MOOCs Demystified –
Practicalities & Possibilities of MOOC Curriculum at PolyU & Victoria University

Peter Duffy
Victoria University, Australia &
Eric Tsui
The Hong Kong Polytechnic University

Learning no longer needs to be confined to a group or location (Source: Terry Anderson, 2011)

"Travelling to a university to attend all of your classes"

The first MOOC… back in 2011

Stanford University Artificial Intelligence course – 160k students from 195 countries signed up

What's in a name?

IMG REF -
http://jeffreymbrackett.files.wordpress.com/2013/05/moocbetterwordb
ubble.png

ACTIVITY – Unpacking 'MOOC'

Four Facets of 'Open'

1. **Access**

2. **Resources**

3. **Creation**

4. **Mix & Match**

Characteristics of a MOOC
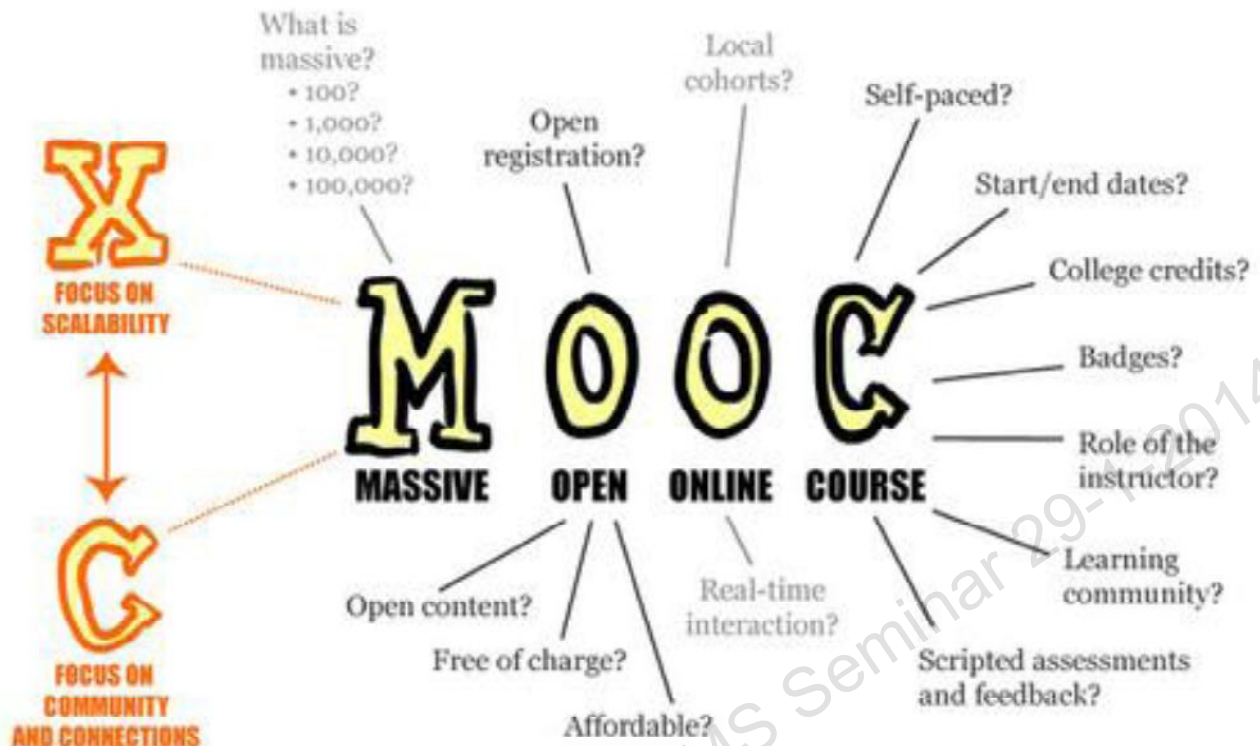
MOOC providers (July 2013)

The scale in MOOCs

270,000

Students enrolled in Udacity's Introduction to Computer Science MOOC

200,000

US university first-years intending to major in computer science

MOOCS TOPPING THE CHARTS

-- 2013 --
THE NEW YORK TIMES
REPORTED THAT MORE THAN

5 million students

AROUND THE WORLD HAVE REGISTERED FOR

MOOCS

Each course may have
HUNDREDS,
THOUSANDS,
or **HUNDREDS**
OF **THOUSANDS**
of students
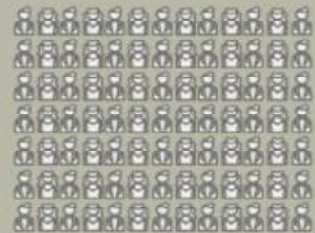
and just
ONE
professor

As of 2013

13% of schools offer MOOCs

That's expected to rise to
43%
by 2016

In a 2013 Chronicle of Higher Education survey of MOOC educators,

THE MEDIAN ENROLLMENT PER COURSE WAS

➜ **33,000**

To MOOC or not to MOOC?

Join MOOC

Prepare for the journey
New business model

Status Quo

Withstand the threat
Hope MOOC will go away

Quick decision is needed

Universities' reaction to MOOC

1. Repel

2. Wait & See

3. Adopt

- ### Producer

- ### Consumer
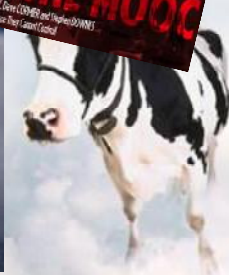
Why universities support MOOC?

- **Extend the reach of education**
- **Enhance the profile of an institution**
- **Provide FREE or low cost education for the masses**
- **Enhance the flexibility and quality of subjects/programs currently being offered**
- **Innovative way of sourcing quality content**
- **Collect learning data and deliver personalised training**
- **To counteract the threat**
- **…**

GIT fires the first shot!!!

MOOC News Roundup – The Low-cost Online Degree is Here

This week Georgia Institute of Technology announced a new online master's degree program in computer science that will be taught using Udacity courses and supported by tutors and mentors at the university. The cost of the Master of Science in Computer Science – a 10-course program taking about three years to complete – will be $7,000.

From MOOCs to university credits

THE CHRONICLE OF HIGHER ED
Technology

July 8, 2013

A University's Offer of Credit for a MOOC Gets No Takers

By Steve Kolowich

It was big news last fall when Colorado State University Global Campus became the first college in the United States to grant credit to students who passed a MOOC, or massive open online course.

For students, it meant a chance to get college credit on the cheap: $89, the cost of the required proctored exam, compared with the $1,050 that Colorado State charges for a comparable three-credit course.

That is a big discount.

Yet almost a year after Global Campus made the announcement, officials are still waiting for their first credit bargain-hunters.

Wharton offers FREE MBA course online

BloombergBusinessweek
Business Schools

| Global Economics | Companies & Industries | Politics & Policy | Technology | Markets & Finance | Innovation & Design | Lifestyle |

GETTING IN
News and insights on B-school admissions, careers, and more

MBA Programs
Wharton Puts First-Year MBA Courses Online for Free

By Louis Lavelle | September 13, 2013

SEND TO kindle

Getting a Wharton MBA involves taking off from work for two years, mo...
Philadelphia, and spending about $200,000 on tuition and expenses. N...
the addition of three new courses on the online learning platform Cou...
get much of the course content for free.

HOME
MOOCs
About UniMOOC
University
Education
Coursera

A free MBA Coursera.

By luis moreno 21:48 Coursera, MBA, MOOC Leave a Comment

MBA
Master of
Business
Administration

We've gone crazy! ? A Free MBA ?

Yes, and good: Wharton Business School (Pennsylvania) will offer the first course of your MBA (valued at over $ 200,000) and for free online. ? And where is the trick ? Well, it really has opened the course content and integrated into the platform Coursera : not obtained the MBA degree, but you can acquire the knowledge that he tries to instill in areas such as marketing, accounting, financial economics. it is the adaptation of the MBA to MOOC methodology .

Obviate the debates between " education" , "knowledge" and "titles" and go to the obvious: What does this course, and why is it so interesting?

Wharton
UNIVERSITY *of* PENNSYLVANIA

Credibility of a MOOC course

72% Of Professors Who Teach Online Courses Don't Think Their Students Deserve Credit
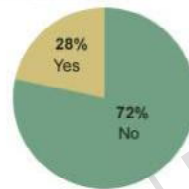
GREGORY FERENSTEIN ≫

posted yesterday   101 Comments

This is not a good sign for online education: 72 percent of professors who have taught Massive Open Online Courses (MOOCs) **don't believe that students should get official college credit**, even if they did well in the class. More importantly, these are the professors who voluntarily took time to teach online courses, which means the actual number of professors who discount the quality of MOOCs is probably much (much) higher. The survey reveals the Grand Canyon-size gap between the higher-education establishment and the coalition of tech companies and lawmakers that are **mandating college credit** for online courses.

Do you believe students who succeed in your MOOC deserve formal credit from your home institution?

28% Yes

72% No

The first MOOC… back in 2011

Stanford University Artificial Intelligence course – 160k students from 195 countries signed up.
20k completion certificates issued.

UDACITY — Course Catalog — Sign In — Sign Up

Introduction to Artificial Intelligence

INTRODUCTION TO Artificial Intelligence — in partnership with STANFORD ENGINEERING

The instructors

Sebastian Thrun

Peter Norvig

UDACITY

Intermediate

INSTRUCTORS
Sebastian Thrun
Peter Norvig

Take the Class

Class Summary
The objective of this class is to teach you modern AI. You will learn about the basic techniques and tricks of the trade. We also aspire to excite you about the field of AI.

What Should I Know?
Some of the topics in Introduction to Artificial Intelligence will build on probability theory and linear algebra. You should have understanding of probability theory comparable to that of our Intro to Statistics class

What Will I Learn?
This class introduces students to the basics of Artificial Intelligence, which includes machine learning, probabilistic reasoning, robotics, and natural language processing.

Course Instructors
Sebastian Thrun
instructor

Sebastian Thrun is a Research Professor of Computer Science at Stanford University, a Google Fellow, a member of the National Academy of Engineering and the German Academy of Sciences. Thrun is best known for his research in robotics and machine learning, specifically his work with self-

Syllabus
Overview of AI
Statistics, Uncertainty, and Bayes networks
Machine Learning
Logic and Planning
Markov Decision Processes and Reinforcement Learning
Hidden Markov Models and Filters

Completion rate at edX

BREAK IT DOWN! EDX'S FIRST MOOC

MIT and Harvard professors took a look at the student body of 6.002x: "Circuits and Electronics" in a 2013 study

Enrollment vs. Completion

155,000+ students registered → **7,100+** passed, earning a certificate

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UDACITY

Introduction to Artificial Intelligence

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Thrun: "MOOC not for higher education"

THE AUSTRALIAN

Time to move beyond MOOC hype?

RY RIVARD INSIDE HIGHER ED JULY 12, 2013 12:00AM

AS scores of universities rush to offer free online classes, the mania over massive open online courses may be slowing down. Even top proponents of MOOCs are acknowledging critical questions remain unanswered, and are urging further study.

Dan Greenstein, the head of post-secondary success at the **Bill & Melinda Gates Foundation** _(http://www.gatesfoundation.org/)_ , now wonders aloud if MOOCs are a "viable thing or are just a passing fad." Gates has agreed to spend $3 million for wide-reaching MOOC-related grants. But Greenstein said higher education is suffering from "innovation exhaustion," and MOOCs are part of the problem.

"It seems to me, at least with respect to MOOCs,

Sebastian Thrun, CEO of Udacity. Source: Supplied

Revenue from MOOCs

(**Provider**) charges (**an institution**) for developing, hosting and/or delivering a MOOC subject

(**University/Provider**) charges (**a learner**) for issuing a completion certificate, taking an assessment and/or an examination, or taking a degree course

(**Provider**) charges (**an employer**) for referring its best students

(**Provider**) charges (**an institution**) for validating a learner has attended a course
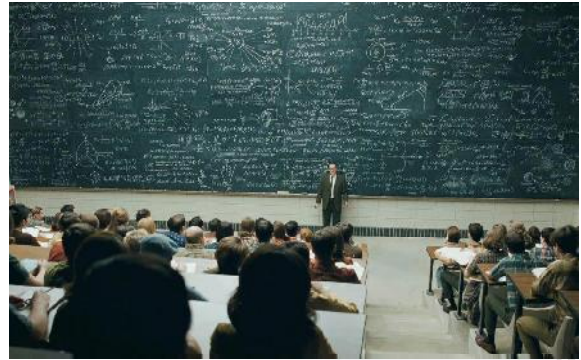
(**Provider**) charges (**an institution**) for using a MOOC course to enhance/expand its existing on-campus course/degree offering

(**Provider/University**) charges (**an individual, company, institution**) for embedding part(s) of a MOOC subject into its own learning content

Shortfalls in MOOCs' adoption

- **Lack of face-to-face contact**
- **Under-leverage of pedagogy & technology**
- **Teachers' attitude and delivery of education need to change**
- **MOOC alone cannot enhance the quality of education**
- **Universities still consider LMS as a strategic tool with a strong cost focus**

Dutch Princess Maxima and Prince Willem-Alexander (both on the right) during the interview with the television hosts. Photo: Epa

Discussion

- ***Should PolyU go MOOC?***

- ***Would you develop (part of) a MOOC?***

- ***What are the opportunities, obstacles and issues?***

- ***Any other thoughts?***

- A variety of complex issues concerning copyright and IP
- Quality assurance of MOOC subjects
- Identifying effective MOOC course designs
- Identifying appropriate MOOC production values
- Learning what makes feedback/assessment most effective?
- Learning what promotes effective engagement (and completion)
- Negotiating the interface with credit and degree programs
- Evolution of Signature Track and its fidelity
- Integration with tools outside the MOOC platform (e.g new app platform)
- Sustainability in a changing landscape?

To MOOC or not to MOOC?

Join MOOC

Prepare for the journey
New business model

Status Quo

Withstand the threat
Hope MOOC will go away

Quick decision is needed

Education for the handicapped

Access denied

Maya Wang says children with disabilities are being pushed out of schools despite Chinese laws mandating universal education, and such discrimination persists through to university

Millions of children across China have just begun a new school year. Some are going to schools equipped with resources their parents could only have dreamed of – laptops, science labs, sports fields – and some will continue to wow the world on international test rankings. Others go to schools that lack basic resources – or are unable to attend school at all. This disadvantaged group includes students with disabilities, and far too many are being denied an education despite China's legal obligations.

Beijing claims near-universal enrolment for the general population. But ... receive no basic education at all. Among the officially estimated 83 million people with disabilities in China, more than 40 per cent are illiterate and at least 15 million live on less than US$1 a day, underscoring the lifelong consequences of a lack of access to education.

Why are so many children with disabilities not in schools? First, it is difficult to get ...

Crowdsource the development of a new subject via a competition

MOOC PRODUCTION FELLOWSHIP

Voting   Details   Jury   Login or register   English

MOOC PRODUCTION FELLOWSHIP
by iversity and Stifterverband für die Deutsche Wissenschaft

What would you like to learn?

We will award 250,000 Euros for the production of ten open online courses. Now it is your turn: Choose your personal favourites!

SEE ALL COURSES

What is a MOOC, and what's in it for me?

Lets Flip the Classroom!

In the 2012 March special issue of the *Harvard Business Review*, I learned a powerful insight about how we can get better prepared for a complicated world! In that issue, they stated that given the world we live in today (fast paced, complex, ambiguous, confusing and confronted with competing demands) our students (and managers) need to learn much more than they are currently learning and they need to learn faster! If this is the case, our strategy class need to take it to the next level. The short video lectures I have uploaded here is one of the ways in which we can *learn more and learn faster*! By covering the fundamentals of a topic via video (and allowing you to watch them at your own pace, anytime, anywhere), we create time during our in-class meetings to engage in more Socratic Debates and open up deeper discussions about the subject matter! Hence, these videos are designed to give you a basic understanding about the key issues I want you to be aware of and zoom-in specifically on those PowerPoint slides that will help you better appreciate the rest of the slides for that topic. You will need to download these PPT slides (uploaded in our CONTENT icon) and have them ready when you watch the videos. Again, in the way I have designed this course, and in the true spirit of the "Staying F.O.C.U.S.E.D." Philosophy of our learning environment, these videos complement and provide an important DOT from which you are expected to (re)connect with the other learning opportunities available to us throughout our course. Enjoy

Strategy Video Lectures

Video Lecture 1: Strategy
Video Lecture 2: External Analysis
Video Lecture 3: Internal Analysis
Video Lecture 4: Corporate Governance
Video Lecture 5: Business Strategy
Video Lecture 6: Corporate Strategy
Video Lecture 7: Implementation
Video Lecture 8: Evaluation

Dr. Robert P. Wright
4th September, 2013

Partnership with Corporate Universities

So, now we're introducing...
The New Way of Learning
YouTube edX coursera KHAN MOOC
TED
In the new way of learning you can...
For future generations too

Reaching out to the best brains

ONLINE

Courses are even reaching as far as developing countries like Mongolia, where high school students are taking courses from:

HARVARD   M.I.T.   U.C. BERKELEY

Mongolia

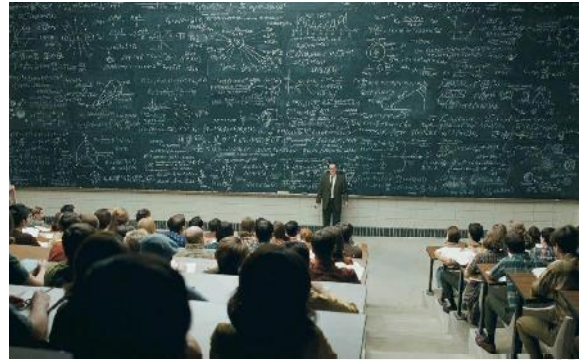*Ivory League universities can rely on MOOCs to identify the smartest brains worldwide & attract them to ...*

Other benefits of MOOCs

1. **Blended MOOCs**
2. **Scaleable & Shared resource among universities**
3. **Gather learning analytics & deliver personalised content to learners**
4. **Education for the community**
5. **Platform for course authoring, learning & problem solving for universities, businesses & individuals**

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Dutch Princess Maxima and Prince Willem-Alexander (both on the right) during the interview with the television hosts. Photo: Epa

MOOC Pedagogy & Practicality

edX: edXDEMO101: edX Demo

MOOCs, Mechanization, and the Modern Professor

MOOC Pedagogy

- These early MOOCs, known as connectivist or cMOOCs, focus on knowledge creation and generation rather than knowledge duplication
- Five steps to success in a cMOOC –
  - 1. Orient,
  - 2. Declare,
  - 3. Network,
  - 4. Cluster,
  - 5. Focus.
- A connectivist course is based on four major types of activity –1. Aggregate, 2. Remix, 3. Repurpose, 4. Feed Forward

21ˢᵗ Century Education

IMG REF - http://www.teachthought.com/wp-content/uploads/2013/02/shifts-21learning-revised.jpg
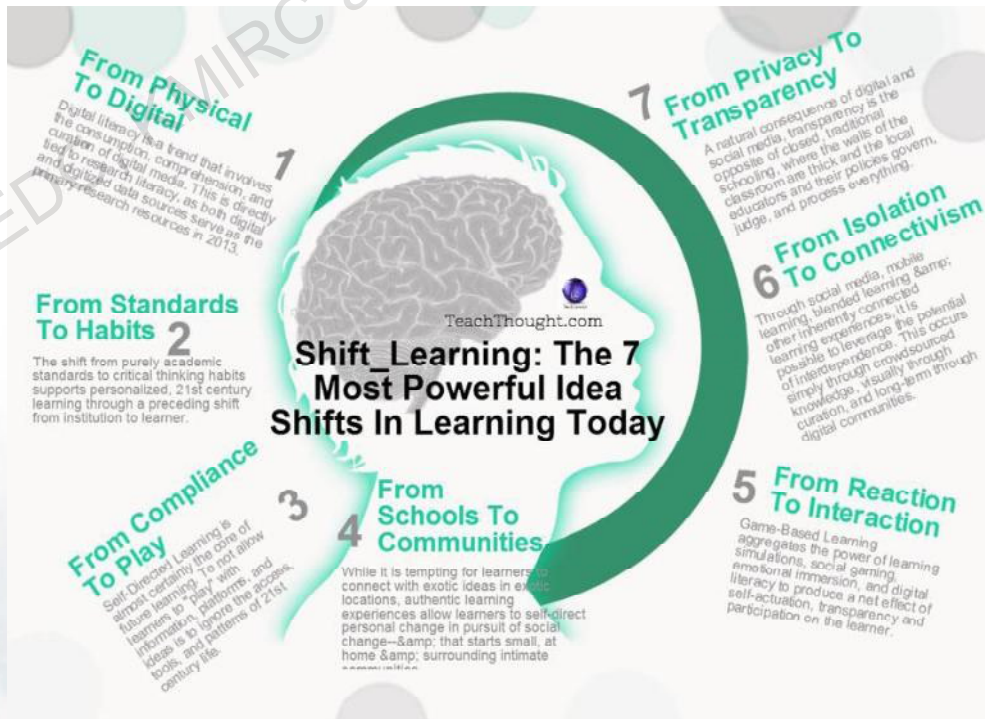
MOOC Pedagogy

ACTIVITY – Minimal Features for MOOChood

- Review the Minimal, Salient, Edge and Disqualifying features of a MOOC
- Identify HOW is a MOOC Different from your existing LMS Course?

(Blackboard / Moodle / Desire2Learn Course)

Assessing MOOC Pedagogy

- The purpose of this new line of research is to design and validate an instrument that characterizes the pedagogical approaches taken in Massive Open Online Courses (MOOCs), and to use that instrument to distinguish among MOOCs and to explore the efficacy of differing approaches
- 10 dimensional scale adapted from similar scales developed Reeves (1996) to characterize computer-based instruction, and Harris & Hofer (2009), to characterize technology integration, along pedagogical dimensions based on learning and instructional design theory

PEDOGOGICAL DIMENSIONS
- Epistemology
- Role of Teacher
- Focus of Activities
- Structure
- Approach to Content
- Feedback
- Cooperative Learning
- Accommodations for Individual Differences
- Activities/Assessment
- Use Role

REF - http://sloanconsortium.org/conference/2013/aln/exploring-mooc-pedagogy

Practicality - VU and MOOCs

http://www.vu.edu.au/

The VU Context

- A dual-sector University servicing a large, low SES population in the West of Melbourne with a high number of first in family students

- 7 Colleges
- Students: 51,642
- Staff: 2,496
- Number of campuses: 9
- Number of offshore sites: 17

The VU Context

- A Mini MOOC in the BBus Career Start Degree – WHY?

- Specialisations - The Bachelor of Business offers specialisations in nineteen disciplines
  (ref - http://www.vu.edu.au/about-us/academic-colleges/business)

MOOC in CONTEXT @ VU

ACTIVITY

Dissecting a MOOC: A Critical Examination of Current Pedagogy and HarvardX: One Year In

(REF - http://www.educause.edu/events/educause-virtual-annual-conference-2013-0/2013/dissecting-mooc-critical-examination-current-pedagogy-and-harvardx-one-)

Using California State University, Chico's Rubric for Online Instruction as the guideline participants will identifying key considerations for the development of A Business Statistics mini-MOOC

(Rubric Reference - www.csuchico.edu/roi/documents/rubricpdf)

PolyU's journey into MOOC

1. **A MOOC Steering Group is being formed**

2. **Large grants to be awarded for developing (partial) MOOC subjects**

3. **MOOC subjects/topics to be launched by Sept 2015**

4. **Keeping a watching brief of MOOC platforms**

5. **Collaborating with 7 other HK higher education institutions on several UGC Cross-institutional T&L grants**

Advisory Committee on Elearning

Community of Practice on using Blackboard LMS to enhance Teaching & Learning