



State Council of  
Higher Education for Virginia

# MOOCs and Higher Education

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# What is a MOOC?

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Massive

Open

Online

Course

# *Massive...*

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- *Introduction to Artificial Intelligence*, P. Norvig and S. Thrun, Stanford, fall 2011: **160,000**.
- “Six-figure enrolments are atypical, with the median average enrolment being 42,844 students, and decreasing over time as the number of courses available continues to increase”

(K. Jordan, cited at <http://techcrunch.com/2014/03/03/study-massive-online-courses-enroll-an-average-of-43000-students-10-completion/>)

# *Open...*

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- Open *access*, rather than open *content*.
  - Offered by elite institutions, but are available without admissions requirements.
  - Cost-free (sort of) to the student, but content is (in many cases) proprietary.
    - Contrast: Open Education Resources (OER)

# *Online...*

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- Internet (i.e., not correspondence, not synchronous broadcasting)
- Components
  - Video: broken down to discrete segments
  - Feedback: to check comprehension and progress
  - P2P Learning: student forums (sometimes wiki-like knowledge integration)

# ***Course.***

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- Content organization and sequencing of presentation is analogous to a traditional college *course*; there's a beginning and end.
  - **But not identical:**
    - Credit generation
    - Relation to degree program
    - Role of instructor
    - E.g., Khan Academy (topic breakdowns

# MOOC Providers

[http://www.moocs.co/Higher\\_Education\\_MOOCs.html](http://www.moocs.co/Higher_Education_MOOCs.html)

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Carnegie Mellon University –  
Open Learning Initiative

Class2Go

Coursera

EDRAAK

edX

Enaco

EWANT

Fort Hays State University

FUN: France Universite  
Numerique

France's National MOOC  
platform

FUTURELEARN, INC.

Holland College

IFP School

iMooX

Institute des Mines-Telecom

INSTRUCTURE / Canvas  
Network

Iversity

LUXVERA

MIRIADAx

MITx

MOOC.org

MOOC FACTORY

MOOCs University

MOOEC

MR UNIVERSITY

Najah National University

NationsUniversity

North Carolina State University

OERu

OpenCourseWorld

OpenHPI

OpenLearn

OPENLEARNING

OPEN2STUDY

OpenUpEd

Phoenix College

Rwaq

Stanford University

Salford Business School

Sunstone Business School

Swinburne University of

Technology

Tsinghua University

UDACITY

UNEOPEN

UNESP aberta

UniMOOC

Universidade Aberta – iMOOC

UNEDCOMA

Universidad Politecnica de  
Madrid

Universitat Polytechnica de  
Valencia (UPVX)

University of Amsterdam

University of California - Irvine:  
OpenCourseware

University of the People

University of Western Australia

UNx

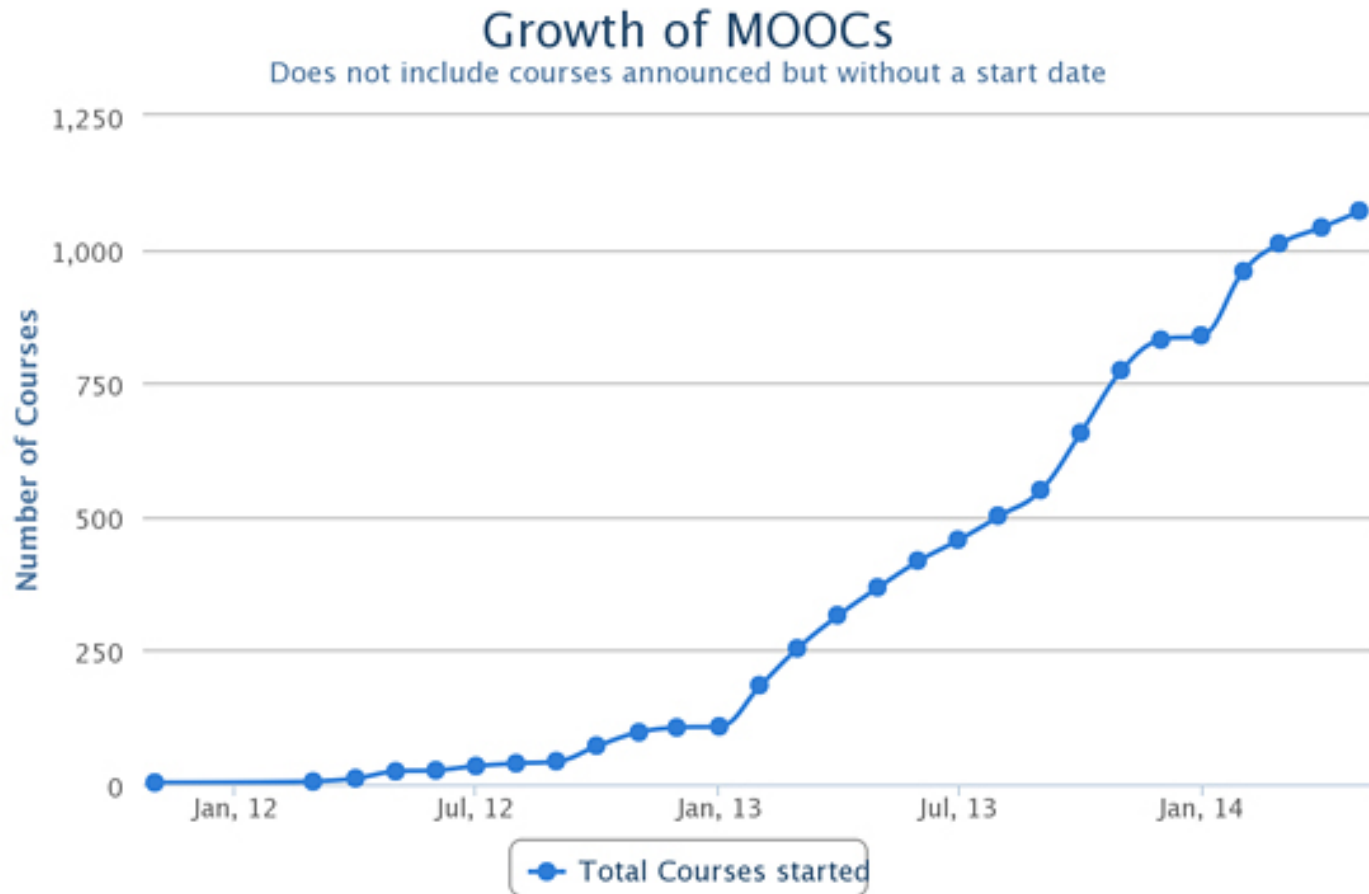
Veduca

World Science University

Yale Open Courses

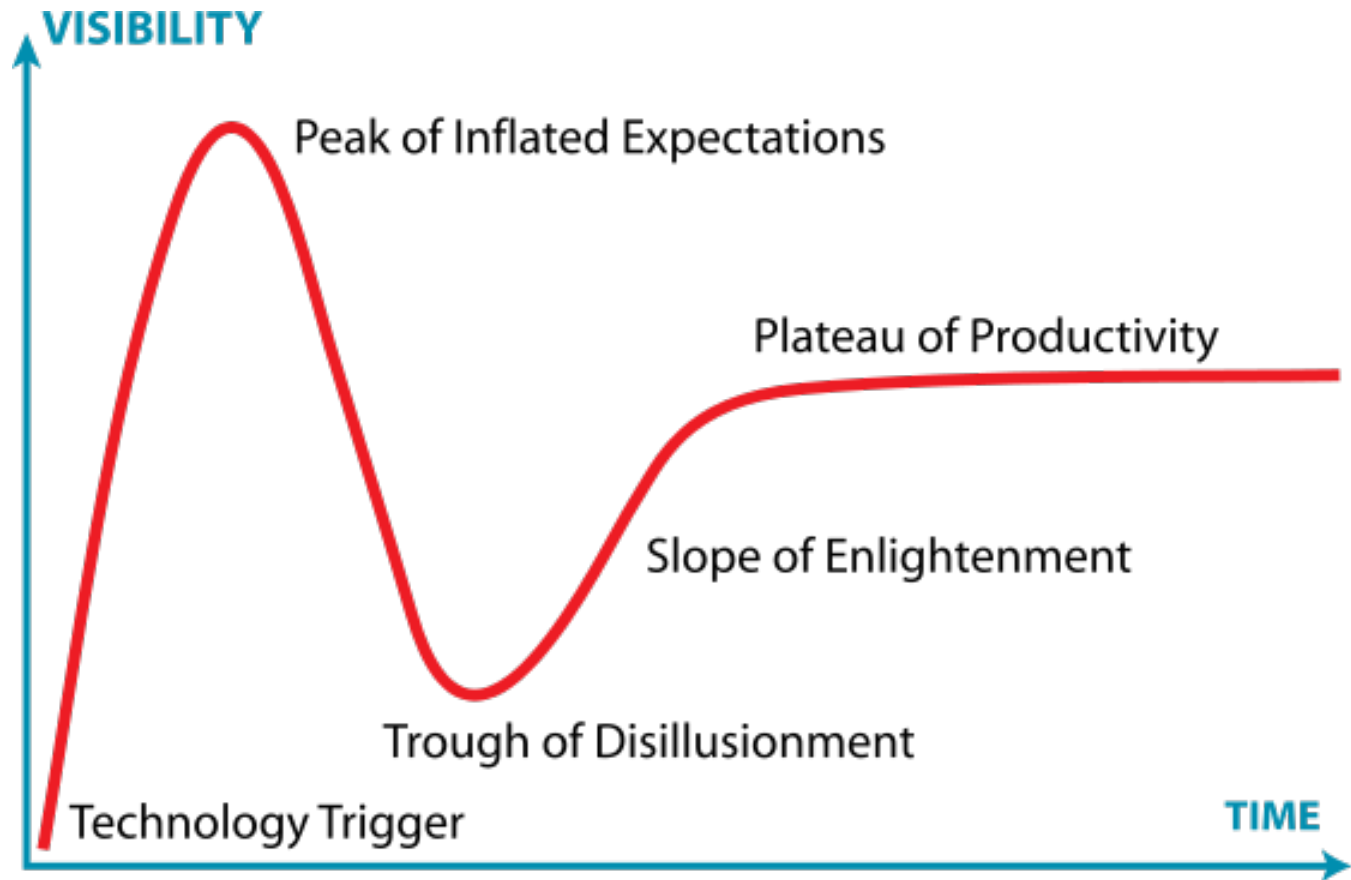
# “Business” Booming

(<https://www.edsurge.com/n/2013-12-22-moocs-in-2013-breaking-down-the-numbers>)





# MOOC Hype?



# MOOC Skepticism

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- Digitized Textbooks
- ATM for lectures and texts
- Marketing for elite institutions
- Low completion (6.8%)
- Failed online ventures

# MOOC Skepticism— The San Jose State Incident

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*In spite of our admiration for your ability to lecture in such an engaging way to such a large audience we believe that having a scholar teach and engage with his or her own students is far superior to having those students watch a video of another scholar engaging his or her students.*

--San Jose State Philosophers

*The worry that the widespread use of online courses will damage departments in public universities facing budgetary pressures is a legitimate concern that deserves serious debate, at edX and throughout higher education. The last thing I want is for my online lectures to be used to undermine faculty colleagues at other institutions.*

--Michael Sandel, Harvard

# Real MOOC Challenges

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- Quality (educational, not institutional)
  - Learning requires more than watching videos and taking multiple choice tests.
  - But, MOOC-related research is revealing new information about how people become engaged by learning and how they retain what they've learned.
    - E.g., attention span, data-mining from student preferences and questions.

# Real MOOC Challenges

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- Certification/Credentialing
  - MOOCS—most of them, for now—do not actually convey college credit
  - New forms of assessment and credentials are arising.
    - “badges,” “specializations”
    - major organizations developing credit-granting schemes for some MOOCS (ACE/Coursera)

# Real MOOC Challenges

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- Long-term financial viability
  - “It’s a money loser. MOOCs are enormously expensive to produce, and they make zero money. This is the kind of business model only bankrupt corporations could love.”  
Prof. Larry Sabato, *The Cavalier Daily*,  
August 31, 2013
  - But what *is* the business model?

# Coursera, for example

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- Founded 2012 (Stanford roots)
- October 2014:
  - 105 partner institutions, 839 courses offered, 10 million users
- April 2012-November 2013: \$85M in venture funding
- Signature Track:
  - \$49 per course.  $[43,000 \times .068 \times \$49 = \$143,276]$
- New Thing: *Specializations*.
  - Targeted sequence of courses, followed by a capstone project. Pay \$49 per course.
  - Johns Hopkins Data Science Specialization: 9 courses/39 weeks/ \$421

# Coursera Specialization Certificate

JOHNS HOPKINS  
UNIVERSITY

## Specialization Certificate

has been presented to

Jane Learner

for successfully completing

Data Science

a non-credit series authorized by the associated Johns Hopkins University through Coursera

*Signature*  
Professor John Doe

*Signature*  
Professor John Doe



*Signature*  
Professor John Doe

*Signature*  
Professor John Doe



# In the future, *something* will be viable

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- Amazon
- What's the potential scale?
  - All-time most-viewed Youtube clips
    1. **Gangnam Style—Psy. 2,126,047,035**
    2. Baby—Justin Bieber w/ Ludacris. 1,106,296, 681
    3. Charlie bit my finger again—Harry & Charlie Davies-Carr. 794,310,365
    4. On the Floor—Jennifer Lopez w/ Pitbull. 789,638,623
    5. Party Rock Anthem. LMFAO w/ Lauren Bennett & Goonrock—766,411,024

# The importance of *openness*

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- MOOCs are just one phenomenon in the realm of innovative uses of instructional technology.
- Open Education Resources
  - E.g., Tidewater Community College “Z-degree.” Potential for \$3000 savings in two years worth of full-time study.
  - At request of Secretary Fornash, SCHEV worked with institutions to form OpenVA, to help propagate increased utilization of quality open resources.



*All human beings naturally desire  
knowledge.*

--Aristotle

*Information wants to be free.*

--Stewart Brand