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

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

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. 9/11/93: Netscape went public
3. Work Flow Software (e.g., PayPal and eBay)
4. Open-Sourcing (e.g., Apache, Wikipedia, Linux, Mozilla)
5. Outsourcing (Y2K)
6. Offshoring (e.g., China, Mexico, Thailnad)
7. Supply-Chaining (e.g., Walmart)
8. Insourcing (UPS using Toshiba laptops)
9. In-Sourcing (e.g., Google, Yahoo!, MSN Web Search)
10. The Staroids: Digital, Mobile, Personal, and Virtual (wireless, file sharing, VoIP, video camera in phone)

Is it spiky?

Or is it Open?

The World is Curved
Hidden Dangers to the Global Economy
David M. Smick

Opening Up Education
The Case for Openness in Education
By David M. Smick

Who's Your City?
Richard Florida

Is the World Curved?
**Question:**
What is the Web?

- An entertainment system?
- A writing aid?
- A communications system?
- A means to handle commercial transaction?
- A social networking device?

No, it is a learning tool!

**Answer:**
The Web of Learning

**The Web of Learning**

**The Explosion of the Web 2.0**
We are entering a jumping off point...

Elements of the Web's Next Generation

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, 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, Mirorsa Salto, age 79, oldest solo sailor)

May 2010, Jessica Watson became the youngest person ever to sail solo, non-stop and unassisted around the world. http://www.jessicawatson.com.au


Abby Sunderland's blog
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
  - Web Searching in the World of e-Books (I.e., Darwin)
  - 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)

**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.
Trend #1. Web Searching in the World of e-Books. What happens then? **WE ALL LEARN!!!**

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

Does iPad have the magic to bring people together? Marco R. della Cava, USA TODAY, June 7, 2010
Opener #2. E-Learning and Blended Learning

Florida Virtual School, 71,000 unique students
This is half credit completions, which means all included have successfully completed a half credit enrollment (June 2, 2010)

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

U. Of California System Proposing Online Ed
Chronicle of HE, May 14, 2016, Josh Keller and Marc Perry
"The university plans to spend about $250,000 on each course. It hopes to raise the money from external sources like foundations or major donors."

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 (Professors, Jennifer Chaulet and Min Lee)

TOTAL AND ONLINE ENROLLMENT IN DEGREES-CRADITING, POSTSECONDARY INSTITUTIONS - FALL 2002 THROUGH FALL 2008

Open U of Malaysia, March 25, 2010

Opener #3. Availability of Open Source and Free Software (e.g., Linux, Apache, Moodle, Sakai)
Moodle (32+ million registered users in 208 countries, 3+ million courses, 2/6/2010)

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

Sample OpenCourseWare Projects (Tufts, Johns Hopkins)

National Repository for Online Courses (NROC) Commons
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)

Learning World is Open

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, WondershowYo, Expio.TV, NASA TV, ClipChef, TV Lesson, BookTV, Edutopia videos, MonkeySee, doPlick, the Research Channel, iVideosong

Link TV: Global Link of World Educators (GLOWE)

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

Transforming the System: An Interview with Stephen Dinkin, Dean, School of Education

Interactive videos need to be captivating.
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."

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

Human Brain Dissected Today in a Live Webcast, Chronicle of Higher Education, December 13, 2009, 12:00 PM ET
http://chronicle.com/blogs/post/Human-Brain-Dissected-Today-
by-D003/ret.popup#c ARTICLE_09982 медиум

The Complete Works of Charles Darwin

The Carlyle Letters Exploring Victorian World Through
Letters and The Diary of Samuel Pepys
(Great Pagan, Great Fire, Charles Dickens, Emmaus Darwin, Mary
WolstonecraftShelley, Robert Browning, John Stuart Mill, Ralph Waldo
Emerson, Elizabeth Barrett Browning, and Alfred Tennyson)
The Royal Society 350th anniversary celebrations put 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

Sharing Repositories and Referatories
MERLOT.org: 78,472 members, 21,690 lang materials, Jan 3, 2010
Connections: Doc 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

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)
Flat Classroom ProjectsIII (combine blogs, videoconferencing, chat, async discussion, etc.)

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

Ice Stories Project from Antarctica

Synchronous Conferencing Presentations

7 Tips for Building Collaborative Learning Spaces, Campus Technology, Matt Villano, June 2010

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

Empathic Education: The Transformation of Learning in an Interconnected World
Jeremy Rifkin, Chronicles of Ht, May 31, 2010

"The educational process emphasizes autonomous learning—sharing knowledge is considered cheating—and the incentive is to produce efficient and productive workers for the market economy."

"New teaching models designed to transform education from a competitive contest to a collaborative and empathetic learning experience are emerging as schools and colleges try to reach a generation that has grown up on the Internet and is used to interacting in open social networks where information is shared rather than hoarded. The traditional assumption that "knowledge is power," and is used for personal gain, is being subverted by the notion that knowledge is an expression of the shared responsibilities for the collective well-being of humanity and the planet as a whole."
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 skyrocketed to 15.4M
Globally: 60,000 new mobile subscriptions every hour!!!

(par Paul Kim, Stanford, 2009); Nokia Research Lab

OLPC, Marvell Join Forces, Announce sub-$100 Tablet by December 2010
May 27th, 2010 by Mike Prospero

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

Mobile Learning
(April 23, 2009, USA Today)

June 9, 2010

TwitterPeek:
Restricted to Twitter.

WikiReader:
Updating can be a pain.
Museum of London's Streetmuseum App Puts Historic Photos in Perspective
Written by Chris Cameron, June 1, 2010
"Hundreds of images from the Museum of London's extensive collection show scenes both everyday and momentous across the city's history, from the Great Fire of 1666 to the swinging sixties."

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

Sociable Professors
First-of-its-Kind Survey Finds College Faculty Increasingly Using Social Media
Boston, MA (PRWEB) May 4, 2010
http://www.prweb.com/releases/2010/05/prweb3966844.htm
"More than 80 percent of college faculty use social media, with more than half using these tools as part of their teaching." Pearson Social Media Survey 2010

Teaching With Twitter
Chronicle of HE, Jeffrey Young, November 23, 2009
Snape showroom, a professor of creative writing and modeling at Purdue University, has integrated Twitter into his literature class, using the service to engage students' creative prowess in online discussion. The students submitted via social media the professor and guest speakers are projected for all the students to see.
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.

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

Decisions for this Open Ed World?
- Technology and Admin Folks:
  - What do to about OER, open sources, E-books, mobile, etc.?
- Instructor decisions:
  - Act as Concierge, Counselor, Course facilitator, Credit manager?
- Student decisions:
  - Should I attend traditional university or create your own degree path?
  - How to report use of OER on resumes?

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!