

# MOOCs – A Constructivist Pedagogy; How helpful in Indian Teacher Education?

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## Abstract:

Indian higher education is the third largest in the world after USA and China in terms of enrollment of students, is facing significant sweeping changes for last decade. These major changes in Indian higher education is in its expansion, which has put forth some challenges before it like quality concerns, equality of access and individualised learning.

MOOCs provide opportunities for revolution in higher education of India. MOOCs (Massive open online courses) are well known for their massive nature and are open for all. A large number of aspirants for higher education can be catered through MOOCs. Secondly most of the MOOCs are free and can be a panacea for problem of economic barriers for aspirants of higher education. The young generations, the learners in higher education are among the digital natives, who are born between 1982 – 2002 and lived with technology, have excellent learning potential with digital technology. Some US based MOOC service provider's like edX, Coursera, Udacity are also contributing and providing services in delivering MOOCs in India. edX is free of cost service provider while Coursera and Udacity are both profit ventures. All these service providers are working on accessibility and availability of MOOCs. Moreover the gap between Industry and Academia may be covered with the help of online courses. The challenges put forth before higher education because of expansion like equality of access, individualized learning and quality issues may seem to be met by use of MOOCs in higher education.

## Introduction

MOOCs (Massive open online courses) are quite recent and most widely researched development in the area of distance education. Firstly these got introduced in the year 2006, after that these gained recognition as most popular mode of learning in 2012. These courses aim at open access to masses. The participation in these courses is unlimited. In addition to the traditional teaching comprising of lectures the MOOCs provide flexible evaluation systems, access to OERs and discussion forums. Digitalization in present context gives boost to the development and popularity for MOOCs. Earlier distance education was imparted through correspondence course only. Initially distance education provided e-learning by broadcasting of courses on radio and television. E-Learning underwent a transformational change due to increase in the number of online learners, open e-learning opportunities and lately by development of MOOCs.

The earlier MOOCs emerged as a result of open educational resources movement. The first course under MOOCs was led by George Siemens of Athabasca university and Stephen Downes of national research council in 2008. This course benefitted more than 2000 students without costing them any fee. Collaborative tools helped the students to participate for the blog posts and discussions in Moodle were used.

MOOCs with its evolution, appeared with two categories one is x MOOCs and c MOOCs. This first MOOC course was considered under c MOOCs (creative and Dynamic MOOC) whereas present day MOOCs are called as x MOOCs. Thereafter other c MOOCs were developed and started. Under Digital storytelling, in 2011 University of New York started other MOOCs with the development of

these courses, many such platforms came into the picture such as Udemy, ALISON and Khan academy. Recorded lectures and predecided evaluation system forms the ideology of x MOOCs and characterized as traditional course structure, The x MOOCs are more like branded IT platforms that propose content distribution partnership to the institutions. The teacher or the instructors here is an expert in providing knowledge. A student interaction is limited to asking questions and discussion on difficult points. Whereas c MOOCs are based on constructivist pedagogy and this ideology believes that the learning material should be remixable and need to be evolving. The instructional approach of c MOOCs connects learners on question answers and collaborates them on joint projects. It supports collaborative dialogues and building of knowledge.

The year 2012 announced as ‘the year of MOOC’ by the New York Times because many finance providers got associated with the top universities for running the course. These were udacity, edx and coursera. The chronicle of higher education lists the non profit major providers such as edx and khan era and some for profit are coursera and Udacity. Acc to Hoy (2014), “ MOOCs are the recent expansion in higher education and experienced rapid development and achieved substantial attention from a broad range of learners”. In India, IITs and ITMs have been already using MOOCs. The MOOCs courses are run by coursera and edx to its students in India. Other institutions in India have also proposed a blended MOOC Model based on combination of online access by using edx platform with multilingual support and face to face instructor help at various centers in the country (FICCI, 2014). Acc. to Richard Levin, coursera CEO, India is the Second Largest best user with 800000 students enrolled. India is among the best 5 countries in terms of revenue generated for coursera (Economic Times, 2014).

### Possible Outcomes with MOOCs

1. **Unlimited access and gross enrolment of students:** - Through udacity, edx and coursera, the number of students registered were 1.5 million by 2012. The range of registered students was broad, diversified and non conventional. Out of registered students, 60% were from economically rich countries. Many of the remaining was from some average income Asian countries, South Africa and Brazil.
2. **Teachers Experience:** - Even Before starting a MOOC, teachers spends 100 hours in content collection and content curation (Chronicle of Higher Education, 2013). He spends 8–10 hours time per week for participation in discussion forums. Unlike the traditional courses, MOOCs requires additional skills provided by instructional designers and IT specialists. For the creation of MOOCs, many tools are needed, like educational software named elicitus, IMC content studio and lectora.
3. **Passing Rate:** - The real concern for the MOOC is course drop out. A huge number of learners enroll the courses but very few are there to complete the course. An analysis report by Katy Jordon (2015) reported that the average completion rates for the MOOCs are 15%. According to Rose et al. (2014), students do virtual cohorts which means that the enrolled students in the course progress and engage with the learning material in the same way. If the students start dropping out then it causes other students to also dropout.
4. **Instructional system:** - Most of the MOOCs use Video lectures and use latest technology simultaneously. The students desperate to seek certification and hardly watch videos longer than 6 – 9 minutes. Some educational institutes use flipped learning for instructional method. Students are to see the videos and study OERS before entering into the next classroom. In the classroom, they discuss with teacher on what they have acquired online. Because of massive and open nature MOOCs require a instructional design that involve large scale feedback and interaction. Approaches which can be used as feedback are:-

- 1) Peer review and collaboration in group.
- 2) Online automated assessment and feedback.

Connectivist MOOCs or c MOOCs uses the former approach whereas the x MOOCs uses the later one. Peer review approach uses sample answers which help the grader in assessment. This way the graders also become more engaged with the course.

5. **Interactive Aspects of MOOCs:** - According to Shanna Smith Jaggers, Columbia University, “The most important thing that helps students succeed in an online course is interpersonal interaction and support. The interaction among students can be enhanced by assigning mentors to a group of students. Adding audio comments on assignments instead of only writing, participating with students in discussion forums, small questions in between the video lecture, updating weekly videos. Research need to be conducted to address the issues related to motivation among students, distraction and dropout (Onkvisit, 2014).

### How MOOCs are beneficial?

- ✓ **Improving the access:** - At local as well as global level, MOOCs are helping in improving the access to higher education. All over the world, students can access the entire course content offered by the universities.
- ✓ **Cost effective alternative for formal education:-** Large number of participants can access the course without any cost. It is open for all, the only basic facility required is internet.
- ✓ **Quality Check in Higher Education:** - MOOCs are prepared by the experts in their subject areas. It is a form of open education through online platforms free of cost. Quality higher education is delivered at massive level.

### Some Critical issues in online learning by MOOCs :-

1. The connectivist MOOCs rely on user modified content which involves reshaping and reinterpreting the content by massive student body. Sometimes it creates difficulty for the course instructors.
2. Language and translational barriers always appears.
3. Online learning can only be conveniently used, when the users have digital literacy.
4. MOOCs are not designed by following the idea of community centeredness.
5. Moshe Y. Vardi says “Absence of serious pedagogy in MOOCs”.
6. De Couture (2014) wrote about MOOCs is half of the registered people never come up, level of participation also varies. Around 10 – 15 % of the registered people follow entire MOOC course.

### Conclusion: -

Recently MOOCs have got media attention. MOOCs can be a panacea for most of the problems of higher education and specifically the teacher education. Demand for higher education and the access provided by MOOCs by its open nature is very well addressed by MOOCs. But the potential of MOOCs faces much skepticism in terms of quality of learning offered. There are some challenges / criticism for the MOOCs. Quality of online courses, serious concern for drop out rate, lack of sound pedagogy, language and translations concerns. Because of their criticism and some concerns, they are not as revolutionary as they seem. Gross enrollment, students interaction and cost effectiveness, up to date education, use of OEFs are the issues which MOOCs are addressing well. MOOCs help universities in providing knowledge to masses and increasing access.

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