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.
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-Source (Self organ colab communities; Mozilla, Apache, WordPress, 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 Stereoids: Digital, Mobile, Personal, and Virtual (wireless, file sharing, VoIP, video camera in phone)

Is the World Curved?
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:**
- 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 Games, 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.
Opener #1. Web Searching (e.g., Google, MSN, Yahoo!) in the World of e-Books (i.e., Darwin, Shakespeare, etc.)

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

Sign of the times: At the San Diego State U. bookstore, a poster exhorts students to "Buy This Textbook as an eTextbook."

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

Blio: Kurzweil Reinvents the Book
Charlie Sorreli, Dec 29, 2009, Wired

- 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?
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.

Read, Listen, etc. to online books (e.g., "An International Episode" by Henry James)

Letter from Bill Gates about online learning (January, 2010)
http://www.gatesfoundation.org/Pages/default.aspx

Free Online Books
(Terry Anderson and Fathi Elouadi, eds. Theory and Practice of Online Learning: Canada: Athabasca University, 2004).
http://ode.athabasca.ca/online_book/; 50,000 downloads in first year

Opener #2. E-Learning and Blended Learning

Indiana University High School
(4,000 students and 1,400 enrolled in diploma programs)

<table>
<thead>
<tr>
<th>Instructional Format</th>
<th>Private</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batching Face to Face</td>
<td>73.0%</td>
<td>57.0%</td>
</tr>
<tr>
<td>New Online</td>
<td>82.2%</td>
<td>73.8%</td>
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<tr>
<td>Existing Online</td>
<td>91.0%</td>
<td>82.6%</td>
</tr>
<tr>
<td>New Online</td>
<td>76.5%</td>
<td>92.0%</td>
</tr>
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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)

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

Open Teaching (Tom Reeves Evaluation Course at Georgia; David Wiley’s Web 2.0 courses at BYU; Connexions 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)

Open source OpenCourseWare Prototype System (OOPS) funded by the Foundation of Fantasy, Lucifer Chu, Chairman and Janitor of OOPS, Taipei

Sample OpenCourseWare Projects (Tufts, Johns Hopkins)

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

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

A single-group article is an Online Publishing Experiment. The Public Knowledge Project is an independent, nonprofit organization that seeks to increase access to scholarly literature. This project is one of the world's largest publishers of scientific literature. The project is funded by the Andrew W. Mellon Foundation, the US National Science Foundation, and the US National Endowment for the Humanities.

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. Fark 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, ClipChick, TV Lesson, BootTV, Edutopia Videos, MonstreySee, doItDC, the Research Channel, iVideo4eng

Link TV: Global Link of World Educators (GLOWE)
Big Think

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

TV Lesson

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 Masilliae Fossil the Missing Link? (wowOwow, May 20, 2009)
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)

Individual Produced Videos
(e.g., African School Dream in Current TV)
http://current.com/items/77146082_african_school_dream

Participatory E-Books

Scribd: Documents on Web
Opener #7. Electronic Collaboration and Interaction (synchronous & asynchronous)

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

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)

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

TwitterPeek: Restricted to Twitter.
WikiReader: Updating can be a pain.

Opener #10. Networks of Personalized Learning (Blogs, Podcasts, MySpace, Flickr, and RSS)
September 30, 2009
the Samsung DualView TL22S

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

Despite challenges, a professor of computer sciences and revalidation at Purdue University, has embraced Twitter into the lecture hall, even though the service lets students engage in both-channel discussions. The questions submitted via tweets 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!)