the R2D2 Method!!!
Try TEC-VARIETY!!!
Sample papers at: http://www.publicationshare.com/
Archived talks at: http://www.trainingshare.com/