

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

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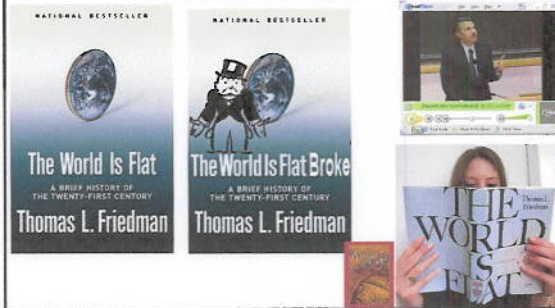
Where are you headed?



Do you know the shape of the world?



Is the World Flat?



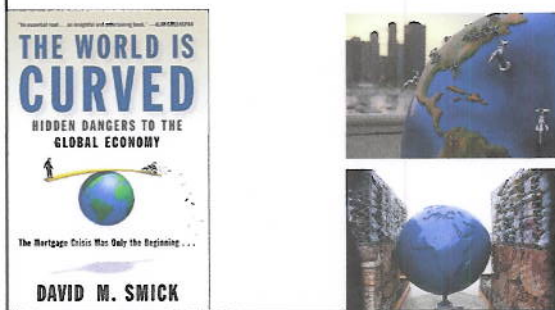
The Ten Forces that Flattened the World

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

- 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)
- 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?

www.RichardFlorida.com

WHO'S YOUR CITY?
RICHARD FLORIDA

Or is it Open?

The MIT Press

OPENING UP EDUCATION
The Collective Advancement of Education Through Open Technology, Open Content, and Open Knowledge
Edited by David Wiley and Matthew A. Prince



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

Learning at the Back Door
REFLECTIONS ON NONTRADITIONAL LEARNING IN THE LIFESPAN
Charles Wedemeyer

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

Photo: Tappan 'Lily' Avery, February

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)

The screenshot shows a Discovery News article with a blue header and various images of archeological sites and equipment. The text is partially legible, mentioning 'Archeology' and 'Discovery News'.

Indiana Jones

A collage of images related to the Indiana Jones franchise, including movie posters for 'Indiana Jones and the Temple of Doom', 'Indiana Jones and the Last Crusade', and 'Indiana Jones and the Kingdom of the Crystal Skull', as well as scenes from the movies.

■ 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)

Audience Participation!

1. WE

2. ALL

3. LEARN!!!

The slide features the text '1. WE', '2. ALL', and '3. LEARN!!!' in large, bold letters. To the right is a small illustration of Indiana Jones holding a whip. At the bottom left is a small image of a woman's face.

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!!!

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/>

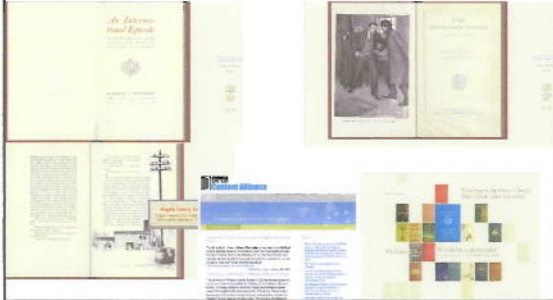
- Blio is a free platform...run on any device.
- Blio is in color.
- Blio lays pages seen on paper, with typography and illustrations; uses video.
- More than a million library of titles.
- The end of the book?

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



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"

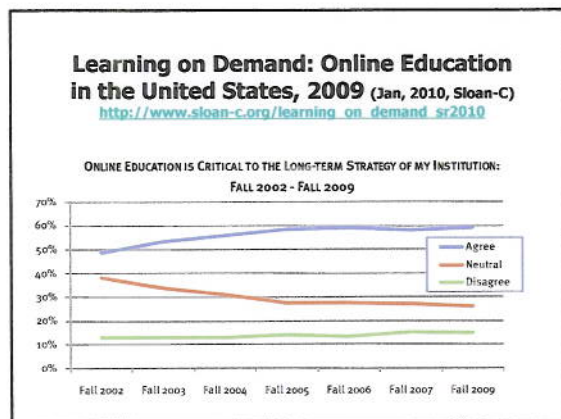
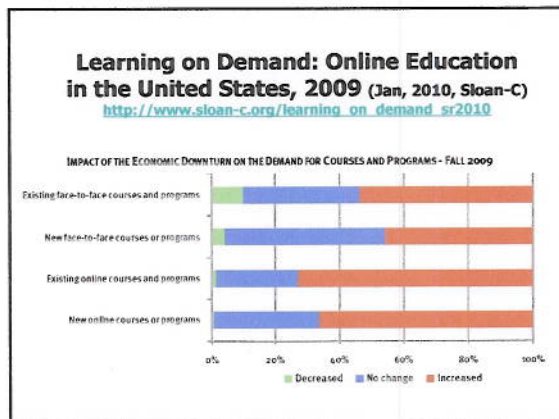
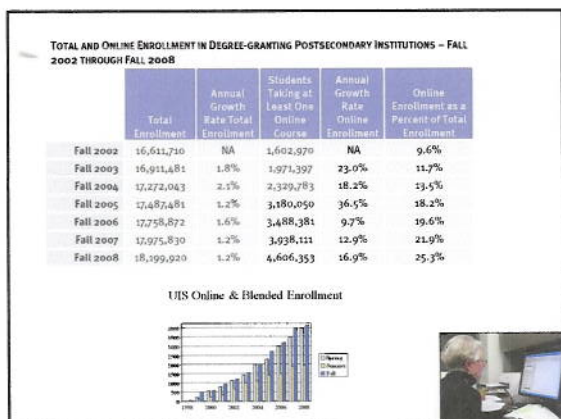


iSMART: Integration of Science, Mathematics, and Reflective Teaching (iSMART) is a FREE 2-year online graduate program for middle school science and mathematics teachers in Texas, University of Houston

<http://www.coe.uh.edu/mycoe/CIJN/math/iSMART%20/yer4.pdf>
<http://www.coe.uh.edu/mycoe/CIJN/math/iSMART.cfm>

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





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

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

The Learning World is Open

INFORMATION TECHNOLOGY

Blackborg

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

The screenshot shows the Moodle website interface. On the left, there are two line graphs: 'Moodle sites' showing a steady increase over time, and 'Moodle downloads' showing a similar upward trend. To the right, a large grid of small circular avatars represents registered users. Below the graphs, there are small images of a cow and a dog, and a portrait of a man.

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

This slide features a collage of logos and images. At the top right is the 'The Learning World is Open' logo. Below it are logos for 'Open Yale' and 'MIT OPEN COURSEWARE'. Other elements include a cartoon pirate character, a person sitting at a desk with a laptop, a person in a snowy environment, and a group of people holding a sign that says 'We ReMix Open Textbooks!'. There is also a logo for 'Exc Traditional 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)

This slide displays four individual portraits of men. The top right portrait is larger than the others. The text above the portraits describes various open teaching initiatives and their enrollment figures.

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

The screenshot shows the Berkeley OpenCourseWare website. It features a yellow header with the Berkeley logo and navigation tabs. The main content area includes a video player with a woman speaking, a search bar, and various course listings and links.

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

This slide is a collage related to the OOPS project. It includes the OOPS logo, a group photo of volunteers, and several screenshots of the OOPS website interface. The text at the bottom of the collage reads 'OOPS OpenSource OpenCourseware Prototype System' and '開放式課程計劃'.

Sample OpenCourseWare Projects (Tufts, Johns Hopkins)

This slide shows two examples of OpenCourseWare pages. The left page is from Tufts OpenCourseWare, displaying a course titled 'IDP290 Pathophysiology of Infectious Diseases, Fall 2004/2005' with a video player showing a close-up of a red insect. The right page is from Johns Hopkins OpenCourseWare, showing a course titled 'PHSPH - COURSEWARE' with a search bar and a video player showing two people in a discussion.

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

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

Transforming the System: An Interview with Michele Riese

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 Complete Work of Charles Darwin Online
 (Journals, Manuscripts, Letters & Correspondence)

Contributors and Acknowledgements

Contributors

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- Dr. Quentin Skinner
- Dr. Robert Brown

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 its public domain correspondence access to some of its most influential papers digital through its Royal Society Digital Library. In this feature, we explore the online archive and why it is an essential tool for researchers in a wide range of disciplines.

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/?id=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

The image shows the Wikipedia homepage with various language options like English, Deutsch, 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 a Ustream live stream interface with several video feeds showing different speakers and presentations from a conference.

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

The image shows a YouTube video player interface. The video title is 'The Queen visits Google London'. Other thumbnails for videos like 'Kylie Minogue collects her OBE at Buckingham' are visible.

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

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

The image shows a Current TV live stream interface. The main video feed shows a classroom with students at desks. There are smaller video feeds and a chat window visible.

Participatory E-Books

The image is a collage of various e-book covers. Notable titles include 'The Future of the Internet and How to Stop It' by Jonathan Zittrain, 'Opening Up Education: A Radical Approach to Disrupting the Higher Education System', 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 with options to 'Upload Documents' and 'Share with the World'. To the right, there is a photograph of two men standing in front of a Scribd banner.

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

The Learning World is Open

edutropia: The Collaboration Age

Collaboration Generation

NEW SKILLS FOR A NEW AGE

LEARN TO COLLABORATE

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 videoconferences as

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 100% of Over 8,000 Islands Over 2,000,000 Residents

Playing Metanomics in Campus Life

Playing Metanomics in 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 hours on Facebook, MySpace

Mobile Learning
(April 21, 2009, USA Today)

We Are Going Mobile!

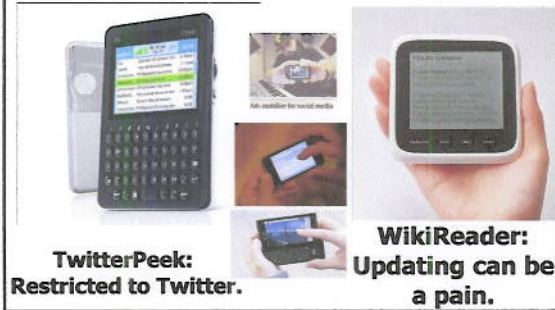
40,000 new mobile subscribers a week in Rwanda; Rwanda Newtimes report, January 2009
Africa is the continent with the fastest growth, International Telecommunications Union (ITU), March 2009

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/afp_afp/indiaeconomytelecom

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

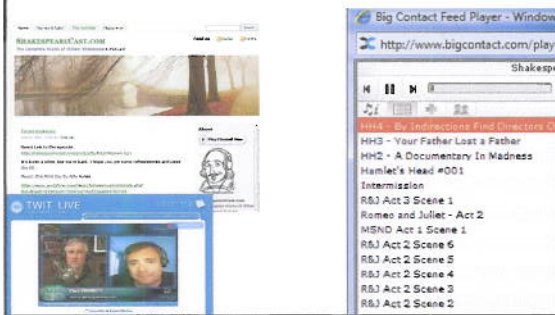
TwitterPeek, WikiReader not worth the loot, USA Today, Edward Baig, November 5, 2009



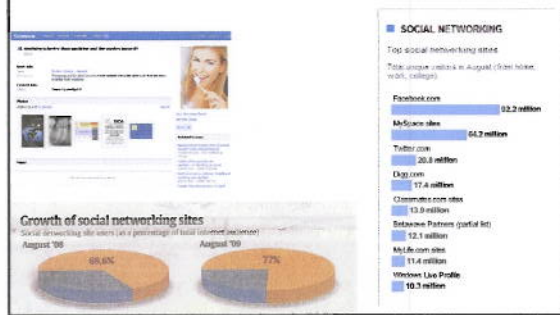
Opener #10. Networks of Personalized Learning (Blogs, Podcasts, MySpace, Flickr, and RSS)



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
 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.

