Winter 2-15-2022

Role of Academic Libraries in the age of MOOCs in India

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Abstract

The study aims to report the current growth of Massive Open Online Courses (MOOCs) and its evolution, features, benefits, various types, International and Indian scenarios, and challenges. The study also examines the role of academic libraries in the expansion of MOOCs in the present era. The study employed web content analysis and questionnaire methods to collect data related to the current growth of MOOCs in India. The study interviewed 75 students and 45 faculties of St. Teresa's College, Ernakulam, to explore their perceptions of MOOCs as a higher education system and how Academic Libraries become their centre for MOOC courses. The study found that 75.3% of respondents joined/completed the MOOC courses, whereas some respondents had no ideas about it. Among the 75.3% of respondents who joined/completed the course, 89.4% of respondents completed one or two certification courses, 7.6% of respondents have completed 3 to 5 classes, and only 3% of respondents have completed between 6 to 10 online courses. The expansions of online education through MOOCs in India, such as the NPTEL and SWAYAM, have positively impacted the growth of Academic libraries.

Keywords: MOOCs; Online courses; Higher Education; Distance Learning and Academic Libraries.

1. Introduction

The advent of the internet and information and communication technologies has brought tremendous change in the teaching and learning process. Technology gives learners expanded and independent learning opportunities to learn without formally attending the classes using course material delivered at their homes. Hence online learning has become very popular and spreads all over the world. Massive Online Open Courses (MOOCs) are a new platform for online courses via the web. It is a model for delivering learning content over the internet to virtually anyone who wishes to take the course at no cost with no limit on attendance (Educause, 2013). According to Wikipedia, a massive open online course (MOOC) is aimed at unlimited participation and open access via the web. In addition, traditional course materials such as filmed lectures, readings, and problems set many MOOCs to provide interactive user forums to support community interaction among students, professors, and teaching assistants (TAs). The main aim of MOOCs is to provide new opportunities to many learners to attend free online courses from anywhere around the world. MOOCs are recent origins where LIS professionals and students can play the roles of learner, connector, and collaborator roles. MOOCs are an opportunity for libraries to provide leadership and guidance in advising faculty and students about open access, open educational resources, copyright issues and other licensing models in higher education. There are multiple potential roles for libraries in the MOOC development, support, assessment, and preservation process. MOOCs become a professional development tool for librarians, who have a chance to extend their influence in the educational context (Ecclestone and Massis, 2013).

1. Related Studies

Several studies have been conducted on the topic MOOCs, and in light of this topic, a survey of available literature is made here to strengthen the research and widen.

Bhatia, Ketki K and Trivedi, Mayank (2015) carried out a study on MOOCs: a paradigm shift for libraries. This paper gives a brief idea about the concept, history of MOOCs, its pros and cons, and how MOOCs enhance accessibility, student engagement, and experience for lifelong learning. Singh, Nisha (2019); Kendrick, Curtis L and Gashurov, Irene (2013); Barnes, Cameron (2013); Wu, Kerry (2013); Agarwal, Anil and Singh, Rajesh Kumar (2018); Sibbu, Kush (2018); Kuri, Ramesh and Maranna, O (2015); Anurag Jagetiya et al. (2018) and Sharmistha Pramanik (2018) have also studied a different aspect of MOOCs in different ways.

Hew (2016) factors promoting engagement in online learning has been examined. A qualitative study has been adopted where the comments posted on the course talk by participants who completed the course, who were currently taking and who partially ended or dropped the course were analysed. Such reflective data shared by 965 respondents of three top-rated MOOCs in the discipline of programming language, literature, arts and science has been considered for data analysis. Out of this analysis, the five factors that promote online learning engagement are identified. This includes (1) problem-centric learning with clear expositions, (2) instructor accessibility and passion, (3) active learning, (4) peer interaction, and (5) using helpful course resources.

Liu et al. (2016) top 15 countries based on the learner enrolments were identified from the data collected through "Big data in Education", an eight-week course offered by Columbia University through Coursera; US, India, China, UK, Canada, Brazil, Spain, Australia, France, Russia, Germany, Singapore, Korea, Nether lands and Japan are found to be the top countries where maximum MOOC enrolment is happening. India is the second-largest country next to the US for MOOC enrolments.

Balasubramanian p. (2020) Knowledge sharing is a tool that can be used to promote evidence-based practice and decision making and also to encourage exchange and dialogue among researchers, policymakers, and service providers. However, little is known about knowledge-sharing strategies and their effectiveness. The researchers selected Pondicherry University as the sample unit and executed the analysis with 190 respondents. The study revealed that the academic staff college members should be honest and share reliable information. The members should create a favourable mind set to share knowledge with other members.

2. Objectives

The primary objectives of the study are:

- To define the Massive Open Online Courses.
- To study the role of libraries in uplifting the MOOCs environment in academic institutions.
- To find out the perception of students and teachers regarding MOOCs.

3. Evolution of MOOCs

The term MOOC (Massive Open Online Course) was derived in 2008 by Dave Cornier of the University of Prince Edward Island and Bryan Alexander of the National Institute for Technology in Liberal Education. MOOCs are of a very recent origin in distance education, started somewhere around mid of 2011. The first MOOC was created at the University of Manitoba in 2008. (Mackness et al.2010). MOOCs are the latest additions to the field of distance learning. MOOCs are student-friendly, for there are no lengthy procedures, formalities or prerequisites for enrolment in a course. As the name suggests, these courses are massive in terms of number and distribution of participants across the globe, open access, and availability online. The first MOOC experiments in India took place in 2012 with Dr. Gautam Schroff of Tata Consultancy Services and an adjunct faculty at the Indian Institute of Technology. Delhi (Trehan et al., 2017).

4.1 Importance of MOOCs in Library and Information Science Education

Libraries may play a key role in MOOCs platform, and MOOC may be used in different areas of education such as:

- **Flipped classrooms:** It is one of the most significant opportunities in the MOOC environment. The students may use some MOOCs as flipped classes and learn their courses of interest from top universities and schools in their leisure time.
- **Choice-based learning:** MOOCs offers various opportunities to learn choice-based courses. The users of MOOCs have the chance to choose their desired MOOCs as per their interests without any constraints.
- **Unlimited learning:** MOOCs support complete understanding. The users may create a forum to discuss, share, and support each other in the MOOC environment to create different MOOCs in the LIS domain in collaboration with respective institutions and universities.

4.2 Popular MOOCS Platform/Providers

Around the globe presently, a number of the platform and services are providing online and MOOCs for the learners and fulfilling their educational needs. Some of the famous and popular MOOCs providers and venues are listed below.

Coursera (https://www.coursera.org/):   Coursera is the most prominent MOOC provider in the world. It is an American online learning platform founded in January 2012 by Stanford professors Andrew Ng and Daphne Koller.

Udacity (https://www.udacity.com): Udacity was founded by Sebastian Thrum, David Stevens, and Mike Stokowski offering, massive open online courses (MOOCs). Udacity is the outgrowth of free computer science classes offered in 2011 through Stanford University.

EdX (https://www.edx.org): EdX is a MOOCs provider. The Massachusetts Institute of Technology and Harvard University created edX in May 2012. EdX is the most trusted platform for education and learning.

NPTEL (https://nptel.ac.in): National Programme on Technology Enhanced Learning (NPTEL) was initiated in 2003. It is an initiative funded by the Ministry of Human Resource and Development, Government of India and coordinated by IIT Madras and Other IITs in India. It is the most viewed educational YouTube channel and largest online repository of courses in engineering, basic sciences and selected humanities and social sciences subjects. Now, NPTEL is a part of SWAYAM, and all systems of NPTEL will be available through the SWAYAM portal

SWAYAM (https://swayam.gov.in): India's national MOOC platform SWAYAM (Study Webs of Active Learning for Young Aspiring Minds). All India Council for Technical Education (AICTE) under the Ministry of Human Resource Development of India's Government (GOI) started MOOCs in 2017. This portal incorporates many courses, ranging from engineering to social sciences, Arts to medical sciences, structured by different Indian Universities and Higher educational Organisations.

5. Methodology:

The study used web content analysis and survey methods to collect data. St. Teresa's College (Autonomous) Ernakulum is the sample unit for the present study. The college has a total population of 3500 students and 200 faculties. The researcher constructed a strong questionnaire in google format and randomly distributed the same to 100 students and 50 faculty. The researcher received the fully completed responses from the 120 respondents. i.e. 75 students & 45 faculty. The collected data were analysed using simple percentage and Regression coefficients.

6. Null and Alternative Hypotheses:

H₀: The role of libraries in uplifting the MOOCs environment in academic institutions does not influence the perception of students and teachers regarding MOOCs.

H₁: The role of libraries in uplifting the MOOCs environment in academic institutions is to influence the perception of students and /teachers regarding MOOCs.

7. Analysis and Findings

The evaluation of the role of MOOCs in academic libraries and their survey results are presented below.

7.1 Awareness of MOOCs

The study found that a total number of responses are 120, out of which 65.2% of students and 37.50 % of faculties participated in it. In which 75% of respondents joined/completed the MOOC courses, 24.7% of respondents have no idea about it. Among the 75.3% of respondents who joined/ completed the course, 89.4% of respondents completed one or two certification courses, 7.6% of respondents have completed 3 to 5 classes, and only 3%of respondents have completed between 6 to 10 online courses. This is explained in detail in Figure 1.

Fig.1: No. of certificate courses completed
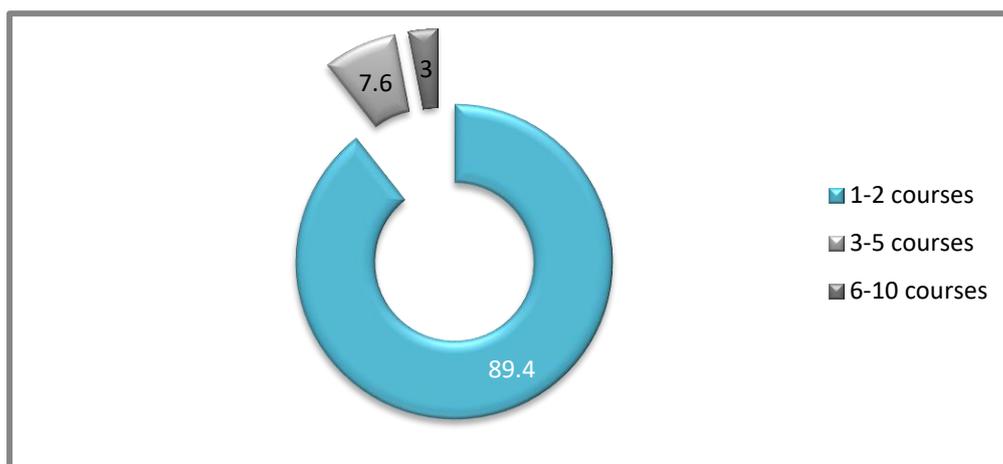
7.2 Notification from the library

Regarding the notification from the library of new courses offered by NPTEL/ SWAYAM, the majority (83.3%) responded agreed that the library supports them. 10.7%

disagreed, and 6% indicated that they had no opinion. The majority of the respondents (89.4%) agreed that the library supports watching online lectures with audio-visual aids. The details regarding the notification from the library are presented in Table 1.

Table 1: The role of library and MOOCs

Statements	Agree	Disagree	No Opinion
Receiving notification from the library regarding new online courses	83.3%	10.7%	6%
The library supports watching online lectures with audio-visual aids	89.4%	8.2%	2.4%

Multiple Regression is applied to analyse the association between the role of libraries in uplifting the MOOCs environment in academic institutions and the perception of students and teachers regarding MOOCs.

Multiple R value :   **0.789**

R Square value :   **0.623**

F value :   **254.108**

P value :   **<0.001****

Table 2: Variables in the Multiple Regression Analysis

Coefficients					
Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.071	.143		7.509	.000
X_1	.603	.042	.607	14.267	.000**
X_2	.172	.037	.200	4.706	.000**
a. **Dependent Variable: The perception of students and teachers regarding MOOCs.**					

Note: ** Denotes significant at 1% level

The multiple correlation coefficient is 0.789 reveals the degree of relationship between the actual values and the predicted values of the perception of students and

teachers regarding MOOCs. Because the predicted values are obtained as a linear combination of Receiving notification from the library regarding new online courses (X_1) and library supports to watch online lectures with audio-visual aids (X_2) indicates that the relationship between the perception of students and teachers regarding MOOCs and the two independent variables is quite solid and positive.

R-square measures the goodness-of-fit of the estimated Sample Regression Plane (SRP) in terms of the proportion of the variation in the dependent variables explained by the fitted sample regression equation. Thus, the value of R square is 0.623 means that about 62.30% of the variation in the perception of students and teachers regarding MOOCs is explained by the estimated SRP that uses Receiving notification from the library regarding new online courses (X1). The library supports watching online lectures with audio-visual aids (X2) as the independent variables, and the R square value is significant at a 1 % level.

a. Factors that hinder joining MOOCs

Regarding the factors that hinder joining open online courses are lack of interest, unawareness, lack of equipment, lack of time (60.6%) of respondents mention that lack of interest is the main factor that hinders joining open online courses followed by lack of time (27.3%) and then unawareness (7.6%) and lack of equipment(4.50%). This is explained in figure.2.
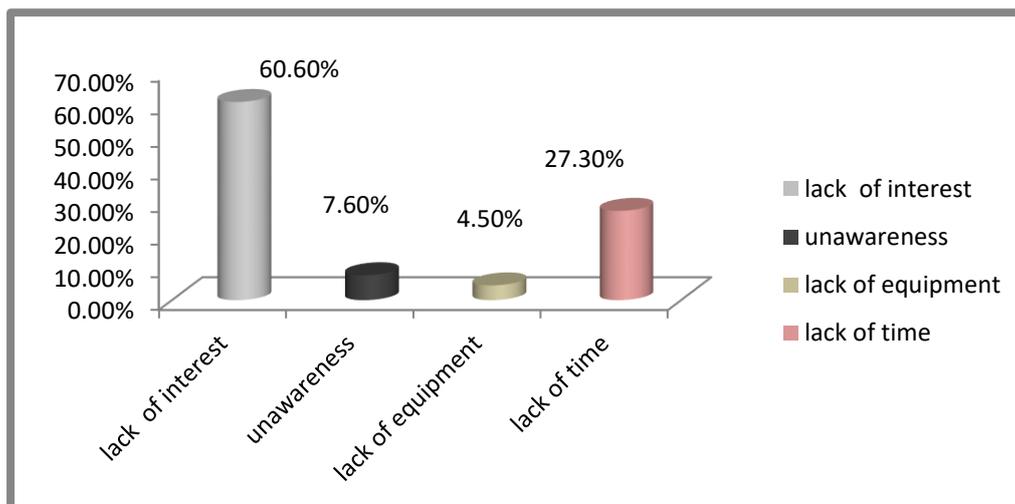

Fig.2: Factors that hinder joining open online courses

8. Conclusion

The present study has investigated the role of libraries in promoting MOOCs and the awareness of MOOCs among students and teachers. It is found that the students and teachers have basic ideas about MOOCs. The study found that 75.3% of respondents joined/completed the MOOC courses, whereas some respondents had no idea about it. Among the 75.3% of respondents who joined/ completed the course, 89.4% of respondents completed one or two certification courses, 7.6% of respondents have completed 3 to 5 classes, and only 3% of respondents have completed between 6 to 10 online courses. The majority have applied to the SWAYAM and NPTEL of the Indian scenario. MOOCs are gaining popularity in libraries due to the ample possibilities. The expansions of online education through MOOCs in India, such as the NPTEL and SWAYAM, have positively impacted the growth of Academic libraries. Note that these are not mutually exclusive categories, as one can have a transfer MOOC that is synchronous or asynchronous. What is important here is that we see MOOCs as informing the debate around learning to get over the apparent problems of relevance, access and cost.

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