Learning is Changing:
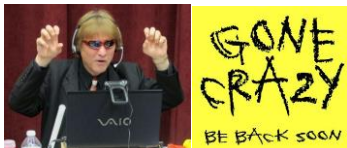### MOOCs, The Open World, and Beyond

Curtis J. Bonk,
Professor, Indiana University
cjbonk@indiana.edu
http://mypage.iu.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)
The First University Correspondence Course
(University of London, External Program, 1858)
1728-1990s – Generally postal system based
1930s – phonograph and radio
1950s and 1960s – television
1970s and 1980s – VHS tapes
1980s and 1990s – DVD

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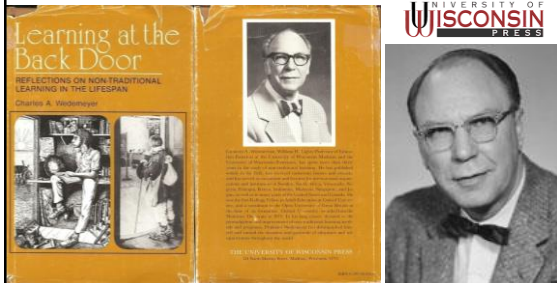http://www.eschoolnews.com/2013/05/10/10-ed-tech-tools-of-the-70s-80s-and-90s/print/

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."

Audience Poll #2:
I. Who remembers what they were doing on 911?
II. Who remembers what they were doing on April 4, 2001?

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."

Part I. Learning is Changing
New Technologies = New Delivery Methods…
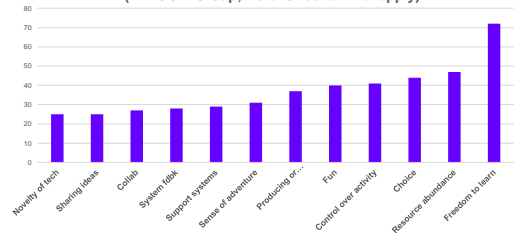
I. Learning is More Open
(80-Year-Old WGU Texas Grad Keeps His Promise, November 30, 2012, Reeve Hamilton, Texas Tribune)

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

The Digital Campus

Open Education's Wide World of Possibilities

Factors leading to success or personal change?

Factors Leading to Success or Personal Change When Exploring Online
(MIT OCW Group; Note: Check all that apply)

Categories (left to right): Novelty of tech, Sharing ideas, Collab, System fdbk, Support systems, Sense of adventure, Producing or..., Fun, Control over activity, Choice, Resource abundance, Freedom to learn

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MIT Data (example #1):
Self-Taught on Social Media
(21-30 year old unemployed female, North America)

At first my purpose was to fulfill boredom …**After graduating with a MS, I was faced with unemployment**. I took the opportunity to read blogs, watch Youtube videos, and more to learn about blogging and social media. Since than I have become well versed in social media and other business topics and started a business… **I decided not to pursue a PHD because I am learning a more rapid pace.** Instead of spending 5 years in school, I can be flexible and work on what I am learning.

MIT Data (example #2):
Prepares to Reenter University
(41-50 year old male, Middle East)

Most interesting experience of my own was my use of MIT OCW to refresh on Calculus. I purchased the textbook and followed one of several calculus options on the site. **This was quite successful in re-introducing Calculus, as a prep to re-entering college 28 years after graduation - this time to study for a Master's.**

MIT Data (example #3):
Retiree Develops New Hobby
(70+ year old female, North America)

I'm am avid photographer and have developed skills for developing my own website for display of my photography and books I have written that include my photographs…I've had multiple careers, from science, to public administration, and information technology. The development of my art is a new and exciting experience.

Life Changing Example #4

It has made my job much easier and it's been easier for me to execute certain tasks, **making me more willing to take on bigger challenges.** It was also shown me how enjoyable it is to learn a computer language. It opened my mind to considering possibilities in this area. It also **made my husband respect my ability** around computers a bit more.

Life Changing Example #5

My life has changed in a big way. **I used these new skills to create a small business** that supplements my income. I couldn't use this income soley to support myself, but it does pay some bills.


The World is very open!
(In Chulalongkorn Univ, March 10, 2014)

II. Learning also is More Collaborative
Collaboration and Discussion in Google Hangouts or with iPad, Jan. 28, 2013
(Carrie Gong from Beijing Normal University)
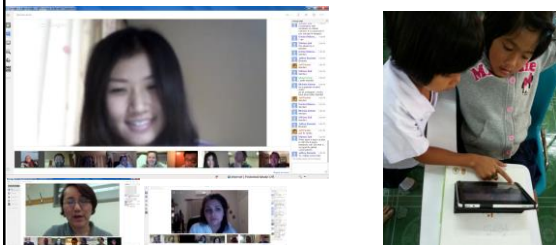
III. Learning is More Mobile
Brown, Keynote talk, "Learning in Hand With Mobile Technology," Wisconsin Distance Teaching and Learning Conference, August 10, 2012
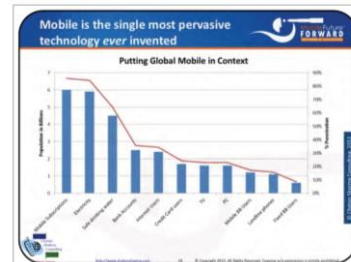
IV. Learning is More Video-Based
Adora Svitak, WFP Youth Representative - 2013 ECOSOC Youth Forum, March 27, 2013
"Shaping tomorrow's innovators: Leveraging science, technology, innovation and culture for today's youth", Statement by the World Food Programme Youth Representative, Ms. Adora Svitak at 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
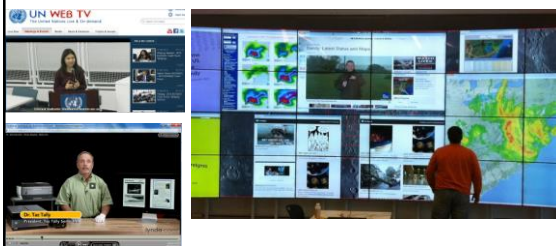
V. Learning is More Social
Facebook reaches one billion users, CNN Money, Aaron Smith, October 4, 2012

4
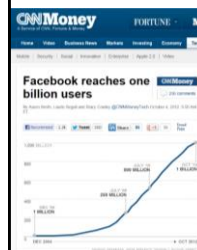
VI. Learning is More Personal
iPotty Aims To Entertain Toddlers During Toilet Training, Mashable, Kate Freeman (January 10, 2013)
http://mashable.com/2013/01/10/ipotty/

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 Ubiquitous
Flexible displays bend what's possible for computers, Jon Swartz, USA Today (May 4, 2012)
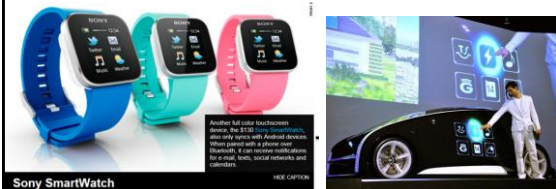
X. Learning is More Instantaneous
April 9, 2013
HER Computer fashions face social test: Can wearable computers fit in? Scott Martin, USA Today
http://www.usatoday.com/story/tech/2013/04/06/google-apple-iwatch-glass-jawbone-iphone-nike-microsoft-samsung/1979419/
(i.e., magnify moles or injuries, see vital 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
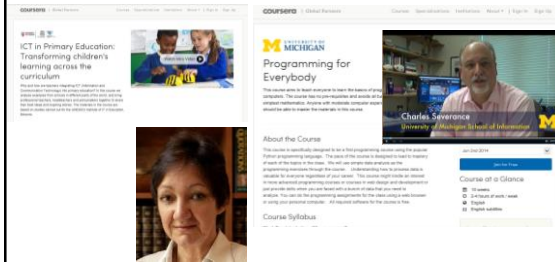

XI. Learning is More Global
UC Irvine (2013 report)
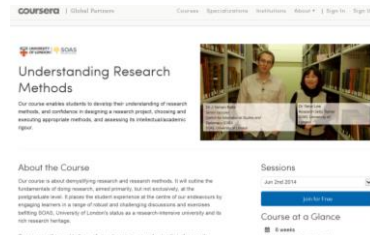Example 3: Fundamentals of Japanese
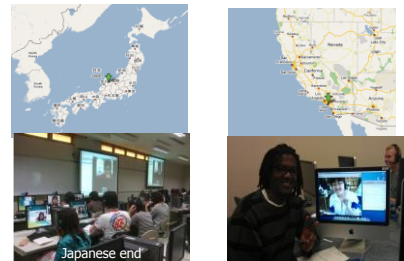
XII. Learning is More Massive
(Sample Courses below May/June 2014)

Need more Summer PD?
June 2, 2014
**Understanding Research Methods,
Coursera, University of London**
https://www.coursera.org/course/researchmethods

XIII. Learning is More Technology-Based

IXV. Learning is More Flipped
**One Man, One Computer, 10 Million Students:
How Khan Academy Is Reinventing Education,**
Forbes, November 19, 2013, Michael Noer
http://www.forbes.com/sites/michaelnoer/2012/11/02/one-man-one-computer-10-million-students-how-khan-academy-is-reinventing-education/
The One World Schoolhouse (Twelve, Oct. 2, 2012)
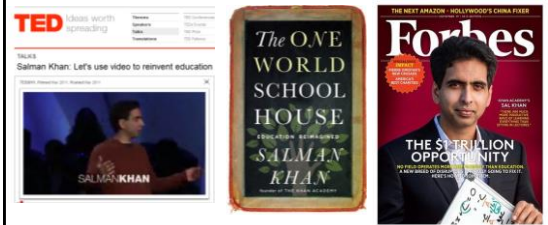
January 2014
XV. Learning is More Online
**Grade Change: Tracking Online Education in the
United States, 2013,** The Sloan Consortium, I. Elaine Allen & Jeff Seaman,
2013 Survey of Online Learning Report and 2014 data from Indiana University
http://sloanconsortium.org/publications/survey/grade-change-2013
Direct connect: http://www.onlinelearningsurvey.com/reports/gradechange.pdf

Let's Review:
Learning is Changing...
**(i.e., it's more informal, video-based,
ubiquitous, collaborative, self-directed,
global, mobile, open, massive, etc.)**

Frank Basile, an aircraft technician, took an MITx course on circuits and electronics to increase his knowledge.

Joe Alfonso, a financial adviser from Oregon, is taking the online finance course as a "refresher."

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

September 2013
Google Wi-Fi from the Sky,
Steven Levy, pp. 126-131, Wired
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.

March 30, 2014
All Things Drones, CNN
Facebook unveils technology to bring the internet to everyone. CNN's Ralitsa Vassileva reports.)
http://www.cnn.com/video/data/2.0/video/tech/2014/03/30/vassileva-facebook-drones.cnn.html

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The Web of Learning
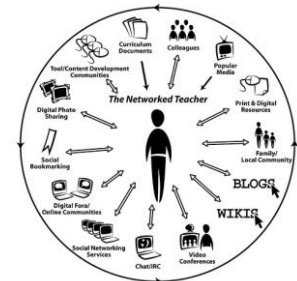
We are entering a jumping off point...

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!!!

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

Opener #2. E-Learning and Blended Learning

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.org/

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

Opener #5. Online Learning Object Repositories and Portals (shared content)
April 23, 2014
Shakespeare's Dictionary? Skepticism Abounds, Chronicle of Higher Education, Jennifer Howard
http://shakespearesbeehive.com/barets-alvearie
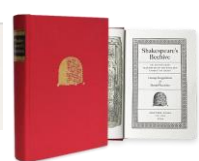
Speaking of OER...
Introducing the (FREE)
"TEC-VARIETY book...(May, 2014)
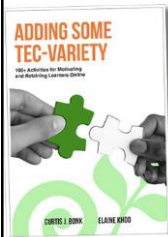
Opener #6. **Learner Participation in Open Information Communities**
(e.g., Wikipedia, YouTube, Scribd)
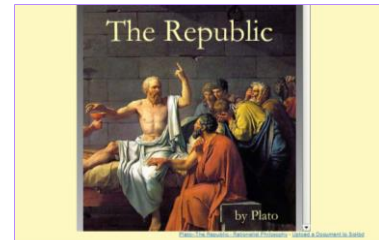
Opener #7. **Electronic Collaboration and Interaction**
(synchronous & asynchronous)
March 26, 2014, By Stephen Noonoo, THE Journal

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, iPads, smart watches, mobile MOOCs (May 5, 2014))
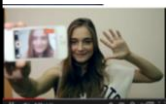
Opener #10. **Networks of Personalized Learning**
(Blogs, Podcasts, Facebook, and RSS feeds, etc.)

Audience Poll #3:
Have you taught a MOOC? (Yes, No)
Have you ever taken a MOOC? (Yes, No)
Have you ever browsed a MOOC? (Yes, No)

Mystery of MOOCs:
Part II. Some MOOC news from the past year...

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 2013 and February 2013
MOOCs @ Edinburgh 2013— Report #1
Duke Bioelectricity
http://dukespace.lib.duke.edu/dspace/bitstream/handle/10161/6216/Duke_Bioelectricity_MOOC_Fall2012.pdf

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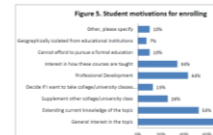
June 19, 2013
2013 was "The Year of the Anti-MOOC"
George Siemens, UW-Madison Summit
http://globalhighered.wordpress.com/european-moocs-in-global-context/

July 16, 2013
"Golden Era of Learning"
Bill Gates Discusses MOOCs at Microsoft Research's Faculty Summit
http://chronicle.com/article/A-Conversation-With-Bill-Gates/132591/?cid=at&utm_source=at&utm_medium=en

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

September 16, 2013
Rwandan Degree Program Aims for a 'University in a Box', Chronicle of Higher Education, Megan O'Neil
http://chronicle.com/article/Rwandan-Degree-Program-Aims/141631/

Students attend an orientation session at Kepler, a new hybrid program in Kigali, Rwanda, which will use MOOCs and classroom time to help students earn competency-based associate degrees.

October 31, 2013
The launch of OERu: Towards free learning opportunities for all students worldwide, BC Campus (Canada)
http://bccampus.ca/2013/10/31/the-launch-of-oeru-towards-free-learning-opportunities-for-all-students-worldwide/

January 21, 2014
MITx Working Papers (research on MOOCs)
http://odl.mit.edu/mitx-working-papers/

April 27, 2014
Coursera, Global Translator Community,
Chronicle of Higher Education
https://www.coursera.org/about/translate

April 30, 2014
Coursera Learning Hubs
https://www.coursera.org/about/programs/learningHubs

Audience Poll #4:
Why would you take a MOOC?
A = For fun
B = To get credit
C = To learn something new
D = Curious about it
E = See if you like a topic

May 28, 2014
Alexander the MOOC Lands
Inside Higher Education, Guy M. Rogers
http://www.insidehighered.com/blogs/higher-ed-beta/alexander-mooc-lands#sthash.tUAXiSX7.dpbs

"Inspiring engagement, passion, and a love of learning are of course harder outcomes to measure...Without any prompting from EdX or WellesleyX students also decided to form ongoing Alexander study groups, requested more history courses like the Alexander course, and asked if we could organize a study tour overseas to follow in the footsteps of Alexander the Great. We also received many unsolicited letters from students telling us how much our course had inspired them."

But who's taking these MOOCs?
February 20, 2014
Harvard and MIT Release Visualization Tools for Trove of MOOC Data,
Lawrence Biemiller, Chronicle of Higher Education
http://chronicle.com/blogs/wiredcampus/harvard-and-mit-release-visualization-tools-for-trove-of-mooc-data/50635?cid=pm&utm_source=pm&utm_medium=en

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May 18, 2014
Harvard goes all in for online courses
The Boston Globe, by Marcella Bombardieri
https://www.bostonglobe.com/metro/2014/05/17/behind-harvard-explosion-online-classes-flurry-lights-camera-action/8ybPhkyfX59D5a7icmHzSM/story.html

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At what age? (February 2014)
HarvardX (visualization tools)
8. World map of age composition
http://harvardx.harvard.edu/harvardx-insights

What about gender? (February 2014)
HarvardX (visualization tools)
4. World map of gender composition
http://harvardx.harvard.edu/harvardx-insights

What about their level of education?
MIT Office of Digital Learning
http://odl.mit.edu/mitx-insights/world-map-education-composition/
All MITx Offerings (All Time)
Estimated Worldwide Completed Education Level
as of **February 10, 2014**

April 21, 2014
The Revolution Is Not Being MOOC-ized, Students are educated, employed, and male.
Gayle Christensen and Brandon Alcorn, UPenn, New Scientist
http://www.slate.com/articles/health_and_science/new_scientist/2014/03/mooc_survey_students_of_free_online_courses_are_educated_employed_and_male.html

Filipino youths go online at an Internet café in Manila on Feb. 18, 2014. Two-thirds of Coursera participants come from the developed world, according to a new report.

Do they finish?
MIT Office of Digital Learning
http://odl.mit.edu/mitx-insights/world-map-certificate-attainment/
All MITx Offerings (All Time)
Estimated Certificate Attainment
as of **February 10, 2014**

June 13, 2014
8 Things You Should Know About MOOCs
Chronicle of Higher Education, By Jonah Newman and Soo Oh
http://chronicle.com/article/MOOCs-EdX/146901/

May 31, 2014
Revolutionizing online education
Professor creates courses tailored to cultural differences,
Korea JoongAng Daily, KIM BONG-MOON [bongmoon@joongang.co.kr]
http://koreajoongangdaily.joins.com/news/article/article.aspx?aid=2989930&cloc=joongangdaily%7Chome%7Cnewslist1

Professor Auh Yoon-il of Kyung Hee Cyber University explains the upcoming Kyung Hee MOOC 2.0 in an interview with the Korea JoongAng Daily at Kyung Hee University on Wednesday. ("one culture" or ocMOOCs and hMOOCs)

June 2014
MOOC Research (and video interviews)
Gates Foundation
http://www.moocresearch.com/report

June 12, 2014
Will a degree made up of Moocs ever be worth the paper it's written on?
The University of the People can now hand out degrees to its online students – but will employers take them seriously?, Louise Tickle The Guardian
http://www.theguardian.com/higher-education-network/blog/2014/jun/12/moocs-viable-alternative-traditional-degree

Moocs can offer a lot, but they don't offer the feedback of a traditional degree.

Mystery of MOOCs:
Part II. Some MOOC Leadership Principles

MOOCs and Open Education Around the Word
By Bonk, Lee, Reeves, & Reynolds

Leadership Principle #1: Be First!
June 21, 2011 and August 2, 2011
Stanford U. Offers Free Online Course in Artificial Intelligence (over 160,000 enroll, 23,000 complete, and 238 perfect scores; http://www.ai-class.com/)

Leadership Principle #2: Take Risks
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

MOOC Leadership Principle #3:
Rethink Delivery, Assessment, Certification, Students, etc.
Guess what! You just got into MIT! (Feb 15, 2012)
http://www.marketplace.org/shows/marketplace-tech-report

MOOC Leadership Principle #4:
Form Strategic Relationships
April 18 and Sept 19, 2012: Coursera
(https://www.coursera.org/)

14

Coursera List of Courses
National Taiwan University
https://www.coursera.org/taiwan

December 13, 2012
UK universities in online launch to challenge US, BBC News, Sean Coughlan
http://www.bbc.co.uk/news/education-20697392

The Open University's Martin Bean says UK universities cannot "stick their head in the sand"

MOOC Leadership Principle #5:
Collect Testimonials
June 11, 2012
http://chronicle.com/article/4-Professors-Discuss-Teaching/132125/

MOOC Leadership Principle #6:
Do Not Make Rash Decisions
July 17, 2012
http://chronicle.com/article/After-Leadership-Crisis-Fueled/132917/

Mystery of MOOCs:
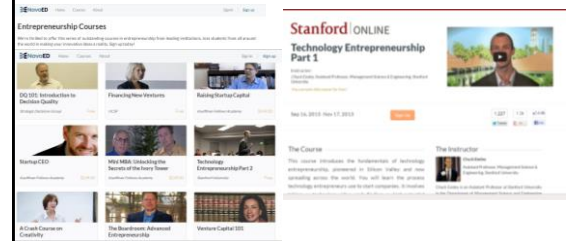### Part III. Types of MOOCs

MOOC Type #1.
Theory- or Trend-Driven MOOC
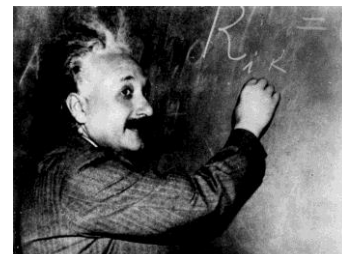
MOOC Type #2.
Remedial Course MOOC

MOOC Type 3.
Professional Development (PD) (practical) MOOC

Mystery of MOOCs:
Part IV. Sample MOOC Business Plans and Models

MOOC Business Model #1.
Advertisers Underwrite Courses and Degrees

MOOC Business Model #2.
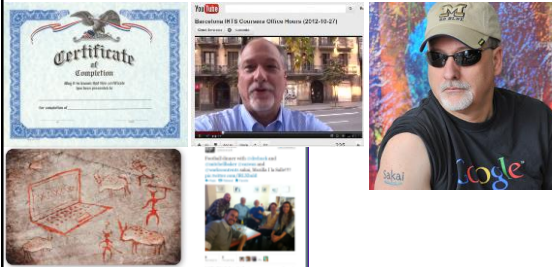### Small and Flexible Application or Enrollment Fee
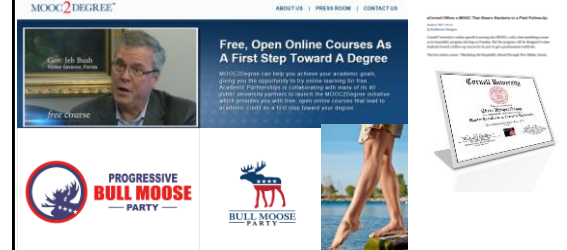

MOOC Business Model #3.
Course Assessment Fee

MOOC Business Model #4.
Certificate Fee (with sticker)
https://twitter.com/drchuck/status/262423228717355009/photo/1

MOOC Business Model #5.
Free Entryway Course

Mystery of MOOCs:
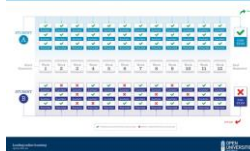**Part V. Ten MOOC Instructor Guidelines**

MOOC Instructor Guide #1.
Plan and Prepare
October 12, 2012
Radical rethink: how to design university courses in the online age, Paul, Wappett, The Conversation, Australia
http://theconversation.edu.au/radical-rethink-how-to-design-university-courses-in-the-online-age-9727

MOOC Guide #2.
Designate Feedback Providers and Tasks (especially in Week One)

MOOC Guide #3.
Use Peer, Machine, Volunteer, and Self-Assessment

MOOC Guide #4.
Personalize Where Possible
Chuck Severance (U Michigan/Coursera) in Barcelona, Seoul, Manila, Melbourne, etc.
http://www.youtube.com/watch?v=JzNHvmSv8TI

MOOC Guide #5.
Form Groups and Social Supports

MOOC Guide #6.
Share Resources and Recap them Weekly

Audience Poll #4:
Would you like to teach or take a MOOC now?
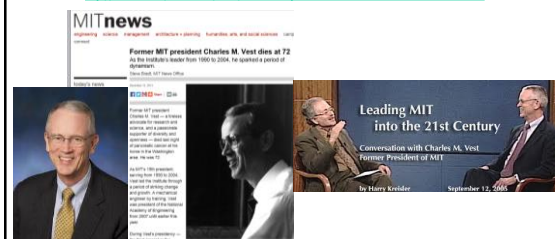**A. Yes…**
B. No…

December 13, 2013
Former MIT president Charles M. Vest dies at 72
As the Institute's leader from 1990 to 2004, he sparked a period of dynamism.
Steve Bradt, MIT News Office
http://web.mit.edu/newsoffice/2013/former-mit-president-charles-m-vest-dies-at-72-1213.html

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Dr. Curt Bonk – CJBonk@Indiana.edu