

MOOC and Open Education Around the World: Recent News and Research Clues

Curt Bonk, Indiana University
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The Evolution of E-Learning (All 7 year cycles)



Phase I, 1994:
THE AGE OF
PORTALS AND
PAGES (NETSCAPE
GOES PUBLIC).



Phase II, 2001:
THE AGE OF
OPENNESS
(MIT OCW &
WIKIPEDIA BORN).



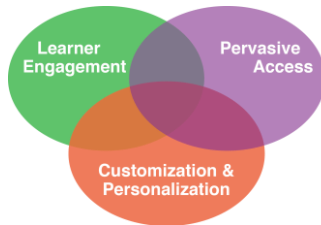
Phase III, 2008:
THE AGE OF
MOOCs (FIRST
MOOC OFFERED).



Phase IV, 2015
THE AGE OF
PERSONALIZATION.

Other prior significant
e-learning dates: 1985: FIRST ONLINE COURSE, LINDA HARASIM, UNIV. OF TORONTO
1987: HYPERCARD FIRST SHIPPED.

30+ Ways Learning is Changing: The Mega Trends



How Learning is Changing: Mega Trend #1. Learner Engagement



Mobile MOOCs (e.g., mobile courses on smartphone)



June 10, 2015

Augmented reality promises 'superpowers', and
people are listening

The USA Today, Marco della Cava

<http://www.usatoday.com/story/tech/2015/06/10/10-ways-people-are-listening-to-augmented-reality/2842861/>

Microsoft HoloLens: <https://www.youtube.com/watch?v=AThC8PyaA>



Letsee is an AR app from a South Korean consumer to scan a product and see reviews instantly overlaid on top.

June 3, 2016

Virtual Reality Lets Med Students Experience What It's Like To Be 74

Elyse Wanshel, Huffington Post

<http://ht.ly/bSpe300XEPJ>

Virtual reality tested by NFL as tool to confront racism, sexism
Marco della Cava, USA Today

<http://www.usatoday.com/story/tech/news/2016/04/08/virtual-reality-tested-tool-confront-racism-sexism/82674406/>

Virtual Reality Lets Med Students Experience What It's Like To Be 74

Virtual reality lets med students experience what it's like to be 74.



I don't remember what I'm supposed to do



How Learning is Changing: Mega Trend #2. Pervasive Access



February 24, 2016 MIT OpenCourseWare

<http://ocw.mit.edu/about/15-years/>



May 4, 2016 (Access) This Mongolian Teenager Aced a MOOC

Now He Wants to Widen Their Impact

(140,000 people take the MIT MOOC on Circuits and Electronics, 1 of 300 to get a perfect score)

The Chronicle of Higher Education, Jeffrey R. Young

<http://chronicle.com/article/This-Mongolian-Teenager-Aced-a-MOOC/236362>

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TECHNOLOGY
This Mongolian Teenager Aced a MOOC.
Now He Wants to Widen Their Impact.

By Jeffrey R. Young May 04, 2016



This is the latest episode of our new podcast series on the future of higher education. You can subscribe to iTunes to get prior and future episodes.

How Learning is Changing: Mega Trend #3. Customization



August 1, 2016 (Customization)

363 by Idea Group; Study Café
Meeting Place; Idea Space (Seoul, Korea)

http://363.co.kr/np/77w_gallery?study_cafe_11



May 20, 2016 (Customization)

agMOOCs (India)

<http://www.agmoocs.in/>



April 13, 2016

**The Fourth Industrial Revolution:
What it means, how to respond**

Klaus Schwab, Founder and Executive Chairman, World Economic Forum
<https://www.weforum.org/agenda/2016/04/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/>
<http://trainingshare.com/fourth-industrial-revolution-video-clip.php>
<http://www.tubecup.com/watch/8288981>



**30+ Ways Learning is Changing:
Recapping the Three Mega Trends:
Engagement, Access, and Customization**



**Audience Poll #1:
Who in here has taken a MOOC?**

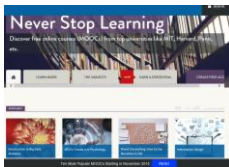


August 12, 2016 (Customization)

**Class Central's Top 50 MOOCs of All Time,
Dhawal Shah, Class Central Blog**

"Now there are close to 6,000 MOOCs from 600+ universities around the world."

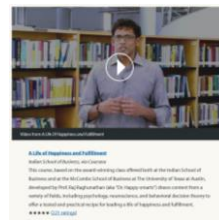
<https://www.class-central.com/report/top-moocs/>



August 12, 2016

**A Life of Happiness and Fulfillment
Indian School of Business, Rajagopal Raghunathan**

<https://www.class-central.com/mooc/2860/course-a-life-of-happiness-and-fulfillment>



August 30, 2016

Thousands sign up for free online wine course, John Elmes, Wine News

<http://www.decanter.com/wine-news/online-wine-course-adelaide-325646/>



January 11, 2016

Maps and the Geospatial Revolution

Anthony C. Robinson, Penn State, Coursera

<https://www.coursera.org/course/maps-and-the-geospatial-revolution>



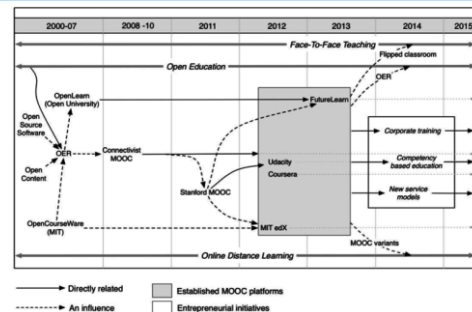
June 14, 2016 (Customization)

World First: University of Michigan's Dr. Chuck Holds a Graduation Ceremony for MOOC Students
Anuar Lequerica, Class Central

<https://www.class-central.com/report/dt-chuck-graduation-ceremony-python-specialization/>



MOOC Timeline



https://en.wikipedia.org/wiki/Massive_open_online_course

| Type of MOOC | cMOOC | xMOOC | pMOOC |
|----------------------------|---------------------------|---------------------------------|----------------------------------|
| Learner Role | Active | Passive | Active |
| Instructor Role | Co-learner | Sage on video stage | Guide on the side |
| Learning Theory | Connectivism | Behaviorism | Constructivism |
| Primary Pedagogy | Knowledge integration | Knowledge duplication | Knowledge production |
| Metaphor | "We link movies" | "We watch movies" | "We make movies" |
| Development Approach | Learning design | Instructional design | Educational design research |
| Primary Type of Assessment | Self Assessment | External and/or Peer Assessment | Self and/or Client Assessment |
| Funding Source | Seat of the pants funding | Large external funding | Moderate client provided funding |

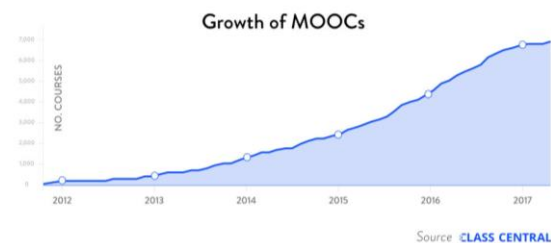
Figure 1. Differences among three types of MOOCs (Reeves & Hedberg, 2014).

Bonk, C. J., Lee, M. M., Reeves, T. C., & Reynolds, T. H. (in press). The emergence and design of massive open online courses (MOOCs). In R. A. Reiser, & J. V. Demsey (Eds.), *Trends and issues in instructional design and technology* (4th Ed.), (pp.7). Boston, MA: Pearson Education. Available: <http://www.publicationshare.com/3>

December 25, 2016

By The Numbers: MOOCs in 2016
Dhawa Shah, Class Central

<https://www.class-central.com/report/mooc-stats-2016/>



Source: CLASS CENTRAL

January 14, 2016

Why You Should Care That MOOCs Had a Great 2015

Bravetta Hassell, Chief Learning Officer

data collected by Class Central:

- No longer are MOOC providers offering free certificates. **At Coursera, the average course is \$56; at edX, it's \$53.**
- 75 percent: the amount of courses available in English (was 80 percent in 2014).
- 2,200: courses offered for the first time.
- **Reportlinker estimates the MOOC market to grow by nearly \$7 billion by 2020.**

February, 2016

MOOCWatch Feb 2016: More Students, More Price Points, More Models. Anuar Andres Lequerica is Class Central's analyst

- Arabic MOOC platform Nadrus has reached 100,000 students.
- Brazilian MOOC platform Veduca has reached 800,000 students.
- **Coursera reaches 700,000 MOOCers in Brazil.**
- French MOOC platform France has reached 500,000 students.
- FutureLearn has reached 3 million students. India: NIIT partners with edX to use MOOCs to train half a million people in tech skills.
- **Udemy has reached 10 million students.**
- University of London reached 1 million enrollments on Coursera.



July 21, 2016
The Scope of edX

Joshua Kim, Inside Higher Ed

https://www.insidehighered.com/blogs/technology-and-learning/scope-nfx?utm_source=inside+higher+education_campaign=56c0bb1f79-50U20160722&utm_medium=email&utm_term=0_5fcb0462156c001f79-197262401

- There are lifelong learners in every country of the world (save North Korea).
- A bit over a quarter (27%) of edX learners come from the U.S. The next biggest country is India (11%), the U.K. and Brazil (both 4%) and China, Canada, and Mexico (3% each).
- Over four-in-ten edX learners live in emerging economy countries.
- Over 840,000 certificates have been earned by edX learners.
- EdX has over 100 schools, institutes and organizations in the Consortium creating open online courses.
- Over 1,000 courses have been offered.
- There have been over 2,300 faculty and staff that have taught on edX.

December 25, 2016
Class Central

<https://www.class-central.com/report/mooc-stats-2016/>



 **58M**
Students


700+
Universities


6850
Courses

MOOCs in 2016. Analysis by Class Central

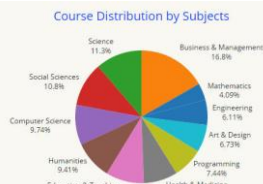
January 5, 2016

Use Of MOOCs And Online Education Is Exploding: Here's Why

Josh Bersin, Forbes

<http://www.forbes.com/sites/joshbersin/2016/01/05/use-of-moocs-and-online-education-is-exploding-heres-why/#290acdda7f09>

Use Of MOOCs And Online Education Is Exploding: Here's Why



The folks at [Class Central](#) just released their data on the growth of online courses (MOOCs) in 2015 and the data is amazing.

More than 35 million people have enrolled in online courses in the last four years, and 2015 enrollments doubled from 2014. (That's equal to one out of five working professionals in the U.S.)

Today there are more than 4,200 MOOC courses available (many more if you include the corporate training programs from companies like Udemy, BigThink, Pluralsight, Lynda, Novell, and Skillsoft). These academic-authored programs cover many topics, and are expanding into several business

Activity #1:

During this talk, jot down a research idea on a card. We will share it at the end.

(Note: Best idea gets a MOOCs book.)

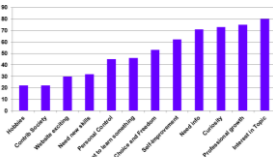


April, 2015**Learners Goals, Motivations, Achievements, Challenges, etc.**

Bonk, C. J., Lee, M. M., Koss, X., Xu, S. & Sheu, F.-R. (2015). Understanding the Self-Directed Online Learning Preferences, Goals, Achievements, and Challenges of MIT OpenCourseWare Subscribers. *Educational Technology and Society*, 18(2), 349-368. Available: http://www.jfets.info/journals/18_2/26.pdf; Issue TOC: <http://www.jfets.info/issues.php?id=87>

Blackboard Data

Figure 4. Main reasons to informally explore the Web to learn

**Experience life change?**

(0 = not at all; 5 = moderately; 10 = significantly)

Has your life changed from informal learning on the Web?

**June 13, 2014****Research Topic #4. Learner Engagement with Content**

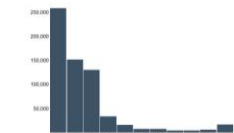
8 Things You Should Know About MOOCs
Chronicle of Higher Education, Jonah Newman and Soo Oh
<http://chronicle.com/article/MOOCs-EdX/146901/>

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

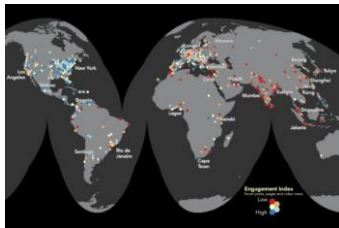
Courses are broken into anywhere from 11 to 48 chapters, but few students look at them all. Only 3 percent of participants look at every chapter, and fewer than one in 10 view even half of the material.

In fact, of those who viewed any course material, half looked at 11 percent of the course chapters or less.

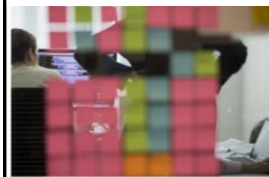
Number of students by percent of coursework viewed

**January 11, 2016****Mapping a MOOC Reveals Global Patterns in Student Engagement**

Chronicle of Higher Education, Anthony C. Robinson
<https://chronicle.com/article/Mapping-a-MOOC-Reveals-Global-Patterns-in-Student-Engagement/22479574d-ed3a4b9d814a4a5f5b64685163a8830>

**May 27, 2015****Research Topic #5. MOOC Participant Study Strategies**

The Invisible Learners Taking MOOCs,
George Veletsianos, Inside Higher Ed
<https://www.insidehighered.com/blogs/higher-ed-beta/invisible-learners-taking-moocs>



HIGHER ED BETA

The Invisible Learners Taking MOOCs

May 27, 2015 - 4:13pm



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

October 6, 2015**Research Topic #6. MOOCs as a Learning Supplement**

Using MOOCs to Fill In Your Weak Spots, Hanna Peacock, Inside Higher Ed
<https://www.insidehighered.com/digital-learning/article/2015/10/06/moocs-to-fill-in-your-weak-spots>

**April 21, 2014****Research Topic #7. Benefits of MOOCs for Disadvantaged and Underprivileged**

The Revolution Is Not Being MOOC-ized, Students are educated, employed, and male.
Gayle Christensen and Brandon Alcorn, UPenn, New Scientist
<http://www.newscientist.com/article/dn24708-moocs-are-educating-students-but-not-revolutionizing-them>



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.

OER and MOOCs in Africa: The AVU Experience

Griff Richards and Bakary Diallo, African Virtual University
Nairobi, Kenya

It is estimated that only 6% of Africans can access post-secondary education. The development goal is set at 12% even though North America and Europe are somewhere around 45%. The gap is huge. This is not to say that African nations are not investing in post-secondary education. For example, Nigeria has been steadily building universities during the past couple of decades.



April 20, 2015

Research Topic #8. Case Studies

250 MOOCs and Counting: One Man's

Educational Journey, Chronicle of Higher Education

<http://chronicle.com/article/250-MOOCsCounting-One/229397/?cid=at>
If the MOOC movement has faded, nobody told Jima Ngei. Mr. Ngei, who lives in Port Harcourt, Nigeria, has completed and passed 250.



Jima Ngei: "I had this unrelenting fear that this miracle of free access might evaporate soon."

May 19, 2016

From MOOC to bootcamp to MIT MIT News

<http://news.mit.edu/2016/mooc-bootcamp-mit-05-19>



MIT Data:

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.**



August 28, 2016

Research Topic #9. MOOC Plagiarism The New Cheating Economy, Brad Wolverton, The Chronicle of Higher Education

<http://www.chronicle.com/article/The-New-Cheating-Economy/234444>

Cheating Is Seasonal

Over the past three years, searches for "essay" in custom writing service, have peaked at the end of each semester.



Source: Chronicle analysis of Google Trends data <http://bit.ly/1Dk0000>

Contract Cheating's African Labor



Nigerian academic writers, who number more than 70,000, perform work for students in the United States, Britain, and elsewhere. "In every apartment building in Nairobi," says one, "you could find two, three writers."

August 31, 2016

BoostMyGrade.com

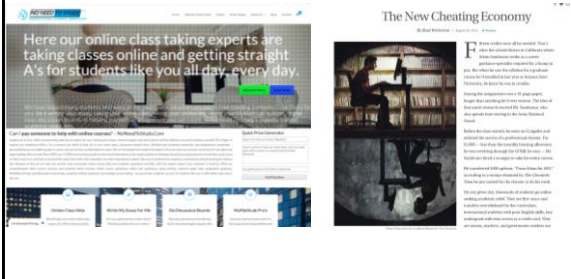
<http://www.boostmygrade.com/>



August 31, 2016

NoNeedToStudy.com

<https://www.noneedtostudy.com/myclass/>



MOOC Research Openings... Part 2: Instructor-Focused



October 25, 2014

Research Topic #10.

Faculty Awareness of the Open World

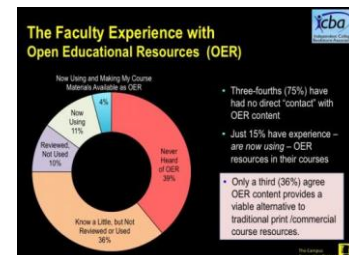
Opening the Curriculum: Open Educational Resources in U.S. Higher Education, 2014, I. Elaine Allen and Jeff Seaman
<http://www.onlinelearningurvey.com/reports/openingthecurriculum2014.pdf>



February 2016

Faculty Awareness of the Open World

Going Digital: Faculty Perspectives on Digital and OER Course Materials
Kenneth Green, The Campus Computing Project
<http://www.campuscomputing.net/goingdigital2016>

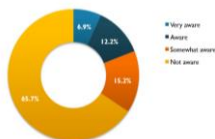


July 2016

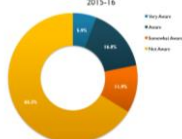
The Awareness Problem: Opening the Textbook: Educational Resources in U.S. Higher Education, 2015-2016

I. Elaine Allen and Jeff Seaman, Babson Survey Research Group
<http://www.onlinelearningurvey.com/reports/openingthetextbook2016.pdf>

AWARENESS OF OPEN TEXTBOOKS: 2015-16



AWARENESS OF OPEN EDUCATIONAL RESOURCES AND CREATIVE COMMONS: 2015-16



Research Topic #11. Actual Use of Open Access Resources and Materials Nature, Openwords, etc.

<http://www.openwords.com/>

<https://www.facebook.com/Openwords>

In a Move Toward Open Access, "Nature" Allows Widespread Article Sharing
By Paul Baines



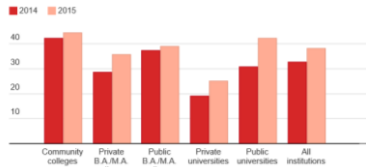
October 29, 2015

Research Topic #12.

Admin Support of the Open World
Campus Tech Leaders Report More Support for Free Educational Materials, Ellen Wexler, Chronicle of Higher Education

Encouraging Faculty to Use Open-Source Content

Here's the percentage of survey respondents who report that their institutions encourage faculty members to use open education resources in their courses.



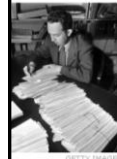
September 2, 2016

Research Topic #13.

Instructor MOOC Grading Impacting Motivation

Humans, the Latest MOOC Feature

Carl Straumsheim, Inside Higher Ed



Humans, the Latest MOOC Feature

MIT experiments with instructor grading in massive open online courses as a way to expand teaching and learning opportunities for students and instructors.

September 2, 2016

By Carl Straumsheim

One of the Massachusetts Institute of Technology

MITx Adds Instructor Grading in MOOC

By Dan Schaffhauser 08/16/16

MOOC Research Openings... Part 3: Course/Instructional Design



Research Topic #14. MOOC Participant Help Giving Behaviors, Learning Communities, and Ecologies

Chapter 14: Creating a Temporary Spontaneous Mini-Ecosystem through a MOOC

Paul Kim and Charlie Chung, Stanford University
 Figure 2. Twitter thread announcing the MOOC



July 2015
Research Topic #15. Rubric Analysis of MOOC Pedagogy
AMP: A Tool for Characterizing the Pedagogical Approaches of MOOCs

Karen Swan, Scott Day, Leonard Bogle, and Traci van Prooyen
 University of Illinois Springfield

Figure 3. Ratings Metaphors



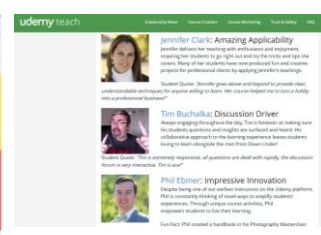
| | | | | | | |
|-----------------------|---|---|---|---|---|--------------------------|
| (objectivist) | 1 | 2 | 3 | 4 | 5 | (constructivist) |
| (teacher-centered) | 1 | 2 | 3 | 4 | 5 | (student-centered) |
| (convergent) | 1 | 2 | 3 | 4 | 5 | (divergent) |
| (less structure) | 1 | 2 | 3 | 4 | 5 | (more structure) |
| (concrete) | 1 | 2 | 3 | 4 | 5 | (abstract) |
| (infrequent, unclear) | 1 | 2 | 3 | 4 | 5 | (frequent, constructive) |
| (unsupported) | 1 | 2 | 3 | 4 | 5 | (integrated) |
| (unsupported) | 1 | 2 | 3 | 4 | 5 | (multifaceted) |
| (artificial) | 1 | 2 | 3 | 4 | 5 | (authentic) |
| (passive) | 1 | 2 | 3 | 4 | 5 | (generative) |

Udacity =
 Coursera =
 EdX =

December 30, 2015

Research Topic #16. Research on Changes in Teaching Practices
Udemy Awards, 2015 Instructor Awards!

<https://teach.udemy.com/comparatations-to-udemy-outstanding-instructors-of-2015/>



August 20, 2015

Research on Unique Pedagogy

Syracuse professor offers free 'Star Trek' class to the public, USA Today, Amari D. Pollard, LeMayne College

<http://college.usatoday.com/2015/08/20/syracuse-professor-offers-free-star-trek-class-to-the-public/>

ONLINE HOME COURSE LIFE COURSE INFO COURSE OFFERS STUDY ABROAD

Syracuse professor offers free 'Star Trek' class to the public



August 24, 2016

Research Topic #17.

Localization of Content and Multicultural Practices

ocMOOCs and hMOOCs

Revolutionizing online education

Professor creates courses tailored to cultural differences

Korea JoongAng Daily, Bong-Moon Kim

<http://www.kmooc.kr/>



2016

Research Topic #18.

Language Availability

State of the MOOC 2016:

A Year of Massive Landscape Change For Massive Open Online Courses, Online Course Report

<http://www.onlinecoursereport.com/state-of-the-mooc-2016-a-year-of-massive-landscape-change-for-massive-open-online-courses/>



June 26, 2015

Research Topic #19. Cultural Differences in MOOC Perceptions and Definitions

In China, Where Everything is a MOOC, Education Week, Justin Reich, HarvardX Research Fellow

http://blogs.edweek.org/edweek/digitalresearcher/2015/05/in_china_where_everything_is_a_mooc.html?i=285729957

The most memorable line from my recent visit to China was this: "We have 12 million K-12 teachers in China who need to receive this particular in-service training, so we started with a group of about 200,000."



Chapter 2: USA/Georgia Tech:
Karen Head

- Be careful with: hand gestures (e.g., finger pointing—use at least two fingers), body movements, English dominance, political issues.
- Jokes and humor can easily be misinterpreted.
- Be aware of shifting political climates impacting resource access such as YouTube in China.
- Many cultures do not have a linear approach (e.g., from A to B) to communication.
- Using visual rhetoric (e.g., visual images) to communicate can be a minefield of problems.

Chapter 9: Scotland
U of Edinburgh
Amy Woodgate

- Intermittent Internet access on one's mobile phone will not help to stream HD videos.
- Simple course designs (e.g., talking heads with minimal hand gestures) helps to make content more available for international audiences. More engaging content is more difficult to convert.





Chapter 11: India and Canada/COL Sanjaya Mishra

- Be culturally sensitive to music and pictures while designing content for global audience.
- Consider technology used to develop the content (does it assist reuse and remixing?).
- Instead of focusing too much on the cultural sensitivity of MOOCs and raising costs, try to allow for reuse and remixing of content. Use open source technologies and content.



Chapter 14: USA/Stanford Paul Kim and Charlie Chung



- Encourage students to download lecture videos and translate them to other languages and perhaps add captions and make available in their local cloud services.
- Encourage students to create low bandwidth versions of videos for those in low bandwidth areas.
- Encourage students to translate videos and add nuances and words understandable in local languages.
- Encourage students to meet locally in teams to share materials and take care of “sensitive matters.”



Chapter 21: U of Philippines Open U Melinda Bandalaria

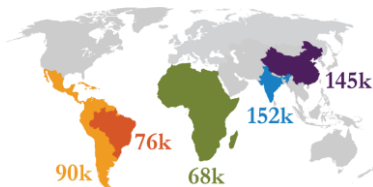
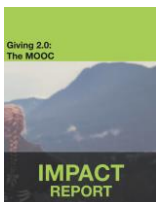
- Strictly avoid references to religion.
- Use acceptable dress code.
- Even when English is the primary or secondary language of the country, consider making MOOC content available in the major dialects of the country.

Activity #2: Half-Way Pt.

Which of the research ideas mentioned so far match what you have written down?



MOOC Research Openings... Part 4: Impact/Context-Focused



Part 4: Impact/Context-Focused Duke MOOCs Around the World

<https://www.youtube.com/watch?v=nL5QRR61OU&feature=youtu.be>



April 23, 2015**Research Topic #20.
Cost-Benefit Analysis**

Offloading Semesters or Years to MOOCs

**The Catch in Arizona State's Low-Cost Freshman Year Online:
No Aid, Chronicle of Higher Education, Thomas Fisher**
<http://chronicle.com/article/The-Catch-in-Arizona-State-s/229617/>



Anant Agarwal, the head of edX, which teamed up with Arizona State U. in the new project: "Our mission is to provide education to people who need it the most."

Building Talent Pipeline

**Master's Degree Is New Frontier of Study Online,
August 17, 2013, The New York Times
By Tamar Lewin**

<http://chronicle.com/article/MOOCs-May-Not-Be-So-Disruptive/140965/>
<http://extensiononline.com/putting-moocs-to-work-rsosp-infographic/#.VtX4o3wtjs>

VERTICAL BY
Master's Degree Is New Frontier of Study Online



Col Clark, the dean of the College of Computing at the Georgia Institute of Technology. The college plans to offer a master's degree in computer science through massive open online courses, or MOOCs.

By Tamar Lewin
Published: August 17, 2013

1 BUILDING TALENT PIPELINES.

At&T companies are seeking Coursera and Udacity to identify the best and brightest students to reduce turnover and add them to graduate and postgraduate programs. The initiative also seeks AT&T to represent the development of a new computer science degree through MOOCs to attract the best and brightest students.

**7 WAYS THAT
CORPORATIONS ARE
USING MOOCS**

May 19, 2016
Research Topic #21. MOOC Access and Use
 (e.g., MOOC listings and ratings schemes)

MOOC lists: Class Central, the MOOC list
<https://www.mooc-list.com/>
<https://www.class-central.com/>

**October 7, 2015****Research Topic #22.
Alternative Delivery Systems**

MIT Unveils 'MicroMaster's,' Allowing Students to Get Half Their Degree From MOOCs, Andy Thomason, Chronicle of Higher Education

MIT Unveils 'MicroMaster's,' Allowing Students to Get Half Their Degree From MOOCs

MIT Master's Program to Use MOOCs as 'Admissions Test'

By Jeffrey R. Young | OCTOBER 7, 2015

**June 12, 2014****Research Topic #23. Economic Value
of MOOCs (Assessment 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-degrees>



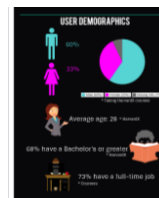
Moocs can offer a lot, but they don't offer the feedback of a traditional degree.

April 17, 2014**Research Topic #24.
Impact of MOOCs Across Age,
Gender, and Course Type**

Infographic: Global MOOC statistics

eCampus News, Meris Stansbury

<http://www.ecampusnews.com/research/infographic-moocs-global-436/>
 Infographic: <https://magic-piktochart.com/output/1747660-moocs>



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

December 23, 2016
HarvardX and MITx: Four Years of Open Online Courses -- Fall 2012 - Summer 2016
 Isaac Chung, MIT, and Andrew Dean Ho, Harvard
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2889436

EXHIBIT 2: Course participation and demographics

Table 2: The size and makeup of a typical HarvardX and MITx open online course

| | |
|--|-----------|
| Courses (including repeat and modules) | 280 |
| Certificates (first and final) | 244,705 |
| Enquiries (across >50% courses) | 739,269 |
| Participants (across courses) | 4,489,594 |
| Certificate earners per course | 500 |
| Enquiries per course | 1,517 |
| Participants per course | 7,802 |
| Percentage of female participants | 39% |
| Percentage of students who hold a degree | 73% |
| Median age | 29 |
| Percentage from the United States | 29% |

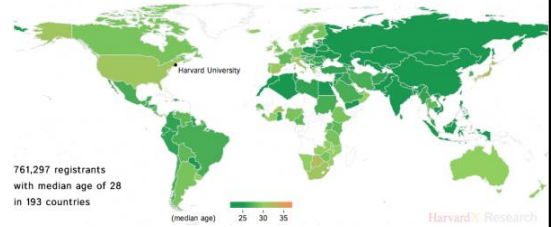
Note: Per course and demographic statistics are medians of course-level statistics.

- The typical HarvardX/MITx course or module certifies 500 participants.
- Around 1,500 will explore half or more of course content.
- Around 250 will receive the course content.



What About Age?
Data Visualization Tools
(Harvard and MIT MOOCs)

Lawrence Biemiller, February 20, 2014, Chronicle of HE
<http://chronicle.com/map/harvardmitmoocs>



October 6, 2014
Research Topic #25.
High School Student College Prep and Advanced Placement Courses
edX turns attention to high school MOOCs, eSchool News
<http://www.eschoolnews.com/2014/10/06/high-school-moocs-839/orint/>

edX turns attention to high school MOOCs

Posted by eSchool News Staff On October 6, 2014 @ 5:00 am In Curriculum, News, Top News | No Comments

Courses will help prepare students for postsecondary success, edX reps said



Anant Agarwal, CEO of edX, said that a high priority for us.

While the courses are not offered for



Search the entire edX course catalog.

High School Initiative

Sometimes you want to complete a course for the sheer joy of learning something new. And sometimes you take a course to prepare yourself for future education. Colleges and universities that many students could benefit from taking a few extra courses to help close the

January 11, 2016
7th grade scholarships for MOOC completion
U.S. News and World Report, eSchool News
<http://www.eschoolnews.com/2016/01/11/7th-grade-scholarships-for-mooc-completion/>

7th grade scholarships for MOOC completion



Qualified 7th grade students can earn special consideration for Cooke Scholarships by completing an edX MOOC



2016 Cooke edX Challenge

Calling 7th Graders: successfully complete an edX course and get a leg up in the Young Scholars Program.

Research Topic #26. Acceptability of MOOCs as Corporate Training
G2g (Googler to Googler) Training
Seven Ways to Corporate MOOC, Udem blog,
December 23, 2013, Shannon Hughes
<https://www.udemy.com/organizations/blog/2013/12/23/seven-ways-to-corporate-mooc/>

Classes range from management and public speaking, to parenting and mountain climbing.

HERE'S A GOOGLE PERK ANY COMPANY CAN IMITATE: EMPLOYEE-TO-EMPLOYEE LEARNING

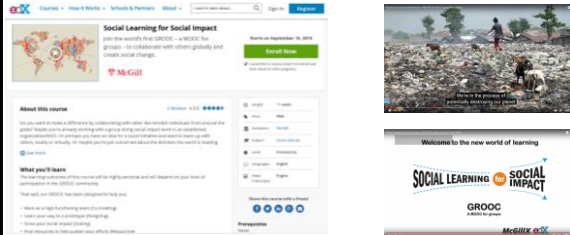
GOOGLE EMPLOYEES CAN NOW LEARN FROM EACH OTHER THROUGH A COURSE CATALOG. AND THE COURSE CATALOG IS OPEN TO ALL GOOGLE EMPLOYEES. AND THE COURSE CATALOG IS OPEN TO ALL GOOGLE EMPLOYEES.



July 28, 2016
Udemy
Your opportunity for adventure ends tomorrow — 50% off any course
<https://www.udemy.com/courses/>

September 15, 2015 Research Topic #27. MOOCs for Social Impact

Social Learning for Social Impact, edX
Join the world's first GROOC – a MOOC for groups – to collaborate with others globally and create social change.
<https://www.edx.org/course/social-learning-social-impact-mcgaill-spocsa>
<https://www.youtube.com/watch?v=36kxvWNg-5LF&list=PLFAMd1>



January 27, 2014 Research Topic #28. Various Geo-Political Issues

Coursera Support Center, Why is my country blocked?
<http://help.coursera.org/faq/why-is-my-country-blocked>
Online education platform Coursera blocks students in Syria and Iran, Wamba, Nina Curley



October 7, 2014 ALISON: Global Health Initiatives Online Mooc courses deliver Ebola health advice, BBC News, Sean Coughlan

<http://www.bbc.com/news/education-29521360>
<http://www.advancelearning.com/why-wait-for-others-to-fight-ebola>



Disinfecting a room in Monrovia, Liberia: Online courses are providing health advice to fight Ebola.

September 16, 2013 Research Topic #29. Issues of Quality

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.

Research Topic #30. Impact of Mobile MOOCs (e.g., mobile courses on smartphone)



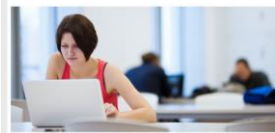
April 1, 2015 Research Topic #31. Flipped the Classroom with MOOCs

For a Better Flip, Try MOOCs, David Rath, Campus Technology
<http://campustechnology.com/articles/2015/04/01/for-a-better-flip-try-moocs.aspx>

For a Better Flip, Try MOOC

Innovative faculty are running MOOCs and flipped format on campus courses on the same schedule and having the two groups interact online — with interesting results.

By David Rath | 04/01/15



Why MOOC OERs are "ultimate necessities" in higher education

By Mary Scambray, Managing Editor, @MS_Scambray
Revised from Mary Scambray
March 23rd, 2015

Researcher discusses 3 strategies to open up MOOC content.

Are MOOCs truly the open education innovation they were designed to be?

That's the question one researcher says those in academia should be asking. Though MOOCs are touted as open, suggesting an evolution of the Open Learning.

Researcher discusses 3 strategies to open up MOOC content.

Are MOOCs truly the open education innovation they were designed to be?

April 30, 2014

Research Topic #32. Impact of Blending FTF Sessions with Online MOOCs

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>
<https://blog.coursera.org/post/184322385012/new-learning-hubs-locations-hosted-by-the-new-york>



Research Topic #33. Learning for Enjoyment vs. Credentials



Learning for Enjoyment Versus Credentials and Badges

"Just play around with ideas for alternatives to printed texts and don't be afraid to create your own, even if they're amateurish...I think we need to de-emphasise formal assessment and accreditation and encourage our playful side to see what is possible. **Too much informal learning wants to get itself 'badged' or validated too quickly and this means its losing its genuine amateur status."**



March 3, 2016

'Trump U.' Draws Unflattering Spotlight to the Candidate as Fraud Cases Move Forward

Chronicle of Higher Education, Corrine Ruff

http://chronicle.com/article/Trump-U-Draws-2305732cd-trump_right_a

'Trump U.' Draws Unflattering Spotlight to the Candidate as Fraud Cases Move Forward



August 5, 2015

Research Topic #34. Acceptability of Nanodegrees and Microcredentials

How Nanodegrees are Disrupting Higher Education

John Waters, Campus Technology

<http://campustechnology.com/articles/2015/08/05/how-nanodegrees-are-disrupting-higher-education.aspx>

How Nanodegrees are Disrupting Higher Education

New "nanodegree" online certification programs are changing the educational pathways to success in certain industries.

By John K. Waters | 08/05/15



Credentialed, built and recognized by industry leaders to advance your career

Google Autodesk Intuit

at&t cloudra

Chubb cadence NVIDIA

FINANCIALACADEMY

January 20, 2016

Coursera Specializations

https://www.coursera.org/learn/coursera-specializations?source=marketing&utm_campaign=ad&utm_medium=990&utm_source=google

Coursera

Adrianne Young 2016 Goals with Oliver 10 Steps

Specializations

What do you want to learn?

Learn from the best

Learn from the best

Learn from the best

Learn from the best

Learn from the best

Learn from the best

Learn from the best

Learn from the best

Learn from the best

Learn from the best

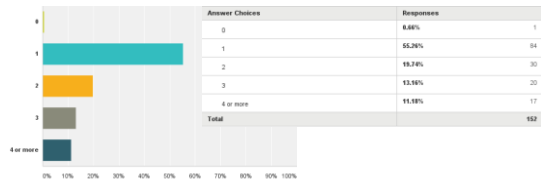
Coursera Removes Free Track From Some MOOCs

January 25, 2016

Coursera x 全球名校 Specializations

Master a skill with a **targeted sequence of courses**
 Apply it in a **capstone project**
 Earn a **Specialization Certificate**

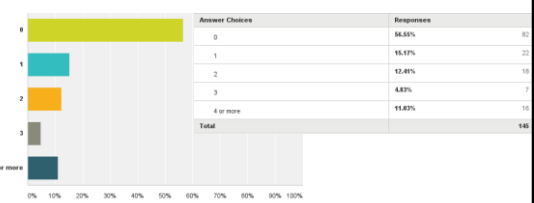
1. How many MOOCs have you taught? (N = 152)



Powered by SurveyMonkey

Q4: 3. How many MOOCs have you completed as a learner (including any that you are currently enrolled in)?

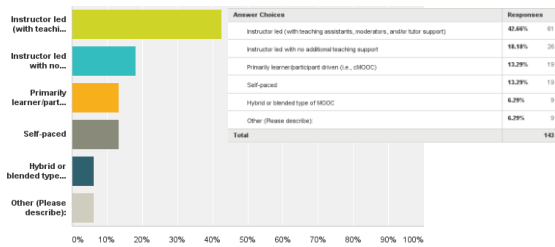
Answered: 145 Skipped: 10



Powered by SurveyMonkey

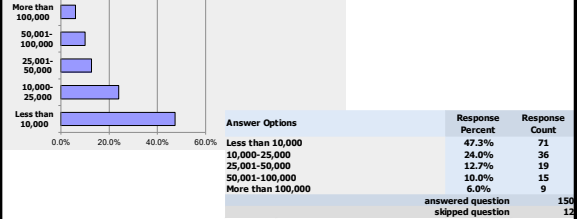
Q7. What is the delivery format of your most recent MOOC?

Answered: 143 Skipped: 12



Powered by SurveyMonkey

8. How many people signed up for your most recent MOOC? (N = 150)



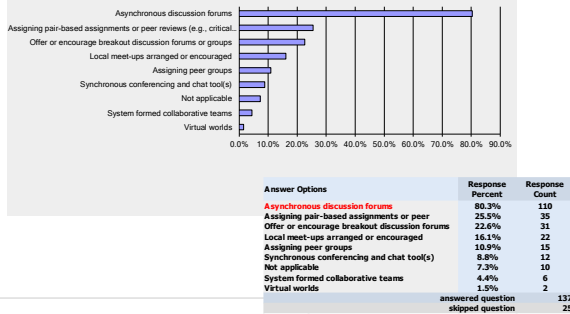
13. How do you address students' varying competencies and needs? [Check all that apply]

| Answer Options | Response Percent | Response Count |
|---|------------------|----------------|
| Establish learner-based discussion forums | 81.0% | 115 |
| Embed supplementary course materials (e.g., readings, Post timely course announcements and emails | 78.2% | 111 |
| Record video tutorials or walkthroughs (e.g., Screencast, YouTube | 63.4% | 90 |
| Emphasize project-based learning over exams | 40.8% | 58 |
| Using preexisting online videos (e.g., Lynda.com, TED talks, YouTube, Other (Please describe): | 34.5% | 49 |
| Hold synchronous lectures, meetings, and events (e.g., Skype, Google | 32.4% | 46 |
| Establish study groups | 26.1% | 37 |
| Establish learner reflection journals or blogs | 23.9% | 34 |
| Schedule virtual office hours and meetings | 19.0% | 27 |
| Offer face-to-face meet-up opportunities | 16.2% | 23 |
| | 14.1% | 20 |
| | 7.0% | 10 |
| answered question | | 142 |
| skipped question | | 20 |

14. What types of learning resources can participants select from in your most recent MOOC? [Check all that apply]

| Answer Options | Response Percent | Response Count |
|--|------------------|----------------|
| Discussion forums or threads | 91.5% | 130 |
| Video lectures and tutorials | 76.8% | 109 |
| Readings (including textbooks, literature, scientific & tech reports) | 76.1% | 108 |
| Practice quizzes and exams | 57.7% | 82 |
| Interactive assessments | 50.7% | 72 |
| Expert interviews | 50.0% | 71 |
| PowerPoint and other presentation slides | 47.9% | 68 |
| Instructor lecture notes | 44.4% | 63 |
| Animations and other types of animated or interactive contents | 43.0% | 61 |
| Visuals (e.g., concept maps, diagrams, flowcharts, timelines, etc.) | 42.3% | 60 |
| Video examples (e.g., TED talks, YouTube, etc.) | 39.4% | 56 |
| Social media (e.g., Facebook, Instagram, Snapchat, Twitter, Pinterest, etc.) | 28.9% | 41 |
| Popular media (e.g., news stories and videos) | 28.2% | 40 |
| Wiki-style documents | 18.3% | 26 |
| Podcasts | 15.5% | 22 |
| Instructor blogs | 14.8% | 21 |
| Simulations and games | 14.1% | 20 |
| Job aids and study guides | 12.0% | 17 |
| Mobile applications | 12.0% | 17 |
| Learner blogs | 9.9% | 14 |
| Other (fill in the blank - optional): | 9.9% | 14 |
| Virtual conferences and summits | 4.9% | 7 |
| answered question | | 142 |
| skipped question | | 20 |

16. In what ways is peer interaction encouraged in your MOOC?
[Check all that apply; N = 137]



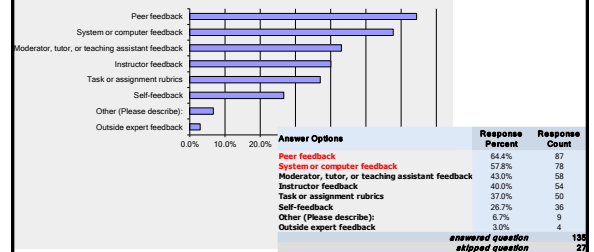
17. How did you design your course to be suitable for students from different cultures and/or linguistic backgrounds?[Check all that apply]

| Answer Options | Response Percent | Response Count |
|--|------------------|----------------|
| Offer transcripts of video or audio content | 66.2% | 88 |
| Add subtitles to video content | 63.9% | 85 |
| Be careful with language use and hand gestures | 51.9% | 69 |
| Simplify the language used | 42.1% | 56 |
| Slow the pace of speech | 36.8% | 49 |
| Simplify the course content and navigation | 27.1% | 36 |
| Limit text by relying more on pictures | 19.5% | 26 |
| Encourage participants to translate and localize content | 18.0% | 24 |
| Other (Please describe): | 15.8% | 21 |
| Translate the content to different languages | 11.3% | 15 |
| answered question | | 133 |
| skipped question | | 29 |

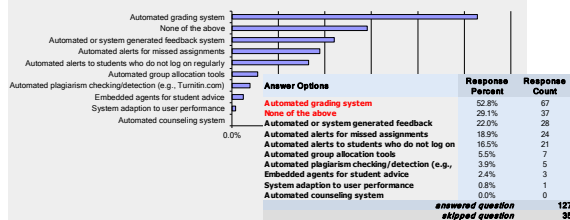
18. Does the structure of your most recent or current MOOC provide any of the following?
[Check all that apply; N = 126]

| Answer Options | Response Percent | Response Count |
|---|------------------|----------------|
| Optional readings, videos, or other materials | 74.6% | 94 |
| Learner selected incentives (e.g., certificates, badges, course credit, etc.) | 64.3% | 81 |
| Options with course tasks and assignments | 38.1% | 48 |
| Learner discussion and negotiation of content | 36.5% | 46 |
| Two or more media elements to learn the same content | 31.7% | 40 |
| Learner determined or contributed content | 30.2% | 38 |
| Learner selected learning pathways (i.e., different routes to learn the) | 19.0% | 24 |
| Learner portfolios of course accomplishments | 16.7% | 21 |
| Choice in team or collaborative partners (i.e., self-formed teams) | 12.7% | 16 |
| answered question | | 126 |
| skipped question | | 36 |

20. In what ways do students get feedback in the course?[Check all that apply; N = 135]



21. Does your most recent (or current) MOOC utilize any of the following?
[Check all that apply; N = 127]



Recent MOOC research

• Veletsiano, G. & Shepherdson, P. (2016)
Systematic Analysis And Synthesis of the Empirical MOOC Literature Published in 2013-2015

"Dependence on Particular Research Methods May Restrict our Understanding of MOOCs"

• Gasevic, D., Kovanovic, V., Joksimovic, S., & Siemens, G. (2014).

Where is research on Massive Open Online Courses headed? A data analysis of the MOOC Research Initiative.

Dragan Gasevic and colleagues (including George Siemens), 2014, IRRODL, 15(5)

<http://www.irrodl.org/index.php/irrodl/article/view/1994>

Table 14

Phase 2 Top 5 Research Fields

| Field | Authors |
|------------------|---------|
| Education | 106 |
| Computer Science | 21 |
| Engineering | 13 |
| Industry | 8 |
| Social Sciences | 6 |

Table 15

Phase 2 Geographic Distribution of the Authors

| Continent | Authors | Authorised proposals | Accepted proposals |
|---------------|---------|----------------------|--------------------|
| Asia | 17 | 4.64 | 0.14 |
| Australia/NZ | 11 | 4.25 | 1 |
| Europe | 40 | 15.66 | 4 |
| North America | 137 | 52.44 | 22.85 |
| South America | 3 | 1 | 0 |



Dragan Gasevic¹, Viktor Kuznetsov^{2,3}, Shadia Jabbari^{4,5} and George Siemens⁶
¹University of Toronto, Canada; ²Simon Fraser University, Canada; ³University of Texas at Arlington, USA

George Veletsianos & Peter Shepherdson's Study (2016)

Systematic Analysis And Synthesis of the
Empirical MOOC Literature Published in 2013-2015

***"Dependence on Particular Research
Methods May Restrict our
Understanding of MOOCs"***



Veletsianos & Shepherdson (2016)

Table 6

Frequency (Percentage) of Data Analysis Methods Used

| Analytic Method | Frequency (%) of Total Papers |
|-------------------------------------|-------------------------------|
| Descriptive statistics | 93.4 |
| Correlational | 52.5 |
| Basic qualitative study | 38.8 |
| Experimental and quasi-experimental | 25.7 |
| Grounded Theory | 7.6 |
| Natural Language processing | 7.6 |
| Social Network Analysis | 6.6 |
| Ethnography | 4.4 |
| Phenomenology | 2.2 |
| Discourse analysis | 1.0 |

***"To gain a deeper and more diverse
understanding of the MOOC
phenomenon, researchers need to use
multiple research approaches (e.g.,
ethnography, phenomenology,
discourse analysis) add content to
them."***

Veletsianos, Collier, & Schneider. (2015), BJET, 46(3), 570–587.

MOOC Research Review, 2014–2017

- Empirical studies between 2014–2017
- 150 studies
- Focus on research methods/paradigms and topics of research

Primary Journals for MOOC Publication (2014–2017)

| JOURNAL | TOTAL |
|--|-------|
| 1. International Review of Research in Open and Distance Learning (IRRODL) | 33 |
| 2. Computers & Education | 11 |
| 3. British Journal of Educational Technology | 9 |
| 4. Online Learning | 7 |
| 5. Distance Education | 5 |
| 6. Educational Media International | 5 |
| 7. Internet and Higher Education | 5 |
| 8. Journal of Asynchronous Learning Network | 5 |
| 9. Journal of Computer Assisted Learning | 5 |
| 10. Computers in Human Behavior | 4 |
| 11. Open Learning | 4 |
| 12. Journal of Online Learning and Teaching | 3 |

MOOC Research Publications (2014–2017)

| DATE | TOTAL |
|--------------|------------|
| 2014 | 27 |
| 2015 | 69 |
| 2016 | 52 |
| 2017 | 2 |
| TOTAL | 150 |

General Analytic Method MOOC Research (2014–2017)

| GENERAL ANALYTIC METHOD | TOTAL | PERCENT |
|-------------------------|------------|---------|
| QUALITATIVE | 29 | 19.3% |
| QUANTITATIVE | 26 | 43.3% |
| MIXED METHODS | 56 | 37.3% |
| TOTAL STUDIES | 150 | |

Specific Analytic Method for MOOC Research (2014–2017)



Number of Data Sources for MOOC Research (2014–2017)

| NUMBER OF DATA SOURCES | TOTAL | PERCENT |
|------------------------|------------|---------|
| 1 | 57 | 38% |
| 2 | 54 | 36% |
| 3 | 24 | 16% |
| MORE THAN 3 | 15 | 10% |
| TOTAL STUDIES | 150 | |

Location of MOOC Research Team Members (2014–2017)



Country of Origin of MOOC Delivery (2014–2017)



Focus of MOOC Research (2014–2017)

| FOCUS | TOTAL | PERCENT |
|--------------------|-------|---------|
| STUDENT-FOCUSED | 75 | 50.0% |
| DESIGN-FOCUSED | 48 | 32.0% |
| CONTEXT AND IMPACT | 21 | 14.0% |
| OTHER | 8 | 5.4% |
| INSTRUCTOR-FOCUSED | 5 | 3.4% |
| TOTAL * | 157 | |

*Seven studies had more than one area of focus.

Specific Topics of MOOC Research (2014–2017)



Data Sources of MOOC Research (2014–2017)



Audience Poll #3: Would you like to research MOOCs now? What was your idea?

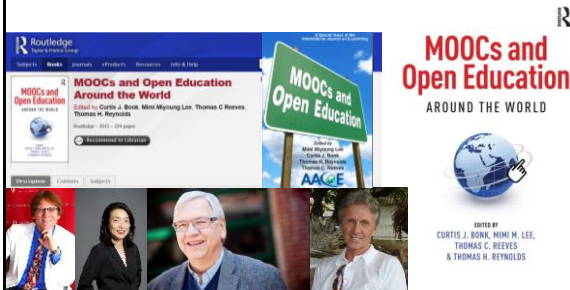
A. Yes...

B. No...



MOOCs and Open Education Around the World

<http://routledge-ny.com/books/details/9781138807419/>



Ten "10" MOOC Instructor Guidelines



MOOC Instructor Guide #1. Plan and Prepare for the Experience



MOOC Guide #2. Build in Feedback for Each Experience (etc., Peer, Machine, Volunteer, and Self-Assessment)



MOOC Guide #3. Create Interactivities (e.g., use Polling Questions)



MOOC Guide #4. Provide Variation and Choice



MOOC Guide #5. Combine Sync and Async Instruction (e.g., David Merrill and Charlie Reigeluth)



MOOC Guide #6. Design Responsive and Interactive Learning Communities



MOOC Guide #7.
Offer Weekly Recaps and Updates

Let's
Recap

MOOC Guide #8.
Personalize the Activity or Experience Where Possible!



MOOC Guide #9.
Engage in Resource Sharing



MOOC Guide #10.
Be Willing to Change Midstream.



Want "FREE" engagement?
How about
"Adding Some TEC-VARIETY"?
<http://tec-variety.com/>



What motivates?

1. TenseClimate: Psychological Safety, Comfort, Sense of Belonging
2. Encouragement: Feedback, Responsiveness, Praise, Supports
3. Curiosity: Surprise, Intrigue, Unknowns
4. Variety: Novelty, Fun, Fantasy
5. Autonomy: Choice, Control, Flexibility, Opportunities
6. Relevance: Meaningful, Authentic, Interesting
7. Interactivity: Collaborative, Team-Based, Community
8. Engagement: Effort, Involvement, Investment
9. Tension: Challenge, Dissonance, Controversy
10. Yielding Products: Goal Driven, Purposeful Vision, Ownership



Where are we headed?
Where to conduct MOOC
research?

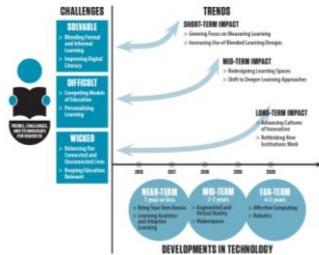


WHAT'S NEXT

February 2016 NMC Horizon Report > 2016 Higher Ed Edition

<http://www.nmc.org/publication/nmc-horizon-report-2016-higher-education-edition/>
<http://csls.nmc.org/media/2016-nmc-horizon-report-the-43k.pdf>

Topics from the NMC Horizon Report > 2016 Higher Education Edition



May 4, 2016 MOOC 4.0: The Next Revolution in Learning & Leadership

Otto Scharmer, Huffington Post
http://www.huffpost.com/otto-scharmer/mooc-40-the-next-revolution_b_7209606.html



October 23, 2016 Ben Gose, The Chronicle of Higher Education

<http://www.chronicle.com/article/When-the-Teaching-Assistant-is-230114>

When the Teaching Assistant Is a Robot
Faculty members experiment with artificial intelligence in the classroom



Article about a computer science professor at Georgia Tech, who is experimenting with teaching assistants, including "AI Robots" for the classroom, in a question-answering software program.

By Ben Gose | OCTOBER 23, 2016 | CHRONICLE

July 21, 2016 Facebook's Aquila drone completes first test flight

Jessica Guynn, USA Today

<http://www.usatoday.com/story/tech/news/2016/07/21/facebook-aquila-completes-first-test-flight/8736893-1/>



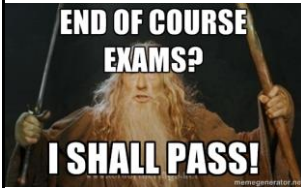
An aerial view of Aquila, a autonomous aircraft Facebook is designing to deliver mobile broadband networks to isolated people (mission to fly 60,000 above Earth for up to 3 months at a time; current record for solar-powered unmanned flight is 2 weeks). (Photo: Facebook)

Things are heating up!



A transformation in
education is coming
within reach!



Poll 4:**Who is now interested MOOCs...?****Remember for MOOCs and Open Education to make an impact:****"I cannot do this alone."**

"I cannot do this alone."

"I cannot do this alone."

"I cannot do this alone."

**Any Questions or Comments?**MOOCsBook: <http://moocsbook.com/>Slides at: TrainingShare.comPapers: PublicationShare.comFree book: <http://tec-variety.com/>Email: curt@worldisopen.com**MOOCs and Open Education**
 EDITED & BOUND BY A. J. LEE
 LONDON & NEW YORK
 ROUTLEDGE
