

## MOOCs and Health Sciences Education: Hype or disruption?



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# Massive Open Online Courses

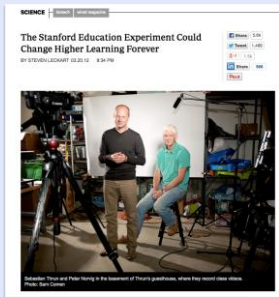
## Overview

- History of MOOCs
- Disruption or Hype?
- Do MOOCs offer us anything new?
- Potential for innovation

## Emergence of MOOCs

- 2008** CCK09 - Connectivism & Connected Knowledge  
Siemens & Downes - 2,300 participants
- 2011** Artificial Intelligence MOOC  
Stanford University - 150,000 participants
- 2012** Year of the MOOC - Udacity, Coursera, edX
- 2013** FutureLearn - Growing numbers of health MOOCs  
Anti-MOOC

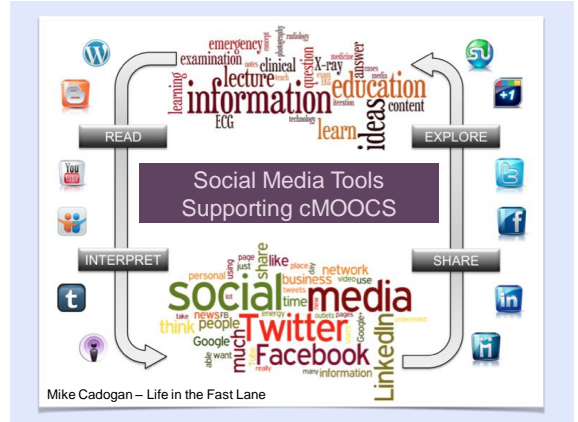
## Disrupting Higher Education



2012: Sebastian Thrun

In 50 years, he says, there will be only 10 institutions in the world delivering higher education and Udacity has a shot at being one of them.

cMOOCs  
Connectivist  
xMOOCs  
eXtension



Unit 01.01  
**Learning Styles and Motivation**  
**INSTRUCTIONAL METHODS IN HEALTH PROFESSIONS EDUCATION**  
 Caren M. Stalburg MD, MA  
 Family, Obstetrics and Gynecology  
 University of Michigan Medical School

xMOOCs typically involve video lectures, quizzes, discussion boards – Viewed by many as didactic

- By October 2013 Coursera had ...
- Enrolled over 5 million students
  - Attracted students from 190 countries
  - 107 partner universities
  - Course videos viewed over 300 million times

We're all going to lose our jobs!

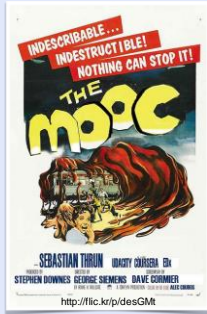
**coursera**

Health & Society 74  
 Humanities 140  
 Information, Tech & Design 81  
 Law 15  
 Mathematics 46  
 Medicine 58

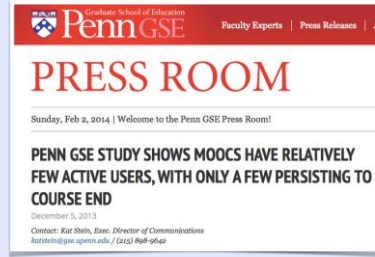
**Courses**

The University of Edinburgh Critical Thinking in Global Challenges with Mayank Datta & Celine Cozminou	Jan 20th 2014 5 weeks long Verified Certificate
Wakeyon University How to Change the World with Michael S. Roth	Jan 20th 2014 6 weeks long Verified Certificate
Johns Hopkins University Statistical Reasoning for Public Health: Estimation, Inference, & Interpretation with John McCreedy	Jan 21st 2014 8 weeks long Verified Certificate
Columbia University The Age of Sustainable Development with Jeffrey Sachs	Jan 21st 2014 14 weeks long
The Ohio State University Introduction to Pharmacy with Kenneth M. Hale	Jan 23rd 2014 7 weeks long
Duke University Introductory Human Physiology with Jennifer Corvey & Emma Jossé	Jan 27th 2014 12 weeks long Verified Certificate
Johns Hopkins University An Introduction to the U.S. Food System: Perspectives from Public Health	Jan 27th 2014 6 weeks long

# MOOC hype and hysteria

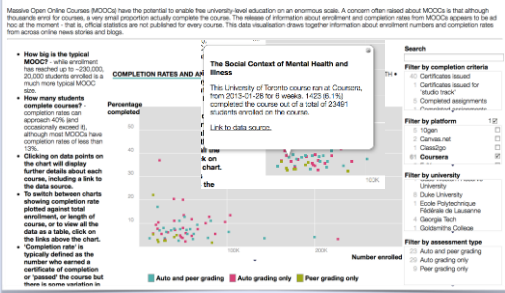


Can anything stop it ... ?



“Course completion rates are very low, averaging 4% across all courses and ranging from 2% to 14% depending on the course and measurement of completion.”

## MOOC Completion Rates: The Data



<http://www.katyjordan.com/MOOCproject.html>

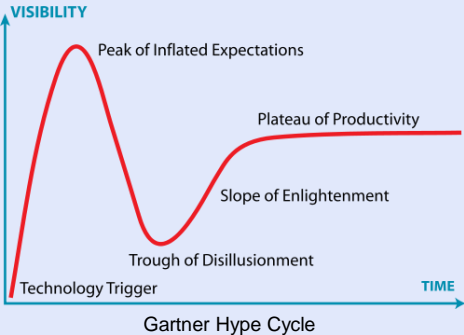
## TECH FORECAST

### UDACITY'S SEBASTIAN THRUN, GODFATHER OF FREE ONLINE EDUCATION, CHANGES COURSE

HE CAPTIVATED THE WORLD WITH VISIONS OF SELF-DRIVING CARS AND GOOGLE GLASS AND HAS SIGNED UP 1.6 MILLION STUDENTS FOR ONLINE CLASSES. SO WHY IS HE PIVOTING AWAY FROM MOOCs? "WE DON'T EDUCATE PEOPLE AS OTHERS WISHED OR AS I WISHED," THRUN SAYS.

"We were on the front pages of newspapers and magazines, and at the same time, I was realizing, we don't educate people as others wished, or as I wished. We have a lousy product," Thrun tells me. "It was a painful moment." Turns out he doesn't even like the term MOOC.

<http://www.fastcompany.com/3021473/udacity-sebastian-thrun-uphill-climb>



By the end of 2013 the hype begins to dip

But ... is the hype just building up in health care professions education?



## Koller's case for MOOCs

- Blended learning - flipped classroom
- MOOCs are inherently social
- Learning analytics
- Lifelong learning

ucisa

Table 3.13: Subject areas that make more extensive use of technology enhanced learning tools than the institutional norm

	No.	Total	Pre-92	Post-92	Coll	Eng	Wal	So	NI
Medicine, Nursing, Health Management, Accountancy, Finance, Business etc.	64	81%	81%	89%	43%	83%	67%	75%	100%
Education	20	25%	24%	26%	29%	25%	0%	50%	0%
Social Sciences, Psychology, Law, Teaching etc.	19	24%	30%	20%	14%	23%	33%	25%	0%
Engineering	14	18%	24%	11%	14%	13%	33%	50%	0%
Art, Music, Drama	14	18%	14%	23%	14%	19%	17%	13%	0%
Sciences, and specified	17	15%	19%	11%	15%	17%	32%	21%	0%

Are we already ahead of the game?  
Medicine, Nursing & Health make the most use of TEL in UK Higher Education

2008) when they were both singled out as extensive users of TEL. The key development from the 2010 Survey is the rise of Education up the list to 3rd position from 5th in 2010. 81% of respondents identified Medicine, Nursing and Health as making extensive use of TEL, of this number 100% of the Russell Group and Million+ universities and 93% of University Alliance Institutions affirmed extensive use of TEL in this area. Responses indicated that this subject area attracted extensive mobile device support, collaborative learning via Web 2.0 tools and a higher TEL culture amongst its staff than other subject areas.

Source: UCISA 2012 Survey of Technology Enhanced Learning for Higher Education in the UK

HCPs already sharing open educational resources  
YouTube, Vimeo, iTunes + +

Video lectures are nothing new ...  
Lectures are only a small piece of the learning experience in health care professions education ... we're already flipping & using TBL

### Have we got a problem with attention span?

The optimal video length is 6 minutes or shorter -- students watched most of the way through these short videos.

### Changing emphasis in HCP education

Surface learning  
Teacher-centred

- Knowledge retention
- Acquisition of knowledge

➔

Active learning  
Student-centred

- Knowledge creation & curation
- Selection & evaluation of information

PHILIP GUO edX – 29 Oct 2013  
<https://www.edx.org/blog/optimal-video-length-student-engagement>



Relationships between conceptions of teaching, approaches to teaching & approaches to teaching & learning with technology

Conception of teaching	Approach to teaching	CONCEPTION OF TEACHING & LEARNING WITH TECHNOLOGY	
		Strategic	Tactical
Teacher-focused	Transmission of knowledge	Technology as agent of change Technologically deterministic	Replicating or supplementing existing practices Presentational use of technology (passive) (PowerPoint, webcasts, etc)
Learner-focused	Developing the learner	Teacher as agent of change Pedagogically determined	Transformational – considering how technology can enable learning goals to be achieved, skills & practices to be cultivated Development use of technology (active) (manipulation & interrogation, reflection, knowledge, building & sharing, etc)

**Teaching in Higher Education**  
 Publication needs, including instructions for authors and subscription information.  
<http://online.sagepub.com/journalsPermissions.nav>  
**Missing: evidence of a scholarly approach to teaching and learning with technology in higher education**  
 Author(s) Robert T. Cook-Peterson  
 Journal of Educational Technology, The Open University, Milton Keynes, UK  
 Published online 22 May 2013.

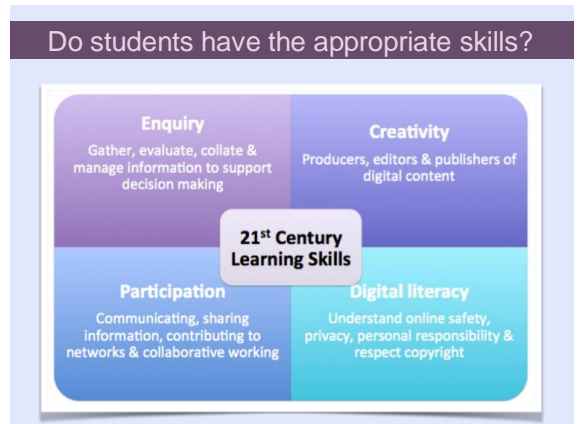


## Assessment & Feedback

**MOCCs, getting my first open badge, feedback & the NSS**

One of the articles that caught my attention on Zite this morning, was 'Four Good Reasons Why Students Need Instructor Feedback in Online Courses' by Debbie Morrison. In her post Debbie speaks out on why she doesn't think MOOCs suit the students entering higher education straight from school and particularly in relation to feedback. This got me thinking about the national Student Survey and the fact that feedback is the criteria that applicants usually score the lowest on. If there was an NSS requirement for MOOCs, how

Issues with quality, plagiarism, machine marking,



## SUSTAINABILITY?

What about the ...

POTENTIAL?

### New models to widen access? Pre-med MOOCs?

Alternative Track:  
Some students study  
MOOC modules

Established Programme:  
Other students study a  
traditional programme

Established Medical  
School Programme

0

Years 2/3

Years 4/5

Issues around accreditation?

### Basic Science Teaching

#### Reply to a Tweet



**Natalie Lafferty** @niafferty

#iamse13 anatomy has been going through a major decline and now as older anatomists retire there's a shallow gene pool able to replace them

8:52 AM Jun 9th, 2013

Can we collaborate to compete?

### Open Online Courses to support interprofessional learning



### Community Open Online Courses

- Ethics
- Global health
- Public health

**OpenBadges**  
Open Badges help you share your skills & interests with the world.

CHEF SCHOOL ONLINE LEARNING UNIVERSITY EXAM  
JOB TRAINING VOLUNTEER PROGRAM

LEARNER  
Badge Backpack

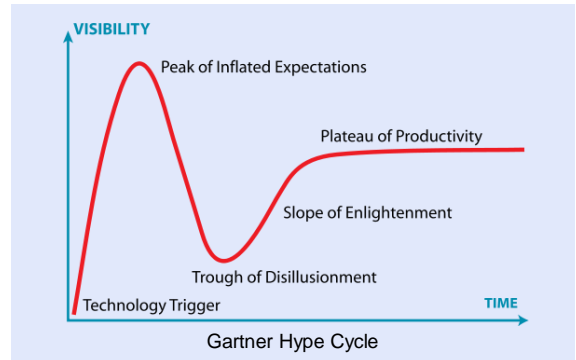
Open badges to accredit learning

Undergraduate Education Postgraduate Education Continuing Professional Development

MOOCs supporting CME/CPD & a marketing tool

**FOAMed**

Free open access medical education communities of practice – rhizomatic learning



What will MOOCs look like in 5 years?

accepting (word in article)  
**focus** n point of convergence; heat, waves of sound, meet; centre of activity or intensity; pl focuses, foci; e adjust; cause to converge; concentrate; a focal pertaining to focus

Keep our focus on enhancing learning & teaching and being agents of change

What do you think?  
Questions?

Thank you

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