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

Do you know the shape of the world?

Where are you headed?

Is the World Flat?

The Ten Forces that Flattened the World

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

1. 11/9/85: Berlin Wall came down
2. 8/9/95: Netscape went public
3. Work Flow Software (e.g., PayPal and eBay)
4. Open-Source (e.g., Linux最有影响力的开源项目)
5. Outsourcing (e.g., China, Mexico, Thailand)
6. Supply-Chain (e.g., Walmart)
7. In-sourcing (UPS fixing Toshiba laptops)
8. In-forming (e.g., Google, Yahoo!, MSN Web Search)
9. The Stereotypes: Digital, Mobile, Personal, and Virtual (wireless, file sharing, VoIP, video calls in phone)

Is the World Curved?
Is it spiky?

Or is it Open?

Not open for everyone!

<table>
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<tr>
<th>World Internet Users by World Regions</th>
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<tbody>
<tr>
<td>North America</td>
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<tr>
<td>Latin America</td>
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<tr>
<td>South Asia</td>
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<td>Africa</td>
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<td>Asia</td>
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<td>Middle East</td>
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<td>Oceania</td>
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Source: International Telecommunication Union

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!

Oregon Scientific "Smartglobe"
The Web of Learning

The Explosion of the Web 2.0

We are entering a jumping off point...

Personalized Learning Environments (Stephen Downes and others)

We are entering an age of Digital Scholarship (George Siemens, 2008)

Grandpa George (Goronja)
(West Allis, Wisconsin, built tractors 40+ years)
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, 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
- 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"
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.)
Trend #1. **Web Searching in the World of e-Books.**
*What happens then?*

**WE**

**ALL**

**LEARN!!!**

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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?

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

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**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.

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**Free Online Books**
(Terry Anderson and Fathal Elouali, eds. *Theory and Practice of Online Learning; Canada: Athabasca University, 2004*.
http://dvc.athabascau.ca/online_book/, 55,000 downloads in first year)

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**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.sitelinksdirect.com/journals-letter/2010/10/web/education-learning-online.htm

North Carolina Virtual Public School

http://sites.google.com/site/nrvmbofva/get-the-virtual-advantage

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
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)

OpenCourseWare (OCW)
Cute Kitten or Transformation?

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

Sample OpenCourseWare Projects
(Tufts, Johns Hopkins)

Indian Institutes of Technology (IIT)
National Repository for Online Courses (NROC) Commons

Cape Town Open Education Declaration, Dec 2007
http://www.capetowndeclaration.org/

Peer2Peer University and University of the People (free!)  

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

Open Access Journals

Open Journal Systems

A single drop of water can initiate an online-publishing explosion.

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.
Key Letter by Descartes, Lost for 170 Years, Turns Up at Haverford, Chronicle of HE, Feb 25, 2010, By Mary Helen Miller

"Last fall, Haverford published the names of the authors of the 12,000 letters online, and that's how Mr. Bos learned that Haverford had the letter... the discovery could revolutionize our view of one of the 17th-century French philosopher's major works... Descartes wrote the letter in 1641 to his friend Marin Mersenne about his major work published that year, Meditations on First Philosophy... the letter provides an abundance of new information about how the thinker completed his book... the letter shows how Descartes drastically changed the book's outline, cutting out three parts entirely."

Charlie Roberts, a member of the Haverford Class of 1864, purchased the letter, and his widow later donated it to the college.

The Complete Works of Charles Darwin

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

(Early 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

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. MSN Video
8. YouTube, YouTube Edu
9. TeacherTube
10. Link TV, Explore, Global Pulse, Latin Pulse

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

How Today's College Students Use Wikipedia for Course-related Research, First Monday, Volume 15, Number 3 - 1 March 2010, by Allison J. Head and Michael B. Eisenberg.

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)
Programmers become Filmographers
(e.g., African School Dream on Current TV)
http://current.com/items/77766982_african_school_dream

Participatory E-Books

Scribd: Documents on Web

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

Iran after the June Election

Synchronous Conferencing Presentations
The Next Generation of Videoconferencing
Chronicle of HE, October 21, 2009

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

Global SchoolNet
http://www.globalschoolnet.org/index.cfm?section=Programs

Ice Stories Project from Antarctica

1kg More Project for Rural China
(http://www.1kg.org/)

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)

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/~pkm/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://www.nokia-research.com/
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.

'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

Podcast Shows
(subscribe to ShakespeareCast.com)

Facebook: The New Classroom Commons?,
Chronicle of HE, Harriet L. Schwartz, Sept. 28, 2009
Teaching With Twitter
Chronicle of HE, Jeffrey Young, November 22, 2009
Suchet Chakravarty, a professor of computer sciences and writing at Purdue University, has welcomed Twitter into the lecture halls, even though the service lists students engage in back-channel discussions. The questions submitted via Twitter 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!)

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

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!!!