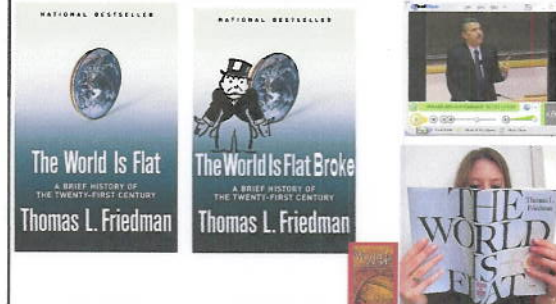


## The Flat World Swung Open: How Web Technology Is Revolutionizing Education

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



## Is the World Flat?



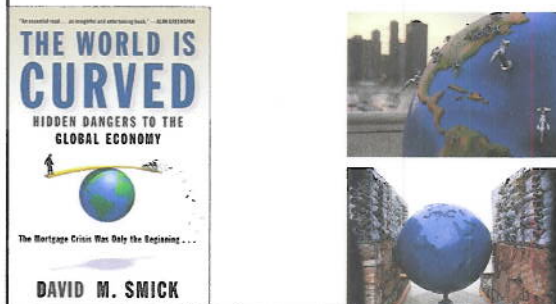
## The Ten Forces that Flattened the World

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

- 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 collob communities; Mosaic, Apache, Wikipedia, Linux, Mozilla)
- Outsourcing (Y2K)
- Offshoring (e.g., China, Mexico, Thailand)
- Supply-Chaining (e.g., Walmart)
- Insourcing (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)



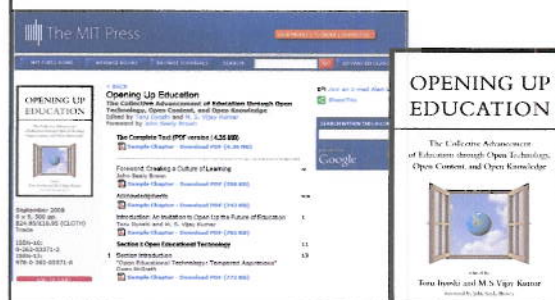
## Is the World Curved?



## Is it spiky?



## Or is it Open?






**Yonsei University, Seoul, Korea**

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


**UCLA Summer Digs Program  
Dig in, archaeology fans! UCLA blogs to offer front-row seat at archaeology digs, 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)**




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**ead-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!!!**

**Free Online Books**  
 (Terry Anderson and Fathi Eloumi, eds. *Theory and Practice of Online Learning*; Canada: Athabasca University, 2004),  
[http://cde.athabascau.ca/online\\_book/](http://cde.athabascau.ca/online_book/), 55,000 downloads in first year)

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

October 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

**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.

More in 2010: The Publically Available Research in Cellular Technology Advancement Program, the most program provided. It starts with the use of technology and education learning tools, allowing the Seton Hill students will be uniquely suited to address various industry sectors that have not yet been met.

For more information on the Cellular Technology Advancement Program, please visit the website: [www.setonhill.edu/technology](http://www.setonhill.edu/technology)

—Continued on next slide

**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**

**Rice** 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 Cuba d'Zwain

This country is:  
 Thailand  
 Malaysia  
 Indonesia  
 Vietnam

**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%20flyer4.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**

Year	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%	2,329,273	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	71022
Year 2003	118998
Year 2004	208566
Year 2005	35896
Year 2006	63248
Year 2007	64489
Year 2008	75425
Year 2009	89429
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 OPENCOURSEWARE  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Open Yale

Open Yale

Epic Traditional Textbooks

We Remix Open Textbooks!

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

### OpenCourseWare (OCW) Cute Kitten or Transformation?

MIT OPENCOURSEWARE  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Open Yale

Open Educational Resources

Open Universiteit 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

開放式課程計劃

### Sample OpenCourseWare Projects (Tufts, Johns Hopkins)

Tufts OpenCourseWare

IDP200 Pathophysiology of Infectious Diseases, Fall 2004/2005

Open Yale

Open Educational Resources

### National Repository for Online Courses (NROC) Commons

OpenSource OpenCourseware Prototype System

開放式課程計劃

## 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 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/64143/7?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.**

**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 public freely downloadable access to some of its most influential papers. Images translated by Agnes Clark at Capital.co.uk. Sir Isaac Newton and Benjamin Franklin are being made available online. Right-click on any of the text captions below to view the original text of articles, with notes.

### 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/9053/2?cid=pm&utm\\_source=pm&utm\\_medium=en](http://chronicle.com/blogPost/Human-Brain-Dissected-Today-in/9053/2?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

A bit of me...

this is me...

flatworld KNOWLEDGE

### Wikis: Wikipedia and Wikibooks

WIKIPEDIA

English: The Free Encyclopedia (2,848,448 articles)  
 Deutsch: Die freie Enzyklopädie (771,448 articles)  
 Français: L'encyclopédie libre (611,448 articles)  
 日本語: フリー百科事典 (448,448 articles)  
 Nederlands: De vrije encyclopedie (448,448 articles)  
 Español: La enciclopedia libre (377,448 articles)

Portugals: A enciclopédia livre (411,448 artigos)  
 Pycckий: Энциклопедия свободная (207,448 статей)

Project of the Wikimedia Foundation (en: en: en:)

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



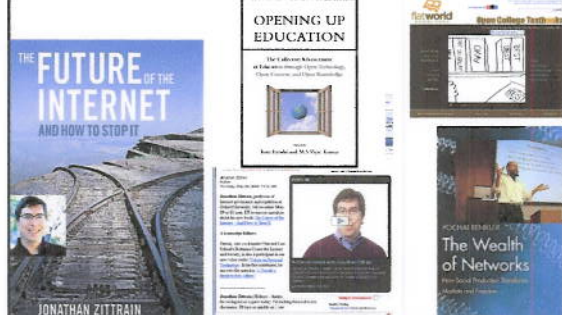
**Shared Online Video**  
(e.g., YouTube and the Royal Channel)



**Individual Produced Videos**  
(e.g., African School Dream in Current TV)  
[http://current.com/items/77146082\\_african\\_school\\_dream](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

### Social Learning Unleashed

Chief Learning Officer, April 2010

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/ba\\_afp/indiaeconomyntelecom](http://news.yahoo.com/s/afp/20090308/ba_afp/indiaeconomyntelecom)



## 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)



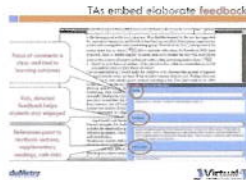
September 30, 2009  
 the Samsung DualView TL225



## 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.



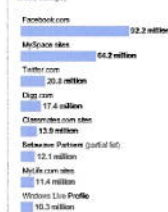
## Facebook: The New Classroom Commons?, Chronicle of HE, Harriet L. Schwartz, Sept. 28, 2009



### SOCIAL NETWORKING

Top social networking sites

Take unique colors in August (from home, work, college)



### 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.

Spanish: Learn Spanish on Your Terms! 243 free lessons & 7367 conversations. Take the test >

Learn Italian on Your Terms! 30 free lessons & 470 conversations. Take the test >

Learn Chinese on Your Terms! 243 free lessons & 7367 conversations. Take the test >

### 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"

**Social Language Learning - Online!**

Learn 29 languages online. 160 hours of lessons. 2 million users. 100% 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 free

**Livemocha Challenge**  
 Learning 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](http://TrainingShare.com)  
 Papers: [PublicationShare.com](http://PublicationShare.com)  
 Book: <http://worldisopen.com/>

The World is Open.  
 What happens then?

**WE ALL LEARN!!!**