

The Flat World Swung Open: How Web Technology Is Revolutionizing Education

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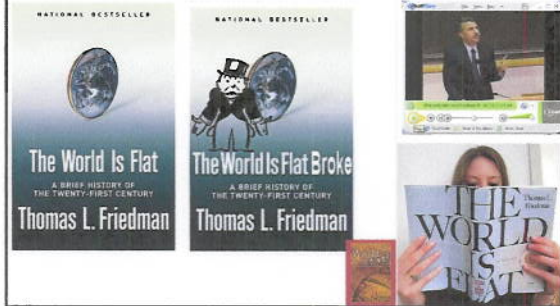
Where are you headed?



Do you know the shape of the world?



Is the World Flat?



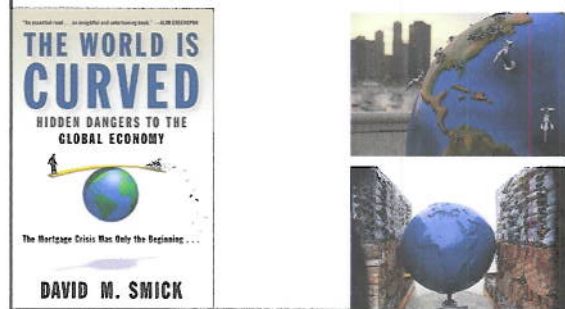
The Ten Forces that Flattened the World

Triple Convergence: (1) new economic players, (2) playing fields, and (3) processes.

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 organ collob communities; Mosaic, Apache, Wikipedia, Linux, Mozilla)
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 (wireless, file sharing, VoIP, video camera in phone)



Is the World Curved?



Is it spiky?

WHO'S YOUR CITY?
RICHARD FLORIDA

Or is it Open?

The MIT Press

Opening Up Education
The Collective Advancement of Education through Open Technology, Open Content, and Open Knowledge
Edited by Tony Bates and M.S. Vign Koller
Foreword by John Seely Brown

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Not open for everyone!

World Internet Penetration Rates by Geographic Region

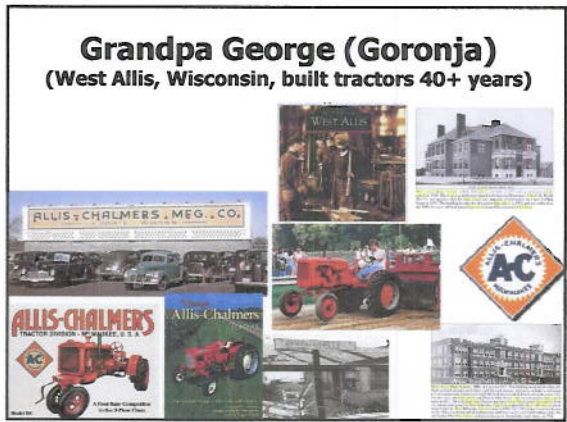
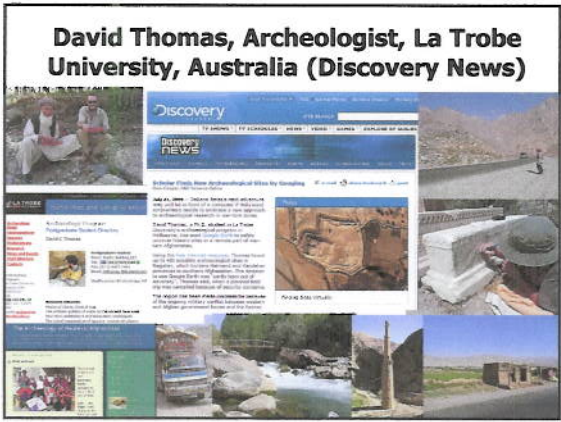
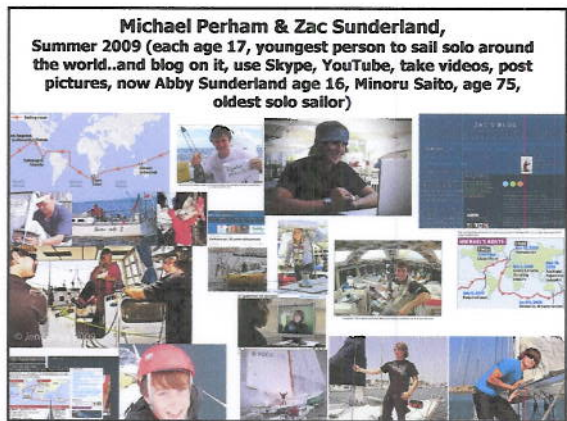
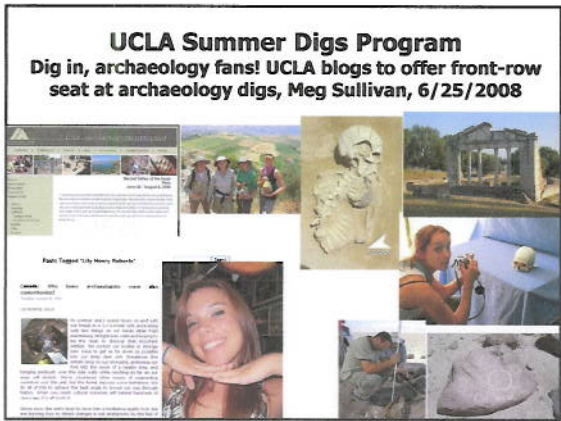
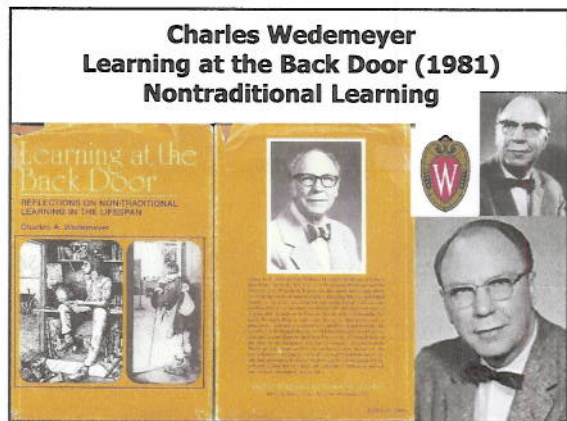
Region	Penetration Rate
North America	75.0%
Europe	60.0%
Asia	35.0%
Latin America	20.0%
Middle East	15.0%
Africa	10.0%
Oceania / Australia	5.0%
South America / Caribbean	2.0%


World Internet Users by World Regions

Region	Percentage
Asia	37.8%
Europe	17.8%
North America	15.5%
Latin America / Caribbean	2.6%
Africa	1.3%
Middle East	1.3%
Oceania / Australia	1.3%


Source: International Telecommunications Union (ITU) - www.itu.int/ITU-T/inf/net/stat/default.asp
 Source: Internet World Stats - www.internetworldstats.com/stats.htm
 1,463,632,361 Internet users for June 30, 2008
 Copyright © 2008, Minivats Marketing Group

Yonsei University, Seoul, Korea





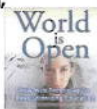
Perhaps people learning online are akin to the alien archaeologists in the 2008 movie, *Indiana Jones and the Kingdom of the Crystal Skull*, Indy said, "Their treasure wasn't gold, it was knowledge. Knowledge was their treasure."



WE-ALL-LEARN:

Ten Forces that Opened the Learning World

- **W**eb Searching in the World of e-Books (i.e., Darwin)
- **E**-Learning and Blended Learning
- **A**vailability of Open Source and Free Software (e.g., Moodle)
- **L**everaged Resources and OpenCourseWare (e.g., MIT)
- **L**earning Object Repositories and Portals (i.e., shared content)
- **L**earner Participation in Open Info Communities (YouTube)
- **E**lectronic Collaboration and Interaction (sync and async)
- **A**lternate Reality Learning (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)
- **R**eal-Time Mobility and Portability (e.g., iPhone)
- **N**etworks of Personalized Learning (Blogs, RSS)





Audience Participation!

1. **WE**
2. **ALL**
3. **LEARN!!!**





Triple Learning Technology Convergence of "WE-ALL-LEARN"

1. **Pipes:** The availability of tools and infrastructure for learning.
2. **Pages:** The availability of free educational content and resources (OER—Open Educational Resources).
3. **Participatory Learning Culture:** A move towards a culture of open access to information, international collaboration, and global sharing.


21 Things That Became Obsolete This Decade

December 11, 2009, Silicon Alley Insider



15 Gadgets that Changed Everything This Decade

December 9, 2009, Jay Yarow, Silicon Alley Insider



Opener #1. Web Searching (e.g., Google, MSN, Yahoo!) in the World of e-Books (i.e., Darwin, Shakespeare, etc.)

The Learning World is Open

Trend #1. Web Searching in the World of e-Books. What happens then?

WE

ALL

LEARN!!!

This Could Be the Year of e-Textbooks
Many titles are available, but students are wary.
 Jeffrey Young, September 7, 2009

September 7, 2009
 This Could Be the Year of e-Textbooks
 Many titles are available, but students are wary.

Latest craze: free e-books

Sign of the times: At the San Diego State U. bookstore, a poster exhorts students to "Buy This Textbook as an eTextbook."

Blio: Kurzweil Reinvents the Book
 Charlie Sorrel, Dec 29, 2009, Wired
<http://www.wired.com/gadgetlab/2009/12/blio-kurzweil-reinvents-the-book/>

- Blio is a free platform...run on any device.
- Blio is in color.
- Blio lays pages seen on paper, with typography and illustrations; uses video.
- More than a million library of titles.
- The end of the book?

First iPad buyers excited, curious
 By Brandon Griggs and John D. Sutter, CNN, April 3, 2010

First iPad buyers excited, curious

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Seton Hill University, 2,100 students. All fulltime students get an iPad and Incoming freshmen will also receive a 13-inch MacBook laptop, April 2010.

An iPad for Everyone

Seton Hill University will give a new Apple iPad to every full-time student in fall 2010.

Now in 2010, The Department of the University's Office of Technology Advancement, the new program provides students with the best in technology and collaborative learning tools, ensuring that Seton Hill students will be among the first to embrace research tools, ensuring that Seton Hill has not just been there.

For more information on the Office of Technology Advancement Program, please visit the website www.setonhill.edu/technology.

Continued on next slide

Free Online Books

(Terry Anderson and Fathi Elloumi. eds. *Theory and Practice of Online Learning*; Canada: Athabasca University. 2004),
http://cde.athabascau.ca/online_book/, 55,000 downloads in first year)

Opener #2. E-Learning and Blended Learning

The Learning World is Open

Letter from Bill Gates about online learning (January, 2010)

<http://www.gatesfoundation.org/annual-letter/2010/Pages/education-learning-online.aspx>

Indiana University High School

(4,000 students and 1,400 enrolled in diploma programs)

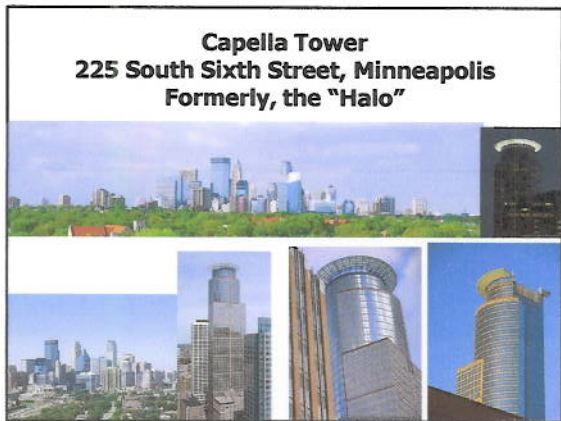
Adora Svitak, age 12, World's Youngest Teacher

A Grain of Rice: A Bloomington man's computer vocab game feeding the world

For each answer you get right, we donate 10 grains of rice through the UN World Food Program to help end hunger.

The country was Cafe d'Zaire

This country is:
 Thailand
 Malaysia
 Indonesia
 Vietnam



iSMART: Integration of Science, Mathematics, and Reflective Teaching (iSMART) is a **FREE** 2-year online graduate program for middle school science and mathematics teachers in Texas, University of Houston

<http://www.coe.uh.edu/mycoe/CUIN/math/iSMART%20fyer4.pdf>
<http://www.coe.uh.edu/mycoe/CUIN/math/iSMART.cfm>

You see the big picture. You find the connections.
Make it official - become iSMART.

TOTAL AND ONLINE ENROLLMENT IN DEGREE-GRANTING POSTSECONDARY INSTITUTIONS - FALL 2002 THROUGH FALL 2008

	Total Enrollment	Annual Growth Rate/Total Enrollment	Students Taking at Least One Online Course	Annual Growth Rate/Online Enrollment	Online Enrollment as a Percent of Total Enrollment
Fall 2002	16,611,730	NA	1,602,070	NA	9.6%
Fall 2003	16,911,481	1.8%	1,971,397	23.0%	11.7%
Fall 2004	17,472,443	2.1%	2,329,783	18.2%	13.5%
Fall 2005	17,487,481	1.2%	3,180,050	36.5%	18.2%
Fall 2006	17,758,872	1.6%	3,488,381	9.7%	19.6%
Fall 2007	17,975,830	1.2%	3,938,111	12.9%	21.9%
Fall 2008	18,199,920	1.2%	4,606,353	16.9%	25.3%

**Open U of
Malaysia, March
25, 2010**

Year	Enrollment
Year 2001	753
Year 2002	7622
Year 2003	16998
Year 2004	20666
Year 2005	35898
Year 2006	53248
Year 2007	64489
Year 2008	78425
Year 2009	88409
Year 2010	91223

U.S. DEPARTMENT OF EDUCATION Evaluation of Evidence-Based Practices in Online Learning A Meta-Analysis and Review of Online Learning Studies

Opener #3. Availability of Open Source and Free Software (e.g., Linux, Apache, Moodle, Sakai)

The Learning
World is Open

Moodle (32+ million registered users in 208 countries, 3+ million courses, 2/6/2010)

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

The Learning World is Open

MIT OPEN COURSEWARE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Open Yale

Etc Traditional Textbooks

We Rent Open Textbooks!

Open Educational Resources (OER) Post Courses in YouTube and iTunes (e.g., Berkeley)

Berkeley
University of California

OpenCourseWare (OCW) Cute Kitten or Transformation?

MIT OPEN COURSEWARE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Open Yale

Open Educational Resources

Open University Nederland

OPEN COURSEWARE CONSORTIUM

Opensource Opencourseware Prototype System (OOPS) funded by, the Foundation of Fantasy, Lucifer Chu, Chairman and Janitor of OOPS, Taipei)

The Biggest OCW Localization Volunteer Group in the World

OOPS
Opensource Opencourseware Prototype System
The Foundation of Fantasy Culture and Arts

OOPS
Opensource Opencourseware Prototype System
開放式課程計劃

Sample OpenCourseWare Projects (Tufts, Johns Hopkins)

Tufts OpenCourseWare

IDP200 Pathophysiology of Infectious Diseases, Fall 2004/2005

JHSPH COURSEWARE

National Repository for Online Courses (NROC) Commons

NROC Commons

Welcome to a worldwide learning network

NROC Commons

Cape Town Open Education Declaration, Dec 2007

<http://www.capetowndeclaration.org/>

Peer2Peer University and University of the People (free!)

Neeru Paharia is behind Peer2Peer University, Fast Company, September 2009, How Web-Savvy Edupunks Are Transforming American Higher Education

Israeli Entrepreneur Plans a Free Global University That Will Be Online Only

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

The Learning World is Open

A Single Group Helps Trigger an Online-Publishing Explosion

The Public Knowledge Project, a nonprofit group, estimates that the open-publishing software it offers free has given rise to more than 5,000 open-access academic journals around the world. Below is their geographic distribution, by continent, as of late 2009.

Open Journal Systems

New Journals, Free Online, Let Scholars Speak Out, Chronicle of Higher Education, By Peter Schmidt, February 14, 2010
<http://chronicle.com/article/Open-Access-Journals-Break/64143/7aid-at>

John Willinsky, an education professor at Stanford U. (shown here visiting the U. of Oxford), offers free journal-publishing software to academics around the world. The program is being used to produce more than 5,000 online journals, he estimates, about half of them in developing countries.

Elliott Masie, Learning Trends, March 2, 2010

"The introduction of video into almost every aspect of our learning and work tasks is profound and "disrupting." As designers, we must experiment with these formats – looking for evidence and appropriate use cases and examples of when not to use video."

Video blogs, Webinars, Webcasts, capture conference keynotes, flipcams, etc.

How about rich video portals?

Most of the Websites below did not exist 5 or 10 years ago.

1. BBC News Video and Audio
2. CNN.com Video
3. MSNBC.com
4. Google Video, Yahoo Video
5. Current TV
6. Fora TV
7. MIT World
8. YouTube, YouTube Edu
9. TeacherTube
10. Link TV, Explore, Global Pulse, Latin Pulse
11. Howcast, Big Think, WonderHowTo, Explo.TV, NASA TV, ClipChef, TV Lesson, BookTV, Edutopia videos, MonkeySee, doFlick, the Research Channel, iVideosong

Link TV: Global Link of World Educators (GLOWE)



Link TV, Academic Earth, TV Lesson, and Fora TV

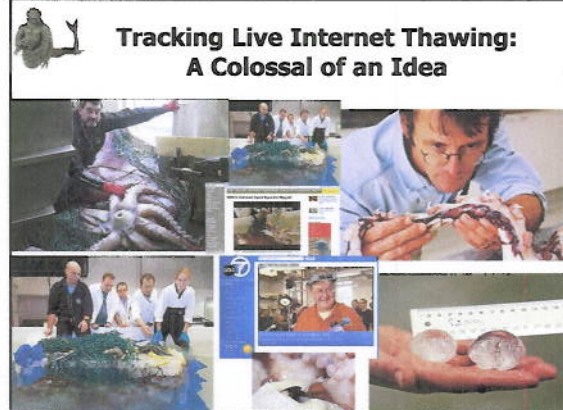


College 2.0: More Professors Could Share Lectures Online. But Should They?, Chronicle of HE, Jeffrey R. Young, March 7, 2010

"The latest Campus Computing Survey, which gathers data on classroom technology nationwide, found that 28 percent of colleges have a strategic plan to provide coursecasting equipment, and 35 percent more are working on a plan now."



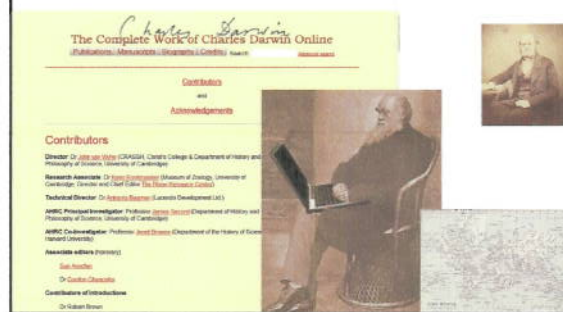
Tracking Live Internet Thawing: A Colossal of an Idea



Ida (a transitional species) 47-Million-Year-Old *Darwinius Masillae* Fossil the Missing Link? (wowOwow, May 20, 2009)



The Complete Works of Charles Darwin



The Carlyle Letters Exploring Victorian World Through Letters and The Diary of Samuel Pepys

(Great Plague, Great Fire, Charles Dickens, Erasmus Darwin, Mary Wollstonecraft Shelley, Robert Browning, John Stuart Mill, Ralph Waldo Emerson, Elizabeth Barrett Browning, and Alfred Tennyson)

The Royal Society 350th anniversary celebrations puts historic papers online (Captain Cook, Sir Isaac Newton and Benjamin Franklin), BBC, Nov 30, 2009

<http://news.bbc.co.uk/2/hi/science/nature/8381425.stm>

Audio slideshow: 350 years of discovery

The world's oldest science academy, The Royal Society in London, is marking its 350th anniversary by making the papers from its early collections available to users of its new collaborative platform.

Original manuscripts by figures such as Captain Cook, Sir Isaac Newton and Benjamin Franklin are being made available online. The archive is one of the world's great scientific collections, and the Society's heart of science, innovation.

Human Brain Dissected Today in a Live Webcast, Chronicle of Higher Education, December 02, 2009, 01:00 PM ET

http://chronicle.com/blogPost/Human-Brain-Dissected-Today-in/9053/?id=pm&utm_source=pm&utm_medium=en

Human Brain Dissected Today in a Live Webcast

In 1893, Henry Gustav Molaison agreed to undergo experimental brain surgery in hopes of stopping the epileptic seizures and blindness that had plagued him since age six. The neurosurgeon William Scoville, at Hartford Hospital in Connecticut, removed not just of Molaison's hippocampus.

"The outcome largely stopped," writes Scott Lurie in the *Los Angeles Times* Tribune, "but so did Molaison's ability to form new memories, though he could recall parts of his life before the surgery, a condition called severe anterograde amnesia."

Sharing Repositories and Referatories

MERLOT.org: 78,472 members, 21,690 Inrg materials, Jan 3, 2010
Connexions: Dec 2009, 1.6m unique users, 4 million page views, 72 million hits, More than 1m users, 200 countries
National Repository of Online Course, OER Commons

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

The Learning World is Open

flatworld KNOWLEDGE

Wikis: Wikipedia and Wikibooks

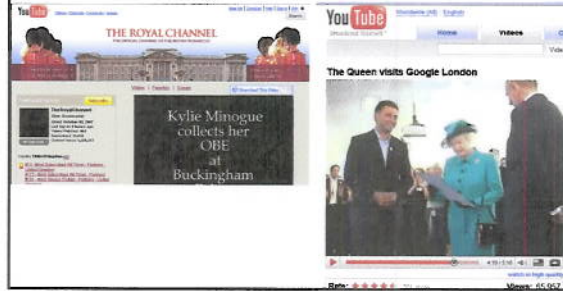
WIKIPEDIA

English: The Free Encyclopedia (1,487,000 articles)
 Deutsch: Die freie Enzyklopädie (170,000 items)
 Français: L'encyclopédie libre (963,000 articles)
 日本語: 自由百科事典 (74,000 項目)
 Nederlands: De vrije encyclopedie (488,000 artikelen)
 Español: La enciclopedia libre (577,000 artículos)
 Deutsch: Die freie Enzyklopädie (170,000 items)
 Polski: Wolna encyklopedia (73,000 stron)
 Italiano: L'enciclopedia libera (476,000 voci)
 Português: A enciclopédia livre (411,000 artigos)
 Pycckий: Свободная энциклопедия (387,000 статей)

Conference to Conference
 (You Ustreamed my Ustream: Now that's
 a Twitter of an Idea)



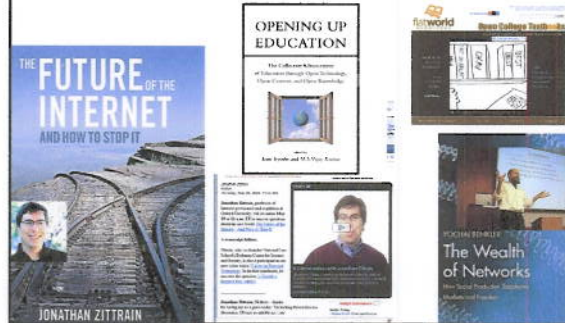
Shared Online Video
 (e.g., YouTube and the Royal Channel)



Individual Produced Videos
 (e.g., African School Dream in Current TV)
http://current.com/items/77146082_african_school_dream



Participatory E-Books



Scribd: Documents on Web
<http://www.scribd.com/>; 21 million unique
 visitors per month, May 2008



**Opener #7. Electronic
 Collaboration and Interaction**
 (synchronous & asynchronous)



Synchronous Conferencing Presentations



The Next Generation of Videoconferencing Chronicle of HE, October 21, 2009



Chief Learning Officer in April, 2010, Social Learning Unleashed

Driving greater collaboration: **With 17,000 internal blogs and 53,000 employees on Social Blue**, IBM's version of Facebook, and **500,000 participants in the company crowdsourcing jams**, IBM's social media usage has become big business. As of 2008, IBM's jams identified **10 incubator businesses with the potential of reaching \$100 million.**



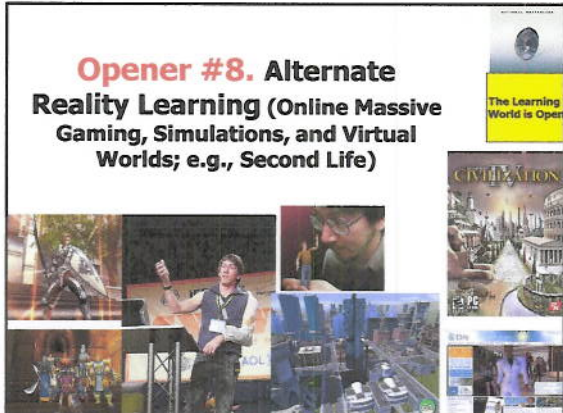
Adventure Learning, GeoThentic, GoNorth (National Geographic) (Aaron Doering, Univ of Minnesota)



Ice Stories Project from Antarctica



Opener #8. Alternate Reality Learning (Online Massive Gaming, Simulations, and Virtual Worlds; e.g., Second Life)



Second Life

(business, law, education, English, medicine)

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

The Learning World is Open

"A" is for App, Anya Kamenetz, Fast Company, April 2010

Social Networking Gaming (e.g., Farmville)

For social networks, it's game on, USA Today, Jon Swartz, Thursday October 15, 2009

Mobile Learning

(April 21, 2009, USA Today)

Mobile Learning in India with Paul Kim

<http://www.stanford.edu/~phkim/curt/India.pdf>

We Are Going Mobile!

40,000 new mobile subscribers a week in Rwanda; Rwanda Newtimes report, January 2009
Africa is the continent with the fastest growth, International Telecommunications Union (ITU), March 2009

India: In January, 2009, the number sky rocketed to 15.4M
 Globally: 60,000 new mobile subscriptions every hour!!!

(per Paul Kim, Stanford, 2009); Nokia Research Lab
http://news.yahoo.com/s/afp/20090308/bc_afp/Indiaeconomytelecom



TwitterPeek, WikiReader not worth the loot, USA Today, Edward Baig, November 5, 2009




TwitterPeek:
Restricted to Twitter.





WikiReader:
Updating can be a pain.

'One Laptop Per Child' program collides with reality GEOFFREY YORK, Toronto Globe and Mail, Oct 15, 2009 Bhutan, Khendum Gyabak (Univ. of Texas at El Paso)




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


The Learning World is Open

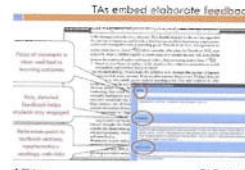



September 30, 2009
 the Samsung DualView TL225




Some Papers Are Uploaded to Bangalore to Be Graded, Chronicle of Higher Education, April 4, 2010, Audrey Williams June





Lori Whisenant, who teaches business law and ethics at the U. of Houston, has outsourced the grading of students' papers to a private company.

Facebook: The New Classroom Commons?, Chronicle of HE, Harriet L. Schwartz, Sept. 28, 2009



SOCIAL NETWORKING


Top social networking sites
 Total unique visitors in August (then new, visit, unique)

Facebook.com	92.2 million
MySpace.com	64.2 million
Twitter.com	30.8 million
Diigo.com	17.4 million
Orkut.com	15.8 million
Bebo.com	12.1 million
LinkedIn.com	11.4 million
Windows Live Profile	10.3 million

Growth of social networking sites

Social networking site users (as a percentage of total internet audience)

August '08



55.0%

August '09



77%

Teaching With Twitter

Chronicle of HE, Jeffrey Young, November 22, 2009
 Sugato Chakravarty, a professor of consumer sciences and retailing at Purdue University, has welcomed Twitter into the lecture hall, even though the service lets students engage in back-channel discussions. The questions submitted via Hotseat for the professor and guest speakers are projected for all the students to see.

Livemocha (29 languages, 160 hours of lessons, over 2 million users, FREE!)

Language Learning on Livemocha
 Livemocha is the world's largest language learning community with over 2 million members! Designed for all language goals and skill levels, Livemocha offers:

Livemocha Challenge
 Learn a new language? Take the Livemocha Challenge and test your foreign language skills!

Predictions

1. Five Billion "Have-Nots" Have at It!
2. Emergence of Lifelong Super E-Mentors/Coaches
3. Quarter-Century Learning Clubs
4. Terabyte Learning Access Points
5. The Veneration of Learning
6. Personalization+ Portfolios
7. The Selection of Global Learning Partners
8. The Shared Learning Era
9. Teaching-Learning Perpetuities
10. Teachers, Teachers
11. The Rise of the Super Blends
12. Self-Determined Humans
13. Free Learning Zones
14. Authentic Learning Amalgamations
15. Alexandrian Aristotles

■ This book is an attempt to reveal a wide range of learning options in front of you while also offering you a framework to make sense of them. As the Grail Knight said in the 1989 movie, *Indiana Jones and the Last Crusade*, "choose wisely." If you do, **WE-ALL-LEARN**. The world is now open to you!

Slides at: TrainingShare.com
 Papers: PublicationShare.com
 Book: <http://worldisopen.com/>
 The World is Open.
 What happens then?

WE
ALL
LEARN!!!