

MOOCs for Development? A Study of Indian learner experiences in Massive Open Online Courses

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Outline of Presentation

1. Critically discuss the narrative of MOOCs and Development.
2. Explore some of the core issues at the heart of MOOCs in Developing Countries
3. Discuss some of the challenges specific to Indian Higher Education Context, and what role, if any, could MOOCs potentially have
4. Outline the Development of MOOCs in India
5. Introduce my proposed research plan and Research Questions
6. Discuss the proposed methods and limitations of such a study
7. Get feedback!

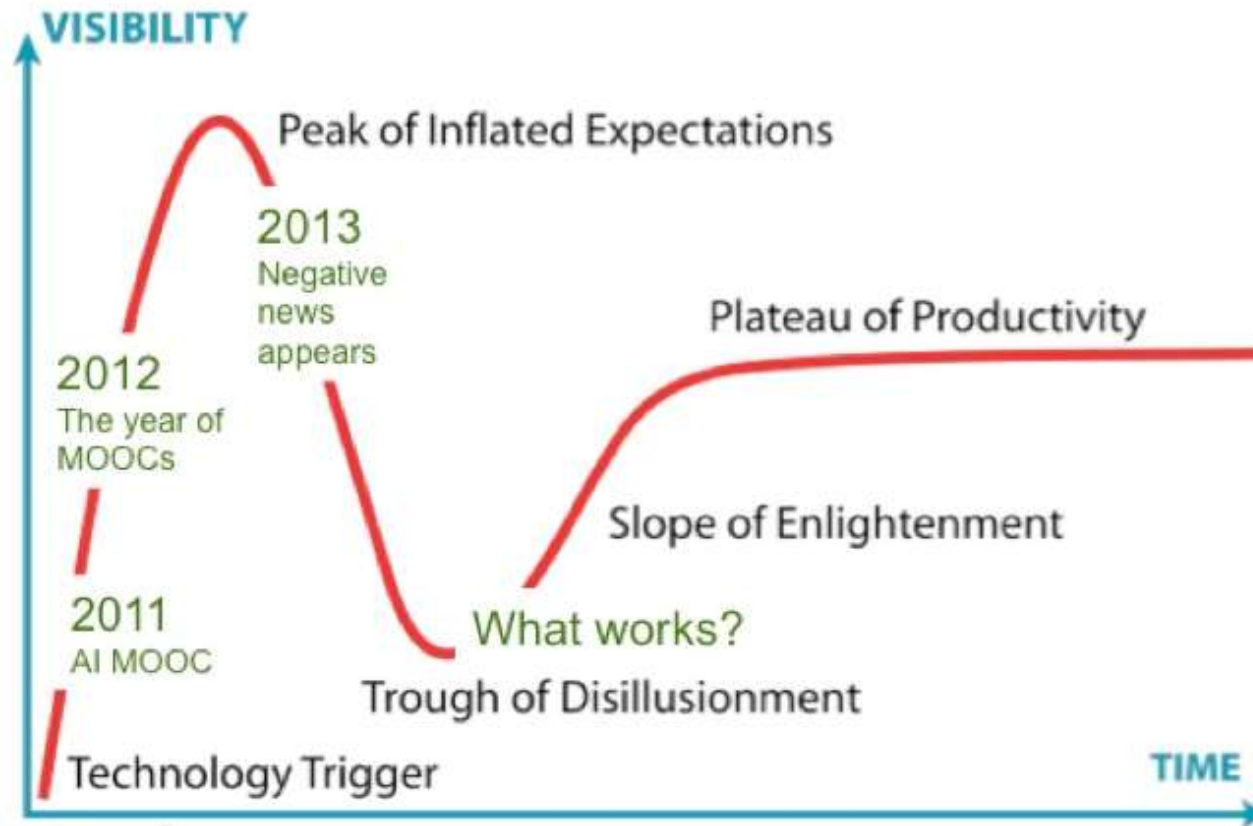


Nothing has more potential to lift more people out of poverty — by providing them an affordable education to get a job or improve in the job they have. **Nothing** has more potential to unlock a billion more brains to solve the world's biggest problems. *And nothing has more potential to enable us to reimagine higher education than the massive open online course, or MOOC, platforms that are being developed by the likes of Stanford and the Massachusetts Institute of Technology and companies like Coursera and Udacity.*

Thomas Friedman, January 2013

Source: [The New York Times](#)

MOOCs: Gartner Hype Cycle

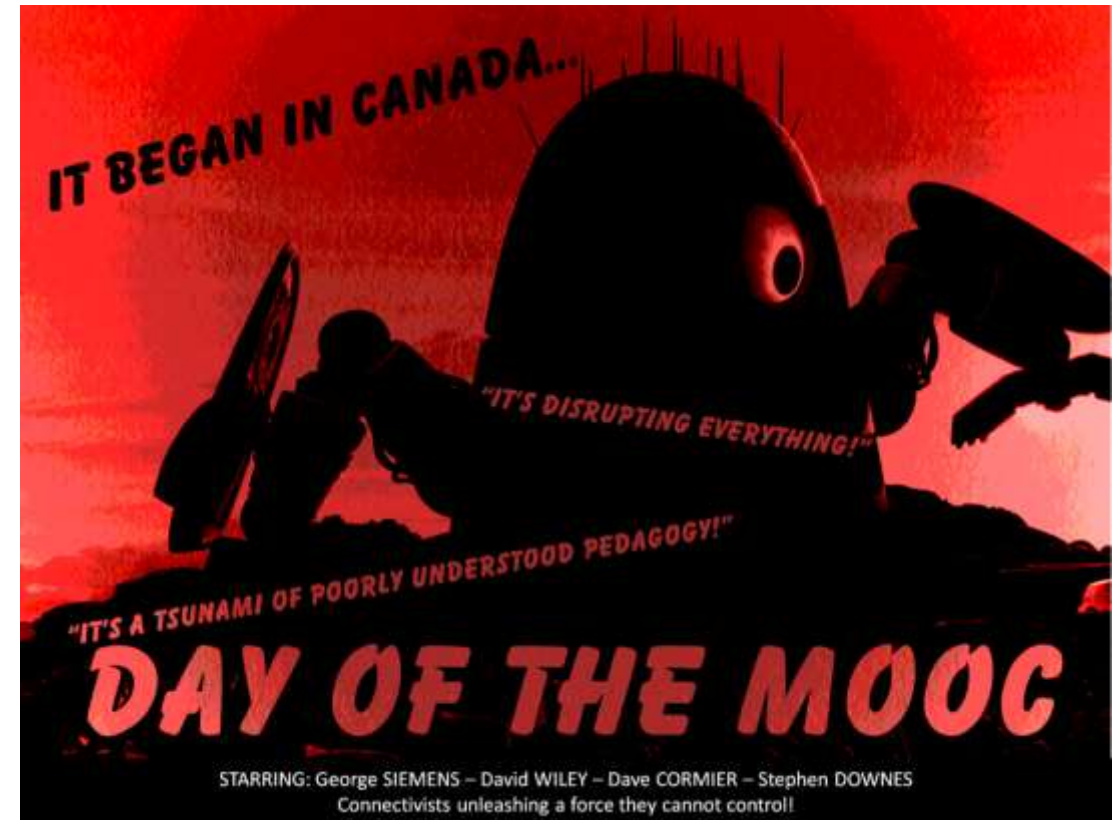


Source: [Li Yuan](#), CETIS.

Kovanovic, Vitomir; Joksimovic, Srecko; Gašević, D. & Siemens, George; Hatala, M., 2015. What public media reveals about MOOCs: A systematic analysis of news reports. *British Journal of Educational Technology*.

The MOOCs for Development Narrative

- Coursera MOOCs can benefit learners in the developing world who currently lack access to higher education (Koller 2012)
- MOOCs can give underprivileged learners in the developing world access to 'top courses from top professors' (Agarwal 2013)
- Anecdotal accounts of learners in the developing world taking MOOCs and finding employment, or gaining admission into universities.



Source: David Kernohan

MOOCs in the Developing World

Infrastructure

- Significant shortage of electricity in many parts of the developing world. (Liyanagunawardena et al 2013)
- Broadband connectivity is extremely poor. Most rely on mobile technologies.

In India

- 75% Electricity Coverage (World Bank)
- Projections of 95% 3G and 45% LTE (4G) Connectivity by 2020 (Ericsson 2014)
- 140 Million Smartphone Users in India – Projected to rise to half a billion by 2019 (The Economic Times 2015)

MOOCs in the Developing World

MOOCs as neo-colonialism

- Within the broader OER movement, there have been arguments that the notion of delivering content from “high quality” Western universities to the *passive* Global South suggests a form of neo-colonialism (Glennie, Harley, Butcher & Wyk 2012)
- Early notions of MOOCs bringing about a *democratization* of learning assumes that knowledge is neutral (Altbach 2014)
- MOOCs reinforce the academic traditions, methodological orientations and teaching philosophies of specific academic systems. This may be more pronounced in some disciplines than others.
- ‘neo-colonialism of the willing’ (Altbach 2014)

MOOCs in the Developing World

Propagation of Elite Institutions

- What are the implications of MOOCs to smaller, struggling universities?
- Barriers to Entry – High cost of Developing a MOOC – Between \$50,000-400,000.
- Implication for Developing Countries?
- In India – Government funding MOOC development from the IITs/IISc's

MOOCs in the Developing World

MOOCs and Employability

- What is the value of a MOOC certificate? Who currently pays for MOOC certification?
- Traditional perception of employers bias against online certification – Associated with diploma mills, lacking rigour and have increased potential for academic dishonesty (Columbaro & Monaghan 2009)
- Employers perceptions of MOOCs for recruitment (Radford et al. 2014)
- One study – One state in the US – 400 Employers – Majority had favourable opinions towards MOOCs and over half could see themselves potentially using MOOC certification for recruitment.
- Implications for the developing world ?

MOOCs in the Developing World

Critical Literacies and Motivation for Online Learning

- Early research on cMOOCs argued for the need of learners to possess a set of critical literacies to succeed in a MOOC (Kop 2011).
- Meta-analyses have identified the need to have high levels of intrinsic motivation to persist in online courses (Hart 2012). Potentially amplified in un-supported platforms like MOOCs.
- Peer assessment requires further need for academic literacy training – issues like plagiarism, constructive criticism etc.

Indian Higher Education

- By 2020, India will have the largest university-age population in the world.
- Third largest Higher Education System in the World – over 500 universities and almost 26,000 colleges
- Currently only 12.4% university-age Indians are in higher education.
- The Indian Government wants to raise this figure to 30% by 2020

Source: Gupta, D. & Gupta, N., 2012. Higher Education in India : Structure , Statistics and Challenges. *Journal of Education & Practice*, 3(2), pp.17–25.

Indian Higher Education

Supply-Demand Gap

- Massive unmet demand.
- In order to achieve Government target of 30% Gross Enrolment Rate, need to provide 40 million universities places.
- Limited supply of educators. Various reports estimate between 30-40% faculty positions remain unfilled (Ernst & Young 2012).
- Aging faculty (FICCI 2014), less likely to embrace technology.
- Is there a role for MOOCs, especially with their key affordance of scalability?

Indian Higher Education

Low Quality of Teaching and Learning

- Poor quality teaching, outdated and rigid curricula and pedagogy (British Council 2014).
- Graduates lack basic employability skills. McKinsey Global Institute study found less than 17% of India's overall graduates were immediately employable (Arnoldy 2012).
- Employers perceive learners with foreign degrees as having a “substantial edge” (British Council 2014).
- Brain Drain – Over a third of all IIT graduates based outside India (Agarwal 2010).
- Could MOOC certification provide Indian learners an advantage over local graduates? What is the influence of ‘elite institutions’ in the minds of employers?

MOOCs in India

- 2003 sees the formation of the National Program on Technology Enhanced Learning (NPTEL)
- Based on MIT-OCW, provides a repository of IIT course materials.
- Currently hosting 860 courses and over 200 million page views.
- All courseware is Creative Commons licensed, repurposing is encouraged.

MOOCs in India

- NPTEL has recently begun offering certification for a few of its courses for a cost of around £10 – Still seen as restrictive by learners.
- Course content is still accessed through the static Web 1.0 interface.
- Videos have not been repurposed for the MOOC format, hour long, often capture of lectures.
- Provides a link to a Google Group for discussions – not embedded within the platform. Sparsely populated. Minimal instructor/TA presence.
- Question and Answer sheets provided, no provision for automated feedback.
- Learners visit one of 100 regional centers for proctored examination to get the certificate.
- Are these MOOCs? Who are the learners who take these courses? What are their experiences?

Course outline

International Economics

- Lecture-01
- Lecture-02
- Lecture-03
- Lecture-04
- Lecture-05
- Lecture-06
- Lecture-07
- Lecture-08
- Lecture-09
- Lecture-10
- Lecture-11
- Lecture-12
- Lecture-13
- Lecture-14
- Lecture-15
- Lecture-16
- Lecture-17
- Lecture-18
- Lecture-19
- Lecture-20
- Lecture-21
- Lecture-22
- Lecture-23
- Lecture-24
- Lecture-25
- Lecture-26
- Lecture-27

International Economics

Lecture-15

Mod-01 Lec-15 Lecture-15 International Economics

$\delta + \pi^* - \lambda \cong 0$
 $\delta = \lambda - \pi^*$

Forward Markets

Demand and Supply of foreign Currency in Forward Markets

speculators
 δ and π

interest rates
 exchange rates

Differential

$\delta < 0$
 $\frac{\pi^* - \pi}{\pi^*} < 0$
 $\Rightarrow \pi^* < \pi$
 $\delta > 0$
 $\pi^* > \pi$

19:01 / 51:42

Ask a question

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MOOCs in India

- In 2013, the IITs produced a MOOC on software architecture and cloud computing.
- Similar certification model, however all assessment was online.
- Just under 1000 participants – 470 paid for certification – 370 completed the course successfully (Devgun 2013)
- Despite smaller enrolment numbers, raised interest due to far greater persistence rate than Western MOOCs.

MOOCs in India

- In the 2014 iteration of the course, the certification price was halved to around £5.
- Reached out to engineering institutions across India to get participants.
- Use of college IT facilities to take MOOCs *together*.

- Handful of small scale MOOCs piloted in India
- Elite University partners with edX and Coursera

The Future of MOOCs in India – SWAYAM?

- SWAYAM platform announced with much hype in September 2014.
- Would be a government run initiative that develops MOOCs in a variety of disciplines, rather than current engineering centric courses.
- Involve national colleges and other regional institutions – not just a platform for the elite.
- However, platform is still in development, and there is no mention of when and in what capacity it will be released.

Research Problem

- Indians make up one of the largest demographic groups in the MOOC platforms of Coursera and edX (Nair 2013). Yet, no study has yet looked at who these learners are, and what are their reasons for taking MOOCs.
- Research on MOOCs and India tend to be theoretical, based on potential benefits and limitations of the technology (FICCI 2014, Kamat et al. 2013) . There is a need for empirical evidence.
- Existing accounts of learner experience in MOOCs tend to either be either anecdotal (Zutchi et al. 2013), or singular case studies from largely Western perspectives (Kop 2011, Milligan et al 2013).

Research Aims

- Are the experiences of Indian learners in MOOCs different from existing Western accounts?
- Are there differences in demographics between global MOOC learners and learners from India?
- Are there differences in demographics between Indians who take global MOOCs and those who take Indian MOOCs?
- What role can MOOCs play in Indian higher education?

Research Questions

This study has two main Research Questions

1. What are the experiences, expectations and motivations of Massive Open Online Course (MOOC) learners from India?
2. To what extent, if any, does the source of the MOOC (Local vs Global) influence the experiences of MOOC learners from India?

Methods

- Methodologically, the study will be mixed-methods.
- There seems to be a tendency within MOOC research to ‘pick a camp’ (Gasevic et al. 2014).
- With the amount of learner data collected through MOOCs, a strong case is made towards incorporating elements of learner analytics within MOOC research.
- However, learner data is precious! Challenges of access, and open data policies.
- Further, human experiences tend to be rich and varied, attempting to identify patterns and draw correlations based on analytics alone would not produce an accurate representation of the experiences.

Methods - WIP

- Questionnaire designed by adapting questionnaires designed by Christensen et. al (2013) in their survey of over 35,000 learners in the Coursera platform.
- Apart from demographic information and motivations of learners to take MOOCs, the questionnaire will ask learners to self-assess their usage of MOOCs as well as their own awareness of their learning behaviour. This is based on a questionnaire designed by Milligan, Littlejohn and Margayan (2013) to gauge participant metacognition in MOOCs.
- Questionnaire participants will be then invited to semi-structured Skype/phone interviews, which will be designed to generate a deeper understanding of their personal experiences with MOOCs.
- Interview schedule will be developed using framework developed during my Master's thesis (Sanzgiri 2013).
- Four key aspects identified as key to learner *experience* in MOOCs : Assessment, Learner Motivation, Instructor Presence and Sense of Community.

Participant Selection

Participants will be recruited for this study through

- Contacting course instructors and requesting permission to post on their discussion spaces for participants.
- Social Media – Facebook and Google Plus communities dedicated both to specific MOOCs, MOOC platforms, and general MOOC enthusiast groups.
- Further informants will be recruited through snowball sampling.

Limitations

- Eliciting responses from MOOC participants tends to favour active learners
- Need to clearly define who the learners being researched are.
- Raises questions of generalization.
- Given the current barriers to entry of MOOCs – care must be taken if attempting to assess the role of MOOCs in any development context.

Thank you!