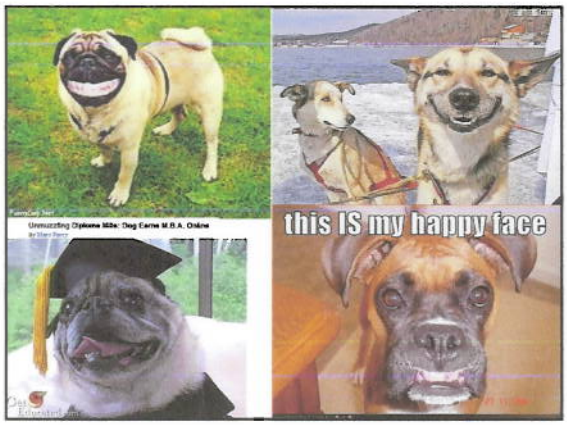
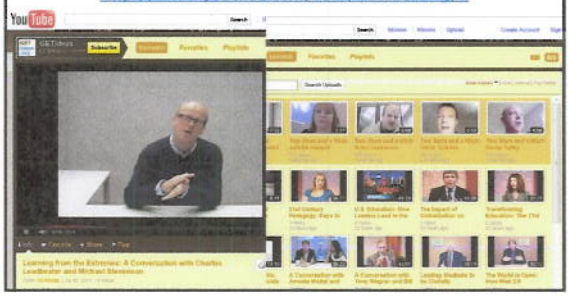
The Flat World Swung Open: How Web Technology Is Revolutionizing Education

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



July 22, 2011

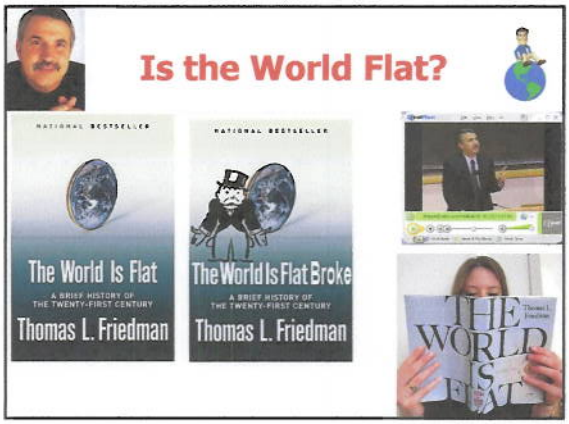
GETideas Channel, Cisco (Education Thought Leader Series uploaded to YouTube)
http://www.youtube.com/user/GETideas#g/u



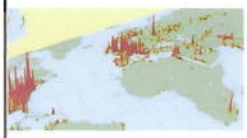
April 2011

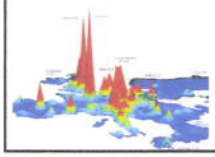
Departments Stay Afloat with new Online Ventures (new Ed.D. in IST/Ed Tech)
(e.g., http://iuconnected.iu.edu/)

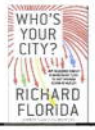
Is the World Flat?



Is it spiky?







Or is it Open?

It is very open!

(May 2011, Norway & June 2011 the Philippines)

February 21-24, 2011

Graphic Facilitation, E-Learning and Distance Learning (ELI) Conference in Riyadh (Sir Tim Berners-Lee and Jimmy Wales)

May 13, 2011

Mobile Apps, USA Today, Mary Beth Marklein

http://www.usatoday.com/news/education/2011-05-12-iphone-apps-college-students_n.htm

Question: What is the Web?

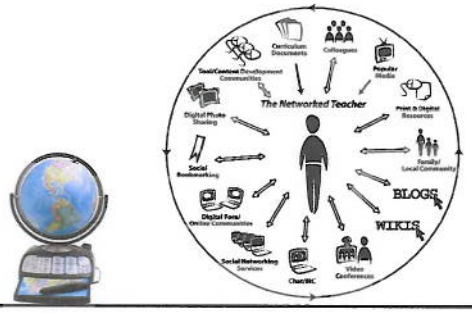
- An entertainment system?
- A writing aid?
- A communications system?
- A means to handle commercial transaction?
- A social networking device?

==========

No, it is a learning tool!

Answer:
The Web of Learning

The Web of Learning



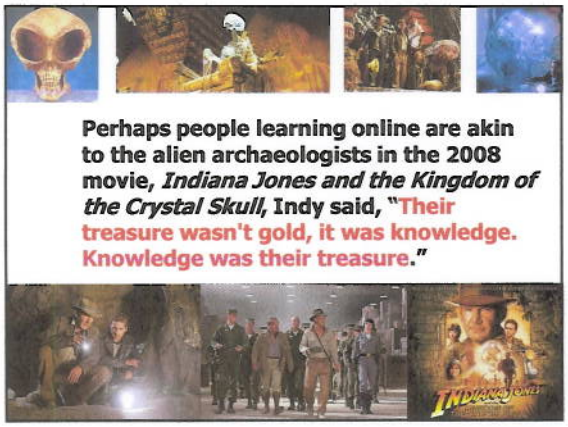
Today we have the Web 2.0

We are entering a jumping off point...

I'm an Armchair Indiana Jones...

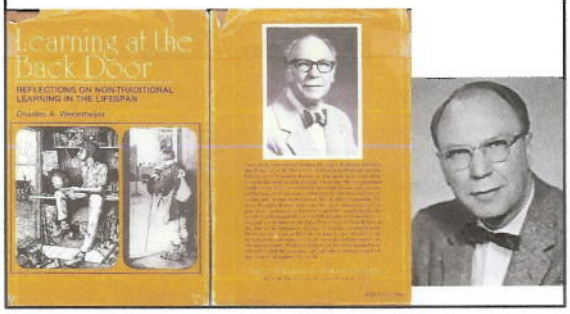
Summer 2009

Michael Perham & Zac Sunderland, (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)



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."

Charles Wedemeyer, University of Wisconsin



Some Educational and Psychological Heroes:

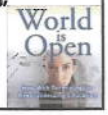
John Dewey, Seymour Papert, John Seely Brown, Ivan Illich, Stephen Heppell, Henry Jenkins

Our New Heroes are not Theoretical or Psychological

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**eal-Time Mobility and Portability (e.g., iPhone)
- **N**etworks of Personalized Learning (Blogs, RSS)



Audience Participation!

1. WE

2. ALL

3. LEARN!!!

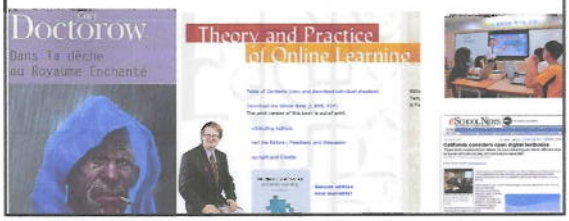
Triple Learning Technology Convergence of "WE-ALL-LEARN"

The Learning World is Open

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.)

The Learning World is Open



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

WE

ALL

LEARN!!!

January 5, 2011

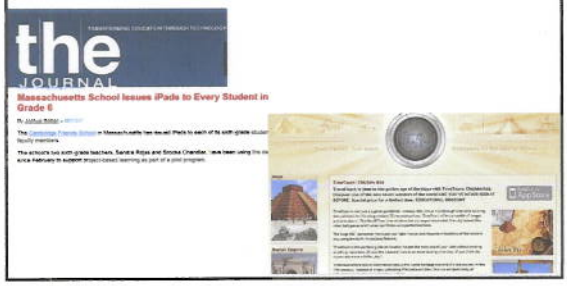
Week after holidays, e-book sales outdo print, USA Today, Bob Minzesheimer and Carol Memmott

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

June 13, 2011

Massachusetts School Issues iPads to Every Student in Grade 6

http://thejournal.com/articles/2011/06/13/massachusetts-school-issues-ipads-to-every-student-in-grade-6.aspx



July 6, 2011

Pocket Dictionaries and Digital Textbook Projects (Korea), Husna Haq, In South Korea, all textbooks will be e-books by 2015, Speeding past the US, South Korea will be digitizing reading material in all public schools by 2015. Christian Science Monitor.

August 3, 2011

Inkling opens textbooks on the iPad

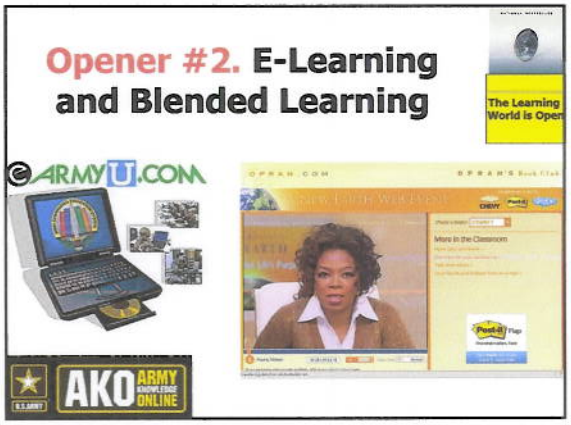
USA Today, Jefferson Graham, August 3, 2011

http://www.usatoday.com/money/industries/technology/2011-08-02-Inkling-ipad-e-textbooks_n.htm

Some $4.5 billion worth of textbooks were sold in 2010, (Assoc. of American Pub). Digital textbooks = 3% of sales in 2011 and growing to 44% by 2017.

Inkling opens textbooks on the iPad

Opener #2. E-Learning and Blended Learning

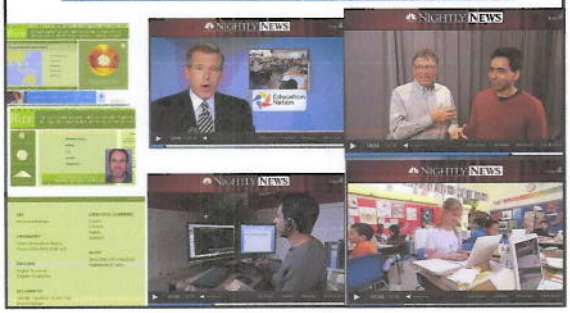


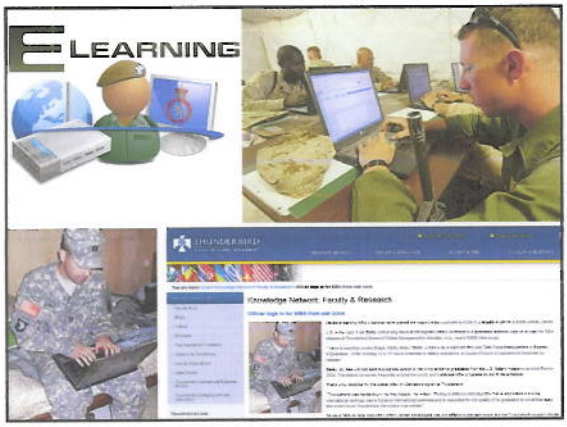
Who is demanding fully online and blended learning?

March 11, 2011

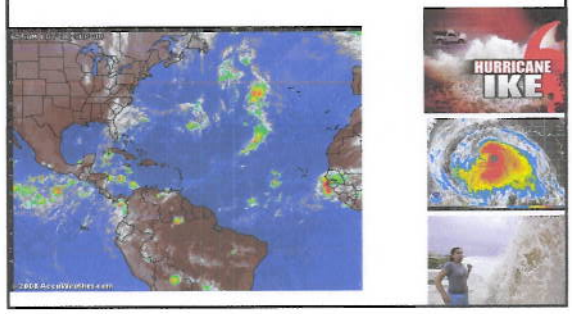
Those Preparing for Exams and Needing Remediation, Bill Gates, Salmon Khan, NBC Special

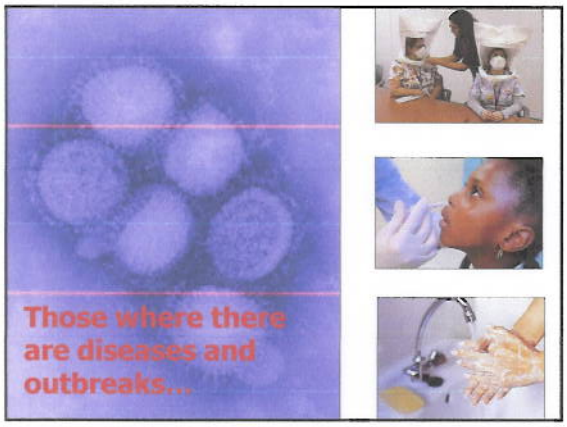
http://www.msnbc.msn.com/id/21134540/vp=42018991&#42018991

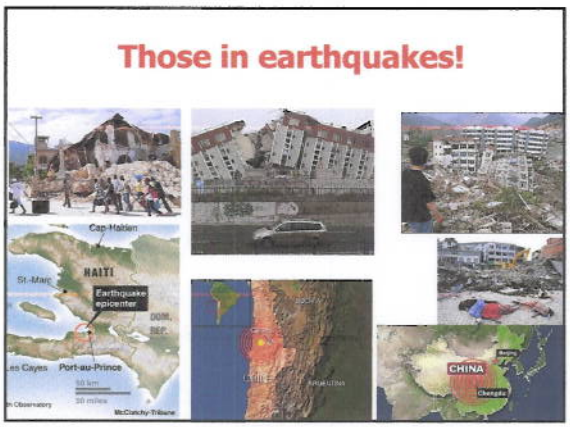


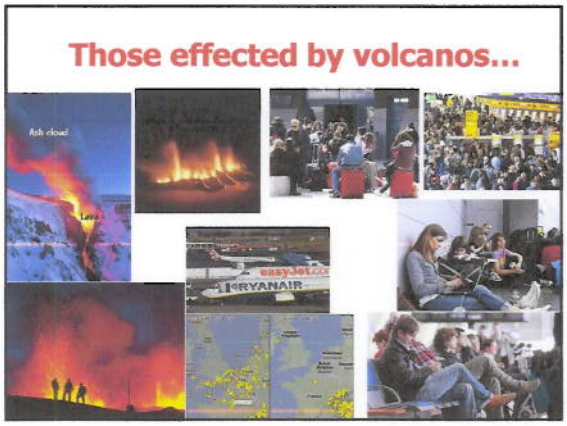


Those in hurricanes!

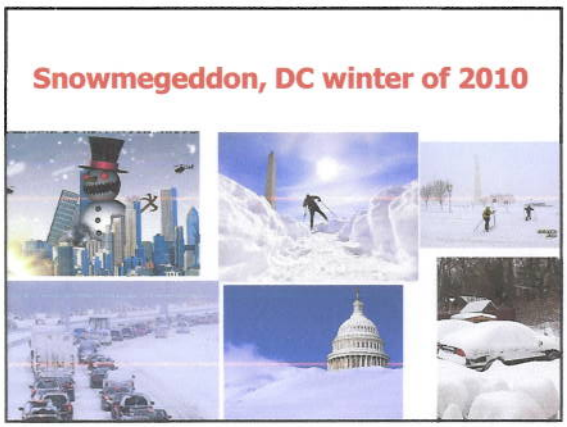


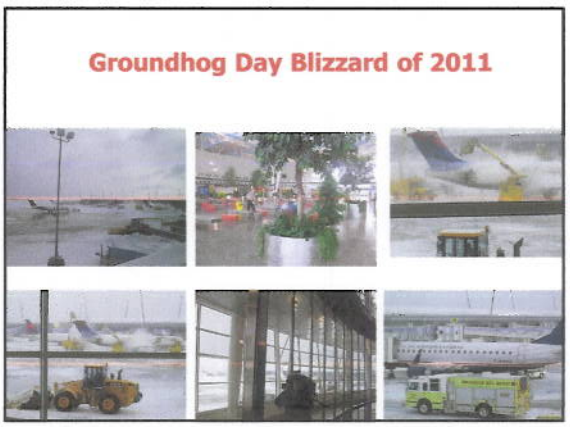

Those where there are diseases and outbreaks...


Those in earthquakes!
Cap-Haïtien
HAITI
St-Marc
Earthquake epicenter
Les Cayes
Port-au-Prince
CHINA


Those effected by volcanos...
Ash cloud
Lava
easyJet.com
RYANAIR

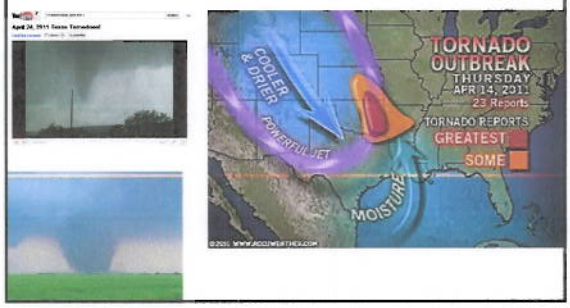
Those in blizzards and ice storms...


Snowmegeddon, DC winter of 2010


Groundhog Day Blizzard of 2011

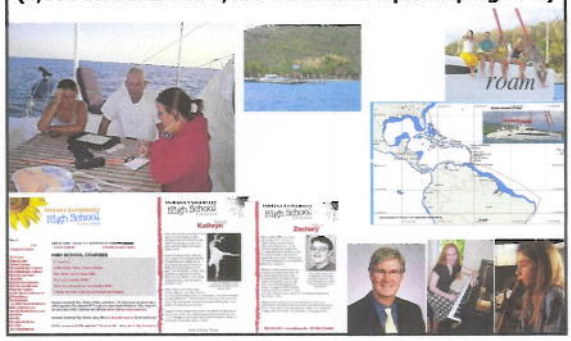
Those in tsunamis?
(Japan, March 11, 2011)

Those in tornados...!
(April 24, 2011)

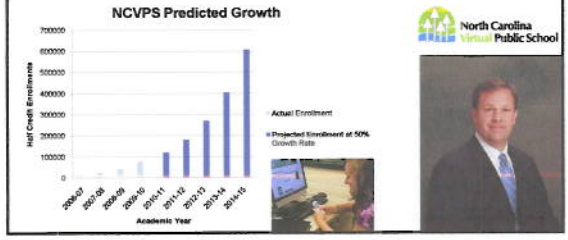


Adora Svitak, age 13, World's Youngest Teacher

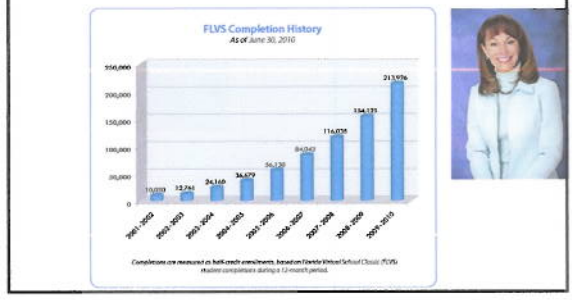
Indiana University High School
(4,000 students and 1,400 enrolled in diploma programs)



July 2010
North Carolina Virtual Public Schools (growing 79% per year)
(per Dr. Bryan Setser, Executive Director, North Carolina Virtual Public School Learn and Earn Online)



February 4, 2011
New Enrollment History Chart: Florida Virtual School (Julie Young, President & CEO)



April 12, 2011

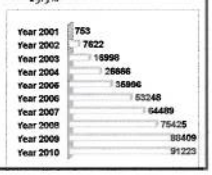
NCTM Conference Session, Free Online Degrees; iSMART: Integration of Science, Mathematics, and Reflective Teaching (iSMART), University of Houston

TOTAL AND ONLINE ENROLLMENT IN DEGREE-GRANTING POSTSECONDARY INSTITUTIONS – FALL 2002 THROUGH FALL 2008

	Total Enrollment	Annual Growth Rate Total Enrollment	Students Taking at Least One Online Course	Annual Growth Rate Online Enrollment	Online Enrollment as a Percent of Total Enrollment
Fall 2002	16,611,710	NA	1,602,970	NA	9.6%
Fall 2003	16,911,481	1.8%	1,971,397	23.0%	11.7%
Fall 2004	17,272,043	2.1%	2,329,783	18.2%	13.5%
Fall 2005	17,487,481	1.2%	3,180,050	36.5%	18.2%
Fall 2006	17,758,872	1.6%	3,488,381	9.7%	19.6%
Fall 2007	17,975,830	1.2%	3,938,111	12.9%	21.9%
Fall 2008	18,199,920	1.2%	4,606,353	16.9%	25.3%

Open U of Malaysia, March 25, 2010

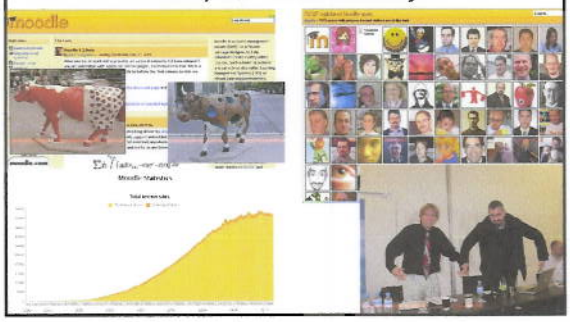
OPEN UNIVERSITY
UNIVERSITI TERBUKA
MALAYSIA



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

August 12, 2011

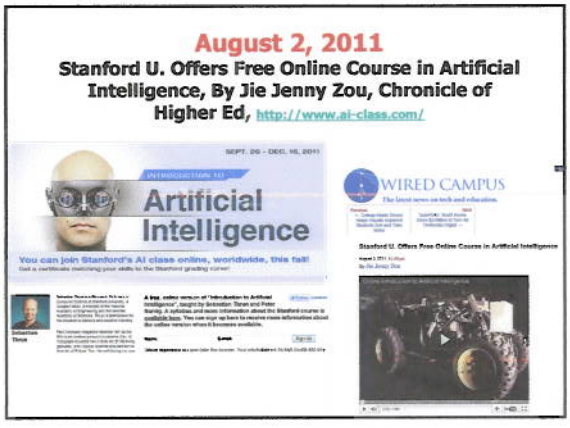
Moodle (45 million users in 209 countries, 54,000 sites, 4.6+ million courses)



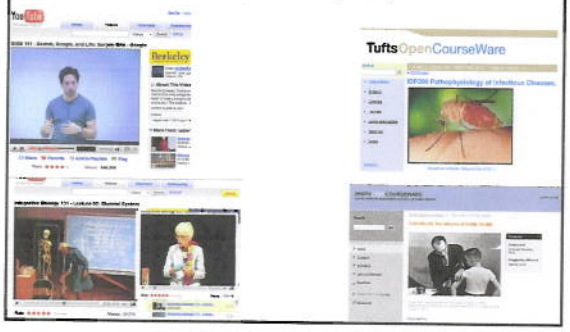
Opener #4. Leveraged Resources and OpenCourseWare (OCW) (e.g., free courses from MIT, Utah State, CORE, OOPS)

August 2, 2011

Stanford U. Offers Free Online Course in Artificial Intelligence, By Jie Jenny Zou, Chronicle of Higher Ed, http://www.ai-class.com/



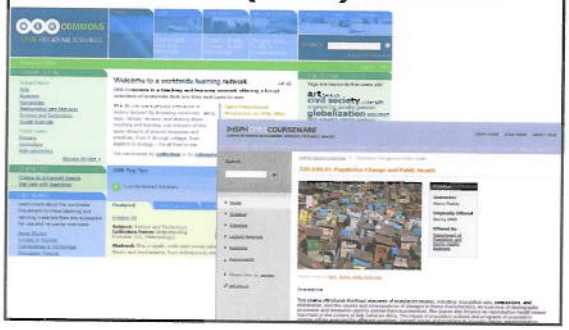
Sample OpenCourseWare Projects
(Tufts, Johns Hopkins)



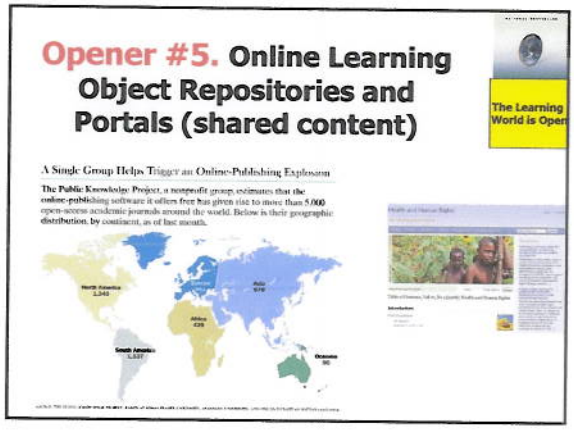
Opensource Opencourseware Prototype System (OOPS) funded by, the Foundation of Fantasy, Lucifer Chu, Chairman and Janitor of OOPS, Taipei)

The Biggest OCW Localization Volunteer Group in the World

National Repository for Online Courses (NROC) Commons



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



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

Google Video
YouTube Broadcast Yourself
Howcast
Book tv on C-SPAN2

April 29, 2011
(e.g., YouTube and the Royal Channel)

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

February 18, 2011

Ten great sites with free teacher resources
eSchool News, Jenna Zwang,
http://www.eschoolnews.com/2011/02/18/ten-great-sources-of-free-teacher-resources/print/

July 10, 2011

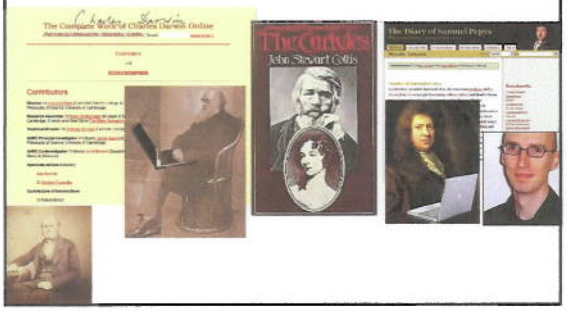
The Virtual Zooarchaeology of the Arctic Project (VZAP) is a virtual, interactive, osteological reference collection for the study of northern vertebrates. VZAP is a dynamic natural history archive which allows students and researchers to examine the complete skeletal anatomies of multiple bird, mammal, and fish species in both 2D and 3D.
(Anthropologist Puts an Idaho Museum's Many Bones Within Virtual Reach, Peter Monaghan, July 10, 2011, Chronicle of HE)
http://vzap.iri.isu.edu/ViewPage.aspx?id=230

February 8, 2011

Google Art Project, Chronicle of HE (new Google project that allows visitors to explore museums around the world and view hundreds of artworks) http://www.googleartproject.com/

The Complete Works of Charles Darwin

(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)



Curriki, Connexions, OpenCourseWare (e.g., MIT OCW Highlights for High School)

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

The Learning World is Open

flatworld KNOWLEDGE

June 2010

Clay Shirky, NYU: How cognitive surplus will change the world, TED

http://www.ted.com/talks/clay_shirky_how_cognitive_surplus_will_change_the_world.html

December 30, 2010

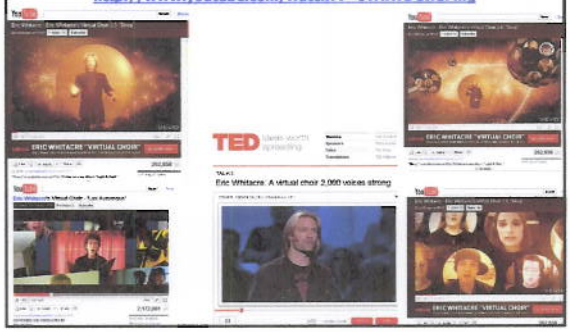
History for Music Lovers, Washington Post
The French Revolution ("Bad Romance" by Lady Gaga)
Trojan Way ("Tainted Love" by Soft Cell)
Charlemagne ("Call Me" by Blondie)

http://www.youtube.com/user/historyteachers?blend=6&ob=5#p/f/12/kJULC0jsgdA

April 6, 2011

Eric Whitacre: A virtual choir 2,000 voices strong

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



October 2010

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

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

May 12, 2011

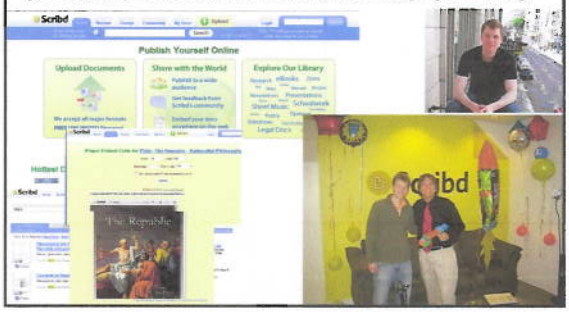
Across More Classes, Videos Make the Grade, Chronicle of HE

http://chronicle.com/article/Across-More-Classes-Videos/127422/?sid=at&utm_source=at&utm_medium=en

Participatory E-Books

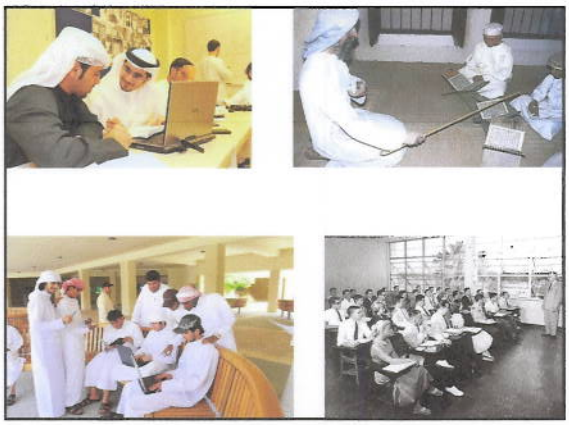
Scribd: Documents on Web

(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)

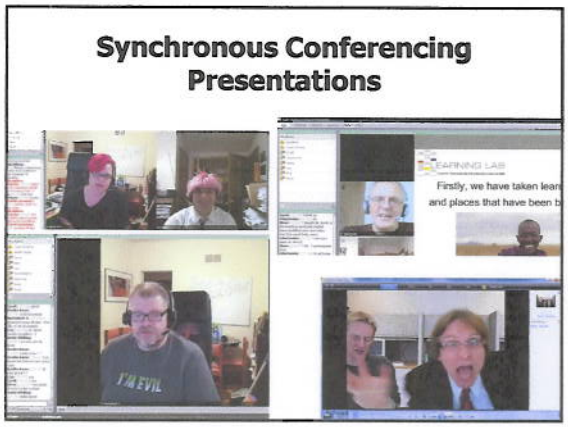


Yonsei University Library, Seoul, Korea

January 14, 2011

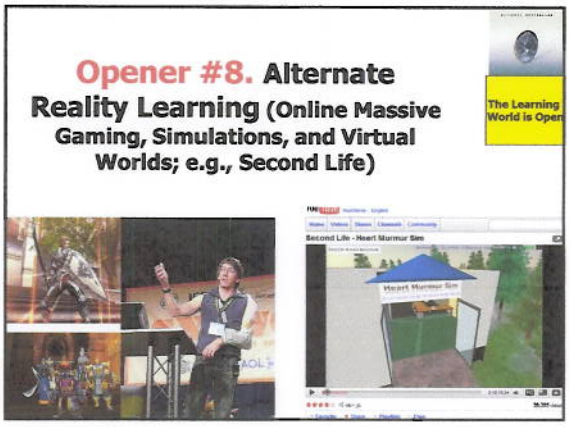
South African teens get virtual mentoring from all over the world, By Danielle Berger, CNN

http://www.cnn.com/2011/LIVING/01/13/cnnheroes.stokes/index.html?hpt=T2


Synchronous Conferencing Presentations

June 29, 2011
Google+ Hangouts
First Look at Google+ Hangouts
36,714

July 6, 2011
Facebook introduces video calling
Eric Stoller, Inside Higher Ed
Facebook introduces video calling


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

April/May 2011
Dr. Monica Rankin's class, UT Dallas, Cuban Revolution
http://www.youtube.com/watch?v=ocQMf1kPo98
No Country for Old Castro

December 24, 2010:
Social Networking Gaming
CityVille 16.8 million daily users, FarmVille's 16.4 million. CityVille 61.7 million monthly users, FarmVille 56.8 million users. Mashable.
"CityVille" Is Now Bigger than "FarmVille"
FRONTIERVILLE
FARMVILLE
CityVille
PLAY NOW

August 18, 2011

HowStuffWorks, iPhone App, USA Today, Marc Saltzman

August 18, 2011

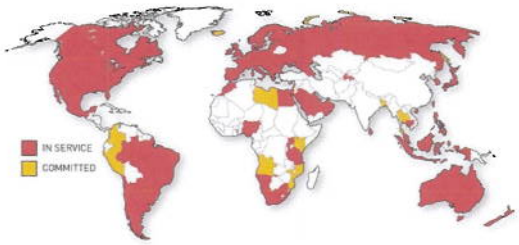
Eco Mania and Face the Waste (iPhone/oPod),
Green games gain in popularity, USA Today, Mike Snider

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

(Paul Kim, 2010)

We Are Going Global Mobile!

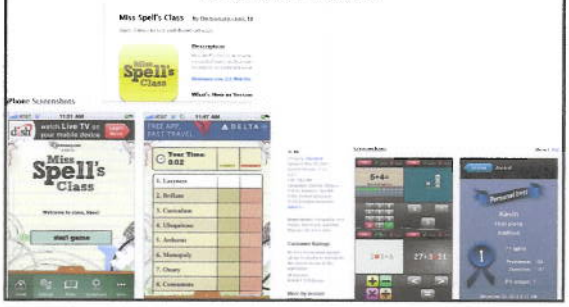


April 2010

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

May 27, 2011

Math and Spelling games on iPads
eSchool News



July 20, 2011

Smart phones driving lecture capture growth

eCampus News, Dennis Carter

http://www.ecampusnews.com/technologies/smart-phones-driving-lecture-capture-growth/

eCampus News

July 20th, 2011 Print Email Tweet

Smart phones driving lecture capture growth

A leading lecture-capture company says use of the technology has skyrocketed in recent months

By Dennis Carter, Assistant Editor

Read more by Denny Carter

Viewing replays of a professor's lecture anyti anywhere on a smart phone has ballooned lecture capture use in higher education, as rec surveys show the technology remains popular campus.

Watching and re-watching lectures online has long been among college students' favorite educational technology, and making those

March 13, 2011

iPad Apps for Calculus, Math, Biology, etc.

Chronicle of HE, Ben Wieder

http://chronicle.com/article/iPads-for-College-Classrooms-/126681/?sid=at&utm_source=at&utm_medium=en

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

April 7, 2011

Expert Tutors as Mobile Apps (e.g., Tutor.com)

tutor.com

Tutor.com To Go™ Releases the First Education App that Connects Students to an Expert Tutor

Tutor.com To Go™

for iPhone, iPad & iPod Touch

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

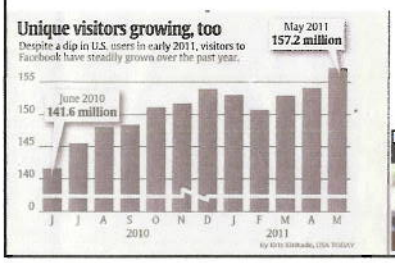
The Learning World is Open

The Samsung DualView TL225

July 7, 2011

Facebook says membership has grown to 750 million, USA Today, Jon Swartz

http://www.usatoday.com/tech/news/2011-07-06-facebook-skype-growth_n.htm



Tablet Computers and Personalized News

April 10, 2010: Seton Hill Univ, 2,100 students an iPad and freshmen a 13-inch MacBook laptop

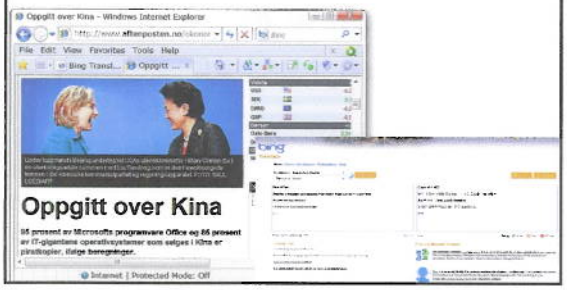
Feb 1, 2011: An Android Tablet Made Just for School, David Zax, Fast Company

March 9, 2011: http://www.zite.com/; USA Today

August 19, 2011

Bing Translator (a convenient way to translate between languages in Internet Explorer 8)

http://www.microsofttranslator.com/default.aspx



Predictions

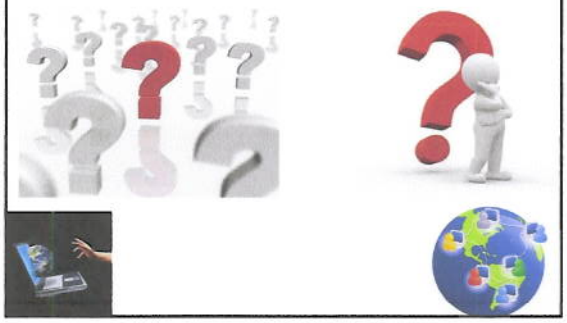
1. Five Billion "Have-Nots" Have at It!
2. Emergence of Lifelong Super E-Mentors/Coaches
3. Quarter-Century Learning Clubs
4. Terabyte Learning Access Points
5. The Veneration of Learning
6. Personalization+ Portfolios
7. The Selection of Global Learning Partners
8. The Shared Learning Era
9. Teaching-Learning 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 & Administrator Decisions:**
  - What do to about OER, open sources, E-books, mobile, etc.?
- **Instructional Designer & Trainer decisions:**
  - Act as Concierge, Counselor, Course facilitator, Credit manager?
- **Formal Learner & Informal Lrnr 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!

Is this a revolution?

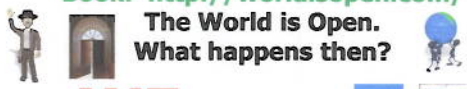


Slides at: TrainingShare.com

Papers: PublicationShare.com

Book: http://worldisopen.com/

The World is Open.
What happens then?



WE

ALL

LEARN!!!