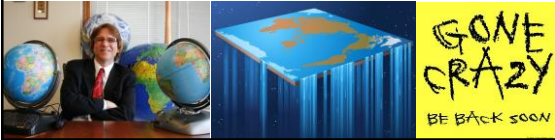## The Flat World Swung Open:
How Web Technology Is Revolutionizing Education

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

Audience Poll #1:
Has learning technology has ever transformed your life.

1728: 1st correspondence course advertised Boston
(learn shorthand from Caleb Phillips thru weekly mailed lessons)
1728-1990s – Generally postal system based
1930s – phonograph and radio
1950s and 1960s – television
1970s and 1980s – VHS tapes
1980s and 1990s – DVD

February 26, 2013
Tablets Rock On: Education Tech Through The Ages, Information Week,
The First Correspondence Course
(University of London, External Program, 1858)
http://www.informationweek.com/education/leadership/educational-technology-across-the-ages/240149241

William Rainey Harper, first president of the University of Chicago, developed the concept of extended education. Research Univ. had satellite colleges of education in the wider community.

In 1892, he also encouraged the concept of correspondence school courses to further promote education, an idea that was put into practice by Columbia University.

May 10, 2013
10 ed-tech tools of the 70s, 80s, and 90s
eSchool News, Meris Stansbury
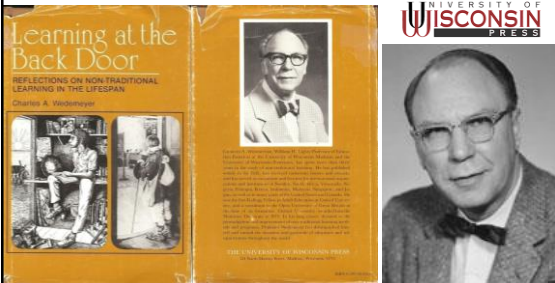http://www.eschoolnews.com/2013/05/10/10-ed-tech-tools-of-the-70s-80s-and-90s/print/

Looking to the Past...

Life as an accountant/CPA in a high tech company in the 1980s...

Took Correspondence & TV Courses
(thanks to Bob Clasen and Charles Wedemeyer, the University of Wisconsin)

Knowledge Navigator (1987)
Apple Computer
http://www.youtube.com/watch?v=hb4AzF6wEoc

Fast Forward 25+ Years...
"Anyone can now learn anything from anyone at any time."

February 26, 2013
Free Tablets for Everyone?
http://www.informationweek.com/education/leadership/educational-technology-across-the-ages/240149241

Actually Technology is Almost Free...

February 20, 2013
Star Trek-like holodeck may be closer to reality than you think
Matt Hartley, Financial Post, Canada
http://business.financialpost.com/2013/02/20/star-trek-like-holodeck-may-be-closer-to-reality-than-you-think/?__lsa=054d-d58d

The Next Generation is Here!

May 20, 2013
The New Greatest Generation: Why Millennials will Save Us All, Time, Joel Stein
http://www.time.com/time/magazine/article/0,9171,2143001,00.html

November, 2012
Degrees of Difficulty, Time
http://nation.time.com/2012/10/18/degrees-of-difficulty//
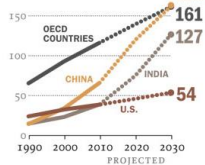
September/October, 2012
The Siege of Academy
Washington Monthly, Kevin Carey,
http://www.washingtonmonthly.com/magazine/septemberoctober_2012/features/_its_three_oclock_in039373.php?page=all

Learning is Changing
**New Technologies =
New Delivery Methods...**

Audience Polls #2:
**I. Who remembers where they were when they found
out that Steve Jobs passed away?
II. Who remembers what they were doing on the day
that John F. Kennedy was shot?
III. Who remembers what they were doing on 911?
IV. Who remembers what they were doing on 441?**

Charles Vest (April 4, 2001)
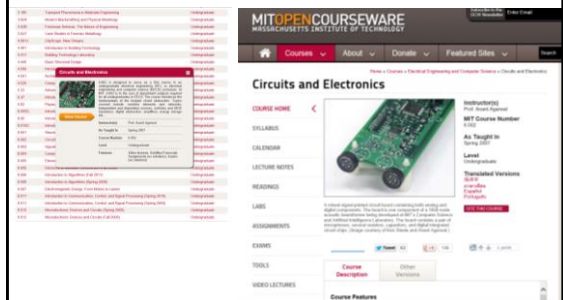**http://web.mit.edu/newsoffice/2001/ocw.html**

**"This is about something bigger than MIT. I hope
other universities will see us as educational leaders in
this arena, and we very much hope that
OpenCourseWare will draw other universities to do
the same. We would be delighted if -- over time -- we
have a world wide web of knowledge that raises the
quality of learning -- and ultimately, the quality of life
-- around the globe."**

OCW Circuits and Electronics
http://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-002-circuits-and-electronics-spring-2007/

I. Learning is More Open
**(80-Year-Old WGU Texas Grad Keeps His Promise,
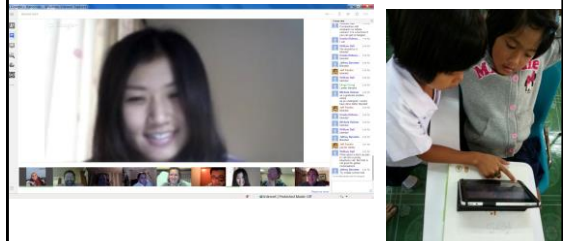November 30, 2012, Reeve Hamilton, Texas Tribune)**

II. Learning also is More Collaborative
**Collaboration and Discussion in Google
Hangouts or with iPad, Jan. 28, 2013**
(Carrie Gong from Beijing Normal University)

III. Learning is More Mobile
Brown, Keynote talk, "Learning in Hand With Mobile Technology," Wisconsin Distance Teaching and Learning Conference, August 10, 2012

IV. Learning is More Video-Based
Adora Svitak, WFP Youth Representative - 2013 ECOSOC Youth Forum, March 27, 2013
"Shaping tomorrow's innovators: Leveraging science, technology, innovation and culture for today's youth", Statement by the World Food Programme Youth Representative, Ms. Adora Svitak at the 2013 ECOSOC Youth Forum.
http://webtv.un.org/meetings-events/economic-and-social-council/other-meetings/watch/adora-svitak-wfp-youth-representative-2013-ecosoc-youth-forum-shaping-tomorrows-innovators:-leveraging-science-technology-innovation-and-culture-for-todays-youth/2257875055001

V. Learning is More Social
Facebook reaches one billion users, CNN Money, Aaron Smith, October 4, 2012

VI. Learning is More Personal
iPotty Aims To Entertain Toddlers During Toilet Training, Mashable, Kate Freeman (January 10, 2013)
http://mashable.com/2013/01/10/ipotty/

VII. Learning is More Modifiable
Inside Look: Learning Spaces, Meeting classroom teaching and collaboration expectations, University Business, Feb. 22, 2013
http://www.universitybusiness.com/article/inside-look-learning-spaces
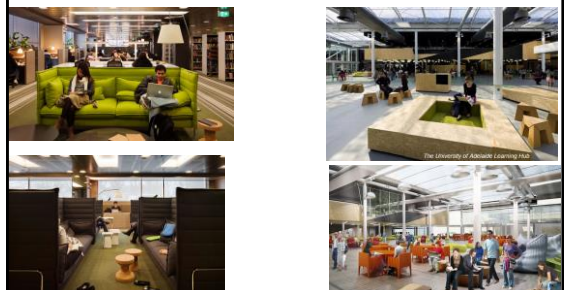

VIII. Learning is More Comfortable
Design for Students, with Students, "Hub Central", the $42 million University of Adelaide learning hub opened in October 2011, May 8, 2012, Mike Roberts
http://designbuildsource.com.au/design-for-students-with-students

IX. Learning is More Massive
April 16, 2013 (NovoEd)
New MOOC Provider Says It Fosters Peer Interaction
Chronicle of Higher Education, Jake New
http://novoed.com/

January 23, 2013: The Bush MOOC Party?
Academic Partnerships Launches MOOC2Degree Initiative
Free, Open Online Courses As A First Step Toward A Degree
http://www.mooc2degree.com/

October 1, 2012: MOOC Students
4 Massive Open Online Courses and How They Work, Ben Gose, Chronicle of HE
http://chronicle.com/blogs/techtherapy/2012/10/03/episode-99-what-wearable-computers-could-mean-for-campuses/

Krissa Swain, of Knoxville, Tenn., is taking "Operations Management" online to help develop her management skills.

Rajeev Bajpai, an airline pilot based in Mumbai, took an online computer-science course to gain programming skills.

October 27, 2012
Travel for Office Hours
Chuck Severance , (U Michigan/Coursera) in Barcelona
http://www.youtube.com/watch?v=JzNHvmSv8TI

November 2, 2012
The Year of the MOOC,
New York Times, Laura Pappano,
http://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html?pagewanted=all


Clockwise, from top left: an online course in circuits and electronics with an M.I.T. professor (edX); statistics, Stanford (Udacity); machine learning, Stanford (Coursera); organic chemistry, University of Illinois, Urbana (Coursera).

April 20, 2013
Two Cheers for Web U!
A. J. Jacobs, New York Times
http://www.nytimes.com/2013/04/21/opinion/sunday/grading-the-mooc-university.html?pagewanted=1&_r=3&emc=eta1&
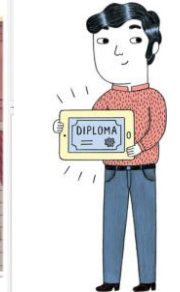
May 6, 2013
Faculty Backlash Grows Against Online Partnerships
Chronicle of Higher Education, Steve Kolowich
http://chronicle.com/article/Faculty-Backlash-Grows-Against/139049/

May 6, 2013

Faculty Backlash Grows Against Online Partnerships

Michael Sandel, a Harvard professor, taught an online course that San Jose State U. asked its philosophy professors to use in place of their own instruction. They said no.

By Steve Kolowich

June 19, 2013
2013 is "The Year of the Anti-MOOC"
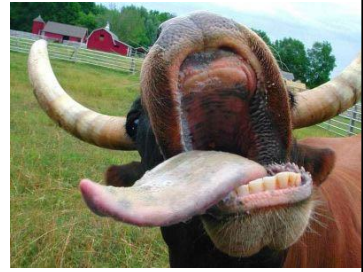**George Siemens, UW-Madison Summit**
http://globalhighered.wordpress.com/european-moocs-in-global-context/

European MOOCs in Global Context

August 8, 2013
The MOOC 'Revolution' May Not Be as Disruptive as Some Had Imagined
Steve Kolowich, Chronicle of Higher Ed
http://chronicle.com/article/MOOCs-May-Not-Be-So-Disruptive/140965/?cid=at&utm_source=at&utm_medium=en

August 8, 2013

The MOOC 'Revolution' May Not Be as Disruptive as Some Had Imagined

By Steve Kolowich

In California, the MOOC revolution came to a halt unceremoniously.

Sen. Darrell Steinberg, the leader of the State Senate, quietly decided to put his online-education bill on the back burner last month. The bill, introduced with fanfare in March, originally aimed to push public universities

"A medium where only self-motivated, Web savvy people sign up, and the success rate is 10 percent, doesn't strike me quite yet as a solution to the problems of higher education," says Sebastian Thrun, of Udacity.

August 19, 2013
Feminist Anti-MOOC
Scott Jaschik, Inside Higher Ed
http://www.insidehighered.com/news/2013/08/19/feminist-professors-create-alternative-moocs

News   TOPICS TEACHING AND LEARNING

**Feminist Anti-MOOC**

August 19, 2013
By Scott Jaschik

At first glance, "Feminism and Technology" sounds like another massive open online open course. The course will involve video components, and will be available online to anyone, with no charge. There are paths to credit, and it's fine for students to take the course without seeking credit. An international student body is expected.

But don't look for this course in any MOOC catalog. "Feminism and Technology" is trying to take a few MOOC elements, but then to change them in ways consistent with feminist pedagogy to create a distributed open collaborative course or DOCC (pronounced "dock").

X. Learning is More Ubiquitous
Flexible displays bend what's possible for computers,
Jon Swartz, USA Today (May 4, 2012)

Sony SmartWatch
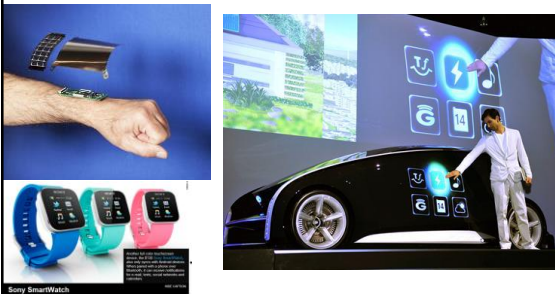
XI. Learning is More Instantaneous
April 9, 2013
HER Computer fashions face social test: Can wearable computers fit in? Scott Martin, USA Today
http://www.usatoday.com/story/tech/2013/04/06/google-apple-watch-glass-jawbone-iphone-nike-microsoft-samsung/1979419/
(i.e., magnify moles or injuries, see vital signs, live stream surgeries, access previous PT sessions, access research and drug info, etc.)
http://www.fiercemobilehealthcare.com/story/google-glasses-could-have-strong-potential-healthcare-use/2013-03-18

XII. Learning is More Global
UC Irvine (2013 report)
Example 3: Fundamentals of Japanese
Dr. Hidemi Riggs, Fall 2012 & Winter 2013, Tech-enhanced: EEE AdvancedWebspace (Dreamweaver), Skype video conferencing tool, Active Learning, Format: 5 - 1A lectures (24 students maximum); 3 - 2A lectures (24 students maximum); 2- 3A lectures (24 students maximum)
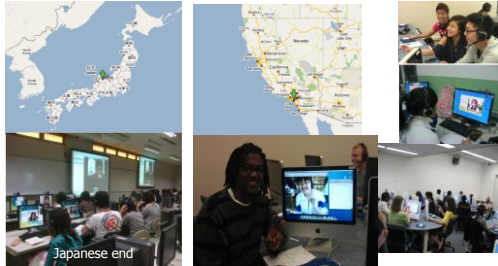

Japanese end

February 22, 2013
NASA's spacey Google+ Hangout shows off zero-G antics – and cats!
http://cosmiclog.nbcnews.com/_news/2013/02/22/17057588-nasas-spacey-google-hangout-shows-off-zero-g-antics-and-cats?lite

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Learning is Changing the World
(Book Review: Ed Tech Mag, May-June 2013)
Walter Bender, Charles Kane, Jody Cornish, and Neal Donahue (2012). *Learning to Change the World: The Social Impact of One Laptop Per Child.* NY: Palmgrave Macmillan.
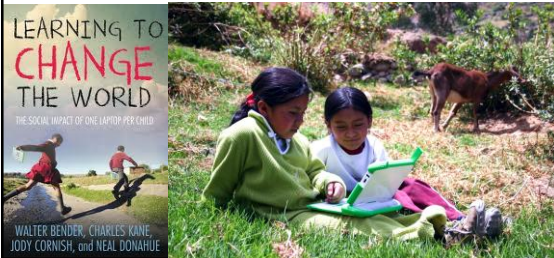
April 15, 2013
World will soon be "Webified"
Google boss: Entire world will be online by 2020, Doug Gross, CNN
http://www.cnn.com/2013/04/15/tech/web/eric-schmidt-internet/index.html?hpt=hp_t3

Google Wi-Fi from the Sky, Steven Levy,
pp. 126-131, Wired, September 2013
http://www.wired.com/gadgetlab/2013/08/googlex-project-loon/

Google X chief Astro Teller (left) and Project Loon's first leader, Rich DeVaul, holding the system's ground-based antennas.
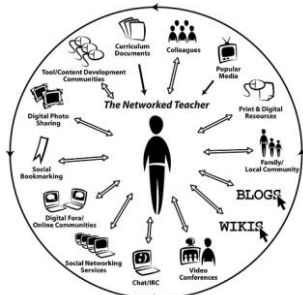

Question:
What is the Web?

- **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!
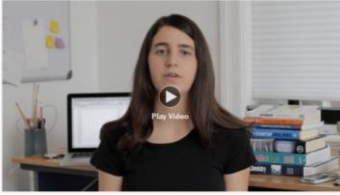
The Web of Learning

It is very open!
(at least in Norway & the Philippines)

Why I spent 10th grade online. Sophia Pink, Washington Post, August 23, 2013
http://www.washingtonpost.com/opinions/why-i-spent-10th-grade-online/2013/08/23/f200164d-ed8a-11e2-bed3-b9b6fe264871_story.html

Honk If You Love Someone, Sophia Pink, January 1, 2013
http://www.youtube.com/watch?v=1EwYLZmkUxo&feature=youtu.be

Are You Feeling Sleepy?, Sophia Pink, April 30, 2013
http://www.youtube.com/watch?v=RSUTLoXg_38&feature=youtu.be

We are entering a jumping off point...

Framework #1: 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!

WE

ALL

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.)

January 22, 2013
Free digital textbooks surge in popularity, Sarah Langmead, Assistant Editor, eCampus News,

http://www.ecampusnews.com/featured/featured-on-ecampus-news/free-digital-textbooks-surge-in-popularity/

OpenStax College
(OpenStax College offers students free textbooks that meet scope and sequence requirements for most courses. These are peer-reviewed texts written by professional content developers.)
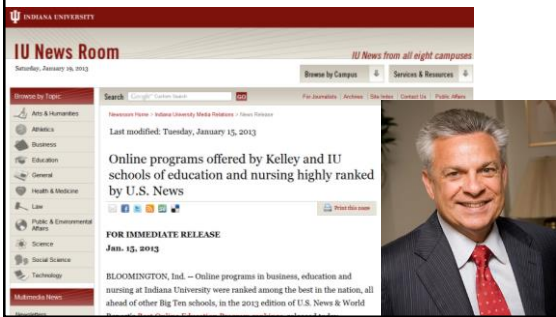http://openstaxcollege.org/

Opener #2. E-Learning and Blended Learning
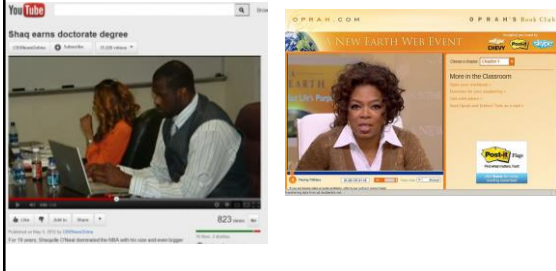
January 15, 2013

Online programs offered by Kelley and IU schools of education and nursing highly ranked by U.S. News, IU News Room
http://newsinfo.iu.edu/news/page/normal/23687.html

More than six million post-secondary students are taking online classes in the USA; growing by 10% per year.
http://sloanconsortium.org/publications/survey/going_distance_2011
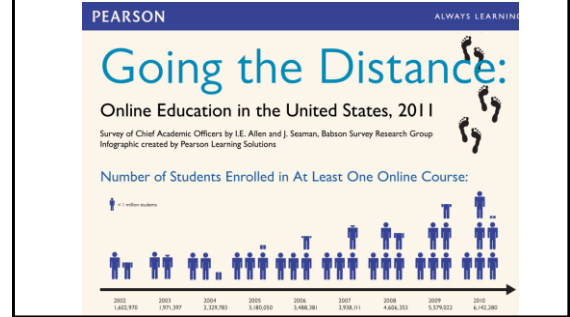
August 5, 2013

Free Online Higher Education: 5 Best MOOCs
By Kannan Sankaran, Epoch Times
http://www.theepochtimes.com/n3/229640-5-best-moocs-for-free-online-higher-education/

**MOOC at UPenn; Recession Fuels Explosion of Online Learning**
http://www.youtube.com/watch?v=52rFiM40l5w

August 18, 2013

Virtual U: Master's Degree Is New Frontier of Study Online
Tamar Lewin, The New York Times
http://www.nytimes.com/2013/08/18/education/masters-degree-is-new-frontier-of-study-online.html?_r=0

August 19, 2013
Entrepreneurship Curriculum
NovoEd, Amin Saberi
https://novoed.com/courses/entrepreneurship
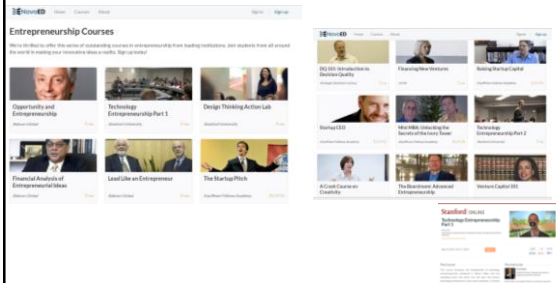
Opener #3. Availability of Open
Source and Free Software Moodle
(July 18, 2013: 72 million users in 237 countries,
84,518 sites, 7.6 million courses)

Opener #4. Leveraged Resources
and OpenCourseWare (OCW) (e.g.,
free courses from Harvard Edx, MITx,
CORE, OOPS)

Saylor.org
http://www.saylor.org/
RedHoop
http://redhoop.com/

February 16, 2012
Online Badges and Certifications from OER
University of Illinois at Springfield, Ray Schroeder
https://sites.google.com/site/opencontinuinged/

Opener #5. Online Learning
Object Repositories and Portals
(shared content)
http://www.deadseascrolls.org.il/explore-the-archive
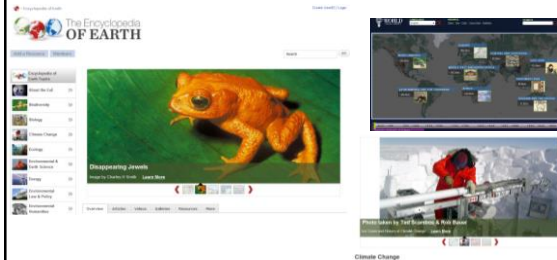http://www.deadseascrolls.org.il/explore-the-archive/search#q=site_en:Qumran,_Cave_4
http://www.deadseascrolls.org.il/home

Online Encyclopedias
(e.g, the Encyclopedia of Earth:
http://www.eoearth.org/)
http://en.wikipedia.org/wiki/Encyclopedia_of_Earth

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

October 2010, The V-PORTAL (Bonk, IU)
"Video Primers in an Online Repository for e-Teaching and Learning" V-PORTAL,
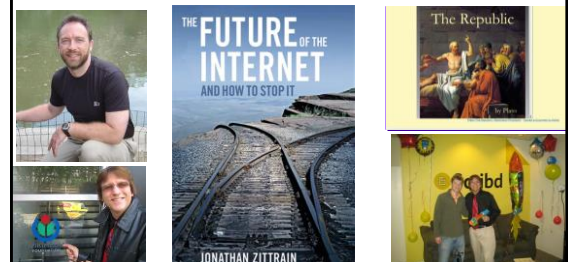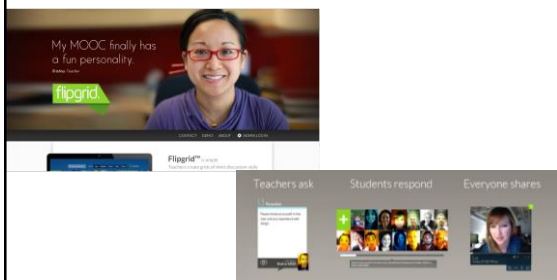TravelinEdMan (27 free/open YouTube videos)
http://www.youtube.com/user/TravelinEdMan

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

Flipgrid (video discussions)
http://flipgrid.com/info/

Opener #7. Electronic Collaboration and Interaction
(synchronous & asynchronous)
Soliya Connect
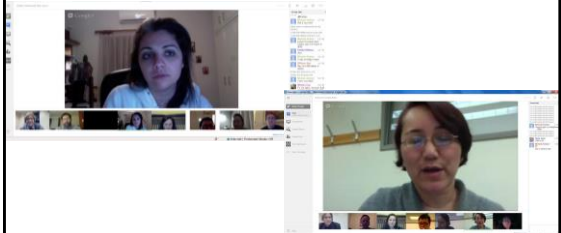http://gli.georgetown.edu/#soliya

February 26, 2013
Tablets Rock On: Education Tech Through The Ages, Information Week
http://www.informationweek.com/education/leadership/educational-technology-across-the-ages/240149241

Google Hangouts
Class Sync Collaboration and Discussion
(Spring, 2013)

April 15, 2013
Guest Speakers
Sara de Freitas and Jim Hensman (https://connect.iu.edu/p2ie1yx6z6x/)
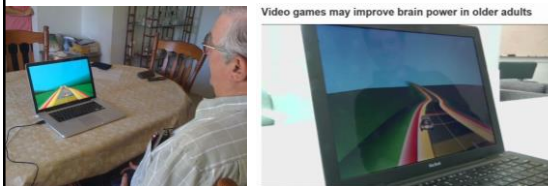Jay Cross (https://connect.iu.edu/p4bytsoronh/)

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

September 5, 2013
Video games may improve brain power in older adults
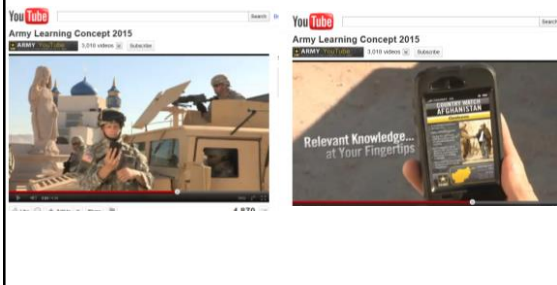http://www.usatoday.com/story/news/nation/2013/09/04/video-games-brain-power-dementia/2762523/

Opener #9. Real-Time Mobility and Portability (e.g., iPhone, low cost wireless devices)
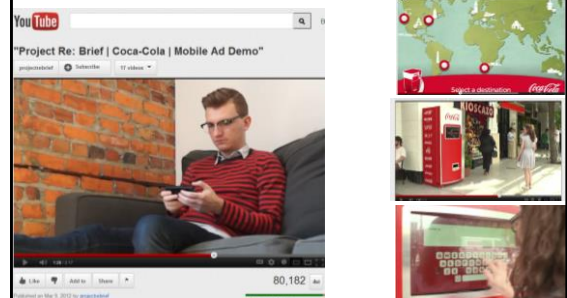
60,000 earthlings/hour get mobile

Military Mobile Learning (See: the U.S. Army Learning Concept for 2015).
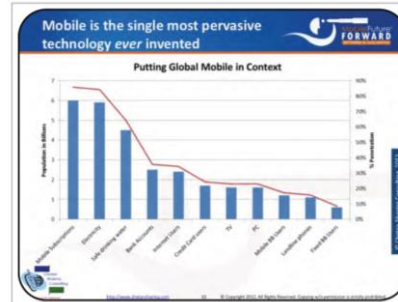http://www.youtube.com/watch?v=KD9NGAV3-3k (4:26 minutes)
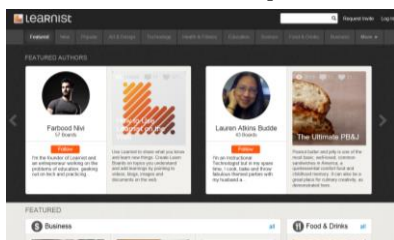

Smartphones and Mobile Learning.

Judy Brown, Keynote talk, "Learning in Hand With Mobile Technology," Wisconsin Distance Teaching and Learning Conference, August 10, 2012

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

September 4, 2013
First impression: Galaxy Gear - welcome to wearable computing, USA Today, Edward Baig,
http://www.usatoday.com/story/tech/personal/2013/09/04/future-for-samsung-smart-watch/2766007

December 16, 2010
Introducing Word Lens
http://www.youtube.com/watch?v=h2OfQdYrHRs

May 22, 2013
Video Walls of Experts (IQ Wall)
Indiana University unveils high-tech classroom
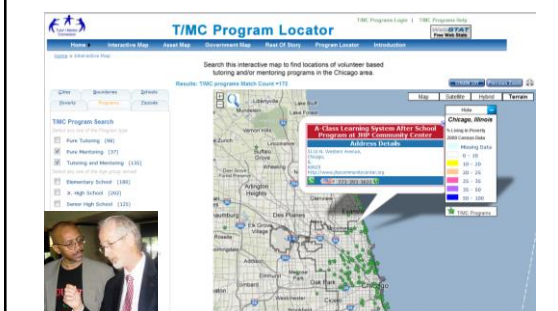**The Herald-Times, Mike Leonard**
http://www.indianaeconomicdigest.net/main.asp?SectionID=31&SubSectionID=135&ArticleID=69980

June 3, 2012
Tutor/Mentor Connection (Chicago)
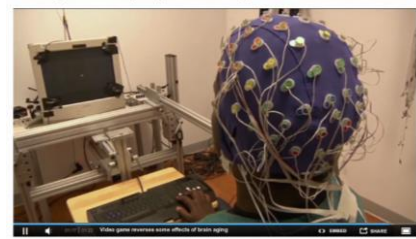http://www.tutormentorprogramlocator.net/InteractiveMap.aspx

September 5, 2013
Do you really want personalized feedback???
http://www.usatoday.com/story/news/nation/2013/09/04/video-games-brain-power-dementia/2762523/

Video games may improve brain power in older adults

What about the Instructor in the Open World?

Ashley is a steamroller

1. Instructor as Credit Manager

7. Instructor as Conductor

9. Instructor as Curator

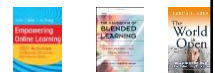## 10. Instructor as Concierge

Finally...
Decisions for this Open Ed World:

- **Technology & Administrator Decisions:**
  - **What do to about OER, open source, 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?**

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

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