To MOOC or Not to MOOC?

– Is that the Question?

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The attack of the MOOCs

An army of new online courses is scaring the wits out of traditional universities.

The Economist, 20 July 2013
Since Fall 2011 when CS221 was offered at Stanford to 160,000 students…
There's a story in The Chronicle almost every day on MOOCs…
So what is a MOOC?

Massive

160,000 students enrolled in the Fall 2011 Stanford course on Artificial Intelligence...

Taught by Sebastian Thrun, a computer-science professor at Stanford,
and Peter Norvig, director of research at Google.
[who, BTW, co-wrote the suggested textbook...]

Open

Free to participate* in the course. Students enrolled in the course live in countries around the globe...

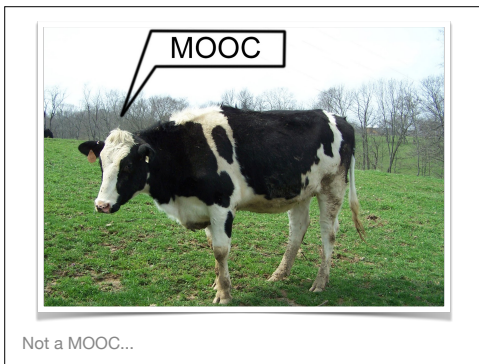*But not to create the content or maintain the digital resources needed…

Online

All the course material, from lectures to video, is online… While local cohorts meet to learn together.

Course

With facilitators, course materials, assessments, and a start and end date...

Not a MOOC...

There are many variations on this theme:
- LOOCs – L(arge)OOCs < 500 students
- OOCs – Open... but not Massive or even Large
        Think Open Courseware Project; Online Learning Initiative.
- cMOOC – connectivist-style... (2008)
        Focuses on community and connections…
- xMOOC – traditional sage-on-the-stage style… (2011)
        Focuses on scalability. This is the model most visible now in the news.
- MOC – Massive and Online but course materials are not Open to share.
- Blended MOOC – Flipping the classroom using MOOC(s) (San Jose State).
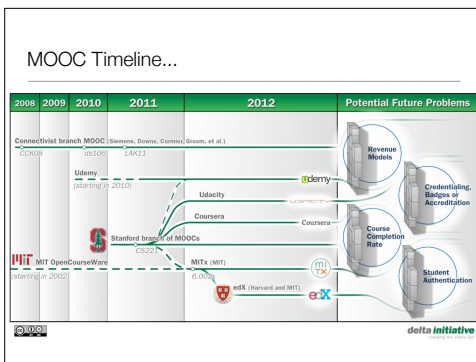
Term coined in 2008 along with first course:
        "Connectivism and Connective Knowledge"
with 2,300 registered students.

In 2013 Blackboard, Desire2Learn and Instructure started offering their platform for MOOC instruction.

Google and EdX joined to create Open EdX an open-source platform…

Comparison of key aspects of MOOCs

Initiatives	For profit	Free to access	Certification fee	Institutional credits
eDX	x	✓	✓	x
Coursera	✓	✓	✓	x ✓
Udacity	✓	✓	✓	x ✓
Udemy	✓	x ✓	✓	x ✓
P2PU	x	✓	x	x

Key
x   Not a feature
✓   Feature present
x ✓ Features partially present

P2PU is Peer-to-Peer University p2pu.org/en/

MOOC Growth Rate...

- **EdX** currently offers 94 courses from 29 institutions around the world (as of November 2013).

- During its first 13 months of operation (ending March 2013), **Coursera** offered about 325 courses, with 30% in the sciences, 28% in arts and humanities, 23% in information technology, 13% in business and 6% in mathematics.

- **Udacity** offered 26 courses. Udacity's CS101, with an enrollment of over 300,000 students, was the largest MOOC to date.

Udemy and **Kahn Academy** work outside the university system or emphasize individual self-paced lessons.

visibility, or expectations

Late 2013

2023 onwards

2017-2022

2014, 2015

March 2012

time

A Projection | Jonathan Tapson netimpact.org/blog/moocs-and-the-gartner-hype-cycle
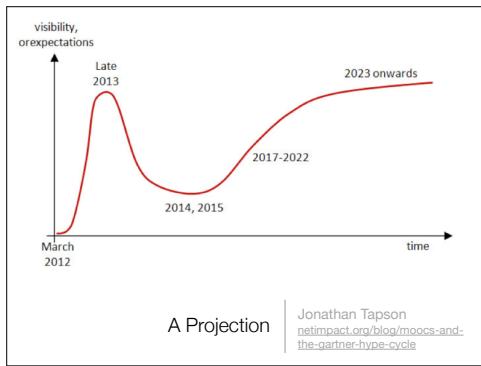
Adapted by Les Schmidt
www.slideshare.net/navigateHighEd/the-mooc-hype-cycle-nov-2012

To MOOC or Not to MOOC…?

8 Propositions

William G. Bowen

Will discuss 6 of these…

Keep [these Propositions] in mind as we look for ways to harness information technology through the medium of online learning.

from William G. Bowen's EDUCAUSE Review:
The Potential for Online Learning: Promises and Pitfalls
September/October 2013, pp. 12-30
Bowen is President Emeritus of Princeton
and Founding Pres of Ithaka/JSTOR.

Context

- Increases in Internet bandwidth available; drop in cost of storage; growth in processing power; decrease in size and weight of computing devices…

- The Millennial Generation (Y) is fully digital… Not to mention Gen Z…

- Growing consensus that cost of college is too high and completion rates and time-to-degree are too low.

- Online learning is here to stay.

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[4]
From Bowen,
ACADEMIA ONLINE: MUSINGS (SOME UNCONVENTIONAL)
14 October 2013

Proposition 1:
We need to distinguish among target populations

- Are MOOCs provided to individual learners?

- Are MOOCs provided to academic institutions [or business firms]?

- What type of learners are targeted? Where are they living? Why are they in the course?

- Are we leveraging MOOCs to substantially increase the data available to research the impact of online pedagogies on learning?

- Can MOOCs be adapted to meet the learning needs of undergraduate state university students?

[5]

Proposition 2:
Different pedagogies are right for different disciplines

- "Machine-guided instruction" for basic concepts in subjects with "the right answer" is not new and is well researched but expensive to develop.
  – Should scale well…
  – Open Learning Initiative; ITHAKA S+R.

- Online technologies can *impact* other types of subjects.
  – Peer assessment may help scale instruction in discursive fields.

[2] ITHAKA provides three innovative services that benefit the academic community:
  JSTOR, Portico, and Ithaka S+R.
  www.ithaka.org

Proposition 3:
A limited degree of "local" customization is important

- Not developing an online course "from scratch" makes it easier for faculty to get started.

- But the learning platform needs to allow some degree of customization to each course.

- Coursera and EdX are moving more in this direction.

[3]

Proposition 4:
More rigorous research needed on learning outcomes

- MOOCs can offer a *massive* amount of data on the effectiveness of different pedagogies.

- Issues affecting much classroom research — selection effects; small samples sizes; lack of third-party assessment — are reduced by the size of enrollment in MOOCs.

[2]

Proposition 5:
We must focus on controlling educational costs

- Fiscal and political realities will continue to put pressure on the economic structure of higher education, especially in the public sector.

- Efforts at raising productivity — by reducing "inputs" or increasing "outputs" — will need to continue*.

- The same is true for efforts to reduce costs…
  – But our calculus needs to acknowledge "start-up costs" differ from "maintenance costs".

- Much of this can be done without recourse to MOOC-ing the curriculum.
  – Better course scheduling and space utilization; higher completion rates and tighter time-to-degree.

[4] *Universities caught in a Cost Disease (Baumol & Bowen)
Rising cost of labor without corresponding increase in productivity.

Proposition 6:
System-wide thinking is required

- It takes a village…

- A clearly established common pathway for graduation involving all state universities in Illinois may help with completion rates and time-to-degree.

- Leveraging external certification — perhaps for approved MOOCs* — could also cut the student cost of a higher education degree.

- Some individuals and some schools in a system can specialize in production of content; others in its consumption.

[4] *ACE has approved 5 courses offered through Coursera for credit and is reviewing MOOCs from Udacity.

Proposition 7:
New thinking is needed on organizational and decision-making mechanisms

- Effective adoption of online pedagogies is going to require new thinking about decision-making in academia.
- Adopt genuinely collaborative decision-making that includes faculty on when and how digital technologies should be used to teach some kinds of content.
- There is a self-evident need for consultation with those who are experts in their disciplines and experienced in teaching.
- Some centralized calibration of both benefits and costs is essential.

How will intellectual content of a MOOC be maintained and offered again?

Proposition 8:
Stratification worries deserve much more attention

- Educational gaps between the rich and the poor in US are growing.
- A student from highest quartile of income is more than 10 times likelier to complete a college degree than one from the lowest quartile.
- Resources gaps between wealthiest and poorest higher education institutions have grown as well.
- Is equal opportunity "our national myth"? (Stiglitz)
- Can MOOCs help reduce the social stratification by increasing access to a college degree? Or make it worse…?

Sebastian Thrun wrote that an altruistic desire to increase access to higher education worldwide was a prime motivator for his creating Udacity.

Not really so scary... Maybe...

Questions?

Time for lunch!   Thanks!

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