

## Problems and Prospects of Implementing MOOCs (Massive Open Online Courses) in North-East India in LIS Perspective

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### ABSTRACT

The paper intends to explore MOOC that has attained considerable attention in attracting the academic intellectuals of different disciplines across the globe. The purpose of the paper is to analyse, evaluate and understand the barriers followed by the scope of implementing MOOC courses especially the LIS perspective in northeast India. The paper also tends to study the significance of MOOCs in the NE region. A comprehensive conceptual model has been put forward by reviewing the existing literature related to the specific field of study. The model shall be beneficial to the team members designing and developing the framework for the MOOC courses (LIS) in North-East India.

**Keywords:** MOOC; North-East India; LIS education; Library & Information Science

### 1. INTRODUCTION

Education is considered the backbone of modern society and the nation as a whole. India has always been occupying a prestigious status in education since the time immemorial. The Indian colleges and universities are offering different curricula-based courses to the student community to pursue their traditional and professional studies. The quality of education becomes limited within the framework of the respective college and faculties<sup>1</sup>. MOOC permits a platform for the learners to seek education from renowned professors from different universities across the globe to benefit the learner. Distance learning acts as the incarnations to traditional learning in its various aspects in dispersing a vast quantity of knowledge and information to the learners. With the increasing use of the Internet and online activities, online learning has attained its central stage that makes the perfect layout for the introduction of MOOC (Massive Open Online Course)<sup>2</sup>.

Dave Cormier (University of Prince Edward Island) coined the term MOOC in 2008 in response to Connectivism and Connective Knowledge courses<sup>3</sup>. MOOCs have their aim to impart quality education to unlimited participation by web or by online. MOOC itself signifies with the terms such as Massive, Open, Online, and Courses respectively. The popular courses platform which is currently most commonly found is edX, Coursera, Udacity, etc<sup>4</sup>. The institutions of higher education are indulging themselves in the implementation of MOOCs, not only to educate the mass participation but also to reduce the cost of education where the affordability of students is taken into consideration<sup>5</sup>. The MOOC courses in the Indian

scenario came in the form of SWAYAM. The SWAYAM is the believer of the three main principles i.e. access, equity, and quality which is an initiative of the Government of India. The courses introduced in SWAYAM will help in the development of the Skill India Program<sup>6</sup>.

### 2. PREVIOUS STUDIES UNDERTAKEN ON MOOCs

As the concept of MOOCs is gaining momentum in the past decade and it catches the eye of scholars to write on the issue. Several academicians/scholars have published literature on it and paved the way for others to write on it. After going through several pieces of literature published on MOOCs with special emphasis on LIS education, the most relevant to the theme is selected and analysed. Annexure I is of literature review for a better understanding of the concept:

### 3. THE OBJECTIVE OF THE STUDY

The study undertakes the following objectives in consideration such as; to (i) understand the importance of MOOC courses in LIS with special reference to North-East India; (ii) identify the factors that act as a barrier for the implementation of MOOC courses (LIS) in North-East India; and (iii) analysis the elements who shall act as a conceptual model for the development and implementation of MOOC courses in North-East India.

### 4. IMPORTANCE OF MOOC COURSES IN INDIA AND NORTH EAST INDIA

India is believed to be one of the fastest-growing economies in the world. The education sector is still a great

**Table 2. State-wise Number of universities listed by UGC under Section 2(f) of the UGC Act as of 31.03.2019 (Source: UGC Annual Report 2018-19)10**

State	Total	Central	State	Private	Deemed	State	Private	Deemed
Arunachal Pradesh	10	1		8	1	-	-	-
Assam	21	2	12	6	1	5	1	-
Manipur	8	3	3	2	-	-	-	-
Meghalaya	9	1	-	8	-	-	-	-
Mizoram	2	1	-	1	-	-	-	-
Nagaland	4	1	-	3	-	-	-	-
Sikkim	6	1	1	4	-	-	-	-
Tripura	3	1	1	1	-	-	-	-

and fauna, its landscape, social practices, marriages, and most importantly is the food habit of this region besides other features. The peoples of this region are also known for their higher education as some of the top listed institutions are present herewith where Mizoram has recorded the second-highest literacy rate in India (According to the 2010-11 census report). Table 1 gives a glimpse about state-wise universities which are enacted under Section 2(f) of the UGC Act as of 31.03.2019.

The universities of this region have tried to fulfill the objective of people by designing and implementing various courses for various disciplines.

**Table 3. State-wise university (Central and State Universities) and year of establishment source: Respective university website**

State	Name of the University	Year of Establishment
Assam	Gauhati University	1948
Assam	Dibrugarh University	1965
Meghalaya	North-Eastern Hill University	1973
Manipur	Manipur University	1980
Tripura	Tripura University	1987
Assam	Assam University	1994
Mizoram	Mizoram University	2001
Assam	Assam Women University	2013
Tripura	Maharaja Bir Bikram University	2015

question as most people cannot afford to seek education. MOOCs can be considered as a trend game-changer in the education sector. The online system of education can act as a good medium for the transformation of the Indian education system<sup>7</sup>. The MOOC system in the Indian scenario promises to offer courses in different discipline such as humanities and social science, applied education, language and literature, and many others for a diverse group of students in various Indian languages which may intend the students to learn more<sup>8</sup>.

The Ministry of Human Resource Development (MHRD), Government of India tends to involve all IIT's and higher learning institutions for growth and development of MOOC courses project under the initiate of IIT, Kharagpur where the blueprint of the National E-Library project was carried out which tends to collect, preserve and disseminate all the intellectual output of our country<sup>9</sup>.

India is known for various reasons worldwide. One of the significant features of this land is the rich cultural diversity of its different regions. North-East India is one of such among many, well known for its rich cultural ethnicity, diverse flora

Librarians and Information Officers are some of the most demanded and respectable in the job sector. The Department of Library and Information Science established in the university is to cater to the need and demands of information professionals in the market<sup>11</sup>. The departments impart knowledge and trained them to be better working professionals in various sectors. As the subject of the study is specific to LIS MOOC courses, we need to understand courses of LIS degree which are offered by different universities (Central and State Universities) of this region<sup>12</sup>.

Table 2 depicts the picture of the present status of the LIS education in North-East India where a good number of higher education institutions has implemented course for the young professionals to train them and do better for the well-being of development of librarianship across the country<sup>13</sup>. When there are a sufficient number of educational institutions in North-East India having capability and potentiality to design and frame the MOOC course, the following<sup>14</sup> are the significant areas where the importance of MOOC course are lying within:

- The MOOC will act as a unique standard syllabus where the participant of the MOOC will follow a unified syllabus pattern which will be beneficial to both the educator and students.
- MOOC can be a good alternative for the candidate who wants to pursue the courses such as refresher where they can save both time and money.
- MOOC can serve as a good channel for single carder employees where they face the difficulty to participate in self-development programs. These can act as a blessing in disguise.
- MOOC shall provide the opportunity for the elder inspiring learners who feel shy or guilty in getting familiar with the latest ICT technology as they are not used to operating these devices.
- MOOC will help the LIS professional to be familiar with the latest concept and technology invented as of now and also trained them to implement that concept in discharging the library services.

The MOOC course gives a new paradigm for the LIS professional to take away the personal self-development

and also to remain themselves up-to-date about the latest development in the field of LIS education. It helps them to remain connected and move with the modern trends<sup>15</sup>.

## 5. BARRIERS TO THE IMPLEMENTATION OF MOOC COURSES (LIS) IN NORTH-EAST INDIA

The North-Eastern states of India are one of the most beautiful naturally designed architectural frameworks with its mesmerizing people with different variety of food habit, cultural and much more which separates with the rest of India. The region has come up with the latest educational technology for the advancement of knowledge<sup>16</sup>. But the states suffer from several hindrances which are highlighted as

- As it is known to all that the NE region is geographically separated from the rest of the country where the feeling of isolation is born among the inhabitant of the area. The geographical location serves as a barrier to implementing the MOOC course in this region.
- Another important point to be noted is that the region as of geographical location fails to nourish with full growth for development due to the lack of proper environment where the implantation of latest technology is somewhat not available<sup>17</sup>.
- MOOC course for its proper implementation requires well-equipped infrastructure. The region fails to develop proper infrastructure for the educational reform of the region as compared with the other parts of the same.
- There is always an educational reform witness with the change with the need of the hour. The government of the states seems to give the least attention to the development of infrastructure and educational technology in the educational sector. In this regard, MOOC still seems to be a hidden corner for the administrators wherein the real reformation of education is necessary.

The existing literature clearly remarks on the growth pace of educational reforms of this region. The region requires a good planning map where the existing problem is solved and a new solution is forwarded in which a new journey will be started with new hope and aspiration. The literature suggests that the immense use of ICT will help the region to overcome the issue for what it has been struggling with for decades<sup>18</sup>. Missing out Librarianship trend is most frequently seen in the region due to poor development of educational sector<sup>19</sup>.

## 6. ANALYSIS OF CONCEPTUAL MODEL FOR THE DEVELOPMENT AND IMPLEMENTATION OF MOOC COURSES IN NORTH-EAST INDIA: DISCUSSION AND CONCLUSION

MOOC has set a new plethora for the academic community to learn, understand, disseminate, and much more in this mechanism. It has opened up a new era for teaching and learning methodology<sup>20</sup>. North-East India is no exception in this regard for the implementation of MOOC courses. The people have knowledge and skills in understanding the importance of MOOC courses in contemporary times. Various factors act as a barrier to the successful implementation of

MOOC<sup>21</sup>. After the consolation of several pieces of literature related to the relevant field of study, the expertise has come up with some important solutions and also analyzing a conceptual model for the development of MOOC courses in this region particularly. The author claims that the elements put forward are just personal analysis and interpretation from the existing literature. The discussion of the conceptual model and its various elements are discussed in detail below:

### 6.1 Linking

The linking element plays a key role in the development of MOOC courses where the two important elements i.e. are the essential department of Library and Information Science in different universities and the academicians. The evolutions of LIS education are of ages where many new theorems have been revolutionizing which have added richness to the subject and attain its present status. Another important element associated with “linking” is the organisation of the central board for the MOOC courses in LIS education.

### 6.2 Ameliorate

Ameliorate can be accepted as another important element for designing the framework and development of LIS MOOC courses<sup>22</sup>. The regional and national level library association should march forward for the enactment of library legislation in the respective state. These legislations shall highlight the significance of LIS MOOC education for professionals and young students to grasp the latest ideas and concepts for their self-development

### 6.3 Marketing

Marketing is being considered as one of the significant elements in contemporary time for its successful implementation of MOOC in LIS in this region. Marketing provides a new and innovative way for creating awareness and brainstorming the mind of intellectuals. Marketing not only helps in spreading awareness about the content of the courses but also serve as the medium to connect the communities and team who design and implement the MOOC courses.

### 6.4 Reputation

MOOC will provide the platform wherein the continuous improvement in terms of knowledge and skill of self-development of professionals and students are predicated<sup>23</sup>. MOOC in LIS shall remove the ideological mindset of elder professionals in terms of inferiority complex where everyone can seek knowledge despite different age groups. As the concept of MOOCs is believed to be a process in which equality and accessibility will be the thought content.

A detailed discussion of the comprehensive model on MOOC (LIS) has been highlighted as per the review of the existing content of works of literature. The authors do not claim to be an ideal model for its true implementation but it is just a suggestive model to be considered as an asset for the MOOC course designer of this region<sup>24</sup>. It is believed to be somewhere or other points to be valuable.

MOOCs possess a great potential for their proper implementation in North-East India especially in the field

of LIS education. The Universities of this region can come up with creative ideas and add more new dimensions in the design and development of the framework of MOOC courses in the region. The professionals and students of the region are believed to be highly beneficial if the MOOC courses in LIS are successfully implemented. The professionals can remain upgraded with the latest development in the respective area of interest whereas students or rather the young professionals to be benefited by abstracting the trending pattern of the mode of education<sup>25</sup>. The Government of India on its part has come up with some adventurous projects like SWAYAM to study and understand the pros and cons of implementing any MOOC courses<sup>26</sup>. It is believed that the government will design and contribute immensely to the growth of knowledge and wisdom from every walks of life wherein three important points to be kept in consideration i.e. equality, accessibility and quality<sup>27</sup>.

As North-East India is geographically located in a different dimension as compared to the rest of India, it has come across several hurdles and obstacles in its day-to-day walks of life. It is not only the geographical location that serves as a barrier for communication but also few other factors which are complementary to these factors. The region lacks proper infrastructural facilities wherein the implementation of creative concepts and ideas fails to turn into reality as like the design and implementation of MOOC courses for the local inhabitant. The others which complement the barriers are the lack of knowledge of the designers who designed laws and policies of the state. The environment also serves as an important factor for the improvement and development of society. The environment of the region also lacks technological backdrops where the full implementation of MOOCs is impossible. Despite the several hindrances in the region, each state has also tried to accept, adopt and implement the latest technology for its development, particularly the educational sector<sup>27</sup>. It is a ray of hope that the region will gradually grow up with the appealing status by moving in with the trending pattern of education where the whole world is adopting and practicing in reality.

Based on the existing research article elaborated and enumerated by the various academicians and research, it can evaluate some of the aspects of which the reality check can be made. Zheng and Yang<sup>21</sup> in their article have articulated that the MOOC in Library and Information Science and computer science has a very little focus of attention and mostly the highly cited article tends to focus and concentrate on pedagogy<sup>21</sup>. Richter, Bozkurt, Alturki, and Aldraiweesh have highlighted clearly that the reviewed article mainly gives priority to four areas of research. They include the potential and challenges of MOOCs for universities, MOOC platforms, learners and content in MOOCs, and the quality of MOOCs and instructional design issues<sup>17</sup>. Hussein<sup>12</sup> in his study on the subjective norm and perceived enjoyment among students in Malaysian universities for MOOCs has found out that the two factors influence student learning. The result reviles that that MOOC can be more attractive to the learner if it has enjoyment facilities along with learning. Another factor included in the social influence which can be considered as the more influential factor than the other one<sup>12</sup>.

Nisha and Senthil<sup>26</sup> in their paper have concluded that

MOOC as a new mechanism would enact a social dimension. Similarly, Gul et al.<sup>27</sup> in their research work identify the pros and cons of MOOC in India. It is a matter of fact that MOOC in reality has gained success in its momentum. It has several backdrop areas to which it needs to pay more attention in detail. The passage of time and its experience in the implementation shall give much information to deal with the matter. It will also enhance the skill of the professionals who are closely associated with the design and development of MOOC courses. The concept of MOOC will not be metaphorically but it will show its color with the time to come.

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In this paper, he contributed in terms of reviewing the final draft of the paper, checking the plagiarism and validation.

**Annexure I**  
**Literature reviewed**

Author(s) & Year	Conclusion
Aras, Keskin & Waard (2016)	The study intense to identify the more comprehensively about MOOC by analyzing thesis and dissertations having relation to MOOC. The analysis reveals that MOOCs research is up-rooted from the combination of education, engineering, computer science, and information and communication technology-related subject <sup>3</sup> .
Atiaja & Guerrero-proenza (2016)	The paper tends to understand the evolution of the learning process (e-learning) that has revolutionized the entire higher learning education, and it is still a myth for many <sup>1</sup> .
Bell (2011)	The paper explores certain plans and actions in technologies that enable learning theories. The concept of Connectivism is applied in teaching and learning as of the presence of Massive Open online courses (MOOCs) <sup>4</sup> .
Bu & Kong (2016)	The paper describes the basic concepts of flipped classroom approaches in teaching and learning methods. In addition, the paper tends to present an overview of K-12 education in flipped classroom environment <sup>5</sup> .
Chauhan (2017)	The paper has displayed the Para diagram of enrollment of students in Massive Open Online courses which hold its position next to the US. India has started implementing and offering MOOCs platforms such as NPTEL, mooKIT, IITBX, and SWAYAM <sup>6</sup> .
Chen,Ibekwe-SanJuan & Hou (2010).	The paper introduces a multiple-perspective co-citation analysis method to identify the characterizing and interpreting the structure and dynamics of co-citation clusters <sup>7</sup> .
Das and Khan (2014)	The paper highlights the massive growth of Massive Open online courses in India. The MOOC provides a greater platform for the open universities to promote their teaching and courses by using three main components i.e. open courseware, open access, and open education resources <sup>8</sup> .
Das (2014)	The paper highlights the new breed of learning process where cutting-edge technology has ruled the virtual learning environment. It also discusses the learning content, learning tools, various subsystems, and many other aspects <sup>9</sup> .
Fournier, Kop & Durand (2014).	The paper explores a report of an exploratory case study of PLENK, a connective-style MOOC where some challenges of the research and analysis process are discussed. The study presents some important findings related to activity levels learning and self-directed learning.
Grabowsky & Weisbrod (2020)	The paper tends to assess the effectiveness of library instruction for expanding information knowledge and skills of literacy among professional and graduate students. The study identifies the literature which was published between 2000 and 2019 in English where measurement is meant concerning the changes in information literacy skills and knowledge <sup>12</sup> .
Hoy (2014)	The article gives an overview of MOOC, its working pattern, and some of the advantages and disadvantages features of MOOC. It also discusses the meaning of MOOCs for medical students and their libraries <sup>13</sup> .
Lechner (2005)	The study mainly focuses upon the flexibility of library instruction delivery on interactive electronic tutorials. It makes a comparative analysis of the cumulative Index to Nursing and Allied literature database and introductory health science tutorials <sup>14</sup> .
Mahajani, Gupta & Singh (2019)	The article describes the concept of MOOCs and its implementation and application in the field of education, particularly medical education. The study also discusses the usefulness of developing MOOCs in India <sup>2</sup> .
Maranda, Harding, & Kinderman (2016)	The study discusses the long-term impact of literacy among medical students. The result depicts that the students have rated high in their abilities and on the other hand, they had very low grades in knowledge score context <sup>15</sup> .
Nagasampige, Subbaiah, & Nagasampige (2015)	The study is a qualitative study in nature where the author has used several students of higher education in Indian Universities as a sample and an interview method was employed to collect relevant information about the growth and development of MOOC in the Indian context <sup>16</sup> .
Pathak & Das (2015)	The paper explores specifically North-East India where the profession of librarianship was brought to the limelight and its comparative analysis with the rest of India and the world as a whole is taken into consideration. It is an attempt to understand the type and quality of the education system imparting in the field of LIS in North- East India <sup>17</sup> .

**Annexure I**  
**Literature reviewed**

Author(s) & Year	Conclusion
Richter, Bozkurt, Alturki & Aldraiwees (2018)	The article tends to identify and recognize the body of literature growing in the field of Massive Open Online Courses from 2008 to 2015. The results reveal that MOOC articles focus on the four areas of research i.e. the potential of MOOC, MOOC platforms, contents in MOOCs, and measuring the quality of MOOC and its different dimensions <sup>18</sup> .
Ryan, & Deci (2000)	The study has highlighted self-determination theory where the individual focuses on social-contextual conditions which enhance the natural process of self-motivation and healthy psychological atmosphere <sup>19</sup> .
Schilling, Wiecha, Polineni & Khalil (2006)	The study explores about the increasing use of e-learning technologies by medical students in medical education. The result of the study suggests that the online curriculum for the study was effective and the outcome of experimental students was efficient in a variety of activities assigned during experiment <sup>20</sup> .
Zawacki-Richter & Naidu (2016)	The article highlights the mapping trends of distance education journals in 35 years of publications in distance education research and scholarship. The study has analyzed 515 full papers by using the text mining tool i.e. Leximancer to dictate and recognize the distance education research covered from 1980- 2014 in journals <sup>21</sup> .
Zheng, & Yang (2017)	The study adopts a visual knowledge network and bibliometric analysis method to explore in-depth aspects such as development status, developing trends, followed by trending subjects of educational study of MOOCs. The article has provided relative information about the trending subject of study on MOOC courses where the highly cited articles mainly focus on pedagogy <sup>22</sup> .
UGC Report (2018-19)	The report of UGC has enhanced the study by providing the relevant data about the list of universities in India specifically to the North-East India <sup>10</sup> .