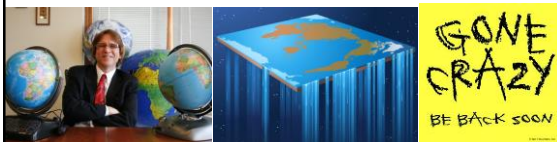


## The Flat World Swung Open: How Web Technology Is Revolutionizing Education

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



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



**1728: 1<sup>st</sup> 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>

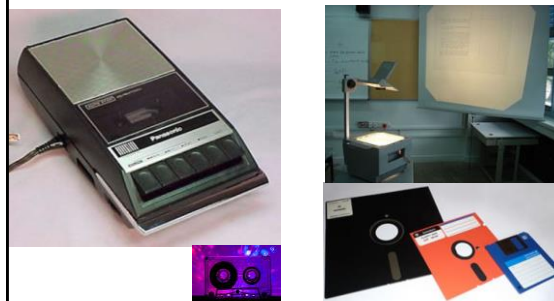


**William Rainey Harper**, first president of the  
University of Chicago, developed the concept of  
extended education. Research Univ. had satellite  
colleges of education in the wider community.

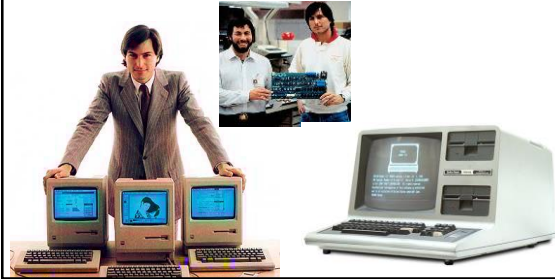
In 1892, he also encouraged the concept of correspondence  
school courses to further promote education, an idea that was  
put into practice by Columbia University.



**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/>



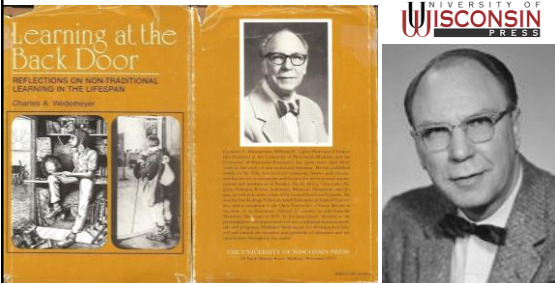
## Looking to the Past...



## 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=hb4Asf6wEoc>



## 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>





**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 D. 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)**

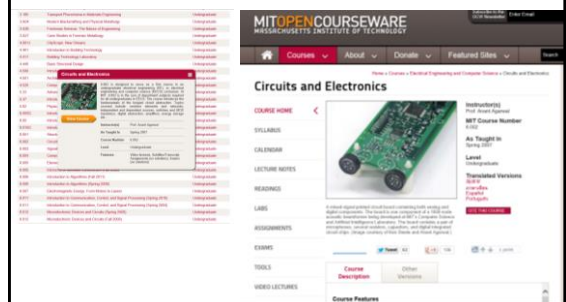
<http://web.mit.edu/newsoffice/2001/ocw.html>

"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**

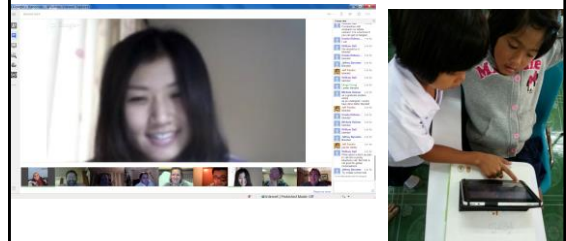
**(80-Year-Old WGU Texas Grad Keeps His Promise, November 30, 2012, Reeve Hamilton, Texas Tribune)**

THE TEXAS TRIBUNE  
An 80-Year-Old Graduate With an Online Marketing Degree Kept His Promise



**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

	Beijing 2008	London 2012
Smartphones	139.3 million	657 million
Facebook	90 million	901 million
Twitter	<1 million	300 million
Tweets / day	1.1 million	140 million
Tablets	0	54.8 million
App store downloads	300+ million	25+ billion

Sources: Nielsen, eMarketer, Forrester, Apple



### IV. Learning is More Video-Based

Adora Svitak, WFP Youth Representative - 2013 ECOSOC Youth Forum, March 27, 2013



### 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)



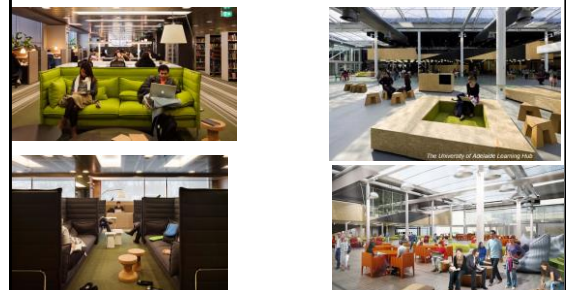
### VII. Learning is More Modifiable

Inside Look: Learning Spaces, Meeting classroom teaching and collaboration expectations, University Business, Feb. 22, 2013



### 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

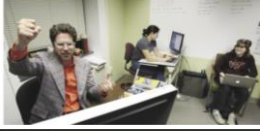


## IX. Learning is More Massive April 16, 2013 (NovoEd)

New MOOC Provider Says It Fosters Peer Interaction  
Chronicle of Higher Education, Jake New  
<http://www.chronicle.com>

April 16, 2013

'Supersizing' the College Classroom: How One Instructor Teaches 2,670 Students



**NovoED**

Learn. Collaborate. Innovate.



Stanford ONLINE

Designing A New Learning Environment

Stanford University School of Education  
Stanford University  
Stanford University



## 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/>

MOOC2DEGREE™

ABOUT US | PRESS ROOM | CONTACT US



Free, Open Online Courses As A First Step Toward A Degree

MOOC2Degree can help you achieve your academic goals, giving you the opportunity to try online learning for free. Academic Partnerships is collaborating with many of its 60 public university partners to launch the MOOC2Degree initiative which provides you with free, open online courses that lead to a degree credit as a first step toward your degree.



## 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

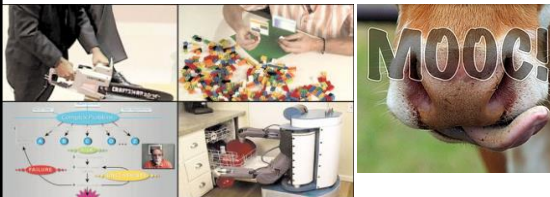
### Travel for Office Hours

Chuck Severance, (U Michigan/Coursera) in Barcelona  
<http://www.youtube.com/watch?v=3zNHvmsv8TI>



## November 2, 2012 The Year of the MOOC, New York Times, Laura Pappano,

[http://www.nytimes.com/2012/11/04/education/online/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html?\\_r=1&hp](http://www.nytimes.com/2012/11/04/education/online/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html?_r=1&hp)



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/a-j-jacobs-weighing-the-massive-advantages.html?pagewanted=all&\\_r=1&mc=at&8](http://www.nytimes.com/2013/04/21/opinion/a-j-jacobs-weighing-the-massive-advantages.html?pagewanted=all&_r=1&mc=at&8)

OPINION  
Two Cheers for Web U!



**May 6, 2013**

**Faculty Backlash Grows Against Online Partnerships  
Chronicle of Higher Education, Steve Kolowich**

<http://chronicle.com/article/Faculty-Backlash-Grows-Against/139049/>

Comments (89)

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/>

**Workshop**  
**European MOOCs in Global Context**  
19-20 JUNE 2013, UW-MADISON, MADISON, WISCONSIN

**Workshop Dates:**  
Wednesday 19 June 2013 10:00-12:00  
Thursday 20 June 2013 9:00-12:00

**X. Learning is More Ubiquitous**

Flexible displays bend what's possible for computers,  
Jon Swartz, USA Today (May 4, 2012)



**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/2013/04/09/her-computer-fashions-face-social-test/279154>)  
(i.e., magnify moles or injuries, see vital signs, live stream surgeries, access previous PT sessions, access research and drug info, etc.)  
<http://www.flexiblehealthcare.com/story/google-glass-could-have-strong-potential-healthcare-use/2811-9218>

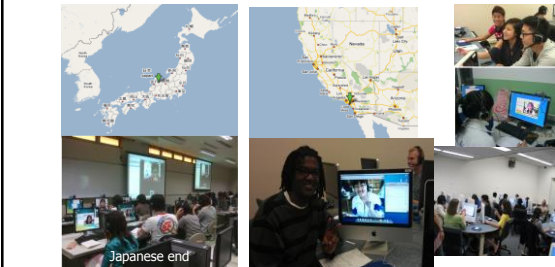


**XII. Learning is More Global**

UC Irvine (2013 report)

**Example 3: Fundamentals of Japanese**

Dr. Hiromi Riggs, Fall 2012 & Winter 2013, Tech-enhanced: <http://www.uci.edu/~hriggs/> (Zoomware),  
Skype video conferencing tool, Active Learning, Formats: 5-1A lectures (24 students maximum); 3-2A lectures (24 students maximum); 2-3A lectures (24 students maximum)



**February 22, 2013**

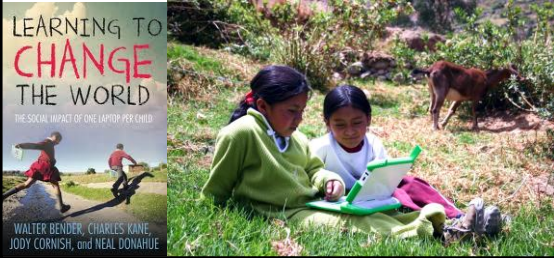
**NASA's spacey Google+ Hangout shows off zero-G antics – and cats!**

[http://comcast.bbc.com/\\_news/2013/02/22/17057585-isaac-asipov-google-hangout-shows-off-zero-g-antics-and-cats10e](http://comcast.bbc.com/_news/2013/02/22/17057585-isaac-asipov-google-hangout-shows-off-zero-g-antics-and-cats10e)



## 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: Palgrave 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-schmid-internet/index.html?hpt=hp\\_13](http://www.cnn.com/2013/04/15/tech/web/eric-schmid-internet/index.html?hpt=hp_13)



## Question: What is the Web?

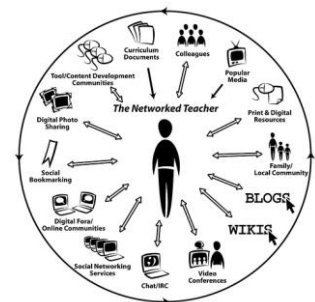
- An entertainment system?
- A writing aid?
- A communications system?
- A means to handle commercial transaction?
- A social networking device?



=====

**No, it is a learning tool!**

## The Web of Learning



## It is very open!

(at least in Norway & the Philippines)



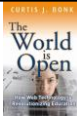

## We are entering a jumping off point...





## 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**ead-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/features/featured-on-ecampus-news/free-digital-textbooks-surge-in-popularity/>

## Opener #2. E-Learning and Blended Learning



**E LEARNING**

**THUNDERBIRD**  
SCHOOL OF GLOBAL EDUCATION

Knowledge Network: Faculty & Research

Other logs in the USA from our zone

**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>

**IU News Room**  
IU News from all eight campuses

Saturday, January 19, 2013

Search: Google Custom Search

Director by Topic: Arts & Humanities, Athletics, Business, Education, General, Health & Medicine, Law, Public & Environmental Affairs, Science, Social Science, Technology

Last modified: Tuesday, January 15, 2013

Online programs offered by Kelley and IU schools of education and nursing highly ranked by U.S. News

FOR IMMEDIATE RELEASE  
Jan. 15, 2013

BLOOMINGTON, Ind. — Online programs in business, education and nursing at Indiana University were ranked among the best in the nation, all ahead of other Big Ten schools, in the 2013 edition of U.S. News & World

**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](http://sloanconsortium.org/publications/survey/going_distance_2011)

**PEARSON** ALWAYS LEARNING

**Going the Distance:**  
Online Education in the United States, 2011

Survey of Chief Academic Officers by I.E. Allen and J. Seaman, Babson Survey Research Group  
Infographic created by Pearson Learning Solutions

Number of Students Enrolled in At Least One Online Course:

Year	Number of Students
2002	1,482,870
2003	1,971,387
2004	2,329,783
2005	3,180,050
2006	3,488,361
2007	3,938,111
2008	4,608,353
2009	5,179,032
2010	5,793,032
2011	6,142,280

**August 5, 2013**

**Free Online Higher Education: 5 Best MOOCs**  
By **Kannan Sankaran, Epoch Times**  
<http://www.theepochtimes.com/n3/229549-5-best-mooc-for-free-online-higher-education/>

**MOOC at UPenn; Recession Fuels Explosion of Online Learning**  
<http://www.youtube.com/watch?v=52rFm40ISw>

**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)**

**OOPS** OOPS  
OOPS! OpenSource OpenCourseware Prototype System  
The Foundation of Fantasy Culture and Arts

**OOPS** OOPS  
OpenSource OpenCourseware Prototype System  
開放式課程計劃  
www.oops.net  
www.ocw.net

**Saylor.org**  
<http://www.saylor.org/>  
**RedHoop**  
<http://redhoop.org/>

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

Badges and other alternative certifications

Some sample badges:

How Will Mozilla's Open Badges Project Affect Higher Ed? by Audrey Walters, Hack [Higher] Education - Inside Higher Ed

The Open Badges Project is a recognition that "learning looks very different today than traditionally imagined. Legitimate and interest-driven learning occurring through a multitude of channels outside of formal education, and yet much of that learning does not "count" in today's world. There is to demonstrate that learning and transfer it across contexts or use it for real results," Mozilla's Eric Knight told me in an interview for *Inside Higher Ed*.

**April and May 2013**  
**Major Players in the MOOC Universe,**  
**Chronicle of Higher Education, Jake New**  
<http://chronicle.com/article/Major-Players-in-the-MOOC/138817/>

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

<http://www.deadseascrolls.org/#!/explore-the-archive>  
[http://www.deadseascrolls.org/#!/explore-the-archive/search?site\\_en:Qumran\\_Cave\\_4](http://www.deadseascrolls.org/#!/explore-the-archive/search?site_en:Qumran_Cave_4)  
<http://www.deadseascrolls.org/#!/home>

**Online Encyclopedias**  
**(e.g, the Encyclopedia of Earth:**  
<http://www.eoearth.org/>  
[http://en.wikipedia.org/wiki/Encyclopedia\\_of\\_Earth](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=5mp/r12KJULC0jsgdA>

**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)**



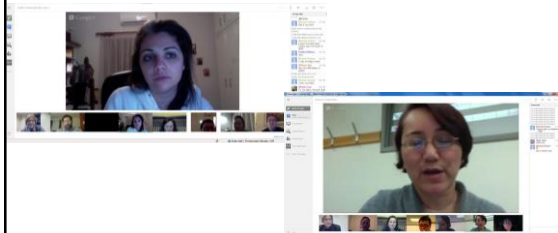
**Opener #7. Electronic Collaboration and Interaction (synchronous & asynchronous)**  
**Soliya Connect**  
<http://gli.georgetown.edu/#soliya>



**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/p4bytsoromh/>)



### A Story from the spring of 1995

#### Combining Asynchronous and Synchronous Events (flipping classes)

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

### 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; 2011, January 15).

<http://www.youtube.com/watch?v=KD9NGAV3-3k> (4:26 minutes)

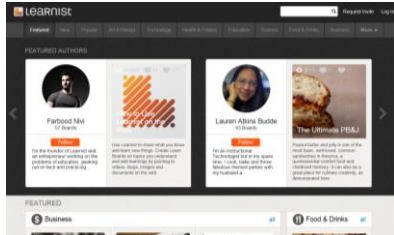


### Judy Brown, Keynote talk, "Learning in Hand With Mobile Technology," Wisconsin Distance Teaching and Learning Conference, August 10, 2012

**Putting Global Mobile in Context**

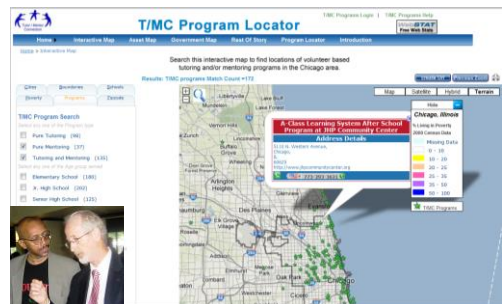
Country	Population in Billions	% Population with Mobile Phone Access
China	1.3	~10%
India	1.1	~10%
USA	0.3	~100%
UK	0.06	~100%
Japan	0.13	~100%
Germany	0.08	~100%
France	0.07	~100%
Italy	0.06	~100%
Spain	0.05	~100%
Canada	0.03	~100%
South Korea	0.01	~100%
Sweden	0.01	~100%
Denmark	0.01	~100%
Norway	0.01	~100%
Finland	0.01	~100%
Australia	0.02	~100%
New Zealand	0.005	~100%

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



## June 3, 2012 Tutor/Mentor Connection (Chicago)

<http://www.tutormentorprogramlocator.net/InteractiveMap.aspx>



## Video Walls of Experts (IQ Wall) Indiana University unveils high-tech classroom The Herald-Times, May 22, 2013, Mike Leonard

<http://www.indianaeconomicdigest.net/main.asp?sectionID=318&subSectionID=138&picID=69980>

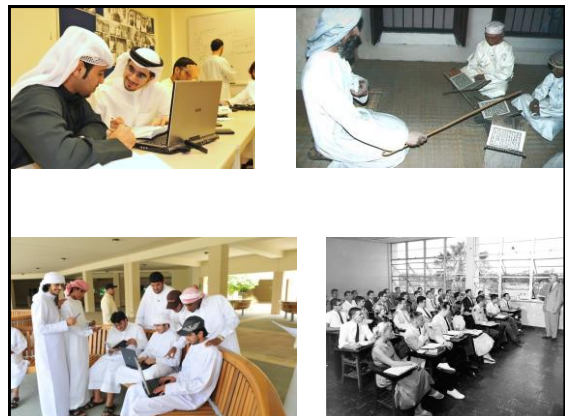


## December 16, 2010 Introducing Word Lens

<http://www.youtube.com/watch?v=h2OfQYrHRs>



## What about the Instructor in the Open World?



## 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](http://TrainingShare.com)  
Papers: [PublicationShare.com](http://PublicationShare.com)  
Book: <http://worldisopen.com/>

WE

ALL

LEARN!!!



OOPS  
Open Source Openness Openness Openness  
開放式課程計劃