E-LEARNING AND MOOCs: ROLE OF LIBRARIES

Pharmacy

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ABSTRACT

After going through this module, learners should get acquainted with e-learning and concepts associated with it. They would learn about various aspects of content creation and content delivery and acquire knowledge about MOOCs, its types, evolution, platforms and providers.

Massive Open Online Courses (MOOCs) are recent innovative addition to the online learning landscape and spreading rapidly in all disciplines including Library and Information Science (LIS) profession. MOOCs proliferates, LIS professionals have the opportunity to leverage this technology to improve their professional skills. This paper, intended to understand the MOOCs concept, MOOCs and LIS Education, MOOCs Benefits, Why LIS should be part of MOOCs, and at the end discussed feasible areas of application of MOOCs in LIS domain etc.

1.INTRODUCTION

Past five decades has witnessed unprecedented developments in computer and communication technology. Dramatic reductions in the size, cost and affordability of computers and equally impressive gains in the speed, storage capacity and reliability of hardware components have expanded their use rapidly by individuals and institutions alike in all spheres of activities. The advent of these innovative technologies has made an extraordinary impact on all aspects of education including teaching and learning, institutional management, administration, finance, library services, research and development, information dissemination & delivery and student life. The emergence of Internet and World Wide Web (WWW) as a new media of information delivery, coupled with availability of powerful hardware, software and networking technology has triggered large-scale production of online educational content through out the world. The Internet has established itself as a powerful media for self-education for people in isolated or remote areas for its ease-to-use, familiarity with masses, availability of tools and wider accessibility. The web has become the most successful networked multimedia hypertext-based system of our time. Recognizing potentials of web-based online education, the Ministry of Human Resource Development launched the National Mission on Education through Information and Communication Technology (NME-ICT) as centrally Sponsored Scheme to leverage the potential of ICT in teaching and learning process for the benefit of all the learners in higher education institutions. Besides a number of initiatives, a large number of e-learning multimedia modules were developed under NME-ICT, which ultimately culminated to the launch of SWAYAM, in 2017. SWAYAM offers more than 1550 courses from class 9 to post-graduate level through its own platform.

2. E-LEARNING

eLearning is learning utilizing electronic technologies to access educational curriculum outside of a traditional classroom. In most cases, it refers to a course, program or degree delivered completely online. Two approaches that are generally used for developing contents for e-learning are i) self-paced; and ii) instructor-led. While self-paced learners are completely independent, facilitated and instructor-led e-learning courses provide different levels of support from tutors and instructors and collaboration among learners. (docplayer.net)Instructor-ledcourses are scheduled for a predefined time-frame.

3.TYPES OF E-LEARNING
i. Synchronous Learning

Synchronous learning refers to learning in real time where a teacher or an instructor and a group of students are engaging in learning at the same time (Wikipedia, 2019).Class-room learning and carrying out experiments in a laboratory are examples of synchronous learning. Learning through video conferencing is also an example of synchronous learning. An e-module may use technological solutions such as Internet telephony, video conferencing, online chat rooms to facilitate synchronous communication amongst students, experts and developers during a specified time period.

ii. Asynchronous Learning

As oppose to synchronous learning, asynchronous learning is self-paced, student- centered and location-independent teaching method that can take place any time, anywhere in absence of a teacher or instructor. Asynchronous learning uses computer and communication technology and online learning resources to facilitate sharing of resources that are beyond constraints of time and place among a network of people. e-Learning and learning from books is an example of asynchronous learning.

The possibilities created by web-based asynchronous online learning are enor emous. Online courses offer interactivity, both at software and human level, which neither the traditional class-room-based method of teaching nor remote (distance education) can offer. The real-time human interaction, so important for learning, is achieved by deploying web-based tools like threaded discussions, e-mail exchange, listserv, conferencing and online chat platforms. The advanced e-mail communication using MIME protocols may include video audio, text and data. Further, synchronous communication can be achieved with remote faculty via full teleconferencing capabilities, which includes two way audio / video and a shared whiteboard for document preparation and mark-up. This capability allows remote students to directly access faculty at the other sites for assistance.(drtc. isibang. ac.in)

4.MASSIVE OPEN ONLINE COURSES (MOOCs)

Massive Open Online Courses (MOOCs) are the latest variant of e-learning specifically designed to offer open access to courses to a large number of learners completely free. However, scalability, very large number of enrolment, low completion rates and higher investments are issues of constant concern for MOOC providers (Brown, 2013); (Trumbić and Daniel, 2013). Over the years, most MOOC providers are either charging fees for their courses or offer courses for free but charge for undertaking examination, certification or credit transfer (Brown, 2013).

5.DEFINITIONS OF MOOCs

According to Wikipedia, a massive open online course (MOOC) is an online course aimed at unlimited participation and open access via the web. In addition traditional course materials such as filmed lectures, readings, and problem sets many MOOCs provide interactive user forums to support community interaction among students, professors, and teaching assistants (Tas). MOOCs are a recent an widely researched development in distance education which were first introduce in 2006 and emerged as a popular mode of learning in 2012.(mafiadoc.com)

According to Barnes, Cameron (2013), the term Massive Open Online Course (MOOC) refers to a specific type of online course.

The main features of online courses is that:
- There are no formal entrance requirements

- Participation is free
- They are delivered entirely online
- They are massively scalable, being designed for thousands of users

According to Gore, Hannah (2014), a MOOC is denoted as:

- Massive: as registration is not capped (with enrolment in some cases exceeding 100,000 students)
- Open: to take advantage of widely available OER and open registration(though some MOOCs have prerequisites, and for-fee registrations, animations or certificates of completion)
- Online: with no requirement for face-to-face attendance
- Course: the concept of a pedagogically designed learning journey

6.EVOLUTION

Evolved from Open Education Resources (OER) • First official MOOCs course was offered by George Siemens, Alaska University and Stephen Downes, National Research Council called "Connectivism an Connecting Knowledge" in the year 2008. The course was offered to 25 students from Manitoba University in Canada and was followed on the Web by 2300 students. • The first truly "Massive" response to an open online course was on "Artificial Intelligence" offered by Sebastian Thun and Peter Norvig from Stanford University in 2011. 1,60,000 students from 190 countries enrolled for the course. After finishing the course Thurn found Udacity.com

7.TYPES OF MOOCs
1. cMOOCs

cMOOCs stands for "Connectivism MOOCs". cMOOCs involve groups of people learning together unlike traditional university courses that are delivered by an individual instructor. cMOOCs are learner-centric wherein participants are all considered teachers and learners, in contrast to the xMOOCs, where each individual is either a student or a teacher. cMOOCs provide space to learners for self-organized learning where learners can define their own objectives, present their own view, and collaboratively create and share knowledge. cMOOCs enable learners to build their own networks via blogs, wikis, Google groups, Twitter, Facebook, and other social networking tools outside the learning platform without any restrictions from the teacher (Kruiderink, 2013). Thus, cMOOCs are distributed and networked learning environments where learners are at the centre of the learning process

2. xMOOCs

xMOOCs stands for extended Massive Open Online Course and are based on traditional studying materials and higher education methods of learning involving video lectures and quiz tests as method of evaluation.(docplayer.net) xMOOCs are teacher-centric, wherein learning objectives are pre-defined by the course coordinator who impart their knowledge through short video lectures, often followed by simple assessment including quizzes, eTest, etc. (Kruiderink, 2013). Unlike cMOOCs, the communication in xMOOCs happens within the platform itself. However, xMOOCs significantly broaden the number of students who can be exposed to university-level courses. Coursera, edX, and Udacity are all examples of xMOOCs

3. Quasi-MOOCs

Quasi-MOOCs are based on web-based OERs that are not designed for supporting learning-specific tasks. Quasi MOOCs lacks social interaction of c-MOOCs

8. ADVANTAGES

- Subject-independent: Individual courses – freedom to choose
- Anywhere, anytime: No geographical or time limitation
- Asynchronous way of learning
- Multi-media supplements: Video, animation, quizzes, simulation, and technology-enhanced courses
- Facilitate pedagogical experimentation

9.CHALLENGES AND DISADVANTAGES

- Higher drop-out rate: 90%, only 10% complete the course
- Addressing diverse requirements of a large number heterogeneous students enrolled for a course is a challenge for faculty
- Lower weight age by employers
- Creation of MOOCs is time-consuming, and expensive involving multiple players
- MOOCs courses are not accredited
- Online evaluation is inadequate - provides room for cheating

10. LIST OF OF MOOCS PROVIDERS
Table 1. List of of MOOCs Providers (https:// en. wikipedia. org/ wiki/List_of_MOOC_providers)

S.No	Provider	Type	Headquarters	Founded
1	ALISON	Commercial	Ireland	2007
2	Canvas Network	Commercial	USA	2008
3	Coursera	Commercial	USA	2012
4	Coursmos	Commercial	USA	2014
5	edX	Non-profit	USA	2012
6	Eliademy	Commercial	Finland	2012
7	FutureLearn[1][2]	Commercial	UK	2012
8	iversity[3]	Commercial	EU	2013
9	Kadenze	Commercial	USA	2015
10	Khan Academy	Non-profit	USA	2006
11	Lynda.com	Commercial	USA	1995
12	NPTEL	Non-profit	India	2015
13	OpenClassrooms[4][5]	Commercial	France	2007
14	openHPI[6][7]	N/A	Germany	2012
15	OpenLearning[8]	Commercial	Australia	2012
16	Open2Study[9][10]	Commercial	Australia	2013
17	Peerto Peer University	Non-profit	USA	2009
18	POLHN	Non-profit	Western Pacific Region	2005
19	Shaw Academy	Commercial	Ireland	2013
20	Stanford Online	Non-profit	USA	2006
21	SWAYAM	Non-profit	India	2015
22	Udacity	Commercial	USA	2012
23	Udemy	Commercial	USA	2010
24	WizIQ	Commercial	India/USA	2007

11.HOW LIBRARIES CAN SUPPORT MOOCs LEARNING

The MOOCS are evolving platform and considered as next big thing in higher education and online learning. MOOCs do appear to be here to stay as part of the overall online learning Environment, just as libraries provide "free" and open access to learning resources, MOOCs provide free and open access to learning opportunities (Payel Biswas 2018). Libraries meet just-intimae learning needs and foster a strong sense of community; connectivity MOOCs in particular might inspire similar positive impacts and augment library learning services.

(Signorelli and Hovious, 2014)

There are multiple roles for libraries in the MOOC development, support, assessment, and Preservation process.

The following roles for librarians:
- Clearing Copyrighted Content
- Supporting production- Library as Content Creator
- Supporting students
- Preserving MOOC content

O'brian, L, et.al. (2014) stated Libraries were supporting MOOCs by: Copyright Clearance ;Open content promotion; Licensing resources; Instructional support; Production Support(Adeyinka Tella,2020) Institutional factors affecting the library's engagement with MOOCs were: Nature of MOOCs offered by the institution; Institutional coordination of MOOCs; Models of MOOC support; Structure of existing [library] services; [library] Staff and budget.

The majority of MOOC platforms are the not for profit; the course structure consists of a combination of short video lectures, suggested reading list, and assignments; majority of the test and quizzes are automatically graded. The discussion forums are moderated by course developers, teaching assistant or peer moderator, and in most of the cases participants are left to their own devices. There are numerous stakeholders of MOOCs who will have an interest in the massive intellectual property that ultimately resides in libraries' in the form of licensed digital repositories. The librarians have expertise in dealing with legal issues related to MOOCs, such as intellectual property rights, privacy issues, and can play active role in sustainable development of MOOCs There have been high levels of attention in recent months given to the academic "faces" of MOOC platforms and

the instructors that deliver the MOOCs themselves. However, there is little documented evidence about the role of libraries and librarians in relation to the development of the MOOC movement. What is well documented by Xu, Ouyang, and Chu (2009) is the propensity for academic librarians to be early adopters of technology with terminology such as "Library 2.0" being coined by Peltier-Davis (2009). MOOCs are different and require the re-planning and repositioning of the library service.

12.CONCLUSION

The module elaborates on e-learning, its units and types, components of an e-module and its significance in the process of learning. The module describes process of incorporating interactivity in e-modules using combination of text, graphics, animation, video, interactive elements, etc. Module describes MOOCs as latest variant of e-learning, MOOCs are gaining popularity in libraries due to the interesting opportunities that they present. As observed above, not only can libraries assist MOOCs developers in many ways, they themselves can also create MOOCs The rise of online courses such as the NPTEL and SWAYM in India expansion of online education through MOOCs, has permitted the introduction of new approaches which involve library services, resources and professionals in online classes; for example, by creating and integrating OER into online courses and MOOCs. Hence, libraries can play pivotal roles and they should not miss out on a chance to get involved in the future of MOOCs

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