Stepping Into Life Change:
A New Measure of the Impact of MOOCs and Open Education

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Instructional Systems Technology Dept.
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Department of Curriculum and Instruction
University of Houston

Audience Poll #1:
I. Who remembers what they were doing on 911?
II. Who remembers what they were doing on 441 (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."

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

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

Learn anything from anyone, anywhere.

Learning is Changing
New Technologies = New Delivery Methods…

Prehistoric Googling

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

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Starts June 2, 2014 (in Coursera)
Programming for Everyone
Chuck Severance, University of Michigan
https://www.coursera.org/course/pythonlearn

Understanding Research Methods
University of London, June 2, 2014-July 14, 2014
https://www.coursera.org/course/researchmethods

June 18, 2014
Free, Open Online Course for K-12 Educators, October 2014
(Oregon State University and Stanford)
http://ecampus.oregonstate.edu/open/english-language-learners/?utm_source=ecampus&utm_medium=all&utm_campaign=open-ell

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June 17, 2014
Open Education Database
(built by volunteers)
http://oedb.org/open/

May 5, 2014
Mobile MOOCs: New platform challenges conventional MOOCs
eCampus News
http://www.ecampusnews.com/top-news/new-platform-challenges-conventional-moocs/print/

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/

The launch of OERu: Towards free learning opportunities for all students worldwide

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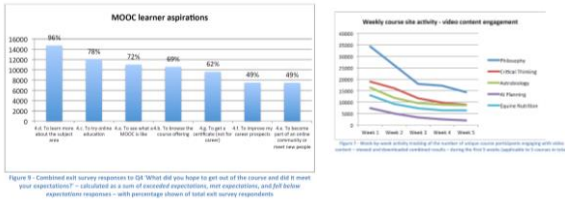http://chronicle.com/article/Rwandan-Degree-Program-Aims/141631/

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.

But there are problems...!

May 2013
1. Dropout (i.e., retention) Concerns
MOOCs @ Edinburgh 2013– Report #1

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

THE CHRONICLE OF HIGHER EDUCATION

5. Nearly half of registrants never engage with any of the content

Courses are broken into anywhere from 11 to 48 chapters, but few students look at them all. Only 3 percent of participants look at every chapter, and fewer than one in 10 view even half of the material.

In fact, of those who viewed any course material, half looked at 11 percent of the course chapters or less.
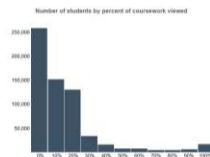
April 17, 2014
3. Issues of Age, Gender, and Course Type
Infographic: Global MOOC statistics
eCampus News, Meris Stansbury
http://www.ecampusnews.com/research/infographic-moocs-global-436/
Inforgraphic: https://magic.piktochart.com/output/1747660-moocs

February 20, 2014
4. Issues of Impact and Elitism
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/50631?cid=pm&utm_source=pm&utm_medium=en

April 21, 2014
Not Impacting the Underprivileged
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/2014/02/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.

June 12, 2014
5. Assessment and Credentialing Issues
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.

April 30, 2014
6. Lack of Feedback and Human Contact
New Learning Hubs Locations Hosted by The New York Public Library and Seven Other Int'l Partners, Coursera Learning Hubs
https://www.coursera.org/about/programs/learningHubs
http://blog.coursera.org/post/84322385012/new-learning-hubs-locations-hosted-by-the-new-york

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

May 31, 2014
ocMOOCs and hMOOCs
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)

January 27, 2014: Maybe it is not so open!
8. Complete Shutdown or Lock-out
Coursera Support Center, Why is my country blocked?
http://help.coursera.org/customer/portal/articles/1425714-why-is-my-country-blocked-
Online education platform Coursera blocks students in Syria and Iran, Wamba, Nina Curley (Syria restored but not Cuba, Iran, Sudan, and Syria)

On the other hand... There is life change
April 9, 2014
"MOOCs and how they will change the world,"
blog post by Noelle Acheson
http://alt-ctrl-esc.com/2014/04/09/moocs-and-how-they-will-change-the-world/

"The biggest impact will be universal access to all human knowledge."
Hal Varian,
Chief Economist at Google

Example #1. 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. **MOOCs can inspire students all over the world and change their lives too."** (Guy MacLean Rogers is Kemper Professor of Classics and History at Wellesley College.)

Example #2: June 15, 2014
Starbucks offers workers 2 years of free college, CNN Money, Gregory Wallace
(from Arizona State online programs)
http://money.cnn.com/2014/06/15/news/economy/starbucks-schultz-education/index.html?hpt=hp_t2
http://www.nytimes.com/2014/06/16/us/starbucks-to-provide-free-college-education-to-thousands-of-workers.html

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Example #3: June 16, 2014
Metra Mehran is a college student in Political Science and Public Administration in Afghanistan.
Afghanistan Student Keynote, by Elliott Masie
Learning 2014, October 26-29, 2014
http://www.learning2014.com/blog/item/afghanistan-student
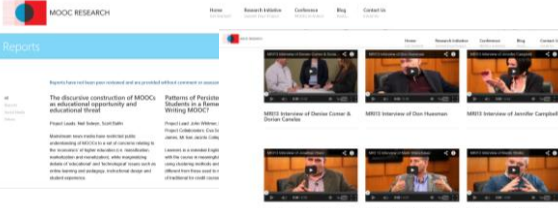
We are honored to announce an exciting keynote speaker at Learning 2014, Metra Mehran, a college student from Afghanistan. Metra will be flying to Orlando in October with her mother, to present a perspective about the role that digital education has played in her life - as it opened up the door to her furthering her education. Previously, access to education was often restricted for female students.

June 14, 2014
What we need are learner voices and video interviews (not just researchers)
MOOC Research (and video interviews)
http://www.moocresearch.com/report

Research Study #1: MIT OpenCourseWare (OCW)
http://ocw.mit.edu/index.htm

MIT OCW Study

- **E-newsletter subscription 156,000 people**
  - **1,429 completed surveys**
    - ◆ **613 completed open ended items**
  - **50% over age 40**
  - **76% males**
  - **North America (44 percent); Asia (23 percent); Europe (14 percent); South America (10 percent); Middle East (3 percent); Oz (2 percent).**
    - ◆ **Top countries in the MIT OCW subscriber list were the United States, India, China, Brazil, Nigeria, Pakistan, Iran, Canada, the UK, Taiwan, Indonesia, Mexico, and Egypt.**

Reasons to explore?

Main Reason Explore the Web Informally to Learn
(MIT OCW Group; Note: Check all that apply)
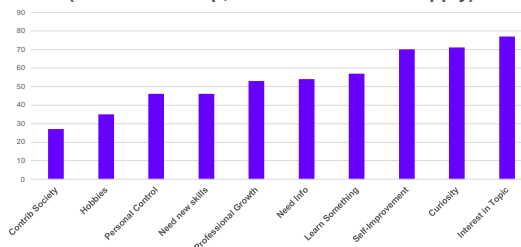
Skills hoping to acquire?

Skills Would Like to Learn Online Informally
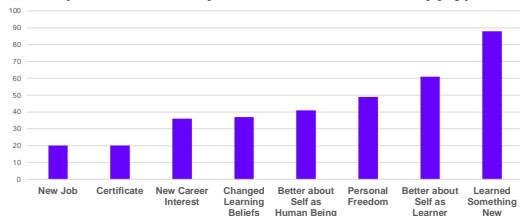**(MIT OCW Group; Note: Check all that apply)**
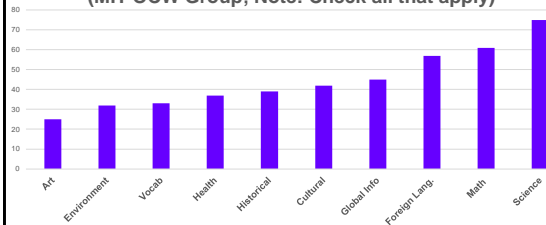
Hoping to achieve?

Like to Achieve from Learning Informally Online
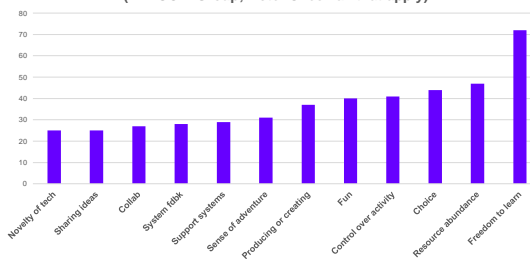**(MIT OCW Group; Note: Check all that apply)**
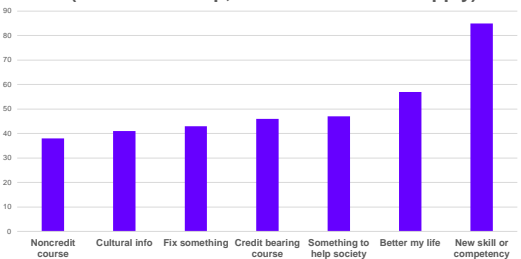
Actual achievements?

Achievements from Informal Online Learning Pursuits
(MIT OCW Group; Note: Check all that apply)

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)

Qualitative Analyses

- A 43-item survey of 1,429 newsletter subscribers of the MIT OpenCourseWare (OCW) initiative
- Culture and identity of MOOC learners
- Mixed methods with a group of researchers (Lee, M., Bonk, C., Sheu, F-R, & Kou, X, 2013)
- NVivo vs. Manual analysis on 25 open-ended items

MOOC Learners

- Strong intrinsic motivation: "my own pleasure"
- Emphasis on autonomy: "nobody helped me"
- Love for creation and sharing
- Membership of community with people of similar interests

NVivo vs. Manual analysis

1. Importance of understanding the complexities behind individual experiences.
2. Challenges with big data.
3. Need for multiple perspectives and methods in data analysis.

Complex Manifestation of Values

Example 1: "Assessment, Certificates and Job improvement"
1. Doing better in the current job.
2. Changing/Getting a job.
3. Seeking promotion within the job.

Obstacles and Challenges?

Understanding the Complexity of MOOCs
(and Informal) Learners

Understanding the data

- Open-ended questions
  - Personal experiences with informal learning
  - "Life changes" small and big
  - Help from others
  - Obstacles and challenges
  - Technology
  - Advice for potential MOOC participants

Data analysis

Challenges
- Possible overlaps between the open-ended questions
- Connected responses across the questions

Analysis Decision
- Analyzing by participant and not by question
- Treating as 764 (BB: 159, MIT: 605) short "interviews"

Findings

- **Need to understand heterogeneity of MOOCs participants and complexity behind their motives for participation**
  - Shared values: Sense of purpose, importance of control, pride as a self-motivated, autonomous learner.
  - Diverse ways of pursuing the values: manifested in contradicting ways (i.e. about assessment, certifications)

Shared Values

- Sense of Purpose
- Importance of control (i.e., time and content)
- Pride as self-motivated, autonomous learners
- Learning as fun
- Sharing knowledge
- Sense of confidence and empowerment through peer recognition

Complex manifestation of values

(**Example 1**)
Assessment, Certificates and Job improvement

1. Doing better in the current job---freedom to choose with no evaluation and no certificates.
2. Changing/Getting a job--- new skills on one's own time and pace with some form of assessment.
3. Seeking promotion within the job---preference for assessment, certificates that could be legitimately recognized by the employer.

Complex manifestation of values

(More examples)
- Valuing freedom to choose but also wanting more evaluation and structure to help make that choice
- Seeking "formal support" in "informal learning"
- Learning "just for the sake of learning" but wanting peer recognition

Implications and moving forward

- **Possibilities for new systems of classification**
  - Participant goals
  - Tangible outcomes vs. Affective outcomes
  - Legitimate Peripheral Participation vs. Full participation
- **Issues of "designing" informal learning environment or MOOCs**
- **Identifying better ways to reach those who are not self-motivated learners**

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.

Blackboard MOOC and Open Education Study

Blackboard MOOC Sample

- **Survey notice sent to 3,800 MOOC participants**
- **159 completed surveys**
  - ◆ **49 completed open ended items**
  - ● 72% over age 40
  - ● 73% females
  - ● North America (81 percent); Asia (2 percent); Europe (6 percent); South America (1 percent); Middle East (2 percent); Australia/NZ (7 percent); Africa (1 percent)
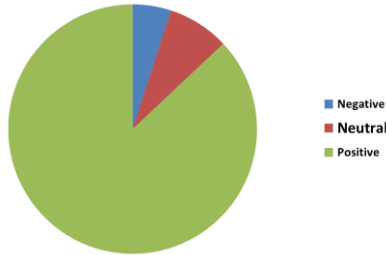
Blackboard Data
Figure 3. Specific skills wanting to learn informally online
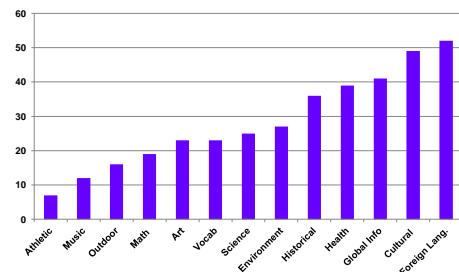
Experience life change?
(0 = not at all; 5 = moderately; 10 = significantly)
Has your life changed from informal learning on the Web?

- Negative
- Neutral
- Positive

Goals and Motivations
(Blackboard MOOC)

- **Improve their job prospects**
- **Pursue personal interests or hobbies**
- **Seeking certification of some type**
- **Information seeking**
- **Means to expand one's formal learning**

Life Changing Example #1

Yes. I plan to focus my Ph.D. research on alternative forms of learning (informal DIY) and credit (like open badges) and the changes higher ed and employers will have to make to accept these forms of credit.

Life Changing Example #2

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 #3

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.

Information Seekers (DIYers): Personal Identity

"Today, we were trying to install a pool filter--we got instructions off You Tube. I also just bought a recumbent exercise bike--I looked at online reviews before making a choice." She then added, "Knowing that I did not need to ask an actual person for help was life changing. I am an introvert by nature, and I prefer to figure things on my own. Knowing that I can research informally on the Web is reassuring."

Joining a Learning Community

"My key moment came when I discovered a **community of like-minded scholars** from around the world. **I no longer felt isolated or disconnected.** This has become my most valuable support network and I am grateful."

Seeking Relevance

"I almost always listen to podcasts or .mp3 audio books, etc. when biking. After one session of learning some Korean language on a bike I was on my way home and chose to stop into a store for some take-out food. The conversation was almost identical to the lesson I had just learned."

Informal Learner Characteristics: Self-Reliant

"Knowing that I did not need to ask an actual person for help was **life changing**. I am an introvert by nature, and I prefer to figure out things on my own. Knowing that I can research informally on the Web is reassuring."
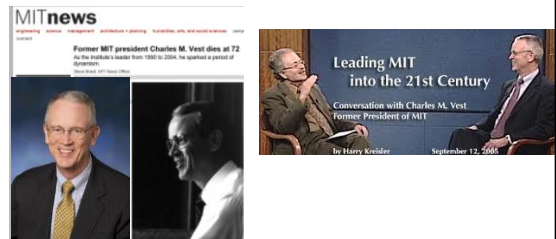
Extrovert vs Introvert
Which one are you?

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

MITnews

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

Leading MIT into the 21st Century
Conversation with Charles M. Vest
Former President of MIT
by Harry Kreisler   September 12, 2005

Any Questions or Comments?

Slides at: TrainingShare.com
Free Book: http://tec-variety.com/
Email: cjbonk@Indiana.edu
Email: mlee@Central.UH.EDU