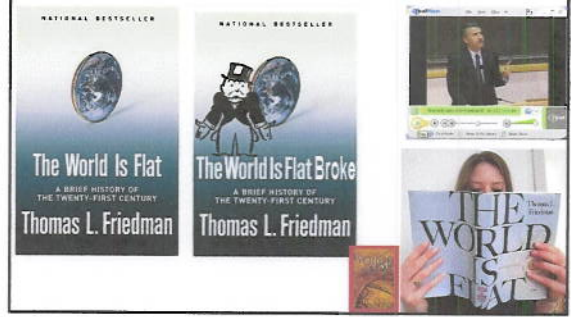


The World Is Open: How Web Technology Is Revolutionizing Education

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



Is the World Flat?



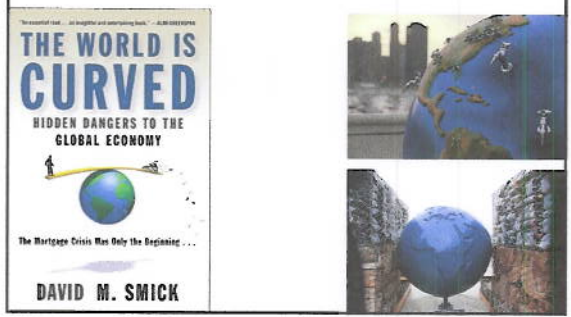
The Ten Forces that Flattened the World

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

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?

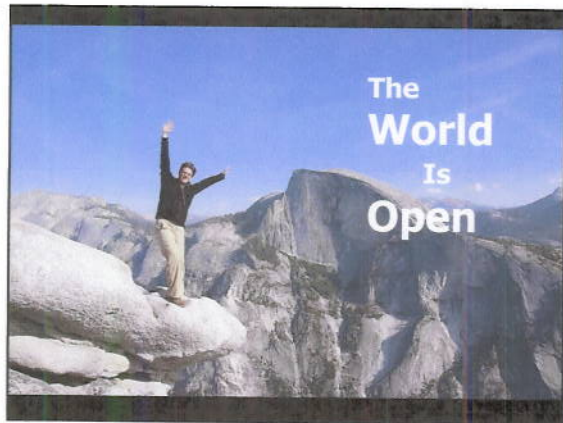


Is it spiky?



Or is it Open?





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**ead-Time Mobility and Portability (e.g., iPhone)
- **N**etworks of Personalized Learning (Blogs, RSS)



Grandpa George (Goronja)

(West Allis, Wisconsin, built tractors 40+ years)



Audience Participation!

1. WE



2. ALL

3. LEARN!!!

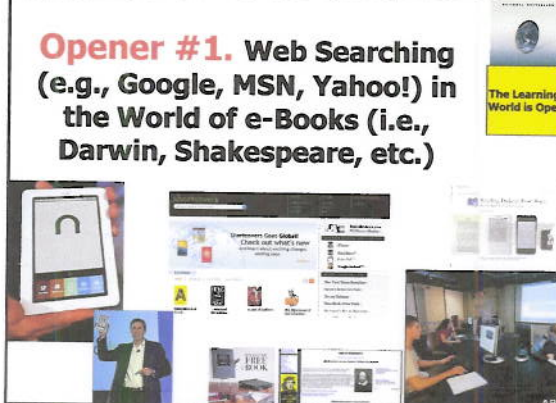



Triple Learning Technology Convergence of "WE-ALL-LEARN"

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.)





Trend #1. Web Searching in the World of e-Books.

What happens then?

WE

ALL

LEARN!!!

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



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)

The collage features several elements: a group of students in a classroom, a map of the school's location, a student working on a laptop, and various text-based information about the school's programs and services.

Adora Svitak, age 12, World's Youngest Teacher

The collage includes a screenshot of a classroom with students, a portrait of Adora Svitak, and a screenshot of her blog titled 'Adora's Blog'.

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

The collage shows a wide view of the Minneapolis skyline, a close-up of the Capella Tower building, and a view of the building at night.

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

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

The collage includes a screenshot of the iSMART website, a photo of students in a classroom, and a photo of a student using a microscope.

Kelley Direct Online MBA

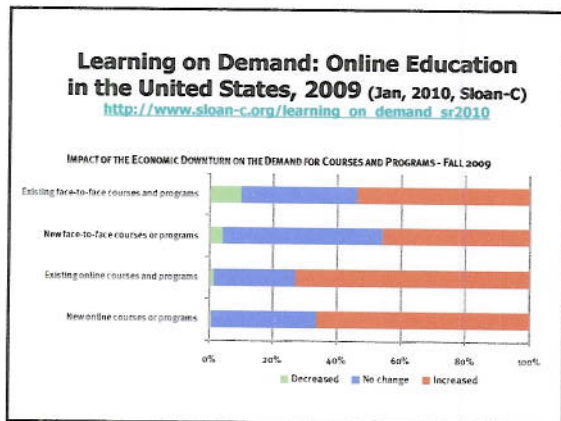
The collage features a student working on a laptop, a student in a business suit, and a screenshot of the Kelley Direct Online MBA program website.

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	16,611,710	NA	1,602,970	NA	9.6%
Fall 2003	16,911,481	1.8%	1,971,397	23.0%	11.7%
Fall 2004	17,272,043	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	17,258,872	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%

UIS Online & Blended Enrollment

The bar chart shows a steady increase in online and blended enrollment over the period from 2002 to 2008.



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

Open Yale

Exc. Traditional Textbooks

We Remix Open Textbooks!

Sample OpenCourseWare Projects (Tufts, Johns Hopkins)

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



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)

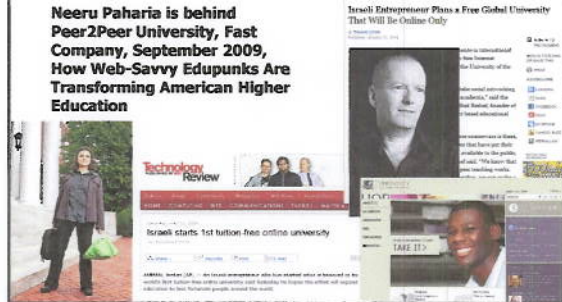


Opensource Opencourseware Prototype System (OOPS) funded by, the Foundation of Fantasy, Lucifer Chu, Chairman and Janitor of OOPS, Taipei)

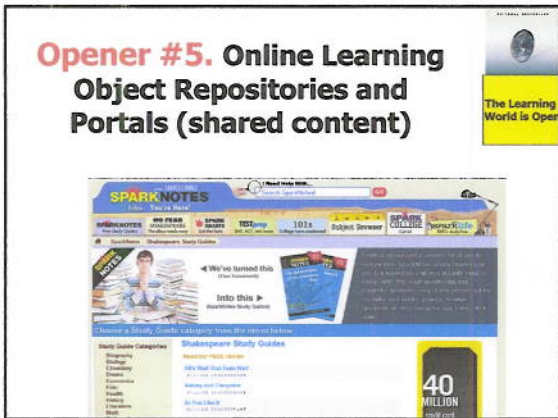


Peer2Peer University and University of the People (free!)

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



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



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



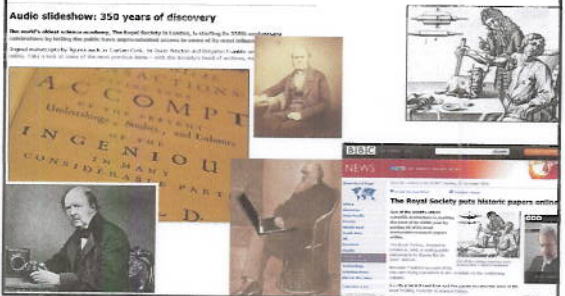
**Ida (a transitional species)
47-Million-Year-Old Darwinius Masillae Fossil
the Missing Link? (wowOwow, May 20, 2009)**



**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>**



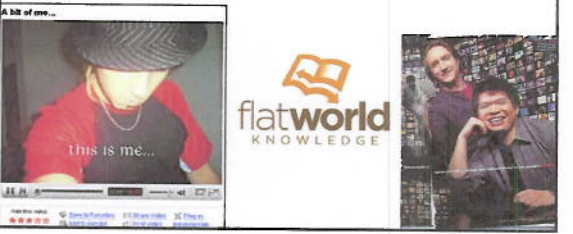
**Human Brain Dissected Today in a Live Webcast, Chronicle of Higher Education,
December 02, 2009, 01:00 PM ET
http://chronicle.com/blink/2009/12/human-brain-dissected-today-in-19053/2aid-pm&utm_source=pm&utm_medium=en**



**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)



Wikis: Wikipedia and Wikibooks

The image shows the Wikipedia homepage with a language selector for various languages including English, Deutsch, Français, and others. A globe is centered on the page. To the right, there is a photograph of a man with a beard, likely a contributor or representative of the project.

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

The image displays the Ustream website interface. It features a central video player showing a live stream, a chat window on the right, and various navigation and control elements. The text above the image reads "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)

The image shows a YouTube video player. The video is titled "The Queen visits Google London" and is from the channel "THE ROYAL CHANNEL". The video player includes a play button, progress bar, and other standard YouTube controls.

Individual Produced Videos (e.g., African School Dream in Current TV)

http://current.com/items/77146082_african_school_dream

The image shows the Current TV website interface. It features a grid of video thumbnails, a search bar, and navigation elements. The text above the image reads "Individual Produced Videos (e.g., African School Dream in Current TV)" and includes a URL.

Participatory E-Books

The image is a collage of e-book covers. Visible titles include "THE FUTURE OF THE INTERNET AND HOW TO STOP IT" by Jonathan Zittrain, "OPENING UP EDUCATION: The Collective Advancement of Education through Open, Collaborative, and Personalized Learning", and "The Wealth of Networks".

Scribd: Documents on Web

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

The image shows the Scribd website interface. It features a search bar, navigation links, and a section for "Publish Yourself Online" with options like "Upload Documents" and "Share with the World". The text above the image reads "Scribd: Documents on Web" and includes a URL and visitor statistics.

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

The Learning World is Open

edutopia The Collaboration Age

Collaboration Generation

NEW SKILLS FOR A NEW AGE

CREATE COLLABORATE

Synchronous Conferencing Presentations

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

October 21, 2009

The Next Generation of Videoconferencing

Footage courtesy of USC Institute for Creative Technologies

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 videoconferencing

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

Explore HELPING LEARNERS LEARN

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

The Learning World is Open

CIVILIZATION

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

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

Quick Access to 1,000s of Treet & Treet Shows
OVER 2,000,000 Downloads

Public Metanomics - Campus Life

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

The Learning World is Open

**Social Networking Gaming (e.g., Farmville)
For social networks, it's game on, USA Today, Jon
Swartz, Thursday October 15, 2009**

For social networks, it's game on

Quick, simple fun games on Facebook, MySpace

FARMVILLE

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/aft/20090308/bs_aft/indiaconomytelecom

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



**WikiReader:
Updating can be a pain.**

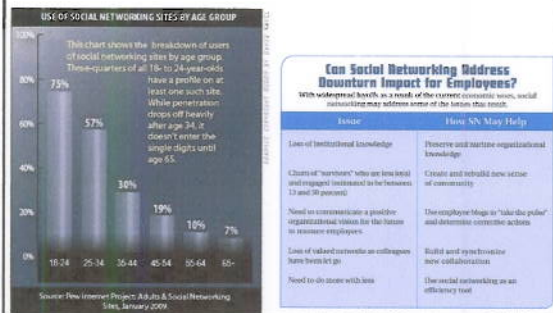
Opener #10. Networks of Personalized Learning (Blogs, Podcasts, MySpace, Flickr, and RSS)



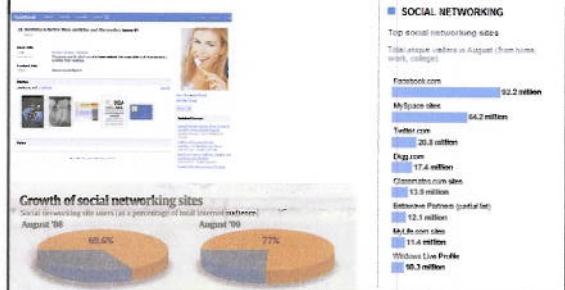
**September 30, 2009
the Samsung DualView TL225**



T&D, Marjorie Derven, July 2009



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



Learning Towns are Popping up!



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.



Podcast Shows (subscribe to ShakespeareCast.com)



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



Live Happy Practitioner Directory http://www.signalpatterns.com/practitioner



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?

