

Massive Open Online Courses(MOOCs)

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LEARNING OBJECTIVES

Define the MOOCs.

Differentiate between various kinds of MOOCs.

List the MOOCs preparing universities, companies and organisations

Know the MOOCs providing platforms

Understand the application of MOOCs.

List the advantage and disadvantage of MOOCs.

MASSIVE OPEN ONLINE COURSES (MOOCS)

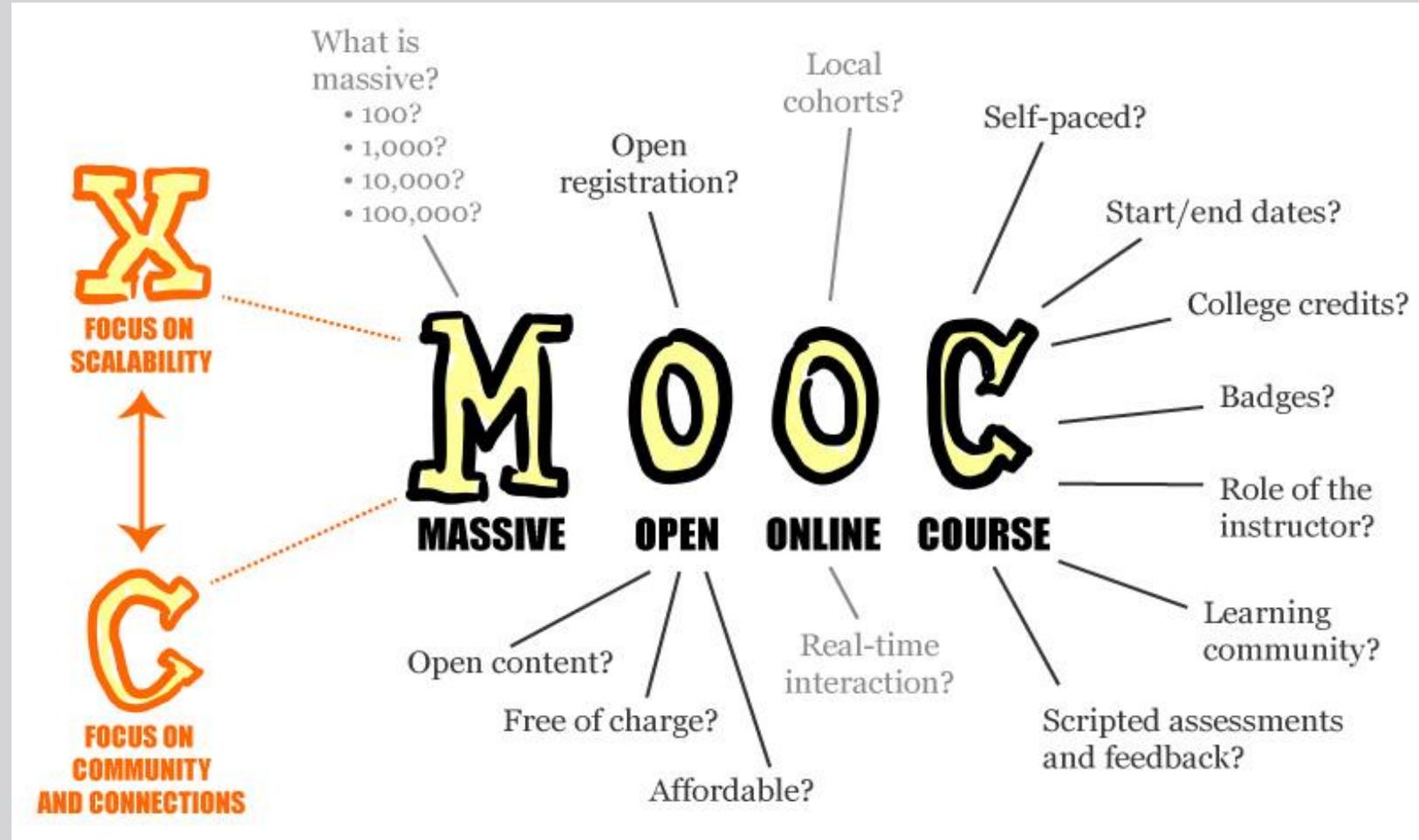
- The word MOOC was coined in 2008 by Dave Cormier, from the University of Prince Edward Island for a course offered by the University of Manitoba, "Connectivism and Connective Knowledge."
- The course Connectivism and Connective Knowledge developed by Stephen Downes and George Siemens .

CHARACTERISTICS

Bates (2015)

- specifies the essential elements behind each acronym of MOOC. Common in these definitions are the following aspects to give meaning to the elements of a MOOC:
- **Massive:** designed for unlimited number of participants. This means that the course is designed such that the efforts of all services does not increase significantly as the number of participants increases.
- **Open:** access to the course is free without entry qualifications.
- **Online:** the full course is available through the internet.
- **Course:** the offering is a course, meaning that it offers a complete learning experience, i.e. structured around a set of learning goals in a defined area of study and includes the course materials, quizzes, feedback, examination and certificate of completion.

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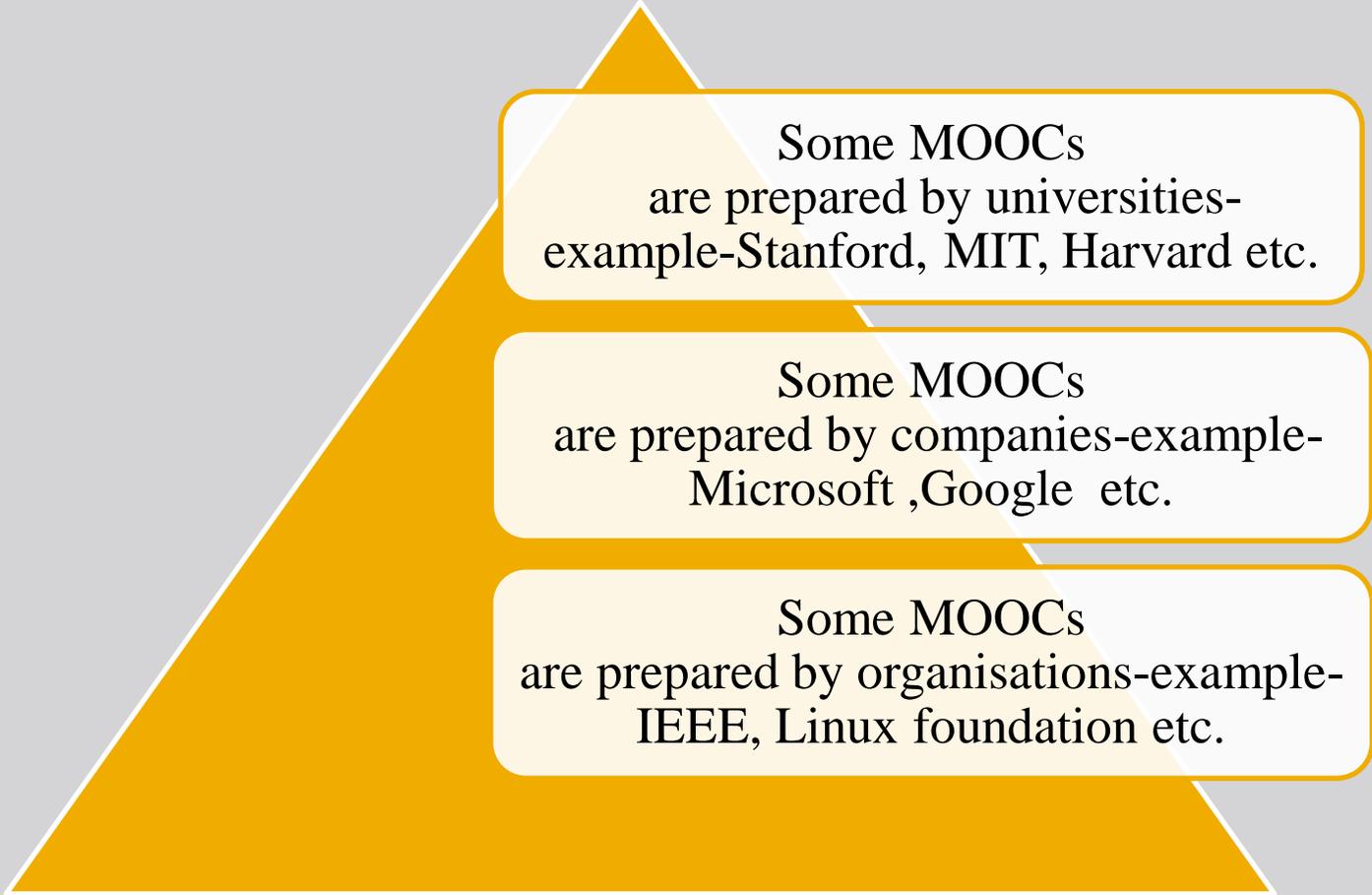
DEFINITIONS

- According to the commonwealth of learning 2015 “A MOOC is an online course that requires no prior qualifications for entry, can be accessed by anyone who has an Internet connection, and includes large or very large numbers of learners”.
- A massive open online course (MOOC) is an online course aimed at large-scale interactive participation and open access via the web. In addition to traditional course materials such as videos, readings, and problem sets, MOOCs provide interactive user forums that help build a community for the students, professors, and teaching assistants (TAs). MOOCs are a recent development in distance education

TYPES

- **xMOOCs** - stands for eXtended Massive Open Online Courses which are based on traditional course structures and make use of established teaching approaches and materials. Students will observe pre-recorded lectures, complete required readings, and participate in discussions as produced and curated by the course instructor or an instructional team from a higher education institution. It follows the behavioristics approach of learning .
- **cMOOCs** - 'c' in cMOOC stands for connectivist, which represents the nature of cMOOC and based on connectivist learning models that privilege collaboration as a form of active learning. Students in a cMOOC will work together to locate, evaluate, and contribute course content, uploading materials (tweets, blog posts, blogs, wikis, etc.) to the course using the learning platform.

PREPARATION OF MOOCs



Some MOOCs
are prepared by universities-
example-Stanford, MIT, Harvard etc.

Some MOOCs
are prepared by companies-example-
Microsoft ,Google etc.

Some MOOCs
are prepared by organisations-example-
IEEE, Linux foundation etc.

MOOCs PROVIDERS

However universities play an important role in creating MOOCs but they rarely provide MOOCs themselves. Instead, they depend on course providers such as:

- Coursera
- edX
- FutureLearn
- Udacity
- NovoEd
- Iversity etc.

students can go through these platforms or others for taking MOOCs .

- **Coursera-** work with universities and organisations to provide courses in physics, engineering, humanities, medicine, digital marketing, data science, mathematics, business, social-sciences, among others.
- **edX-**Created in 2012 by The Massachusetts Institute of Technology and Harvard University it is a massive MOOC provider and different from other providers as it is a non-profit organization and runs on the Open edX open-source software. It has over 7 million students taking over 700 different online courses.
- **Future Learn-** launched and wholly owned by The Open University in Milton Keynes, England was founded in December 2012. As on January 2017 it has 109 UK and international partners and also includes non-university partners such as the British Museum, European Space Agency, the British Council, UCAS, UNESCO, Cancer Research UK, the National Film and Television School.

- **Udacity**- founded by Sebastian Thrun, David Stavens, and Mike Sokolsky and is a for profit organization offering MOOCs. Originally focused on offering university style courses but now focuses on vocational courses for professionals.
- **NovoEd**- founded by Stanford University professor Amin Saberi and PhD student Farnaz Ronaghi, it partners with universities, foundations, and corporations to offer massive open online courses (MOOCs) as well as small private online courses (SPOCS).
- **Iversity**:-A European online education platform that provides free courses for anyone to enrol and participate.

INDIAN PLATFORMS FOR MOOCs

- **SWAYAM** -Stands for Study Webs of Active Learning for Young Aspiring Minds. It is an India Chapter of Massive Open Online Courses, indigenously developed IT platform, initiated by Government of India, which is instrumental for self-actualization providing opportunities for a life-long learning. It is an integrated MOOCs platform for distance education that is aimed at offering all the courses from school level (Class IX) to post-graduation level. SWAYAM was developed in 2014, collaboratively by MHRD (Ministry of Human Resource Development) and AICTE (All India Council for Technical Education) with the help of Microsoft and is capable of hosting 2,000 courses.
- **NPTEL**- is an acronym for National Programme on Technology Enhanced Learning which is an initiative by seven Indian Institutes of Technology (IIT Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras and Roorkee) and Indian Institute of Science (IISc) for creating online course contents in engineering and science. It is a project funded by the Ministry of Human Resource Development (MHRD) and contents for the courses were based on the model curriculum suggested by All India Council for Technical Education (AICTE) and the syllabi of major affiliating Universities in India.

- **mooKIT-** is a light-weight MOOC Management System like EdX which is conceived, designed and developed at IIT Kanpur to deliver and manage a course online. mooKIT Management System has been built ground up at the Computer Science department at IIT Kanpur with best-of-breed features and state-of-art technology.
- **ITBX-** is MOOC platform developed by IIT Bombay through significant customization of open edX code base. IITBX platform is an integration of Drupal 8 with Open edX. The courses are offered using Open edX, while Drupal is used to fetch and display courses in various ways. This platform has been created for learners including academicians, students, researchers, professionals, administrative staff, and novice users, including educationally, socially, economically, physically disadvantaged groups or others that seek to transform themselves through cutting-edge technologies, innovative pedagogy, and rigorous courses.
- **IIMBx** -is a MOOC founded on the philosophy that management education has strong potential to transform our educational systems and that high quality education must be available to all unconstrained by limitations imposed by location, finances or prior educational background

APPLICATIONS OF MOOCS

- Professional development
- Skill development
- Faculty development—fostering soft skills , inculcating research etc.
- Development of knowledge.

ADVANTAGES OF MOOCs

MOOCs:

- **Are free of cost-** Right now, most MOOCs are free or almost free . This is likely to change as universities look for ways to defray the high cost of creating MOOCs.
- **Provide a solution to overcrowding-**According to Heller, 85% of California's community colleges have course waiting lists. A bill in the California Senate seeks to require the state's public colleges to give credit for approved online courses.
- **Force professors to improve lectures.-**Because the best MOOCs are short, usually an hour at the most, addressing a single topic, professors are forced to examine every bit of material as well as their teaching methods.
- **Create a dynamic archive-** That's what Gregory Nagy, professor of classical Greek literature at Harvard, calls it. Actors, musicians, and stand-up comedians record their best performances for broadcast and posterity, Heller writes; why shouldn't college teachers do the same? He cites Vladimir Nabokov as once suggesting "that his lessons at Cornell be recorded and played each term, freeing him for other activities."

- **Are designed to ensure that students' progress-**MOOCs are real college courses, complete with tests and grades. They are filled with multiple choice questions and discussions that test comprehension. Nagy sees these questions as almost as good as essays because, as Heller writes, "the online testing mechanism explains the right response when students miss an answer, and it lets them see the reasoning behind the correct choice when they're right."The online testing process helped Nagy redesign his classroom course. He told Heller, "Our ambition is actually to make the Harvard experience now closer to the MOOC experience."
- **Bring people together from all over the world-** Heller quotes Drew Gilpin Faust, Harvard president, regarding her thoughts on a new MOOC, Science & Cooking, that teaches chemistry and physics in the kitchen, "I just have the vision in my mind of people cooking all over the globe together. It's kind of nice."
- **Allow teachers to make the most of classroom time in blended classes-** In what is called a "flipped classroom," teachers send students home with assignments to listen to or watch a recorded lecture, or read it, and return to the classroom for more valuable discussion time or other interactive learning.
- **Offer interesting business opportunities-**Several new MOOC companies launched in 2012: edX by Harvard and MIT; Coursera, a Stanford company; and Udacity, which focuses on science and tech.

DISADVANTAGES

MOOCs:

1. Could cause teachers to become nothing more than "glorified teaching assistants": Heller writes that Michael J. Sandel, a Harvard justice professor, wrote in a letter of protest, "The thought of the exact same social justice course being taught in various philosophy departments across the country is downright scary."

2. Make discussion a challenge: It's impossible to facilitate meaningful conversation in a classroom with 150,000 students. There are electronic alternatives: message boards, forums, chat rooms, etc., but the intimacy of face-to-face communication is lost, emotions often misunderstood. This is a particular challenge for humanities courses. Heller writes, "When three great scholars teach a poem in three ways, it isn't inefficiency. It is the premise on which all humanistic inquiry is based".

3. Grading papers is impossible. Even with the help of graduate students, grading tens of thousands of essays or research papers is daunting, to say the least. Heller reports that edX is developing software to grade papers, software that gives students immediate feedback, allowing them to make revisions. Harvard's Faust isn't completely on board. Heller quotes her as saying, "I think they are ill-equipped to consider irony, elegance, and...I don't know how you get a computer to decide if there's something there it hasn't been programmed to see."

4. Make it easier for students to drop out: Heller reports that when MOOCs are strictly online, not a blended experience with some classroom time, "dropout rates are typically more than 90%".

5. Intellectual property and financial details are issues: Who owns an online course when the professor who creates it moves to another university? Who gets paid for teaching and/or creating online courses? These are issues that MOOC companies will need to work out in the upcoming years.

6. Miss the magic: Peter J. Burgard is a professor of German at Harvard. He has decided not to participate in online courses because he believes the "college experience" comes from sitting in preferably small groups having genuine human interactions, "really digging into and exploring a *knotty* topic—a difficult image, a fascinating text, whatever. That's exciting. There's a chemistry to it that simply cannot be replicated online."

7. Will shrink faculties, eventually eliminating them: Heller writes that Burgard sees MOOCs as destroyers of traditional higher education. Who needs professors when a school can hire an adjunct to manage a MOOC class? Fewer professors will mean fewer Ph.D.s granted, smaller graduate programs, fewer fields, and subfields taught, the eventual death of entire "bodies of knowledge." David W. Wills, professor of religious history at Amherst, agrees with Burgard. Heller writes that Wills worries about "academia falling under hierarchical thrall to a few star professors." He quotes Wills, "It's like higher education has discovered the megachurch."

SELF ASSESSMENT

- What is the full form of MOOC?
- Who coined the term MOOC?
- What are the various kinds of MOOCs?
- Mention the advantage and disadvantage of MOOCs.

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