

# A Model of Massive Open Online Course (MOOC) for the Indian Higher Education Landscape

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**Abstract:**

The number of institutes offering professional courses in India is on the rise. But quality of education has not kept pace with the quantity. Various studies have shown that Indian students lack employability skills. The industry believes that there still exists a considerable gap between what they seek in a graduate and what the module delivers. The Indian Institutes do not perform very well when compared with their global counterparts. They seem to be lagging behind even to some of the Asian universities in terms of content and pedagogy. The emergence of MOOC seems to be a solution as it provides quality content at a pace enjoyed by students. It brings to them courses from some of the most reputed universities in the Globe. MOOCs seem to have become very popular with Indian students as demonstrated by the huge number of students joining MOOC platforms like Edx and Coursera. This paper looks to develop a better understanding of what MOOCs are and what are the various benefits offered by MOOCs and what are its limitations. The author intends to develop a model for the Indian Higher Education landscape keeping in mind the Indian Education system and highlight the role of the class room and the instructor. The author looks to integrate MOOCs into the traditional classroom teaching and sees a greater role of the universities in recognizing certain courses that are available on the MOOC platforms as a part of its module. That author believes that this will enhance the quality of delivery in the class room and enable students to comprehend the subjects in a better manner.

**Key words:** *MOOC, Skill Gap, Indian Higher Education, Global Ranking*

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**I. Introduction:**

Education is the prime cog in the developmental wheel of any society. It determines the role and approach for the modernization of society and the nation at large. It assumes an even greater role in case of developing nations that is trying to emerge as a powerhouse of knowledge but marked my paradoxes both in opportunities and quality of higher education. Since the word that has gained most attention in political debates and academic deliberations, is *Development*, the quality of education is of paramount importance when it comes to reaping dividends from our demographic capital. With globalization and liberalization, we are players in the global arena. We need to relook at the contents of our educational system and the quality of curriculum transaction, research and development to enhance the quality of education through an effective quality management system

**The misplaced notion of quality:** *Both at the institution level and at the student level*

India has witnessed an explosive growth in the number of institutions offering higher education since her independence. The quality of education still remains questionable though. It is not surprising to note that Indian universities do not feature in the global list of institutions offering enviable quality of education. It lags behind not only the US and European universities but also to their Chinese and Singaporean, Japanese counterparts. A ranking of Global Universities published by *The Times Higher Education* does not have a single Indian Institute in the top 200 universities in the World. Indian Institute of Science makes it to the list at number 279. The *Times Higher Education* used **13 performance indicators grouped into five areas:**

- Teaching: the learning environment (worth 30 per cent of the overall ranking score)
- Research: volume, income and reputation (worth 30 per cent)
- Citations: research influence (worth 30 per cent)
- Industry income: innovation (worth 2.5 per cent)
- International outlook: staff, students and research (worth 7.5 per cent) refer to EXHIBIT 1

There are many quality gaps with respect to curriculum design and development, teaching, learning and evaluation, research consultancy and extension, infrastructure and learning resources, student support and progression, governance, management and leadership.

According to a report published by *Aspiringminds* 47% of Indian graduates are not employable in any sector of the knowledge economy. The employability of graduates varies from 2.59% in functional roles such as accounting, to 15.88% in sales related roles and 21.37% for roles in the business process outsourcing (BPO/ITeS) sector. A significant proportion of graduates, nearly 47%, were found not employable in any sector given their English language and cognitive skills. A lot of discussions have taken place to address the employability issues. One of the prime reasons attributed for this situation is the growing gap between skills expected by the industries and the skills possessed by the students. If one delves deeper into the previous statement, one will realize that it is just a syndrome. Lack of skills of students is more of a syndrome than a problem. The problem is that Indian universities failed to update curriculum at pace with the desire of Indian industries to update the technology and knowhow to be able to compete at the global scale.

Some of the skills sought by any prospective employer is summed up in the following table.

<i>Personal Skills</i>	<i>People Skills</i>	<i>Applied Knowledge</i>	<i>Workplace Skills</i>
<ul style="list-style-type: none"> <li>• Integrity</li> <li>• Initiative</li> <li>• Dependability</li> <li>• Adaptability</li> <li>• Professionalism</li> </ul>	<ul style="list-style-type: none"> <li>• Team Work</li> <li>• Communication</li> <li>• Respect</li> </ul>	<ul style="list-style-type: none"> <li>• Reading</li> <li>• Analytical thinking</li> <li>• Technology</li> </ul>	<ul style="list-style-type: none"> <li>• Decision Making</li> <li>• Business Fundamentals</li> <li>• Customer Focus</li> </ul>

One has to ask oneself, are we equipped to build these skills in our students? Does our syllabus and examinations encourage analytical and problem solving skills among students? If one looks at what the best universities are doing differently from Indian Institutes, one would realize they are

developing curriculum that meets the current industry requirements and the pedagogy and evaluation methods are designed to encourage application and analytical thinking among students. With the explosion of IT, it is much easier today to gain access to such world class

lessons offered by some of the best institutes in the world.

## II. The Emergence of MOOC:

The term MOOC was developed in 2008, defined to describe a course experiment utilizing connectivism. Connectivism is a computer-mediated learning theory introduced by George Siemens (2005), developed specifically to address the issues of a world where the vast majority of learning and knowledge are impacted by technology. A massive open online course (MOOC) is an online course aimed at unlimited participation and open access via the web. In addition to traditional course materials such as filmed lectures, readings, and problem sets, many MOOCs provide interactive user forums to support community interactions between students, professors, and teaching assistants (Tas). The New York Times called 2012 "*the year of MOOCs*"

Tracing the history of the MOOC through a formal education lens leads back over 150 years to the birth of distance education through the establishment of correspondence courses in Great Britain (Harte, 1986). These courses were designed to provide training in specific skills or tasks to a clientele who could not avail themselves to University due to economics, class distinction or geography. The success of these ventures led to an interest from some higher education institutes in adopting their models and practices. The first and second generations of distance education consisted of content transmitted from a sender to a receiver, with no opportunity for the receiver to do more than perform an assessment Computer conferencing, the structural change in the third generation,

provided students the affordance for interaction in two-way communication with the instructor as well as students either in real-time or asynchronously, in a space accessible and editable by both student and instructor.

Accordingly, it has been said that distance education turns the learning process into something very individual. It could be argued that learning is always and of its very nature an individual matter. From my cultural perspective, I would say the contrary. Learning - although a very *personal* matter - must never be an *individual* matter - one learns best by and with others (Nipper, 1989 pg. 66).

## III. Types of MOOC:

As MOOCs have evolved, there appear to be two distinct types: those that emphasize the connectivist philosophy, and those that resemble more traditional courses. To distinguish the two, Stephen Downes proposed the terms "cMOOC" and "xMOOC".

cMOOCs are based on principles from connectivist pedagogy indicating that material should be *aggregated* (rather than pre-selected), *remixable*, *re-purposable*, and *feeding forward* (i.e. evolving materials should be targeted at future learning).

cMOOC instructional design approaches attempt to connect learners to each other to answer questions and/or collaborate on joint projects. This may include emphasizing collaborative development of the MOOC. Ravenscroft claimed that connectivist MOOCs better support collaborative dialogue and knowledge building.

The difference is summed up in the following table:

xMOOCs		cMOOCs
Scalability of provision	<b>Massive</b>	Community and connections
Open access - Restricted license	<b>Open</b>	Open access & licence
Individual learning in single platform	<b>Online</b>	Networked learning across multiple platforms and services
Acquire a curriculum of knowledge & skills	<b>Course</b>	Develop shared practices, knowledge and understanding

#### IV. Advantages of MOOC:

(1) MOOC creates the opportunity for **sharing ideas & knowledge** and also helps improving lifelong learning skills by providing **easy access to global resources**.

(2) It **improves cross cultural relationships** which lead to **collaboration between institution educators and learners** locally and internationally.

(3) It gives an **idea where I stand in the course** in the current world as large number of students all over the globe would have registered for the same course on the same common platform and participate in the activities and discussion in the study group.

(4) MOOC **enhances active learning**. Research shows that students learn more through active learning (i.e. when they have assignments or discussion on an issue) rather than through listening to lectures. Students listen to lectures more attentively if they have been given a problem or task to solve before the lecture. In this regard the structure that most MOOCs have – short lectures alternating with assignments and quizzes – seems to be ideal.

(5) MOOC **encourages flipping the classroom**. Teacher-student contact time usually used for lectures could be used differently, e.g. for discussions, experiments, project and group-work, working with peers etc. Students watch

lectures online at home and interact with faculty regarding their doubts while in class.

(6) **Knowledge sharing in Discussion Forum** helps reflective and global learners along with active and sequential learners. Reflective learners who are not able to share ideas inside the physical classroom can put their ideas in discussion forum and get the view points of others. Global learners who feel themselves lost in the beginning can share their diverse ideas on the forum and can get other's suggestions to find their solution. To know about different types of learners follow the post "Different Learning Styles".

(7) "**No exam fever**" encourages deep approach of learning against the surface & strategic approach of learning.

(8) **Peer evaluation** provides the opportunity to learn via grading others. Because it is the best way to learn when you teach or grade someone else.

(9) MOOC provides the opportunity to **learn from world class universities and from renowned instructors** without being a student of the respective university while sitting in the any part of the world.

(10) MOOC opens up the facility to get free of cost "**statement of accomplishment**" signed by the instructor of the course, which someone completes in all respect according to the

requirement of the subject. There are provisions to earn the **verified certificates** with university logo and instructor signature on the payment of the course fee. Anyone can show these certificates at the **time of job applications** also.

### **V. Challenges of MOOC:**

(1) MOOC provides all the video lectures and slides along with all related reading resources. This gives the students **scope for not going through the lectures gradually but whole lectures in a single day** which does not lead to deep understanding of the concepts.

(2) **Real time question answering** is also not possible while going through the lectures.

(3) Technical courses needing **physical hands-on practical exposures** (eg. Civil, Mechanical, Electrical etc.) are quite tough to be delivered through MOOC.

(4) There is no opportunity for effective assessment methods like **Q&A in classroom, surprise quizzes and presentations**.

### **MOOC & India**

Over the years the MOOCs have become really popular with Indian students. The three top US-based MOOCs — Coursera, Udacity and EdX — now have a huge percentage of Indian students. The biggest of these Coursera — it has 4.3 million students from across the world — says it is 'astounded and humbled' by the interest shown by Indians. For the popular MOOC Coursera Indian students represent the second largest population outside USA. The fact that Indian institutes like IIM B and IIT Bombay have joined the bandwagon highlights the fact that MOOCs do play in the Indian higher education landscape. But are all those who register for a course, completing the course? As per some estimates the completion rate of courses are sometimes as low as 10%. For example out of a total of 40000 students who registered for the introduction to Sociology course from Princeton University running in Coursera, only 3.21% completed the course. According to a report published by The

New York Times in 2013 the completion rate of MOOCs are as low as 4%.

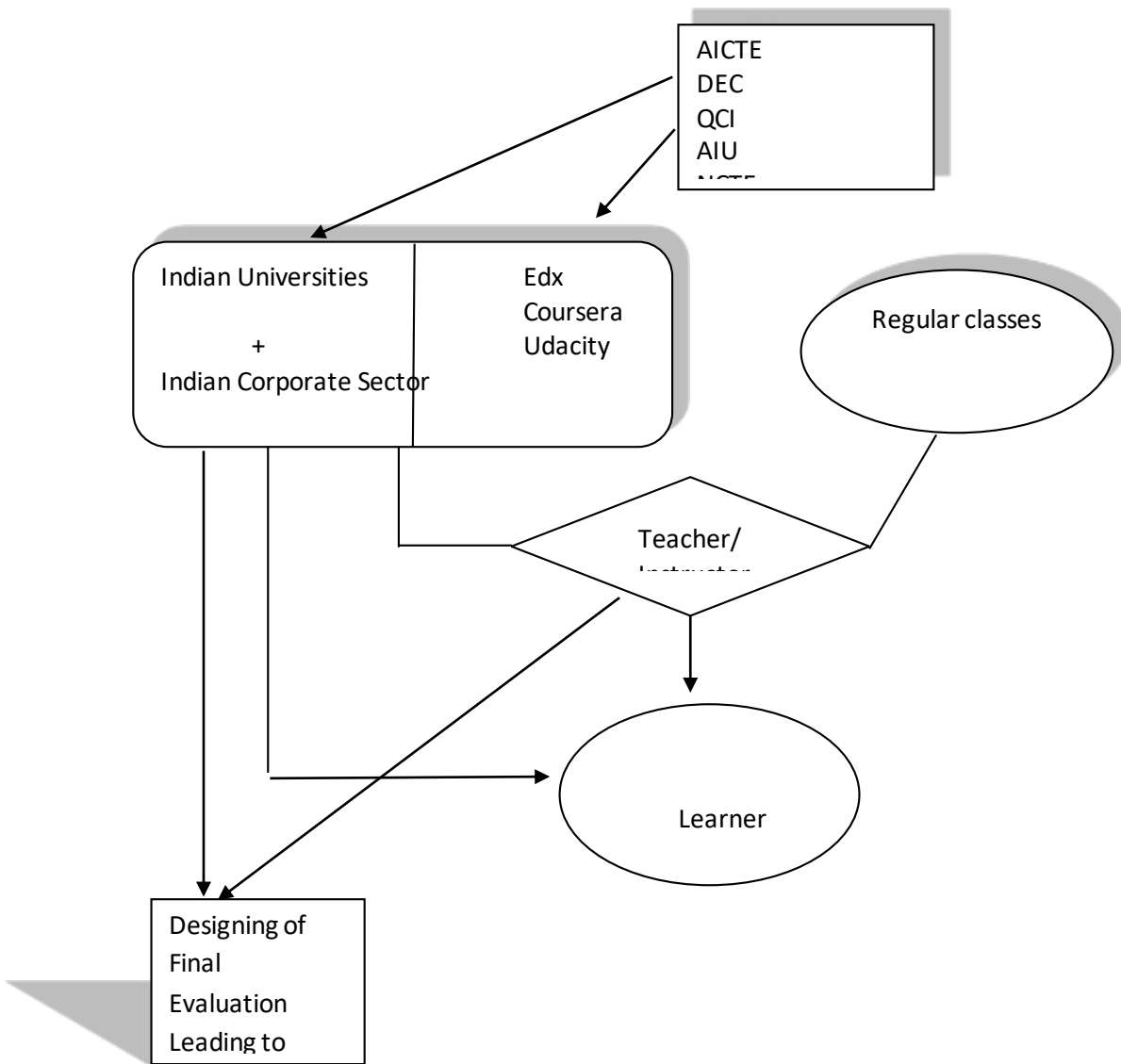
But even with their low completion rates MOOCs do provide Indian students with a wonderful platform to enhance their skills in areas required by the industries and also learn new and upcoming topics. But in order to make MOOC more effective in the Indian context the author sees a bigger role of the Indian universities and the lecturers who are engaging students in the regular traditional class rooms.

### **VI. The Proposed Indian Model**

For MOOCs to deliver value for Indian students beyond being just a platform for additional knowledge, it has to be structured as a important component within the higher education system framework and not an outside additional component. The MOOCs need to be recognized and given the required accreditation by the various bodies governing the higher education system in India. It will ensure that learners and instructors look at MOOC as a part of their regular teaching learning environment and also it gives a boost to the student while seeking employment. Indian Universities may launch their own MOOCs or give a list of MOOCs already available on the popular platforms as a part of their module. If the Indian Universities choose to develop their own content then it should be done in collaboration with the industry so that it closely matches with the requirement they have. The author believes that MOOCs need not be compulsorily a part of a university module. It has to be delivered only if it is absolutely necessary. The industry might also specify certain MOOCs for certain streams. The role of the teacher becomes immensely important as he not only acts as a navigator through this humongous database of courses but also takes care of a major drawback of the MOOC. He plays a crucial part in the content revision and reinforcement and continuous evaluation of the students. He also can enhance his own pedagogy by taking concepts from the MOOCs and customizing it for his own learners. The final evaluation of students is designed by both the

course developer and also the teacher from the traditional classroom. The author believes that MOOCs genuinely can enhance the skill set of the

Indian students if it is allowed to play a supplementary role to the traditional class room rather than an alternative to the existing system.



**Fig: 1**

**VII .Conclusion:**

Even though, the current Indian education system lacks quality in terms of employability skills cannot be completely ignored. It has to be made robust by making addition of value added inputs that focuses on skills that the current employer market demands. The emergence of MOOC seems to be solution for millions of students seeking quality content and modern pedagogy in a range of courses. But it has its own limitations in terms of infrastructure and evaluation. But if the MOOCs are integrated into the traditional methods of content delivery and our curriculum their contribution in the Indian landscape might magnify. The teacher in the regular classrooms actually plays a crucial role by guiding students and monitoring progress of the students through these modules. The author firmly believes that the teacher has a greater role in developing a student in the world of MOOCs unlike the popular notion that soon traditional teachers will perish as students will turn to MOOCs and other forms of online education turning away from the brick and mortar class rooms.

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