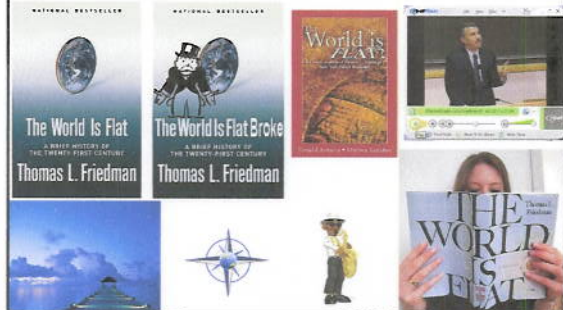


Nothing "Flat" World About this Jazz: How Web Technology is Revolutionizing Education

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



Is the World Flat?



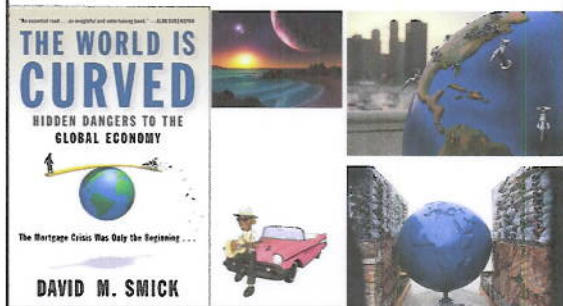
The Ten Forces that Flattened the World

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

- 11/9/89: Berlin Wall came down
- 8/9/95: Netscape went public
- Work Flow Software (e.g., PayPal and eBay)
- Open-Sourcing (Self organ collab communities; Mosaic, Apache, Wikipedia, Linux, Mozilla)
- Outsourcing (Y2K)
- Offshoring (e.g., China, Mexico, Thailand)
- Supply-Chaining (e.g., Walmart)
- In-sourcing (UPS fixing Toshiba laptops)
- In-forming (e.g., Google, Yahoo!, MSN Web Search)
- The Steroids: Digital, Mobile, Personal, and Virtual (wireless, file sharing, VoIP, video camera in phone)



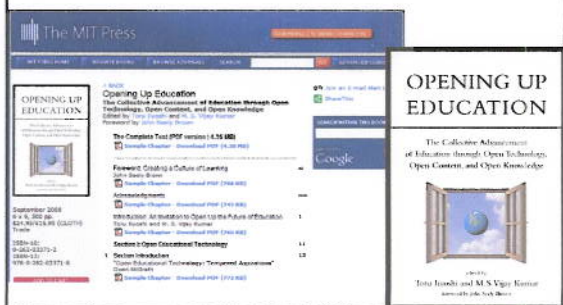
Is the World Curved?



Is it spiky?



Or is it Open?





**Charles Wedemeyer
Learning at the Back Door (1981)
Nontraditional Learning**

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


UCLA Summer Digs Program
Dig in, archaeology fans! UCLA blogs to offer front-row seat at archaeology digs, Meg Sullivan, 6/25/2008

Michael Perham & Zac Sunderland,
Summer 2009 (each age 17, youngest person to sail solo around the world...and blog on it, use Skype, YouTube, take videos, post pictures, now Abby Sunderland age 16, Minoru Saito, age 75, oldest solo sailor)

David Thomas, Archeologist, La Trobe University, Australia (Discovery News)


Indiana Jones

■ Perhaps those learning online are akin to the alien archaeologists in the 2008 movie, *Indiana Jones and the Kingdom of the Crystal Skull*. We are seeking the knowledge nuggets of our planetary past and present. As Indy said, **"Their treasure wasn't gold, it was knowledge. Knowledge was their treasure."** If that is true for us as well, then today pretty much all the world's known treasures can be found online.

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.




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?

Tablet May Help E-Textbook Market, Publishers Hope
 Chronicle of HE, Jeffrey Young
 January 31, 2010

Guests play with Apple's new iPad at an event announcing its debut in San Francisco. At least one college is considering giving iPads to new students, but the jury on whether the device will revolutionize learning will be out for a while.

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)

Read, Listen, etc. to online books (e.g., "An International Episode" by Henry James)



Opener #2. E-Learning and Blended Learning

The Learning World is Open

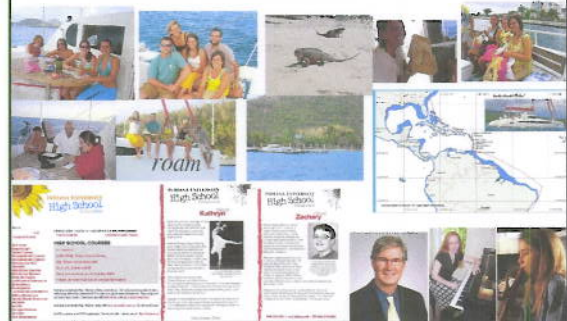


Letter from Bill Gates about online learning (January, 2010)

<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)

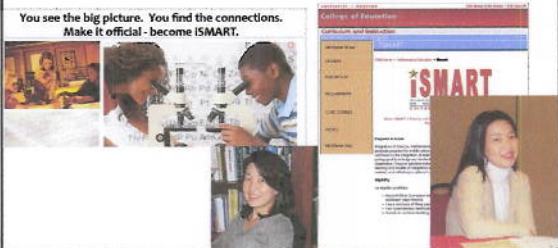


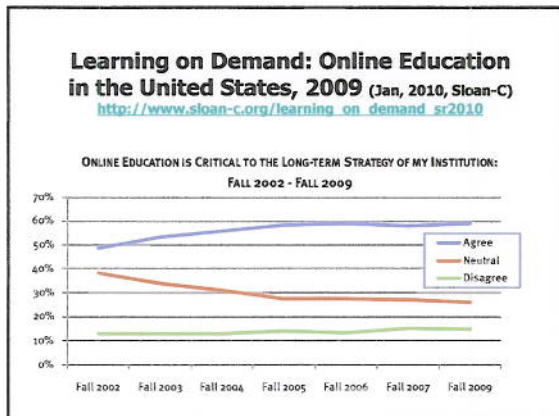
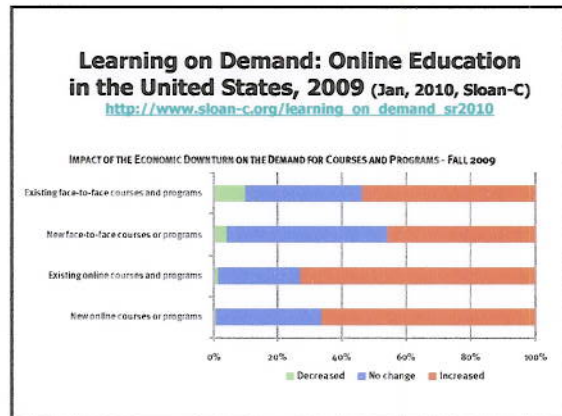
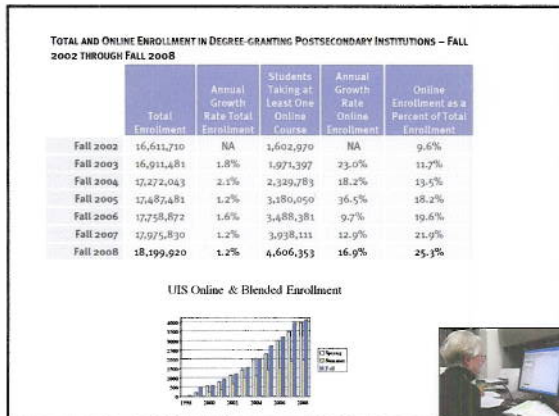
Capella Tower 225 South Sixth Street, Minneapolis Formerly, the "Halo"



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%20 flyer4.pdf>
<http://www.coe.uh.edu/mycoe/CUIN/math/iSMART.cfm>





Learning on Demand: Online Education in the United States, 2009 (Jan, 2010, Sloan-C)

http://www.sloan-c.org/learning_on_demand_sr2010

PROPORTION OF INSTITUTIONS REPORTING ECONOMIC DOWNTURN HAS INCREASED DEMAND FOR COURSES AND PROGRAMS – FALL 2009

	Public	Private nonprofit	Private for-profit
Existing Face-to-face	75.9%	31.6%	52.7%
New Face-to-face	60.2%	30.9%	45.8%
Existing Online	87.0%	58.2%	67.0%
New Online	76.5%	59.5%	54.5%

	Doctoral/Research	Master's	Baccalaureate	Associate's	Specialized
Existing Face-to-face	51.9%	44.7%	30.9%	75.2%	26.5%
New Face-to-face	39.2%	35.9%	24.6%	63.3%	32.6%
Existing Online	75.0%	66.7%	62.1%	81.2%	62.0%
New Online	79.1%	67.6%	55.8%	71.9%	52.4%

U.S. DEPARTMENT OF EDUCATION

Evaluation of Evidence-Based Practices in Online Learning
A Meta-Analysis and Review of Online Learning Studies

Research Initiatives for Teaching Effectiveness

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

The Learning World is Open

INFORMATION TECHNOLOGY
Cities Four Blackboard Will Put the Drive in Digital Learning

Blackboard
The power to learn

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

Moodle sites
Total Moodle sites: 3,200,000

Moodle downloads
Total Moodle downloads: 3,200,000

Statistics:
 - Moodle 1.9.10: 3,200,000
 - Moodle 1.9.9: 3,200,000
 - Moodle 1.9.8: 3,200,000
 - Moodle 1.9.7: 3,200,000
 - Moodle 1.9.6: 3,200,000
 - Moodle 1.9.5: 3,200,000
 - Moodle 1.9.4: 3,200,000
 - Moodle 1.9.3: 3,200,000
 - Moodle 1.9.2: 3,200,000
 - Moodle 1.9.1: 3,200,000
 - Moodle 1.9.0: 3,200,000
 - Moodle 1.8.10: 3,200,000
 - Moodle 1.8.9: 3,200,000
 - Moodle 1.8.8: 3,200,000
 - Moodle 1.8.7: 3,200,000
 - Moodle 1.8.6: 3,200,000
 - Moodle 1.8.5: 3,200,000
 - Moodle 1.8.4: 3,200,000
 - Moodle 1.8.3: 3,200,000
 - Moodle 1.8.2: 3,200,000
 - Moodle 1.8.1: 3,200,000
 - Moodle 1.8.0: 3,200,000
 - Moodle 1.7.10: 3,200,000
 - Moodle 1.7.9: 3,200,000
 - Moodle 1.7.8: 3,200,000
 - Moodle 1.7.7: 3,200,000
 - Moodle 1.7.6: 3,200,000
 - Moodle 1.7.5: 3,200,000
 - Moodle 1.7.4: 3,200,000
 - Moodle 1.7.3: 3,200,000
 - Moodle 1.7.2: 3,200,000
 - Moodle 1.7.1: 3,200,000
 - Moodle 1.7.0: 3,200,000
 - Moodle 1.6.10: 3,200,000
 - Moodle 1.6.9: 3,200,000
 - Moodle 1.6.8: 3,200,000
 - Moodle 1.6.7: 3,200,000
 - Moodle 1.6.6: 3,200,000
 - Moodle 1.6.5: 3,200,000
 - Moodle 1.6.4: 3,200,000
 - Moodle 1.6.3: 3,200,000
 - Moodle 1.6.2: 3,200,000
 - Moodle 1.6.1: 3,200,000
 - Moodle 1.6.0: 3,200,000
 - Moodle 1.5.10: 3,200,000
 - Moodle 1.5.9: 3,200,000
 - Moodle 1.5.8: 3,200,000
 - Moodle 1.5.7: 3,200,000
 - Moodle 1.5.6: 3,200,000
 - Moodle 1.5.5: 3,200,000
 - Moodle 1.5.4: 3,200,000
 - Moodle 1.5.3: 3,200,000
 - Moodle 1.5.2: 3,200,000
 - Moodle 1.5.1: 3,200,000
 - Moodle 1.5.0: 3,200,000
 - Moodle 1.4.10: 3,200,000
 - Moodle 1.4.9: 3,200,000
 - Moodle 1.4.8: 3,200,000
 - Moodle 1.4.7: 3,200,000
 - Moodle 1.4.6: 3,200,000
 - Moodle 1.4.5: 3,200,000
 - Moodle 1.4.4: 3,200,000
 - Moodle 1.4.3: 3,200,000
 - Moodle 1.4.2: 3,200,000
 - Moodle 1.4.1: 3,200,000
 - Moodle 1.4.0: 3,200,000
 - Moodle 1.3.10: 3,200,000
 - Moodle 1.3.9: 3,200,000
 - Moodle 1.3.8: 3,200,000
 - Moodle 1.3.7: 3,200,000
 - Moodle 1.3.6: 3,200,000
 - Moodle 1.3.5: 3,200,000
 - Moodle 1.3.4: 3,200,000
 - Moodle 1.3.3: 3,200,000
 - Moodle 1.3.2: 3,200,000
 - Moodle 1.3.1: 3,200,000
 - Moodle 1.3.0: 3,200,000
 - Moodle 1.2.10: 3,200,000
 - Moodle 1.2.9: 3,200,000
 - Moodle 1.2.8: 3,200,000
 - Moodle 1.2.7: 3,200,000
 - Moodle 1.2.6: 3,200,000
 - Moodle 1.2.5: 3,200,000
 - Moodle 1.2.4: 3,200,000
 - Moodle 1.2.3: 3,200,000
 - Moodle 1.2.2: 3,200,000
 - Moodle 1.2.1: 3,200,000
 - Moodle 1.2.0: 3,200,000
 - Moodle 1.1.10: 3,200,000
 - Moodle 1.1.9: 3,200,000
 - Moodle 1.1.8: 3,200,000
 - Moodle 1.1.7: 3,200,000
 - Moodle 1.1.6: 3,200,000
 - Moodle 1.1.5: 3,200,000
 - Moodle 1.1.4: 3,200,000
 - Moodle 1.1.3: 3,200,000
 - Moodle 1.1.2: 3,200,000
 - Moodle 1.1.1: 3,200,000
 - Moodle 1.1.0: 3,200,000
 - Moodle 1.0.10: 3,200,000
 - Moodle 1.0.9: 3,200,000
 - Moodle 1.0.8: 3,200,000
 - Moodle 1.0.7: 3,200,000
 - Moodle 1.0.6: 3,200,000
 - Moodle 1.0.5: 3,200,000
 - Moodle 1.0.4: 3,200,000
 - Moodle 1.0.3: 3,200,000
 - Moodle 1.0.2: 3,200,000
 - Moodle 1.0.1: 3,200,000
 - Moodle 1.0.0: 3,200,000

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

MIT OPEN COURSEWARE
MITALPHALTA FACULTY OF EDUCATION

Open Yale
Etc. Traditional Textbooks

we Remain Open Textbooks!

Open Teaching

(Tom Reeves Evaluation Course at Georgia; David Wiley's Web 2.0 courses at BYU; Connectivism from George Siemens and Stephen Downes, 24 enrolled, 2,000+ sitting in)

Open Educational Resources (OER)

Post Courses in YouTube and iTunes (e.g., Berkeley)

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
開放式課程計劃

Sample OpenCourseWare Projects (Tufts, Johns Hopkins)

Tufts OpenCourseWare

JOHNS HOPKINS COURSEWARE
OPEN SOURCE EDUCATIONAL COURSES OF PUBLIC ACCESS

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

Open Access Journals

New Journals, Free Online, Let Scholars Speak Out, Chronicle of Higher Education, By Peter Schmidt, Feb 14, 2010

<http://chronicle.com/article/Open-Access-Journals-Break/64143/?cid=at>

A Single Group Helps Trigger an Online-Publishing Explosion

The Public Knowledge Project, a nonprofit group estimates that the online-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 last month.

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/?cid=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.

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

Transforming the System. An Interview with Michelle Rhee

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 celebrating its 350th anniversary by putting its entire 350-year archive online for the first time. The archive contains the work of some of the world's greatest scientists, including Sir Isaac Newton, Benjamin Franklin, and Captain Cook.

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/90537?cid=pm&utm_source=pm&utm_medium=en

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

Wikis: Wikipedia and Wikibooks

WIKIPEDIA

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

The collage features several digital book covers and content snippets. On the left is the cover of 'THE FUTURE OF THE INTERNET AND HOW TO STOP IT' by JONATHAN ZITTRAIN. In the center is 'OPENING UP EDUCATION: The Liberal Arts Movement and How to Open Up Learning, from Coursera to Khan Academy' by Tom Ichniowski and N. S. Raman. To the right is 'The Wealth of Networks' by Richard A. Radwin. Other elements include a 'Social Networks' cover and a snippet of a presentation slide.

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

The top part shows a screenshot of the Scribd website with navigation tabs like Home, Upload, Library, and Help. Below the website screenshot is a photograph of two men standing in a room decorated with balloons. One man is wearing a dark jacket and the other is wearing a light-colored jacket. A large Scribd logo is visible in the background of the photo.

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

This collage includes several educational and collaboration-themed items. On the left is the 'edutopia' logo with the tagline 'The Collaboration Age'. In the center is 'Collaboration Generation' featuring photos of people working together. On the right is 'The Learning World is Open' logo. Other elements include a 'NEW SKILLS FOR A NEW AGE' graphic and a photo of a man wearing a headset, likely representing customer support or online interaction.

Synchronous Conferencing Presentations

A grid of approximately 15 small video conference windows. Each window shows a different participant in a meeting. Some participants are speaking, while others are listening. The windows are arranged in a roughly rectangular grid, illustrating a synchronous conferencing session.

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

The screenshot shows a video conference interface. On the left, a large window displays two participants in a conversation. Below this is a smaller window showing a presentation slide with a diagram of a human head and neck. The interface includes standard video conferencing controls like mute, video on/off, and chat. Text at the bottom reads: 'Researchers at the University of Southern California and the University of North Carolina at Chapel Hill are creating new tools that may soon let people attend videoconferences in...'.

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

This collage features educational content related to adventure learning. It includes a 'GeoThentic' logo, a 'GoNorth' logo, and a 'National Geographic' logo. There are several images of people in outdoor settings, likely related to the 'Adventure Learning' theme. A prominent image shows a person in a red jacket. Text at the bottom reads: 'Explore HELPING LEARNERS LEARN...'.

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

Second Life
(business, law, education, English, medicine)

University of Texas: 50 Islands in Second Life, Nov 2009
<http://archive.treet.tv/metanomics-campus-life>

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

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)

We Are Going Mobile!

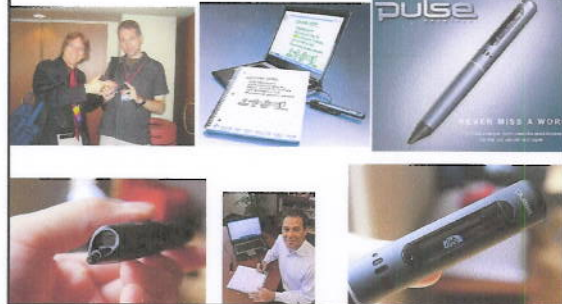
40,000 new mobile subscribers a week in Rwanda; Rwanda Newtimes report, January 2009
Africa is the continent with the fastest growth, International Telecommunications Union (ITU), March 2009

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/bs_afp/indiaeconomytelcom



Terabyte thumb Drives and Magic Pens! (The Pulse from Livescribe, \$129-\$169)



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

TwitterPeek:
Restricted to Twitter.

WikiReader:
Updating can be a pain.

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

September 30, 2009
 the Samsung DualView TL225

The Learning World is Open

Podcast Shows (subscribe to ShakespeareCast.com)

Big Contact Feed Player - Window
<http://www.bigcontact.com/play>

ShakespeareCast.com

HH4 - By Indira Prasad, Fred Director, O...
 HH3 - Your Father Lost a Father
 HH2 - A Documentary In Madness
 Hamlet's Head #001
 Intermission
 R&J Act 3 Scene 1
 Romeo and Juliet - Act 2
 M&ND Act 1 Scene 1
 R&J Act 2 Scene 5
 R&J Act 2 Scene 3
 R&J Act 2 Scene 4
 R&J Act 2 Scene 3
 R&J Act 2 Scene 2

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

SOCIAL NETWORKING

Top social networking sites

Site	Users (in millions)
Facebook.com	82.2 million
MySpace sites	64.2 million
Tumblr.com	50.8 million
Diigo.com	17.4 million
Classmates.com sites	12.9 million
Beatscape Pattern (partial list)	12.1 million
MyLife.com sites	11.4 million
Western Live Profile	10.3 million

Growth of social networking sites

Social networking site users (as a percentage of total Internet increase)

Month	Percentage
August '08	65.8%
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 Hotsheet 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!)

"A powerful opportunity for people around the world to connect with language partners"

Language Learning on Livemocha
 Livemocha is the world's largest language learning community, with over 3 million members! Designed for all language goals and skill levels, Livemocha offers free

Livemocha Challenge
 Learning a new language? Take the Livemocha Challenge and use 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!!!