

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

Curtis J. Bonk, Professor, Indiana University
President, CourseShare, LLC
cjbonk@indiana.edu
<http://php.indiana.edu/~cjbonk>



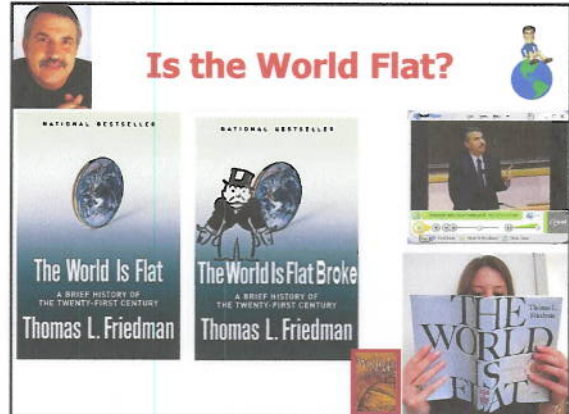
Where are you headed?



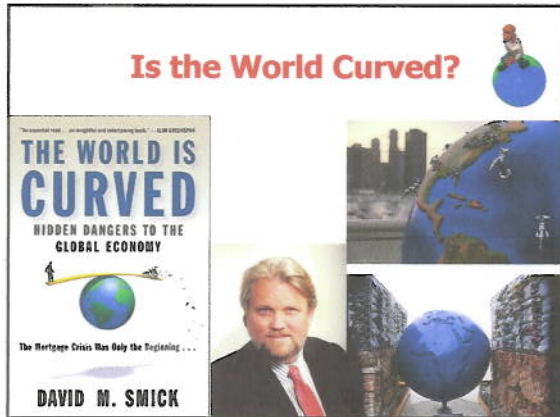
Do you know the shape of the world?



Is the World Flat?




Is the World Curved?




Is it spiky?



Or is it Open?






OPENING UP EDUCATION

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




Edited by Tony Bates and M. S. Vaughan
Foreword by John Seely Brown



The MIT Press
Tony Bates and M. S. Vaughan, Editors



Oregon Scientific Smartglobe






Question: What is the Web?


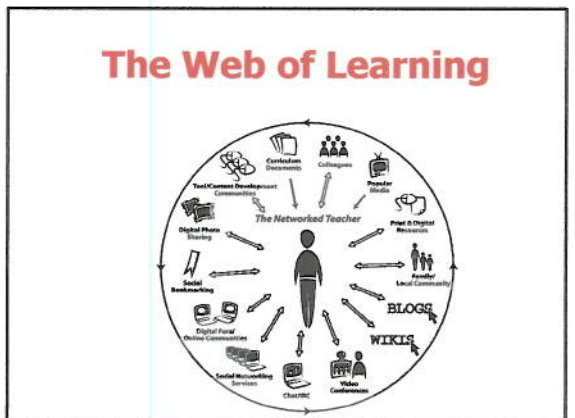
- An entertainment system?
- A writing aid?
- A communications system?
- A means to handle commercial transaction?
- A social networking device?

=====

No, it is a learning tool!



Answer: The Web of Learning

Today we have the Web 2.0

Today we have the Web 2.0

WEB 2.0

LiveJournal Google

facebook

PBWORKS

Blogger

slideshare

photobucket

WIKIPEDIA The Free Encyclopedia

Periodic Table of the Internet

We are entering a jumping off point...

Web 2.0

Elements of the Web's Next Generation

Web 2.0

Weblogs

Social Networking

User Generated Content

Webcasts

Podcasts

Wikis

Virtual Worlds

Web 2.0

Weblogs

Webcasts

Podcasts

Wikis

Virtual Worlds

Web 2.0

Weblogs

Webcasts

Podcasts

Wikis

Virtual Worlds

Life in the Cloud...?

Life in the Cloud...?

Cloud Computing

Code

Apps

Servers

Databases

PC

PDAs

Mobile

Cloud Computing everything in the "cloud"

Google sites

Thinking of creating a website?

Check

Content

Control

I'm an Armchair Indiana Jones...

I'm an Armchair Indiana Jones...

THE FIRST NATIONS OF BRITISH COLUMBIA

OF BRITISH COLUMBIA

Point Topped 1.5 by Nancy Roberts?

Armchair Indiana Jones

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)

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)

Sailing route

Last stop: Los Angeles (California) / Perth

Start: Los Angeles (California) / Perth



© Jen P 2009

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."

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."

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.


 The Learning World is Open

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




 The Learning World is Open

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

WE
ALL
LEARN!!!





Marissa Mayer leads the company's product management efforts on search products—web search, images, news, books, products, maps, Google Earth, Google Toolbar, Google Desktop, Google Health, Google Labs and more. She joined Google in 1999 as Google's first female engineer and led the user interface and web server teams at that time. Her efforts have included designing and developing Google's search interface, internationalizing the site to more than 100 languages, defining Google News, Gmail, and Orkut, and launching more than 100 features and products on Google.com.

Brewster Kahle, and Aaron Swartz, Open Library the Internet Archive





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



e-Book Readers

Barnes & Noble, Color Nook

Week after holidays, e-book sales outdo print, USA Today, January 5, 2011, Bob Minzesheimer and Carol Memmott

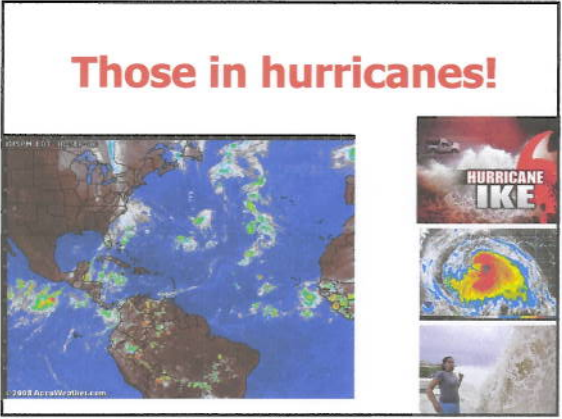
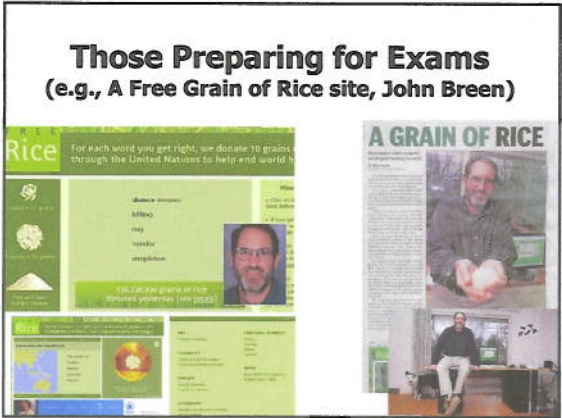
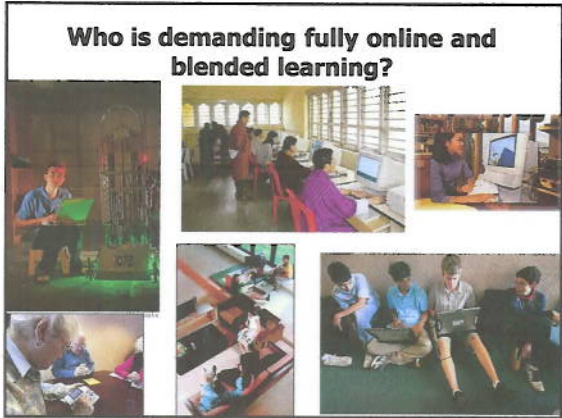
http://www.usatoday.com/life/books/news/2011-01-05-1Aebooksales05_ST_N.htm

April 10, 2010: Seton Hill University, 2,100 students an iPad and freshmen a 13-inch MacBook laptop. August 10, 2010, Can college students learn as well on iPads, e-books?, USA Today, Beth Marklein

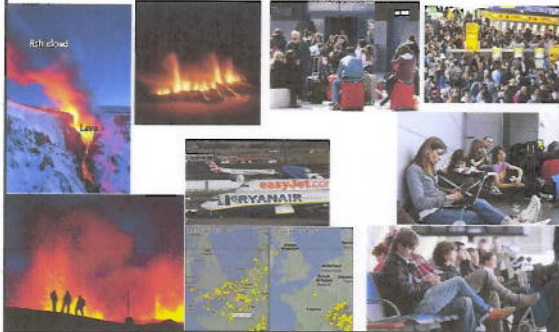
iPad 2 is even better than the original, USA Today, March 10, 2011, Edward C. Baig

http://www.usatoday.com/tech/columnist/edwardc_baig/2011-03-10-baig10_ST_N.htm

Opener #2. E-Learning and Blended Learning



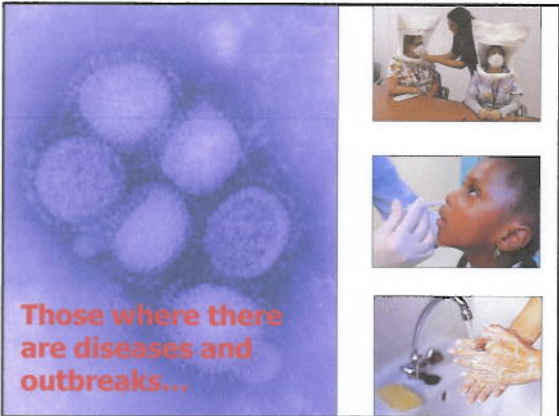
Those effected by volcanos...



Those in blizzards and ice storms...

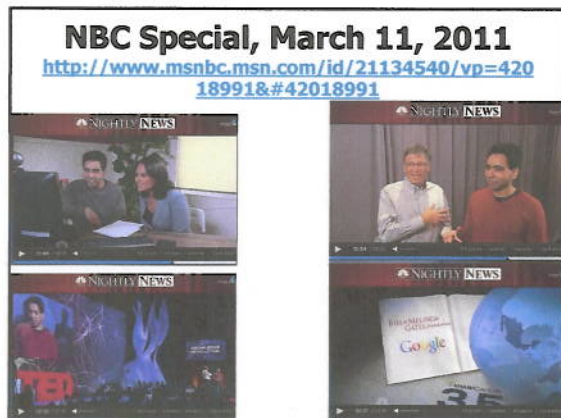
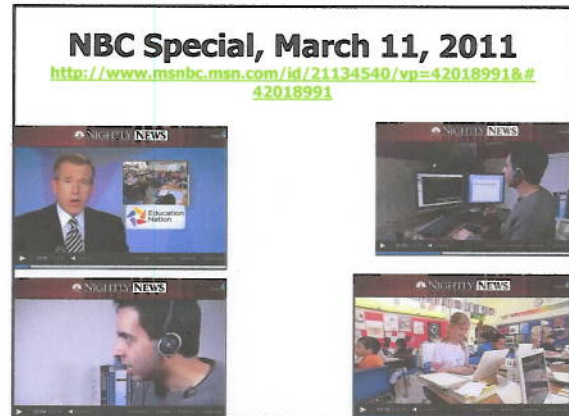
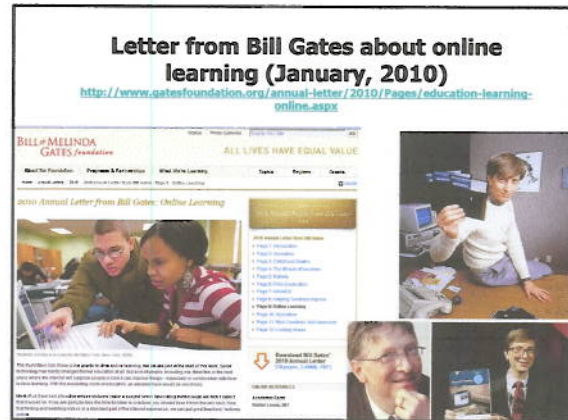
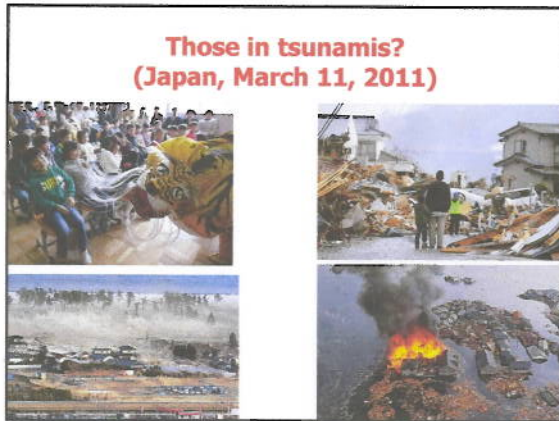


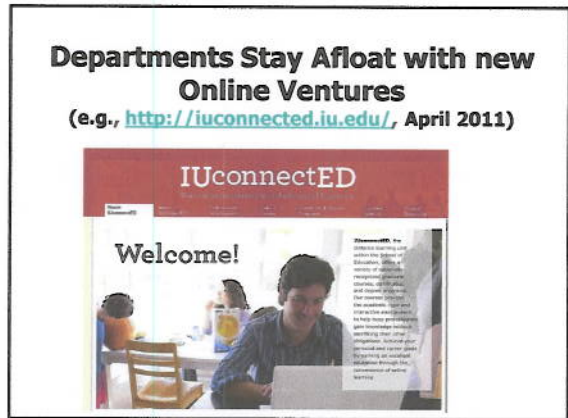
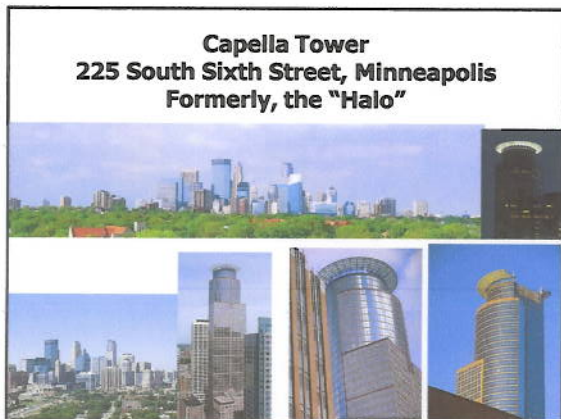
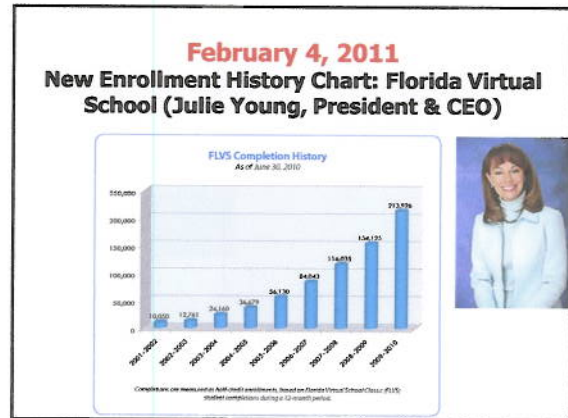
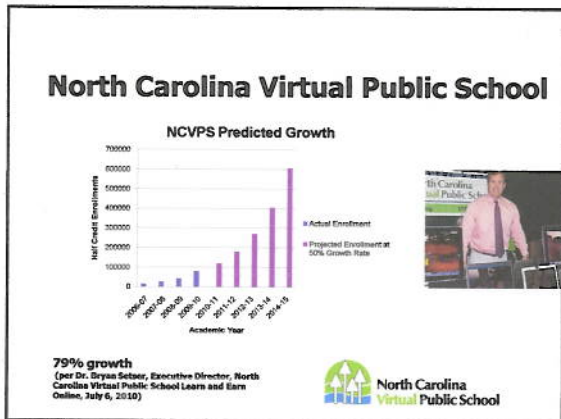
Those where there are diseases and outbreaks...



Snowmegeddon, DC winter of 2010







U. Of California System Proposing Online Ed

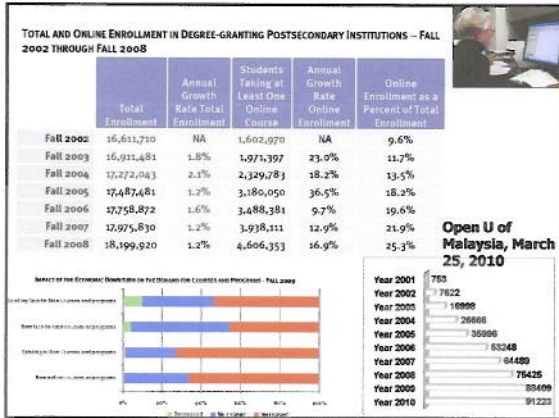
Chronicle of HE, May 14, 2010, Josh Keller and Marc Perry
"The university plans to spend about \$250,000 on each course. It hopes to raise the money from external sources like foundations or major donors."

April 12, 2011

NCTM Conference Session, Free Online Degrees; iSMART: Integration of Science, Mathematics, and Reflective Teaching (iSMART), University of Houston

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

Jen Chauvot and Mimi Lee, Univ of Houston



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

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

The Learning World is Open

Blackboard

Moodle (41+ million users (1,060,000 registered) in 211 countries, 54,000 sites, 4.4+ million courses, April 27, 2011)

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!

Sample OpenCourseWare Projects (Tufts, Johns Hopkins)

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

OOPS! Opensource Opencourseware Prototype System
The Foundation of Fantasy Culture and Arts

開放式課程計劃

National Repository for Online Courses (NROC) Commons

OOO COMMONS
OF OPEN SOURCE COURSES

Welcome to a commons learning network
The Commons is a technical and training network, offering a broad range of services to support the development of open-source learning content.

Sign Up | COURSEWARE

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

Technology Review

Israeli starts 1st tuition-free online university

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

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.

North America 1,848
Europe 1,016
Asia 1,016
Africa 1,016
South America 1,016

The Learning World is Open

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)

DISRUPTIVE Technology

Industry SAVIOR?

How about rich video portals?

Most of the Websites below did not exist 5 or 10 years ago.

- BBC News Video and Audio
- CNN.com Video
- MSNBC.com
- Google Video, Yahoo Video
- Current TV
- Fora TV
- MIT World
- YouTube, YouTube Edu
- TeacherTube
- Link TV, Explore, Global Pulse, Latin Pulse
- Howcast, Big Think, WonderHowTo, Expio.TV, NASA TV, ClipChef, TV Lesson, BookTV, Edutopia videos, MonkeySee, doFlick, the Research Channel, iVideosong

Google
YouTube
Broadcast Yourself

Howcast

BookTV
ON CSPAN2


How TED Connects the Idea-Hungry Elite, Fast Company, Anya Kamenetz, September 1, 2010

<http://www.fastcompany.com/magazine/148/how-ted-became-the-new-harvard.html>

TED ideas worth spreading

Format	Microconference
Speakers	250+ Leaders
Topics	50+ Issues
Transcripts	100+ Resources

TALKS
John Hunter on the World Peace Game



Chris Anderson: The entrepreneur bought TED in 2001. "It felt like something you could devote your life to," he says

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

Transforming the System: An Interview with Michelle Rhee


Academic Earth

FORA.TV

TV.Lesson



Tracking Live Internet Thawing: A Colossal of an Idea



The Complete Works of Charles Darwin

The Complete Works of Charles Darwin Online

Contributors and Acknowledgments

Contributors


- Director: Dr John van COTTEN (CRAGH, Christ's College & Department of History and Philosophy of Science, University of Cambridge)
- Research Assistant: Dr Tom CHAPMAN (School of Zoology, University of Cambridge, Director and Chief Editor, The Darwin Research Centre)
- National Director: Dr John BERRY (Lancaster Development Ltd)
- EMRC Principal Investigator: Professor James BEARD (Department of History and Philosophy of Science, University of Cambridge)
- EMRC Co-ordinator: Professor David CLAY (Department of the History of Science, University of Cambridge)

Associate editors (historical):

- Sam Atkinson
- Dr David CHRISTIE


Contributors of introductions:

- Dr Robert BRAY



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 three early scientific papers available to access its most celebrated projects.

Project supported by 'Ignite' grants in a Capital Grant. Sir Isaac Newton and Benjamin Franklin are being made available online.



Sharing Repositories and Referatories

MERLOT.org: 94,000 members, 28,040 lrmg materials, April, 2011
Connexions: 2.2m unique users, 17,500 modules, 4 million page views, 100 million hits, >1m users, 200 countries, Jan, 2011
Curriki: Free K-12 contents.
National Repository of Online Course, Jorum, OER Commons, etc.

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

The Learning World is Open

Wikis: Wikipedia and Wikibooks

WIKIPEDIA

English The Free Encyclopedia 2,700,000+ articles
 Deutsch Die freie Enzyklopädie 27,000+ Artikel
 Français L'encyclopédie libre 2,700,000+ articles
 Polski Włoa i Wikipolonia 27,000+ artykuł
 Italiano L'enciclopedia libera 27,000+ articoli
 Português A enciclopédia livre 27,000+ artigos
 Esperanto La enciklopedio libera 27,000+ artikoloj
 Pycckий Свободная энциклопедия 27,000+ статей

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)

"Video Primers in an Online Repository for e-Teaching and Learning" V-PORTAL, TravelinEdMan (27 free/open YouTube videos), October 2010

<http://www.youtube.com/user/TravelinEdMan>

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)



SEEDS OF EMPOWERMENT

Empowering the next generation

August 5, 2010, Remaking the College Campus, Bridget McCrea, Campus Technology
June 2010, 7 Tips for Building Collaborative Learning Spaces, Campus Technology, Matt Villano

CAMPUS TECHNOLOGY

7 TIPS FOR BUILDING COLLABORATIVE LEARNING SPACES

Research: Ed Tech 2.0
 Are students required to use mobile devices in your institution as part of their education?

Ed Tech 2.0: 2.0
 Ed Tech 2.0: 2.0
 Ed Tech 2.0: 2.0

Remaking the College Campus
 An e-learning culture creates a college campus where physical space, technology, and collaborative work

Yonsei University, Seoul, Korea

Yonsei University Library, Seoul, Korea

Saltire Centre
 (Glasgow Caledonian University;
<http://www.gcu.ac.uk/thesaltirecentre/>)

Feb 1, 2011: Self-Organized Learning
 from Sugata Mitra, Teacher-Replacing Tech: Friend or
 Foe?, Gregory Ferenstein, Fast Company

FAST COMPANY

We're all connected. See how it really connects people, profits and the planet.

TECHNOLOGY | DESIGN | FINANCE | LIFESTYLE | BUSINESS | HEALTH

Teacher-Replacing Tech: Friend or Foe?

Just as the Internet replaced television as the default source of information, teachers may be next on the chopping block. Self-organized learning is a

TED talks with Sugata Mitra

The Flat Classroom Project

About the International Flat Classroom Project

Flat Classroom Project

FLAT CLASSROOM

Synchronous Conferencing Presentations

Cross-Institutional Wikibook Project (e.g., IU and the University of Houston)

April 6, 2011: Eric Whitacre: A virtual choir 2,000 voices strong

<http://www.youtube.com/watch?v=6WhWDCw3Mng>

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

Global Collaborations in Virtual Worlds (e.g., Air University in Second Life)

Opener #9. Real-Time Mobility and Portability (e.g., iPhone, low cost wireless devices)

15m people/month India
40,000/week Rwanda
60,000 earthlings/hour

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/bs_afp/indiaconomytelecom



iPads Could Hinder Teaching, Professors Say, Chronicle of HE, Ben Wieder, March 13, 2011

http://chronicle.com/article/iPads-for-College-Classroom/258617?cid=ar-art&utm_source=at&utm_medium=ec



At Pepperdine U. Timothy Lucas, an assistant professor of mathematics, shows a class how to use iPads for calculus. Linda Johnson, an assistant professor of biology at Chatham U., for her plant-physiology

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



Force is with new GPS units

June 9, 2010

TwitterPeek: Restricted to Twitter.

WikiReader: Updating can be a pain.

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



The Samsung DualView TL225



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.



Zite (Personalized Online News and Magazine on iPad)

<http://www.zite.com/> (March 9, 2011, USA Today)

July 21, 2010 vs. Sept 28, 2009 Status update: Facebook logs 500 million members, USA TODAY, Kristin McGrath

Social Networking Site	Members (in millions)
Facebook.com	82.2 million
MySpace sites	64.2 million
Twitter.com	20.8 million
Diigo.com	17.4 million
Classmates.com sites	13.9 million
Bebo.com (partial list)	12.2 million
MyAa.com sites	11.4 million
Windows Live Profile	10.3 million

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.

The Language Learning Explosion

(e.g., Livemocha, ChinesePod, Babbel, Mboxer, English Central, Kantalk, etc.)

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!!!

OOOPS
Oops! Learning and Teaching Resources
www.oopslearning.com