

MOOCS and Health Sciences Education: Hype or disruption?



<http://flic.kr/p/dQkC93>

Natalie Lafferty
University of Dundee

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

SCIENCE | biotech | wired magazine

The Stanford Education Experiment Could Change Higher Learning Forever

BY STEVEN LECKART 03.20.12 9:34 PM

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+1 1.5k
Share 566
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Sebastian Thrun and Peter Norvig in the basement of Thrun's guesthouse, where they record class videos.
Photo: Sam Comen

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.

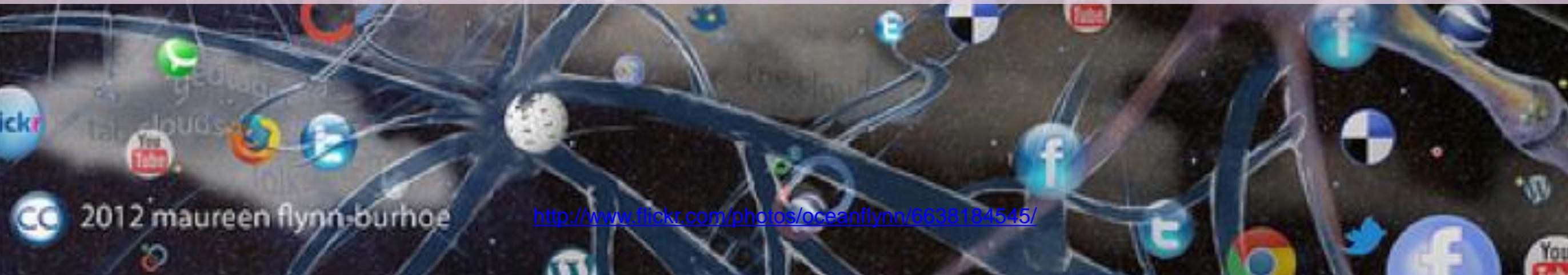
cMOOCs
Connectivist

xMOOCs
eXtension

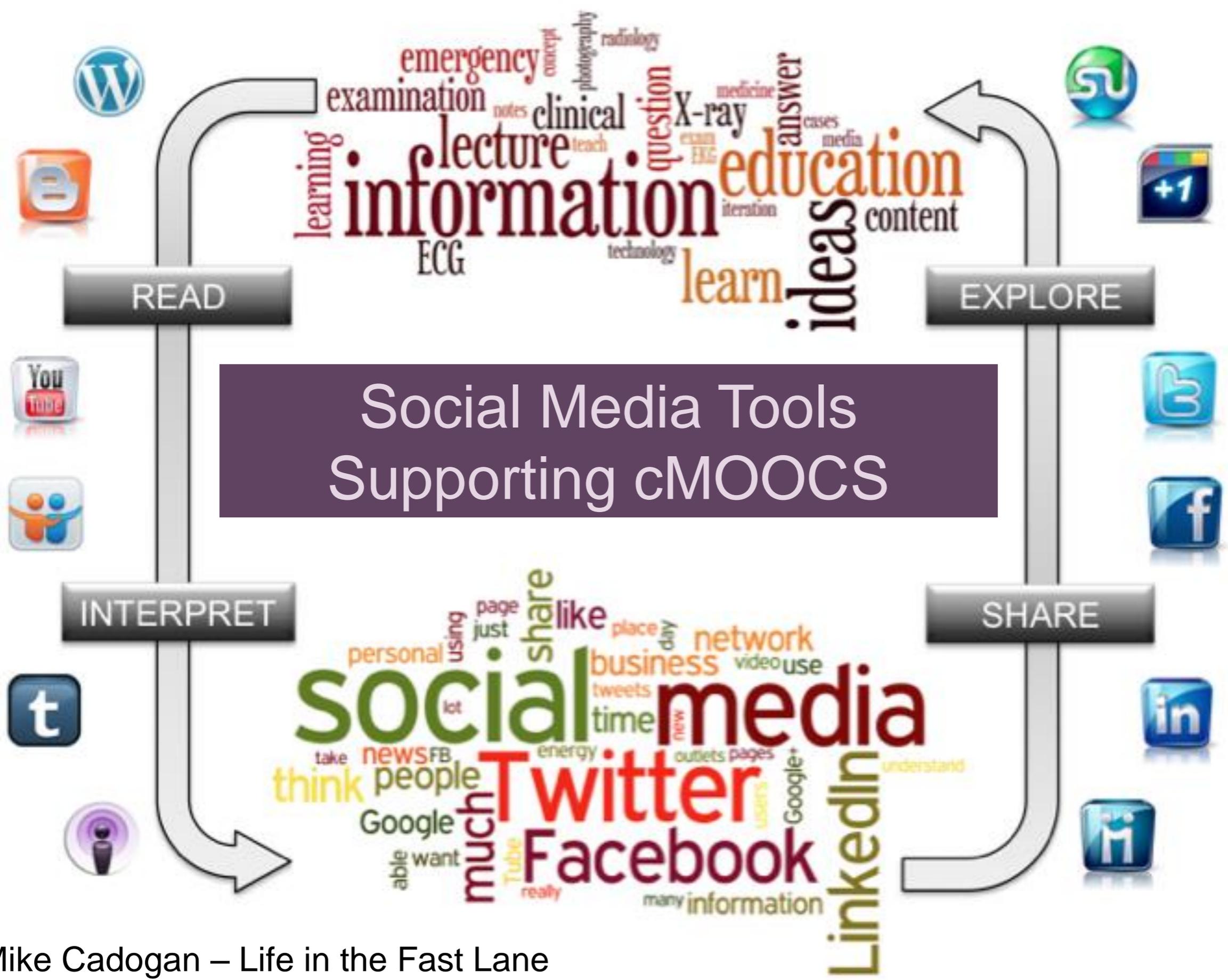


Connectivism - open networked learning

<http://www.connectivism.ca/about.html>



Social Media Tools Supporting cMOOCS



The screenshot shows a video player interface on the Coursera platform. The video title is "Unit 01.01 Learning Styles and Motivation". The course is "Instructional Methods in Health Professions Education" from the University of Michigan. The instructor is Caren M. Stalburg MD, MA, Faculty, Obstetrics and Gynecology, University of Michigan Medical School. The video player includes a progress bar at 00:05 / 17:44, a volume icon, and a settings gear. The background shows a sidebar with course navigation options like "End-of-Course", "Demographic S", "Announcement", "Video Lectures", and "UNITS".

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!

- Health & Society 74
- Humanities 110
- Information, Tech & Design 61
- Law 15
- Mathematics 46
- Medicine 63

Courses



The University of Edinburgh
Critical Thinking in Global Challenges
 with Mayank Dutia & Celine Caqueneau

Jan 20th 2014
 5 weeks long

Verified Certificate



Wesleyan 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 McGready

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 Carbrey & Emma Jakoi

Jan 27th 2014
 12 weeks long

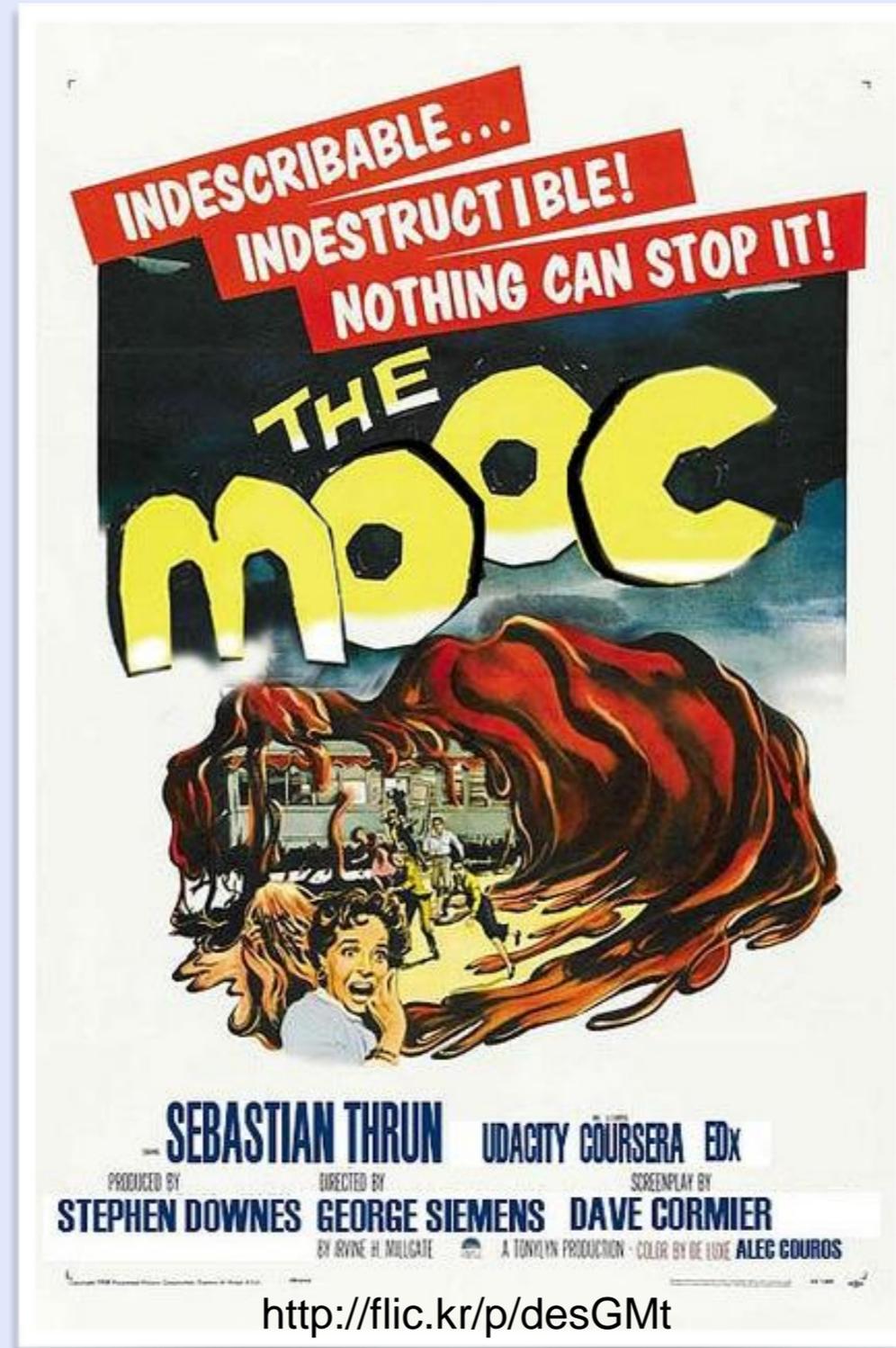
Verified Certificate



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 ... ?



PRESS ROOM

Sunday, Feb 2, 2014 | Welcome to the Penn GSE Press Room!

PENN GSE STUDY SHOWS MOOCS HAVE RELATIVELY FEW ACTIVE USERS, WITH ONLY A FEW PERSISTING TO COURSE END

December 5, 2013

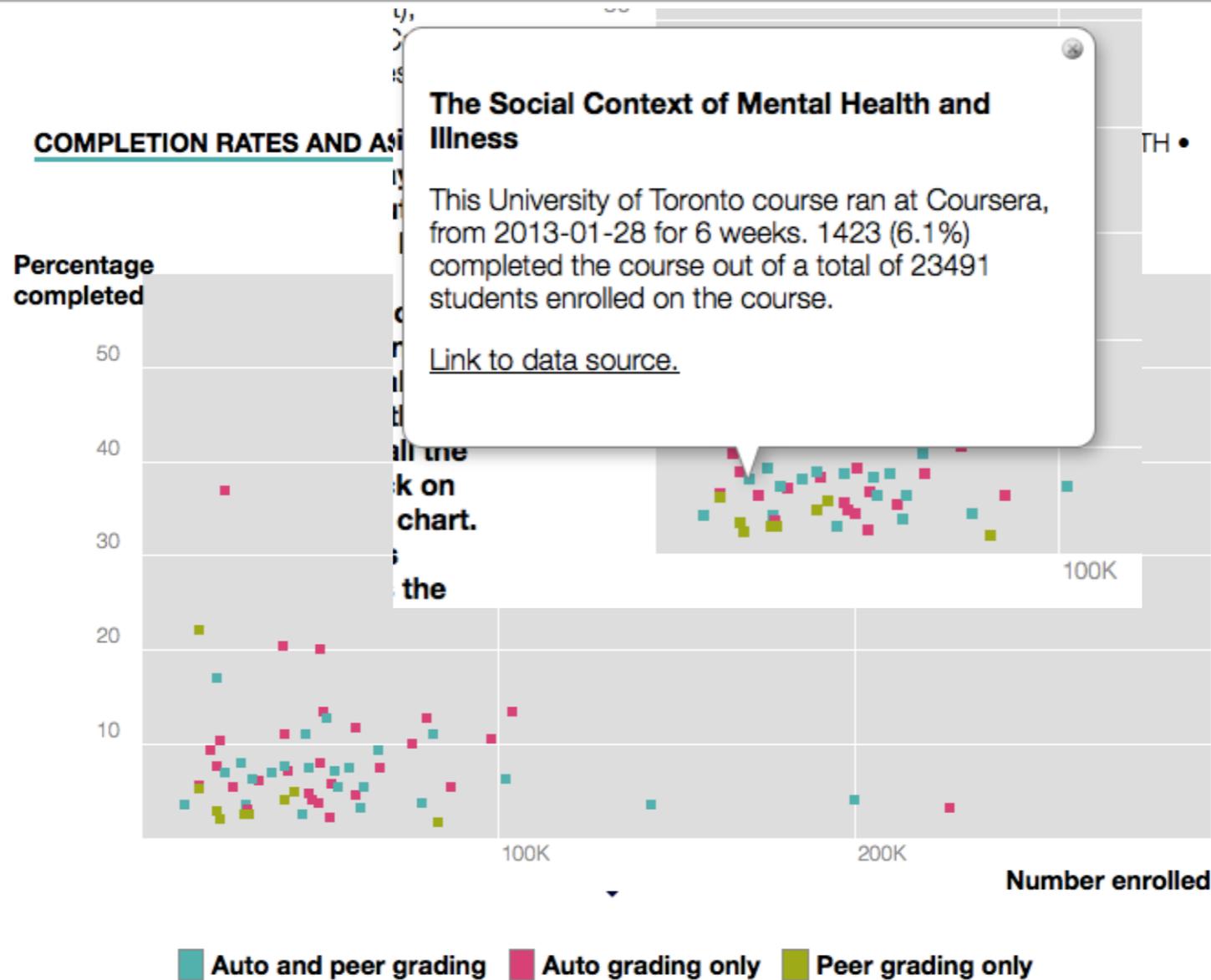
Contact: Kat Stein, Exec. Director of Communications
katstein@gse.upenn.edu / (215) 898-9642

“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

Massive Open Online Courses (MOOCs) have the potential to enable free university-level education on an enormous scale. A concern often raised about MOOCs is that although thousands enrol for courses, a very small proportion actually complete the course. The release of information about enrollment and completion rates from MOOCs appears to be ad hoc at the moment - that is, official statistics are not published for every course. This data visualisation draws together information about enrollment numbers and completion rates from across online news stories and blogs.

- **How big is the typical MOOC?** - while enrollment has reached up to ~230,000, 20,000 students enrolled is a much more typical MOOC size.
- **How many students complete courses?** - completion rates can approach 40% (and occasionally exceed it), although most MOOCs have completion rates of less than 13%.
- **Clicking on data points on the chart will display further details about each course, including a link to the data source.**
- **To switch between charts showing completion rate plotted against total enrollment, or length of course, or to view all the data as a table, click on the links above the chart.**
- **'Completion rate' is typically defined as the number who earned a certificate of completion or 'passed' the course but there is some variation in**



Search

Filter by completion criteria

- 40 Certificates issued
- 1 Certificates issued for 'studio track'
- 5 Completed assignments
- 1 Completed assignments

Filter by platform

- 5 10gen
- 2 Canvas.net
- 1 Class2go
- 61 Coursera

Filter by university

- 1 Case Western Reserve University
- 8 Duke University
- 1 Ecole Polytechnique Fédérale de Lausanne
- 4 Georgia Tech
- 1 Goldsmiths College

Filter by assessment type

- 23 Auto and peer grading
- 29 Auto grading only
- 9 Peer grading only

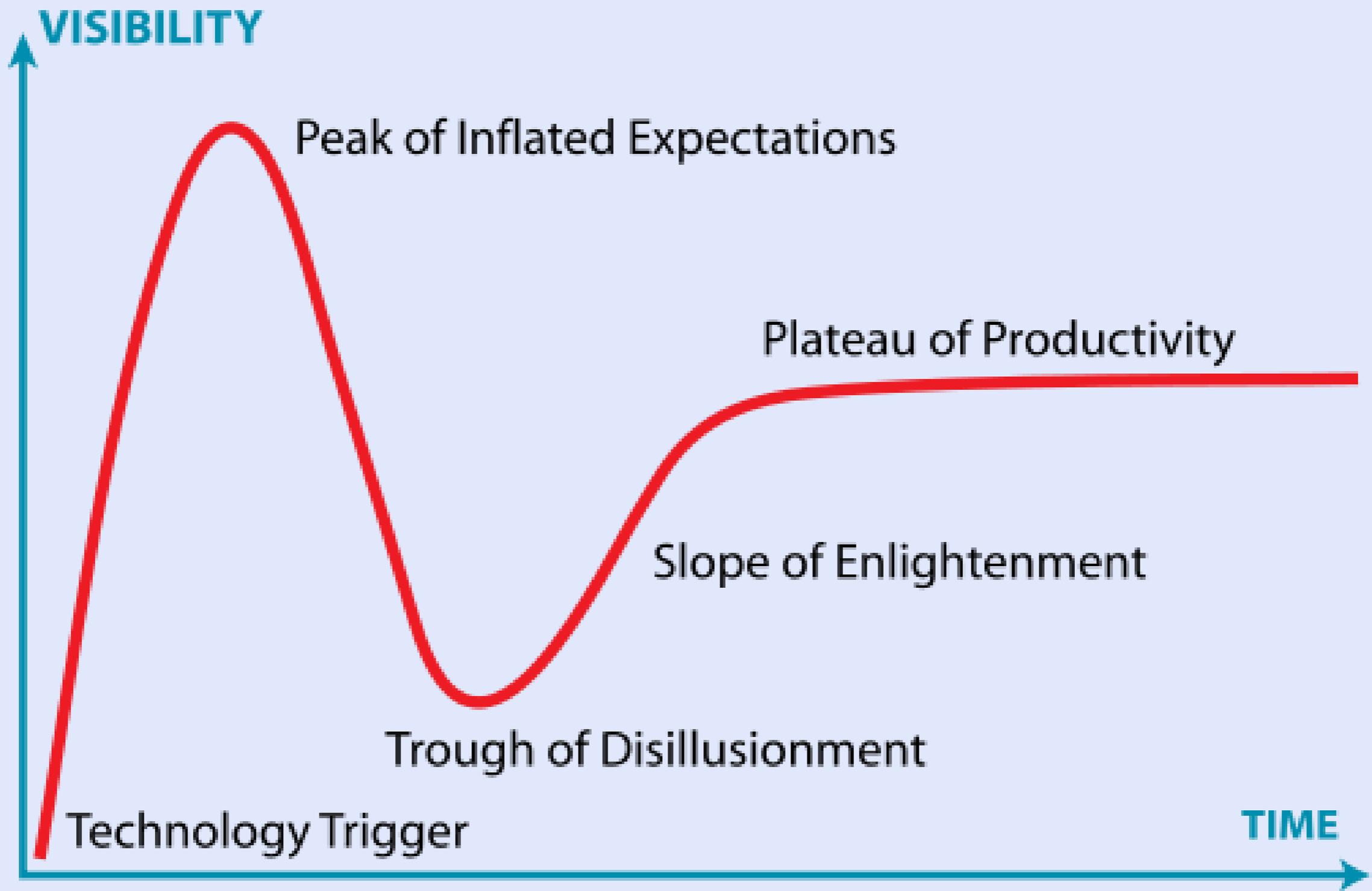
<http://www.katyjordan.com/MOOCproject.html>

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*.

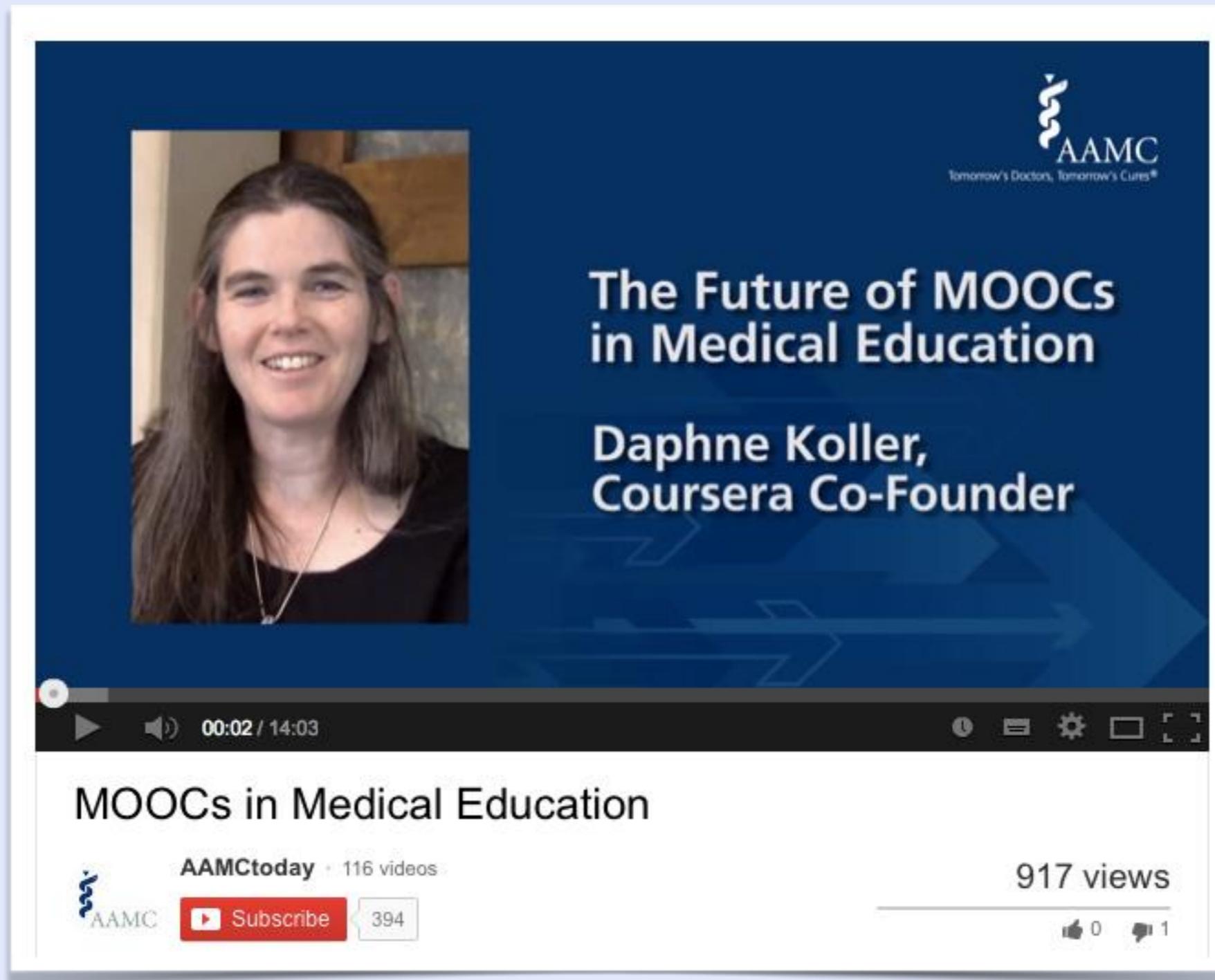
<http://www.fastcompany.com/3021473/udacity-sebastian-thrun-uphill-climb>



Gartner Hype Cycle

By the end of 2013 the hype begins to dip

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



The image shows a YouTube video player interface. The video title is "MOOCs in Medical Education". The channel is "AAMCtoday" with 116 videos. The video has 917 views, 0 likes, and 1 comment. The video content features a woman, Daphne Koller, Coursera Co-Founder, speaking. The background of the video is dark blue with the AAMC logo and the text "The Future of MOOCs in Medical Education" and "Daphne Koller, Coursera Co-Founder". The AAMC logo includes the text "AAMC" and "Tomorrow's Doctors, Tomorrow's Cures®".

**The Future of MOOCs
in Medical Education**

**Daphne Koller,
Coursera Co-Founder**

MOOCs in Medical Education

AAMCtoday · 116 videos

917 views

Subscribe 394

0 1

Koller's case for MOOCs

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

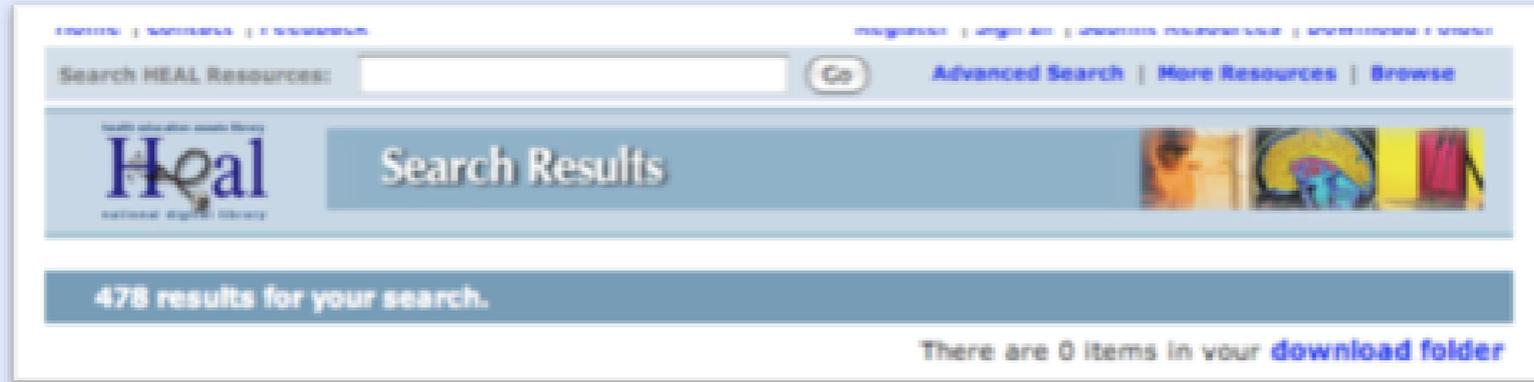
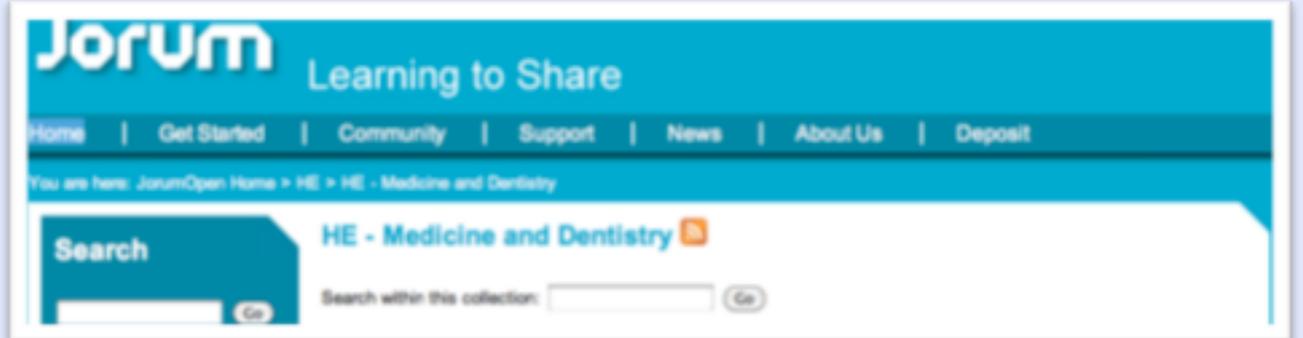
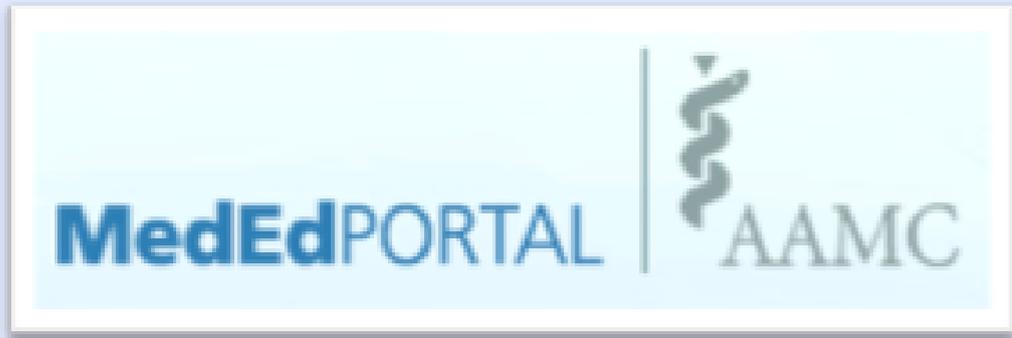
Table 3.13: Subject areas that make *more extensive* use of technology enhanced learning tools than the institutional norm

	No.	Total	Pre-92	Post-92	Coll	Eng	Wal	Sco	NI
Medicine, Nursing, Health	64	81%	81%	89%	43%	83%	67%	75%	100%
Management, Accountancy, Finance, Business etc.	30	38%	43%	34%	29%	41%	17%	25%	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%
Science(s), not specified	12	15%	19%	11%	14%	13%	33%	25%	0%

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

Medicine, Nursing and Health (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.



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



Research

Education

News

Comment

Multi

Search all BMJ comment articles



From

1840



Jan



Our online table of contents is updated at least twice each day. [Read all articles published](#)

FEATURE

Medical education

Are MOOCs the future of medical education?

BMJ 2013; 346 doi: <http://dx.doi.org/10.1136/bmj.f2666> (Published 26 April 2013)

Cite this as: *BMJ* 2013;346:f2666

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?

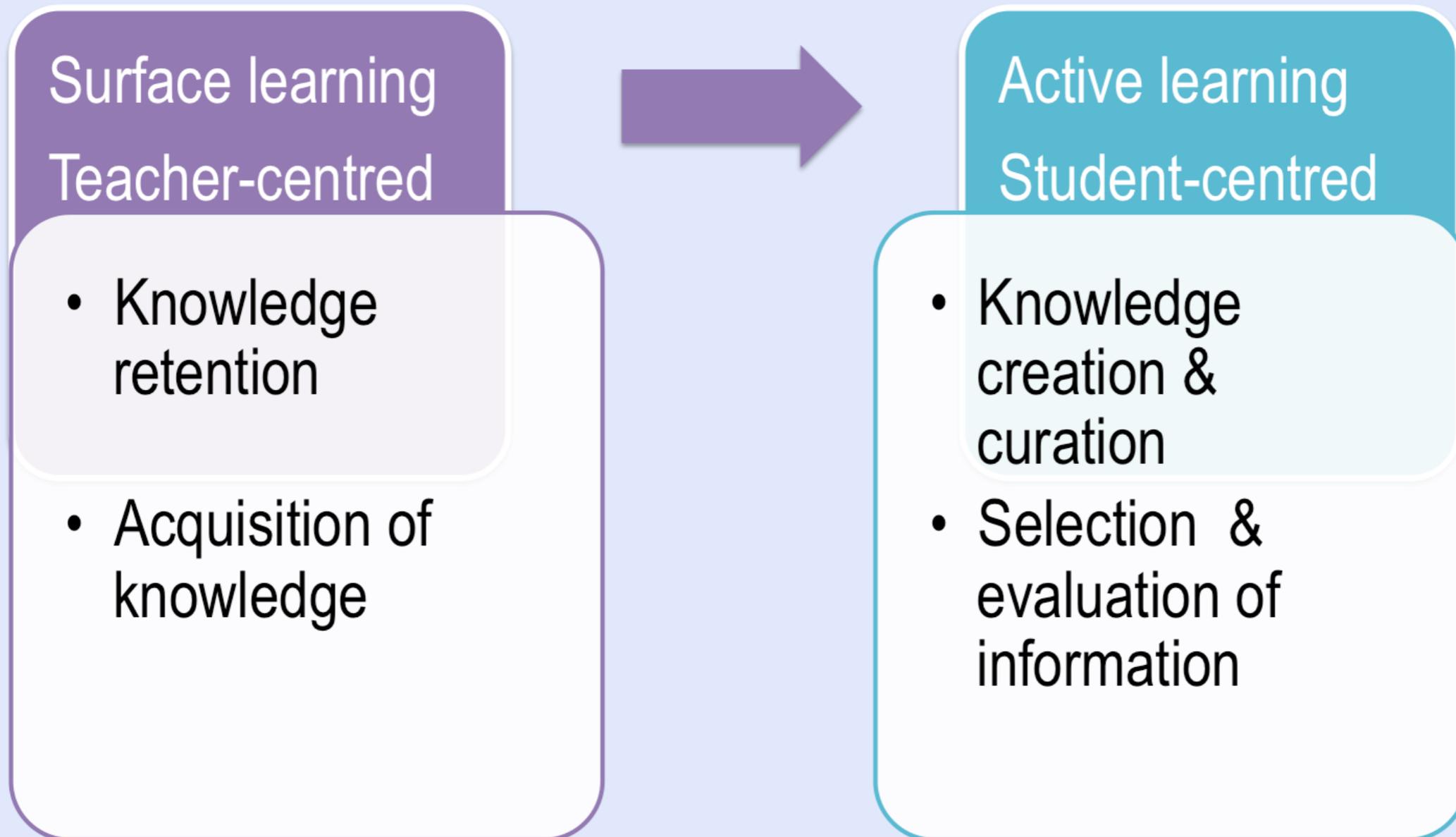


The optimal video length is 6 minutes or shorter -- students watched most of the way through these short videos.

PHILIP GUO edX – 29 Oct 2013

<https://www.edx.org/blog/optimal-video-length-student-engagement>

Changing emphasis in HCP education



Clinical skills

Seminars

Game-based learning

Lectures

Interprofessional learning

Problem-based learning

Case-based learning

Labs

Learning

Portfolios

Ward-based teaching

Tutorials

Small group teaching

Enquiry-based learning

Online learning

Peer learning

Formative assessment

Task-based learning

Simulation

Team-based learning

Teaching

Clinical teaching

Enquiry-based learning

Team-based learning

Task-based learning

Simulation

Online learning

Peer learning

Formative assessment

Task-based learning

Simulation



Are MOOCs simply replicating existing practice?

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

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

Teaching in Higher Education

Publication details, including instructions for authors and subscription information:

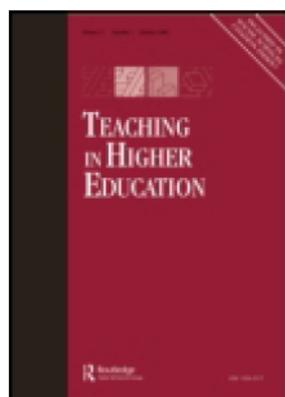
<http://www.tandfonline.com/loi/cthe20>

Missing: evidence of a scholarly approach to teaching and learning with technology in higher education

Adrian Kirkwood^a & Linda Price^a

^a Institute of Educational Technology, The Open University, Milton Keynes, UK

Published online: 22 May 2013.





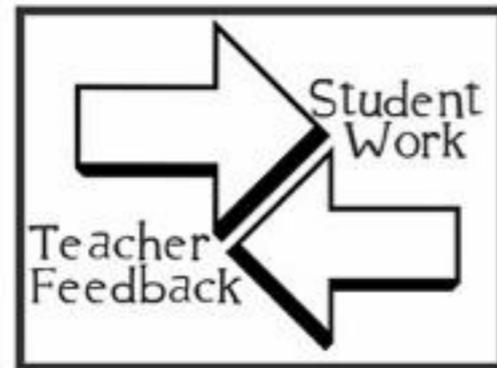
<http://www.flickr.com/photos/x1brett/1472187414/>

Are xMOOCS really social?

Students want face-to-face teaching

Assessment & Feedback

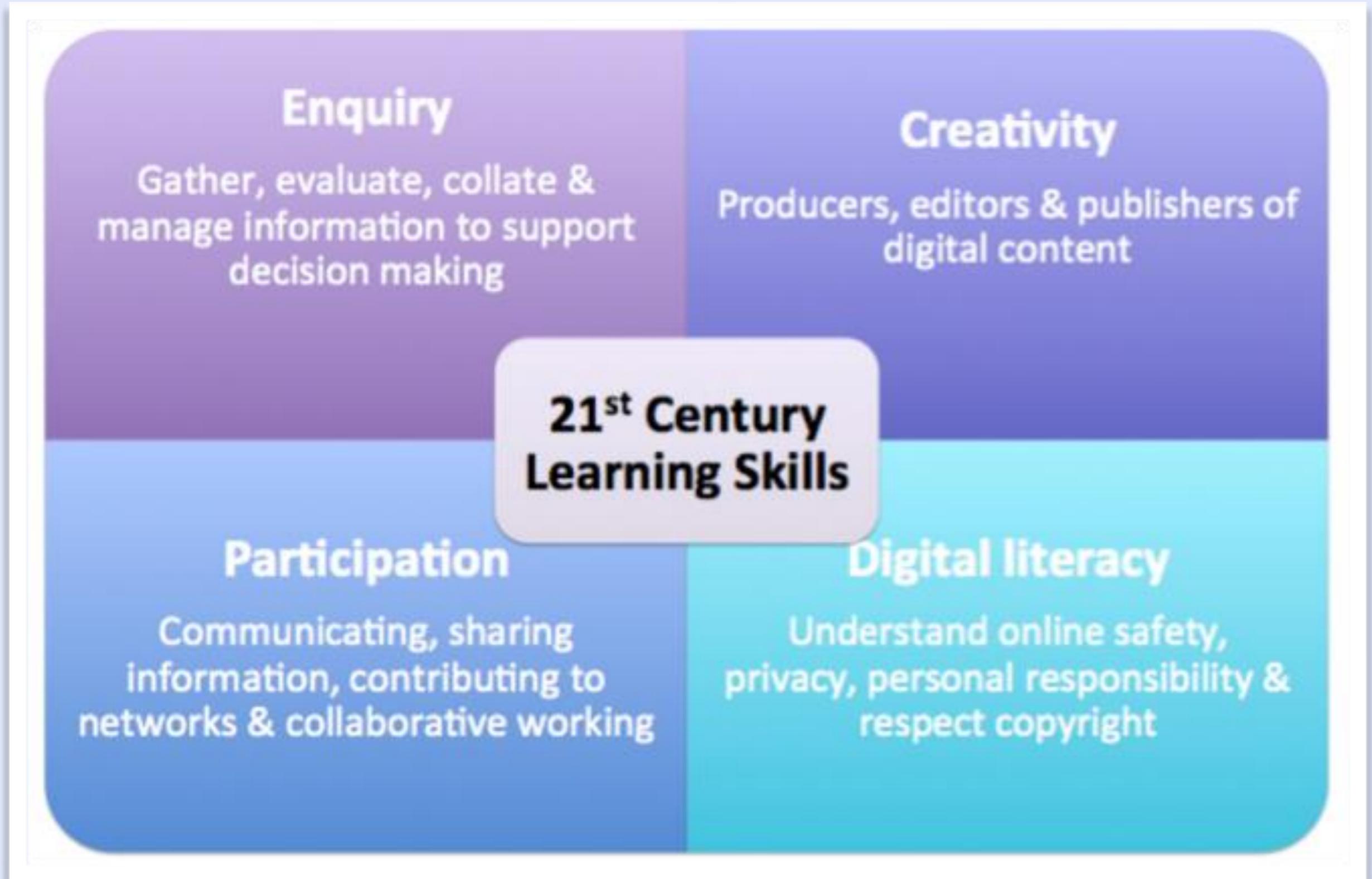
MOOCs, getting my first open badge, feedback & the NSS



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 spells out why she doesn't think MOOCs cut it for 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 universities typically score the lowest on. If there was an NSS equivalent for MOOCs how

Issues with quality, plagiarism,
machine marking,

Do students have the appropriate skills?



SUSTAINABILITY?

What about the ...

POTENTIAL?

Basic Science Teaching

Reply to a Tweet



Natalie Lafferty @nlafferty

[#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

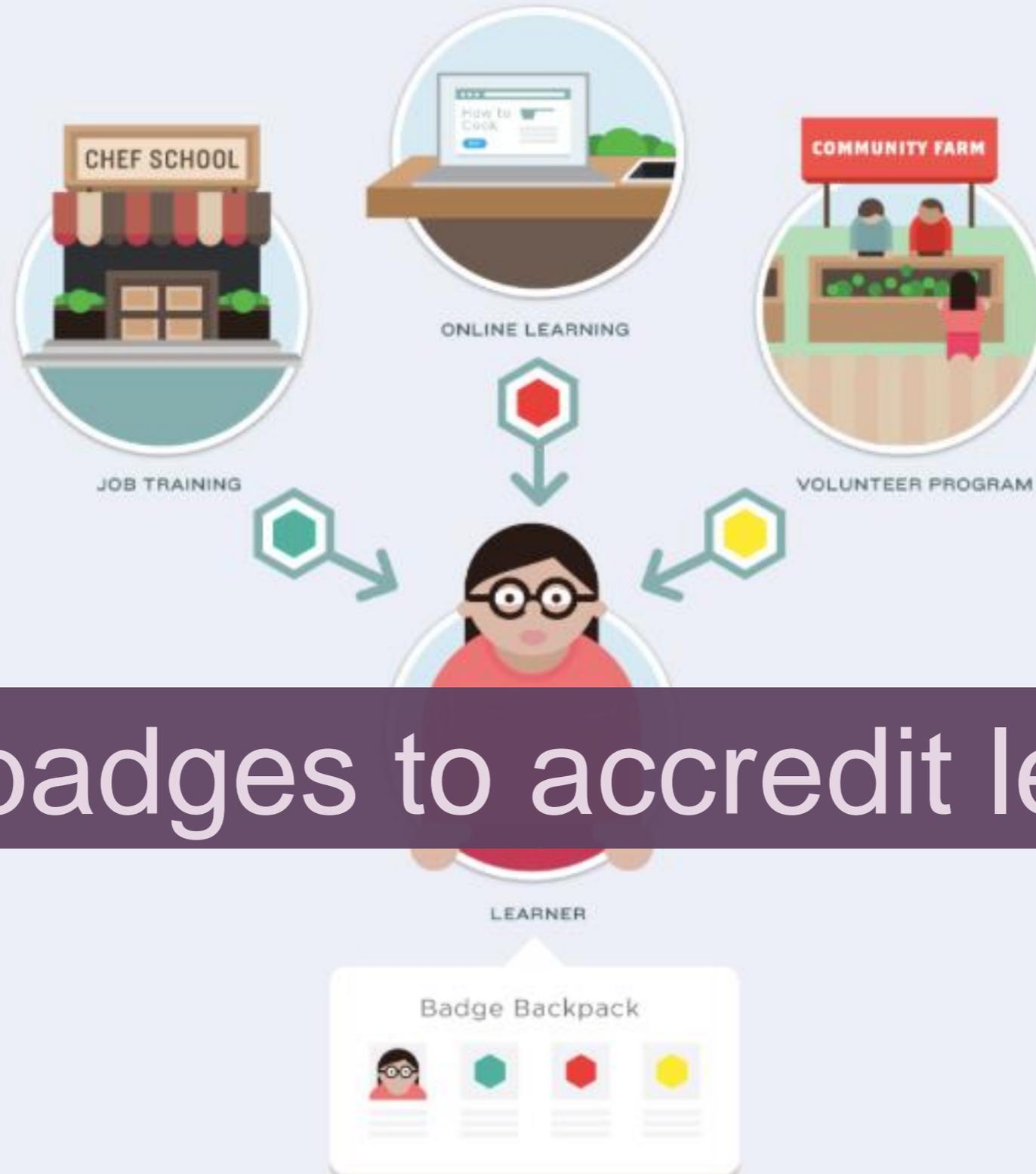


Community Open Online Courses

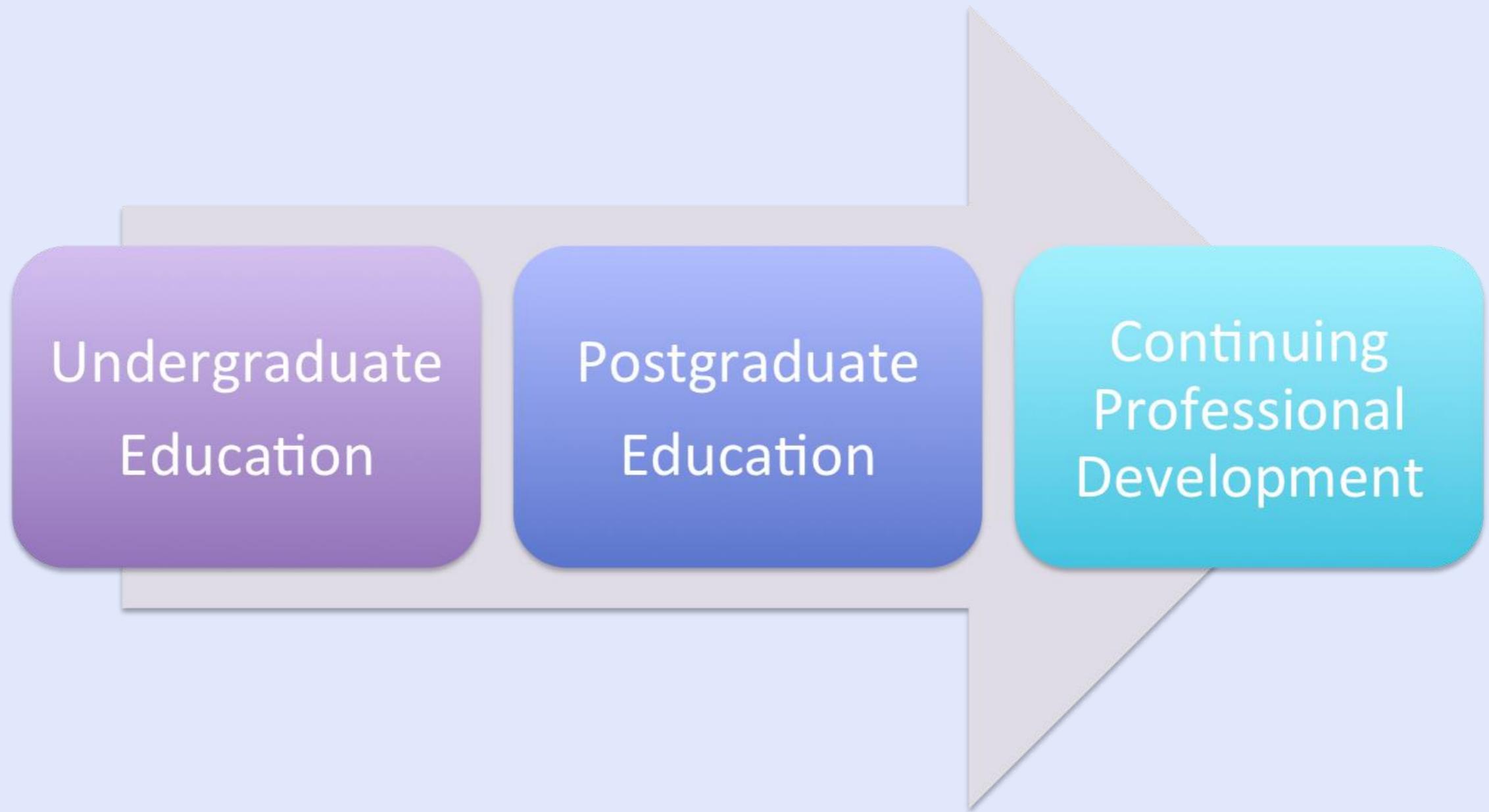
- Ethics
- Global health
- Public health



Open Badges help you share your skills & interests with the world:



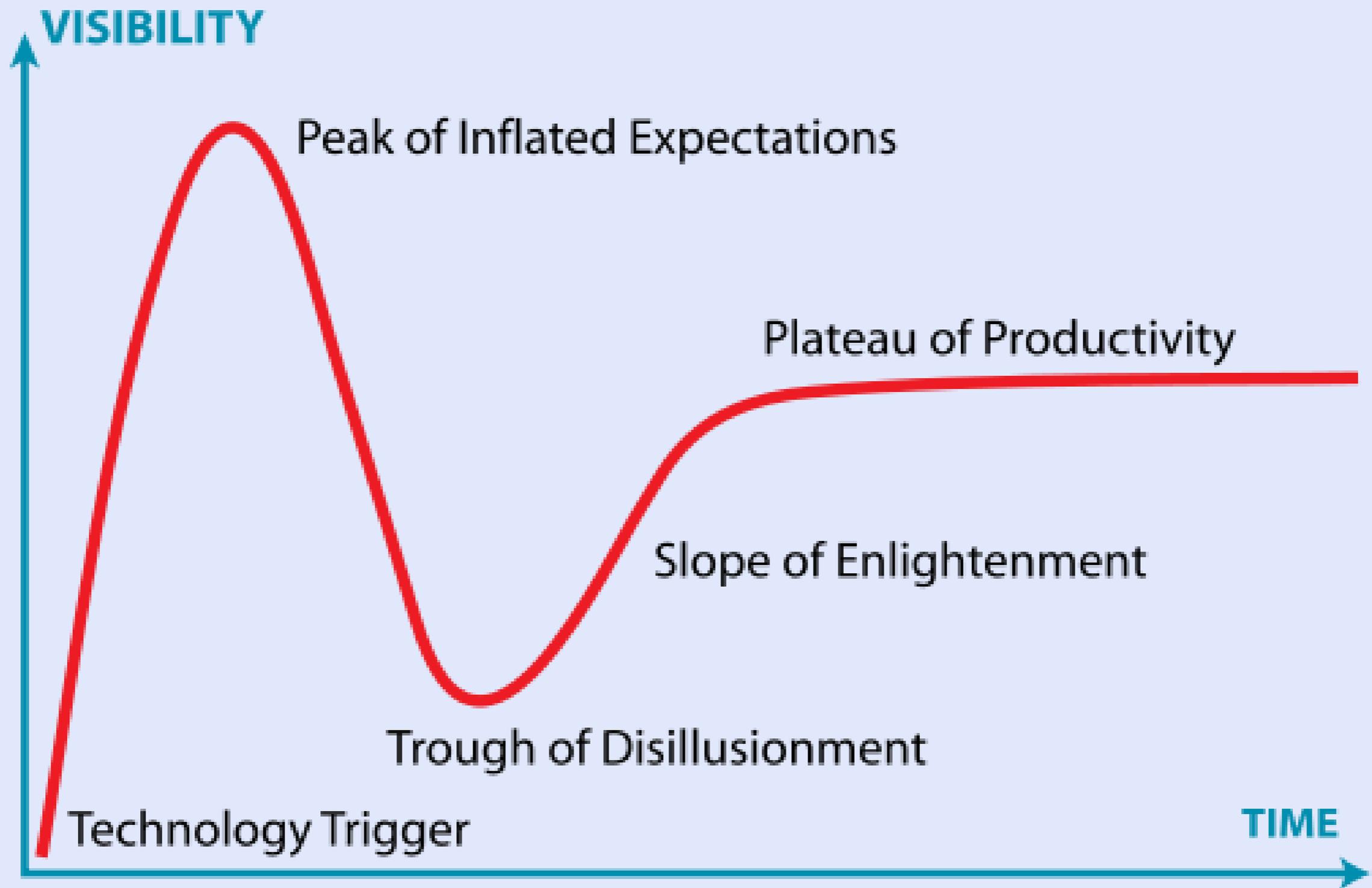
Open badges to accredit learning



MOOCs supporting CME/CPD & a marketing tool



Free open access medical education
communities of practice – rhizomatic learning



Gartner Hype Cycle

What will MOOCs look like in 5 years?

inged insect;
used as fish-bait;
the ointment
idm fly on the
et observer; idm no
sb sb is not easily
bled; a flyblown
ggoty; n fly-
bird;

accepting (wo
article).

focus n poi

converging rays of light,
heat, waves of sound, meet;
centre of activity or
intensity; pl focuses, foci; v
adjust; cause to converge;
concentrate; a focal
pertaining to foc

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

What do you think?

Questions?

Thank you



Natalie Lafferty

Twitter - @nlafferty

Email – n.t.lafferty@dundee.ac.uk

