

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

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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-Sourcing (Self organ collab communities; Mosaic, Apache, Wikipedia, 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 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?



The MIT Press

OPENING UP EDUCATION

The Collective Advancement of Education through Open Technology, Open Content, and Open Knowledge

Edited by **Tom VanderWeide** and **David Wiley**

Foreword by **Bill Gates**

Part I: The Open Education Movement

Part II: The Open Education Movement

Part III: The Open Education Movement

Part IV: The Open Education Movement

Part V: The Open Education Movement

Part VI: The Open Education Movement

Part VII: The Open Education Movement

Part VIII: The Open Education Movement

Part IX: The Open Education Movement

Part X: The Open Education Movement

Part XI: The Open Education Movement

Part XII: The Open Education Movement

Part XIII: The Open Education Movement

Part XIV: The Open Education Movement

Part XV: The Open Education Movement

Part XVI: The Open Education Movement

Part XVII: The Open Education Movement

Part XVIII: The Open Education Movement

Part XIX: The Open Education Movement

Part XX: The Open Education Movement

Part XXI: The Open Education Movement

Part XXII: The Open Education Movement

Part XXIII: The Open Education Movement

Part XXIV: The Open Education Movement

Part XXV: The Open Education Movement

Part XXVI: The Open Education Movement

Part XXVII: The Open Education Movement

Part XXVIII: The Open Education Movement

Part XXIX: The Open Education Movement

Part XXX: The Open Education Movement

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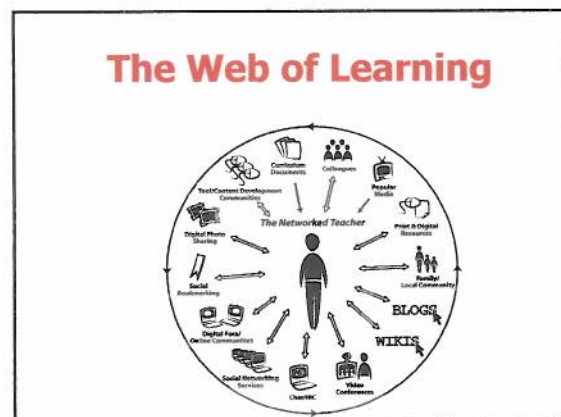
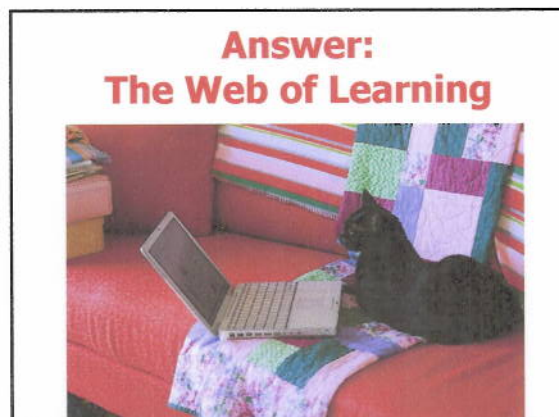
Part XXX: The Open Education Movement



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!

The Explosion of the Web 2.0

Periodic Table of the Internet



We are entering a jumping off point...

Web 2.0

Elements of the Web's Next Generation

UCLA Summer Digs Program

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

David Thomas, Archeologist, La Trobe University, Australia (Discovery News)


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, Minoru Saito, age 75, 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, 16, reportedly in trouble.

ESPN, June 10, 2010
<http://sports.espn.go.com/oly/news/story?id=5272149>




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.


Yonsei University, Seoul, Korea




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!!!



Free Online Books and now the Blio
 (a free e-book platform to run on any device;
 Bright Spots: **Canada, Korea, and California**)



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

USA TODAY, June 7, 2010

Does iPad have the magic to bring people together?

An iPad for Everyone



Opener #2. E-Learning and Blended Learning

The Learning World is Open

OPRAN.COM

NEW EARTH WEB EVENT

More in the Classroom




Letter from Bill Gates about online learning (January, 2010)

<http://www.gatesfoundation.org/annual-letter/2010/Pages/education-learning-online.aspx>

BILL & MELINDA GATES Foundation

ALL LIVES HAVE EQUAL VALUE

Bill Gates' Annual Letter from Bill Gates - Online Learning




Salmon Khan (Khan Academy) (videos on math, bio, trig, chemistry, money and banking, economics, statistics, etc.; <http://www.khanacademy.org/>)

KHAN ACADEMY

Teaching Mathematics to Veterans

Salman Khan: Math master of Internet



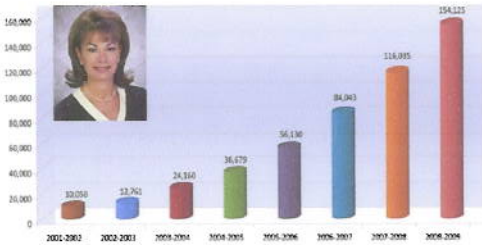
A Grain of Rice: A Bloomington man's computer vocab game feeding the world (John Breen)



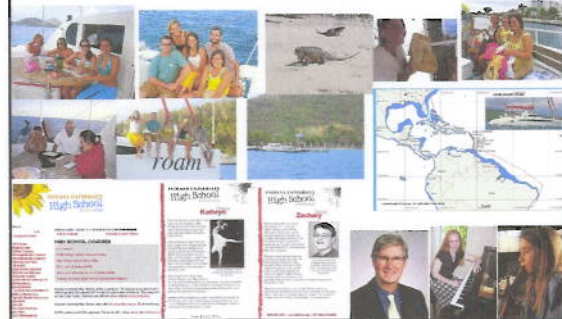
Adora Svitak, age 12, World's Youngest Teacher



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



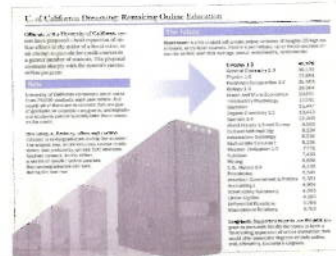
**Indiana University High School
(4,000 students and 1,400 enrolled in diploma programs)**

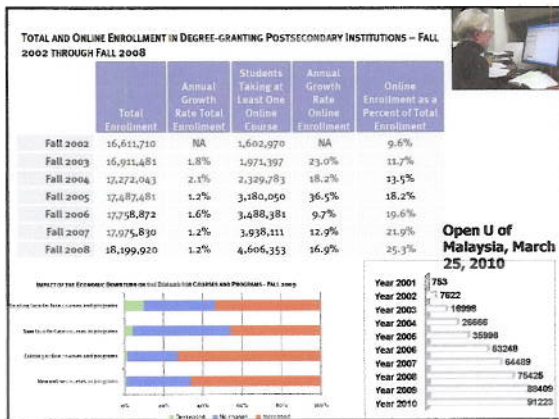


**Capella Tower
225 South Sixth Street, Minneapolis
Formerly, the "Halo"**



**U. of California System Proposing Online Ed
Chronicle of HE, May 14, 2010, 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."**





Mexico's Monterrey Tech Pushes E-Learning, as Some Worry It Won't Solve Region's Burgeoning Need
 June 16, 2010, Chronicle of Higher Ed, Marion Lloyd

"A decade ago, only one in 50 Mexicans had access to the Internet. Today that figure is one in four, a staggering cultural transformation that is fueling a boom in online degree programs in the country."

Monterrey Institute of Technology and Higher Education...has allowed it to reach more than 35,000 new students

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 (35+ million users (930,000 registered) in 213 countries, nearly 50,000 sites, 3.5+ million courses, June 27, 2010)

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

The Learning World is Open

Open Yale

MIT OPEN COURSEWARE

Exc. Traditional Textbooks

We Remix Open Textbooks!

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

The screenshot shows the Berkeley Open Educational Resources website. It features a navigation menu with categories like 'All Courses', 'New Courses', 'Featured Courses', and 'About'. A central video player displays a woman speaking. To the right, there are several video thumbnails with titles and durations. The website has a clean, professional layout with a blue and white color scheme.

Sample OpenCourseWare Projects (Tufts, Johns Hopkins)

This block contains two screenshots of OpenCourseWare pages. The top screenshot is for Tufts OpenCourseWare, showing a course titled 'IDP29 Pathophysiology of Infectious Diseases, Fall 2004/2005'. It includes a video thumbnail of a red tick and a list of course materials. The bottom screenshot is for Johns Hopkins OpenCourseWare, showing a course titled 'JHSPH 620 The History of Public Health'. It features a video thumbnail of two men in a classroom setting and a list of course materials.

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 block is a collage of images and text related to the OOPS project. It includes a group photo of volunteers, several documents and posters, and the OOPS logo. The text mentions 'The Biggest OCW Localization Volunteer Group in the World' and 'OOPS OpenSource Opencourseware Prototype System The Foundation of Fantasy Culture and Arts'. The collage is colorful and informative, showcasing the community and resources of the project.

National Repository for Online Courses (NROC) Commons

The screenshot shows the NROC Commons website. It features a search bar at the top and a list of course listings below. The listings include course titles, descriptions, and links to the course materials. The website has a clean, modern design with a blue and white color scheme.

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

This block is a collage of images and text related to Peer2Peer University and University of the People. It includes a portrait of Neeru Paharia, several articles and news snippets, and the logos of the institutions. The text mentions 'Neeru Paharia is behind Peer2Peer University, Fast Company, September 2009, How Web-Savvy Edupunks Are Transforming American Higher Education'. The collage is colorful and informative, showcasing the impact of these online learning initiatives.

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.

Continent	Number of Journals
North America	1,143
South America	1,007
Europe	1,788
Asia	676
Africa	288
Oceania	105

The map shows the geographic distribution of open-access academic journals by continent. The data is as follows:

- North America: 1,143
- South America: 1,007
- Europe: 1,788
- Asia: 676
- Africa: 288
- Oceania: 105

College 2.0: More Professors Could Share Lectures Online. But Should They?, Chronicle of HE, Jeffrey R. Young, March 7, 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, keynotes, etc., Elliott Masie, Learning Trends, March 2, 2010)



**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, Expto.TV, NASA TV, ClipChef, TV Lesson, BookTV, Edutopia videos, MonkeySee, doFlick, the Research Channel, iVideosong



Link TV: Global Link of World Educators (GLOWE)



More Shared Online Video: Academic Earth, TV Lesson, and Fora TV



**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)**



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

THE CHRONICLE
of Higher Education

December 2, 2009

HOME NEWS OPINION & DEBATE FACTS & FIGURES TOPICS

Faculty Administration Technology Creativity Colleges International Special Reports

Tweet

By [@mikep](#) on Dec 2, 2009

Human Brain Dissected Today in a Live Webcast

In 1925, Henry Gustav Molaison agreed to undergo experimental brain surgery in hopes of stopping the epileptic seizures and blackouts that had plagued him since age six. The neurosurgeon William Powell Scarver, at Hartford Hospital in Connecticut, excised one mass of Molaison's hippocampus.

"The outcome largely stopped," writes Scott Taylor in the *New York Times* Friday. "But as the old Molaison's ability to form new memories, though he could recall parts of his life before the surgery, a condition called severe anterograde amnesia."

The Complete Works of Charles Darwin

Charles Darwin
The Complete Works of Charles Darwin Online
(Aristotle's Metaphysics | Aristotle's Corollary | Search | Darwin Online)

Contributors and Acknowledgments

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Contributors to Introduction

Dr. Robert BRIDGES

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 Diary of Samuel Pepys

The Carlyle Letters
John Stewart Collis

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 celebrating its 350th anniversary by making its public archive of scientific papers available to the world online.

Original papers by the likes of Sir Isaac Newton, Sir Robert Boyle and Benjamin Franklin are freely available online. They include a vast range of the most precious items - with the majority held at Bodleian, Ashmolean, and other libraries.

ACCUMPT
HABITANDO, STUDIO, ET LABORANDO
ATQUE
INGENIOSUS
IN MANU
CONSIDERANDA PARTES
D

BBC NEWS

The Royal Society puts historic papers online

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

MERLOT

Connexions

OER Commons

A bit of me...

this is me...

Opener #6. Learner Participation in Open Information Communities (e.g., Slashdot, Digg, Wikipedia, YouTube)

The Learning World is Open

flatworld
KNOWLEDGE

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.**



Wikis: Wikipedia and Wikibooks

WIKIPEDIA

English The Free Encyclopedia 2,444,000 articles

Deutsch Die freie Enzyklopädie 771,000 Artikel

Français L'encyclopédie libre 488,000 articles

Português Wikipédia 418,000 artigos

Italiano L'Enciclopedia Libera 471,000 voci

Nederlands De vrije encyclopedie 488,000 artikelen

Português L'Enciclopédia Livre 411,000 artigos

Español La enciclopedia libre 577,000 artículos

Polymèdiu Confineer Encyclopedie 387,000 articole

Search: Search: Search: Search: Search:

Pages of the Wikimedia Foundation (last items: 7)

- Wikimedia Commons
- Wikimedia Foundation
- Wikimedia Incubator
- Wikimedia Labs
- Wikimedia Lists
- Wikimedia Meta
- Wikimedia News
- Wikimedia Outreach
- Wikimedia Species
- Wikimedia Support
- Wikimedia Training
- Wikimedia User Groups
- Wikimedia Village
- Wikimedia Wiki
- Wikimedia Wikisource
- Wikimedia Wikiversity
- Wikimedia Wikivoyage
- Wikimedia Wikiquote
- Wikimedia Wikispecies
- Wikimedia Wiktionary
- Wikimedia Wikidata
- Wikimedia Wikiscript
- Wikimedia Wikispeaks
- Wikimedia Wikisource
- Wikimedia Wikispecies
- Wikimedia Wikiscript
- Wikimedia Wikispeaks

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)

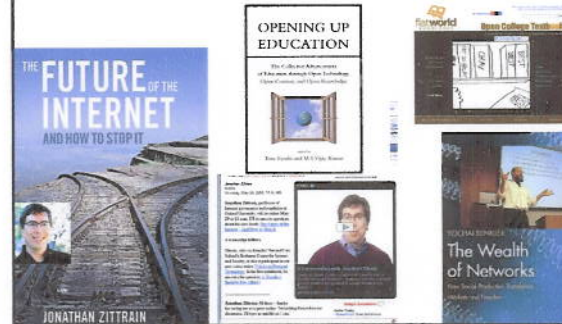


Individual Produced Videos (e.g., African School Dream in Current TV)

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



Participatory E-Books



Scribd: Documents on Web

(<http://www.scribd.com/>); 50 million unique visitors per month, 10's of millions of documents, April 2010)

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

The Learning World is Open

Flat Classrooms Project and Global Nomads Group

Synchronous Conferencing Presentations

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

Technology and design can work together to maximize the effectiveness of new learning environments. By Matt Villano

7 TIPS FOR BUILDING COLLABORATIVE LEARNING SPACES

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 are creating new tools that may soon let people attend videoconferenc...

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

The Learning World is Open

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

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/bf_afp/indiaecconomytelecom

"A" is for App, Anya Kamenetz, Fast Company, April 2010

OLPC, Marvell Join Forces, Announce sub-\$100 Tablet by December 2010

May 27th, 2010 by Mike Prospero

LAPTOP **TOSHIBA**

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

Over 1.5 million users have signed up for Farmville on Facebook, MySpace

Force is with new GPS units
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 collections showcase both everyday and momentous occasions in London's history, from the Great Fire of 1666 to the swinging sixties"

iPhone Screenshots




Carnaby Street

MUSEUM OF LONDON


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

The Learning World is Open



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



Virtual

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 visitors in August (from home, work, college)

Facebook.com	92.2 million
MySpace.com	64.3 million
Twitter.com	20.8 million
Digg.com	17.4 million
Classmates.com sites	13.9 million
Bebo.com	12.1 million
LinkedIn.com sites	11.4 million
Windows Live Profile	10.3 million

Growth of social networking sites

* Social networking sites (as a percentage of total Internet audience)

August '08	65.6%
August '09	77%

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.

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

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?
- **Students 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!

Slides at: TrainingShare.com
 Papers: PublicationShare.com
 Book: <http://worldisopen.com/>

The World is Open.
 What happens then?

WE
ALL
LEARN!!!