# MOOCs and other Online species — A Lexicon and Overview

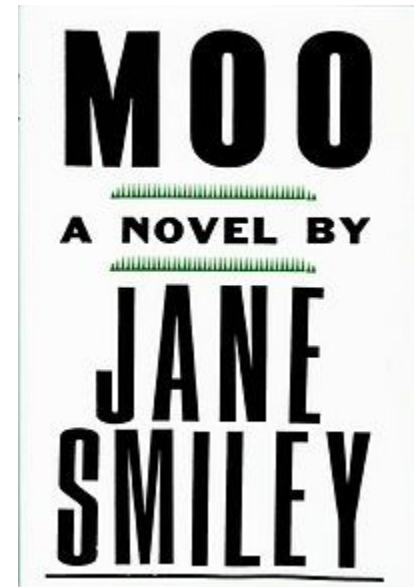## by

**Meera Sitharam**

*University of Florida*

# What is a MOOC ?

Choose one

1. A cow's  mating call
2. Newest novel by Jane Smiley
3. No one really knows

# MOOC

# Massively Open Online Course

# Backdrop

·Skills shortage

·Cost of higher education

Can MOOCS address these issues?

# Massive

- How many enroll?   5,000 – 50,000
- How many drop out?  > 90%

# OPEN

·What does OPEN mean? Choose one:

- Organization's Ploy to Educate Nincompoops

- Odd Payments Entitlements Noise

- No one really knows

# OPEN

- Free and open course materials for each *student*

- Free and open course materials for *other instructors*  (a variety of **tight copyleft** Creative Commons  type licenses)

- Open source Platform (also with a variety of licenses)  [*Student quiz performance data visible only to instructor, IP address invisible, hosted on the cloud – security level announced  upfront*]

- Open "brand" – membership cooperative: examples of "closed/exclusive brand" edX

7

# OPEN

(1)  Free and open course materials for each student
(2)Free and open course materials for other instructors
(3)Open source Platform
(4)Open membership cooperative

Pearson/Harcourt  online     --  None

Coursera/Udacity     –          1
Khan Academy                   1, 2
AOPS (alcumus)                 1, 2
EdX                            1,   3
CodeAcademy/AppInventor -- 1, 2, 3, 4
MIT AppInventor                1, 2, 3, 4

# Online (distance only)

Four types of online (distance only) paradigms:

(1) Web-based textbooks with web assignments
(2) MOOC
- Synchronized *(Coursera),* Nonsynchronized
- *(Khan Math, Udacity)*
- Noninteractive online content (audio + text/video)
- Interactive robot-graded exercises (no other content in the case of *codeacademy and MIT appinventor*)
- Peer-to-peer chat forum/discussion board with/without moderator
(3) MOOC, but with phone-in instructor help
- *Florida Virtual School*
(4) Socratic style interactive distance lectures w/ conferencing or chatblazer
- *Art of problem solving*
- Delivered realtime by one instructor (two helpers per "section" of 30 students), and 4 hand-graded project assignment

# Online (distance only)

Four types of online distance paradigms:

(1) Web-based textbooks with web assignments
(2) MOOC
- *Coursera, Khan Math, Udacity*
- Noninteractive online content (audio + text/video)
- Interactive robot-graded exercises (only these in the case of *codeacademy and MIT appinventor*)
- Peer-to-peer chat forum/discussion board with/without moderator
(3) 100% automated, with  phone-in  instructor help
- *Florida Virtual School*
(4) Socratic style interactive distance lectures on chatblazer
- *Art of problem solving*
- Delivered by one instructor and two helpers, to a class of 30, and 4 hand-graded project assignment

# Online  (distance only)

• Cost
•  Web-based textbooks with web assignments (comparable to textbooks)
MOOC  *Coursera, Khan Math, Udacity* (startup cost, $30K per course, one TA salary for 200 participants, one IT person salary for 1000 participants. For student: free unless discussion participant, need certification etc.)
•  Automated course with telephone access to instructor and some hand-grading. *Florida virtual school* ($500 per student for a semester course at K-12 level)

• Socratic style interactive distance lectures  a class of 30, and 4 hand-graded project assignments. *Art of problem solving* ($300 per student for a quarter course)

# Online(distance) positives





ıAnimated textbook
ıExercises as games
ıIncreased access to interaction with worldwide peers and experts
ıOpen/crowd sourced development and improvement of a searchable
        database of instructional material for standardized courses of study
ıLarge scale student response data (in easily analyzable format) for
ı Understanding how people learn
ıCan support "flipping the classroom" teaching methods

12

# Online (distance) Issues

- Does not offer the standard level of support even of large face-to-face courses
  - An expert prof to  run the course and  one TA for every 30 or so students,  hands-on discussion/lab
- Question 1:  What are the student and content characteristics needed to ensure quality?
- Question 2: How are the students to be authentically evaluated and certified at a distance without a proctor?

# … Online(distance) Issues

· Plausible answer to Question 1
  - Student: well above average resourcefulness, discipline, self-confidence to self-assess learning effectiveness without hand-holding
    Qualities not  measurable as quantities  – but can be statistically defined as 5%  of the population
  - Course content: entry level, not requiring depth of conceptual understanding, course just provides some practice and experience (course not major / minor in)

· Answer to Question 2
  - Difficult, unsolved problem

# Links

Web textbooks with interactive exercises:

http://www.pearsonhighered.com/pearsonhigheredus/in

# Other Online species

•Take a step back: What does a course consist of?

•Unbundle according to:
Content delivery and Interaction /Discussion
‣Assessment towards feedback or credit – how is it done?
‣Assessment toward credit – who does it?
‣Accreditation of the Course – who does it?

•Mix and Match according to
‣Course content
 (for an experience-report on flipped classroom, see
   http://www.cise.ufl.edu/~sitharam/flippingtheory.pdf
‣Budget …

# Unbundling Education

Table 1: **Unbundling Course Delivery**

| | | face-to-face | distance |
|---|---|---|---|
| no interaction | live | performing arts | fast-changing areas |
| | recorded | ?? | $ |
| blog, e-mail, forum | student-student | | $ |
| | student-teacher | ? | $$$ |
| | students-teacher | ? | $$$ |
| interactive | student-student | $$ | $ |
| | student-teacher | $$$$ | $$$$ |
| | students-teacher | $$$$ | $$$$ |

Table 2: **Unbundling Assessment**

| | | face-to-face | distance |
|---|---|---|---|
| no interaction | teacher grading/proctor | on campus $$$ | $$ |
| | automated grading/proctor | ?? | $ |
| blog, e-mail, forum | student-student | | $ |
| | student-teacher | ? | $$$ |
| | students-teacher | ? | $$$ |
| interactive | student-student | $$ | $ |
| | student-teacher | $$$$ | $$$$ |
| | students-teacher | $$$$ | $$$$ |

# Unbundling Education

Table 1: **Unbundling Course Delivery**

|  |  | face-to-face | distance |
|---|---|---|---|
| no interaction | live | performing arts | fast-changing areas |
|  | recorded | ?? | $ |
| blog, e-mail, forum | student-student |  | $ |
|  | student-teacher | ? | $$$ |
|  | students-teacher | ? | $$$ |
| interactive | student-student | $$ | $ |
|  | student-teacher | $$$$ | $$$$ |
|  | students-teacher | $$$$ | $$$$ |

Table 2: **Unbundling Assessment**

|  |  | face-to-face | distance |
|---|---|---|---|
| no interaction | teacher grading/proctor | on campus $$$ | $$ |
|  | automated grading/proctor | ?? | $ |
| blog, e-mail, forum | student-student |  | $ |
|  | student-teacher | ? | $$$ |
|  | students-teacher | ? | $$$ |
| interactive | student-student | $$ | $ |
|  | student-teacher | $$$$ | $$$$ |
|  | students-teacher | $$$$ | $$$$ |

18

# Unbundling Education

**Unbundling Student Assessment towards Credit: Who does it?**

- Content deliverer
- Employer
- Independent standardized testing
-

# Unbundling Education

**Unbundling  Accreditation: Who does it?**

- "Brand": a cooperative of content deliverers
- Employers
- Independent  accreditors

# Case Studies

Cheap

- SJSU

- http://chronicle.com/article/The-Document-an-Open-Letter/138937/

- https://www.udacity.com/collegecredit

- GaTech

- https://www.udacity.com/georgiatech

- FL SB 904 rolled into HB 7029

-  http://www.flsenate.gov/Session/Bill/2013/7029

   Look for:   http://www.pearsonvue.com/

# Case Studies

Not Bad (blended online, closed)

- Duke  via 2U  http://2u.com/

- Udemy https://www.udemy.com/

--Florida Virtual Campus http://www.flvc.org

# Your Rights
# Issues and Concerns

- You are
  - content creator
  - content presenter
  - <span style="color:red">owner ?</span>

# IP ownership
# Legal Wild West

·You might think it all belongs to you
·The university wants it all

Who decides?  …….

# The University of Florida Case

· The Deputy General Counsel says:

  · Your online course belongs to UF

· The CBA says:

  · It belongs to you unless

  · UF commissioned it    AND

  · UF paid you specifically for it

· No case has been tested yet

# The University of Florida Case

- http://www.uffacultycontract.org/new/archive/2010-2013_UFF-UF

# Georgia Tech Masters in CS with Udacity

·Interesting deal, appears reasonable for faculty

[http://](http://) [www.insidehighered.com/news/2013/05/28/documents-shed-li](http://www.insidehighered.com/news/2013/05/28/documents-shed-li)

# Food for Thought

·Safe option: use your own resources even if you plan a free and open course

·Incidental use of university resources *may* be OK

# What the Future Holds

·Familiarize yourself with the technology
·Actively promote awareness of  fragility of  IP ownership
·No issue is fully settled – they continue to evolve

<span style="color:red">Get faculty involved in discussions!</span>

# Comment by a Workshop Attendee

When dealing with online "revolution" we can collectively

choose to:

- Be in the driver's seat

- Be in the passenger's seat

- Be in the trunk

<span style="color:red">Get faculty involved
in discussions now!</span>

# Thank you