Exploring the Opportunities of MOOC: A model Plan for the Library

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Declaration

I certify that this thesis entitled "**Exploring the opportunities of MOOC: A model plan for the library**" is entirely my own work and has not been taken from the work of others save. I belief, it contains such materials which are not ever published and written by any other person.

Exam Roll: 2515

Dated: December 27, 2014

Dedicated to

My parents

Acknowledgement

Foremost, I would like to express my sincere gratitude to my supervisor for the continuous support of my thesis study and research, for his patience, motivation, enthusiasm, and immense knowledge. His guidance helped me in all the time of research and writing of this thesis. I could not have imagined having a better advisor and mentor for my thesis study.

Besides my advisor, I would like to thank the rest of my teacher of the department. I pay my gratitude to them.

Last but not the least, I would like to thank my family: my parents for giving birth to me at the first place and supporting me spiritually throughout my life.

Abstract

Purpose –The purpose of this research is to examine the current opportunities of massive open online courses (MOOCs) and the library's involvement in this worldwide movement. It made a relation between MOOC content with the library service

Design/methodology/approach–Online homepage survey has been used as research approach. Online questionnaire has been used as data collection instruments for this study.

Findings– The study finds that MOOCs may offer the opportunities for the Universities to accept the democratization of learning for all who wish to engage. Librarians have to play a vital role to make MOOC as a library service.

Originality/value– The value in addressing this issue is to suggest the benefits that the library can bring to this burgeoning form of online learning.

Keywords: Libraries, Online, Massive open online courses, Supplementary, Instruction, Learning, Internet, hyperlink library

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List of Acronyms

Acronyms	Elaborations
ALA	: American Library Association
ADEC	: American Distance Education consortium
ALISE	: Association for library and information science education
CMS	: course Management System
DVD	: Digital versatile disc
EL	: E-learning
ICT	: Information and Communication Technology
IT	: Information Technology
IFLA	: Information Federation of Library Association and Institution
KM	: Knowledge Management
KS	: Knowledge Sharing
LA	: Library Association
LIS	: Library and Information Science
MLS	: Masters of Library Science
MRQ	: Major Research Question
SRQ	: Subsidiary Research Question
WISE	: Web-based Information Science Education
WWW	: World Wide Web

Chapter -1

Introduction

1.1 Prelude

Once physical existence of knowledge and knowledge storage medium were being gathered in the library. But now physical existence of knowledge is not necessary. Similarly, knowledge giving institutions are giving knowledge in virtual environment. This is not necessary to be present in the university. Student can learn knowledge sitting their home and acquire degree. This type of virtual knowledge must need a easy way to manage.

As librarians know, the face of education is changing rapidly – and the nature of continuing education is no exception. Technological developments in the delivery of virtual learning combined with the pervasiveness of Internet connectivity have created a perfect storm for changing how we learn. But despite the seemingly infinite potential for online learning, librarians seeking professional development opportunities are faced with the ever-present challenge of how to maintain and enhance their professional skills while balancing work demands and limited funds.

A very interesting project is the University Of The People, a Tuition-Free Online University sponsored by the United Nations that tries to create an environment as closed as possible to a real world. The learning community is divided in small groups of 20 to 30 students participating in online courses. Each study group (or class) has a course instructor who monitors course forums to ensure that student's questions are being properly answered. This seems quite similar to CoeTAIL and the chances to finish the course are bigger when learning in small groups than on a big MOOC course. Students and faculty also have access to the University of the People Library and Resource Center (ULRC). This virtual library provides students and faculty access to various collections of quality academic resources and services to support the

University's academic programs and even offers online assistance by librarians. This is the idea of "library without walls" with librarians working in different universities participating in a common project. Librarian of this information age has many responsibilities. They have to work more effectively and efficiently than an ancient librarian.

1.2 Background

Will MOOCs create "a tool for democratizing higher education" (Lewin, 2012) much like the public library achieved in the nineteenth century where "every citizen had access intended to empower the populace through educational opportunity and socialize a fast-growing and diverse population by providing membership in a common culture" (Fister, 2012)? If such a description is accurate, and democratization of college courses is deemed a worthy and achievable goal, are libraries and librarians under consideration by MOOC developers to serve in the same role they do in the traditional college environment? Are selected and trusted resources going to be provided through libraries and made available to students engaged in the course to help them successfully navigate their way through?

A recent library blog post indicated that, while a textbook is often assigned to a MOOC, at present, "Even in a class with multiple writing assignments, such as 'A History of the World since 1300', students aren't asked to seek, read, or reference evidence to support their theses" (Barlow, 2012). As the current model enrolls thousands of students, but is available through one of the MOOC providers (Coursera, Udacity, Edx, others) and not directly through one of the colleges or universities associated with that provider, who would be assigned to provide reference, research and supplementary library instruction to tens of thousands of students enrolled in the MOOC?

In the example of Coursera, any one of more than 30 partner institutions could provide such library service, but it is more than likely that a consortium of libraries would have to be organized within that group of institutions to serve in such a role. While there has been lament echoed in some quarters that librarians were not involved earlier in the development of

MOOCs, such remorse need not turn to disappointment. There are numerous feasible strategies and strengths librarians can employ to serve a vital function in this evolving learning environment. After all, it was only several years ago that the concept of "the flipped classroom" was welcomed as a groundbreaking learning model. In this exemplar, much of the study, research and writing in a course would occur outside the classroom and the classroom itself would be used as a forum to discuss and argue theories, engage in interactive engagement between individuals and learning teams. As a result, librarians were called upon to expand their libraries' resources and accessibility online in conjunction with its on-ground offerings. Over time, through the distance, flipped and blended learning models, librarians responded by offering online chat services, blogs, email reference, accessibility through numerous forms of social media interactivity. Supplementary reference support tools such as LibGuides provided students with a single page of reference and research materials developed cooperatively by librarians and college faculty to support such a model. There is no reason to believe such offerings would not continue should MOOCs catch fire across the spectrum of higher education. Summary Once embraced by colleges in its current form or one that

1.3 Statement of the problem

MOOC is a popular term for the developed countries but not for the poor and developing countries. Though the velocity of digitalization is rising day by day in our country maximum people do not know about massive open online course. They know nothing about its utilization and benefit. It can be used both academic and personal purpose. Here in this paper I have discussed about some of the problem. Those problems are-

First problem: Find out the opportunities of MOOC for developing countries. In developing countries this is a rare topic for the student. Is it possible to show its potentialities for the student of developing countries?

Second problem: Since MOOC is a service, provided for the student, is it somehow related to the library service.

Third problem: Can library enrich its service by using MOOC content.

1.4 Objectives of the study

This study has some objectives which are related to the library and its user. This study is totally related to the dissemination of knowledge as the library do.

The aim of the study is:

- To build a unique model for utilizing all the content of MOOC for the library.

The more specific objectives of the study are:

- To explore the opportunities of MOOC that could be used for the library.
- To find out the suitable contents of MOOC and use those content for enriching library service.
- To show how to use MOOC as a hyperlink virtual library.
- To offer some suitable recommendation and specific plan for the overall development of library service using MOOC.

1.5 Research Questions

A research question is a question which guides the project, and which the research is designed to answer. Research question organize the project. It also give its direction and coherence; delimit the project; provide a framework for writing up the project; and point to the data that will be needed (punch, 1998, p.38). Miles and Huberman (1994, p.55) point out that developing research question is a valuable defense against the confusion and overload that is possible in the early stages of research.

This study has one major research question and three subsidiary research questions (SRQs):

Major Research Question (MRQ)

How to build a model for library utilizing MOOC?

Subsidiary Research Questions

SRQ1: What are likely to be the potentialities of MOOC that could be used for the library?

SRQ2: What are likely to be the suitable contents of MOOC and use those contents for enriching library services?

SRQ3: Are libraries ready to take MOOC as a library service?

1.6 Significance and originality of the study

The movement toward MOOCs is quickly amplifying and intensifying, as more and more "actors" have been announcing their entrance during the last five years, as captured (Hill, 2012a). Now MOOC has become a popular term of education. Traditional libraries are turning into virtual library. Now-a-days people do not want to go to the university and library physically. They are taking virtual accessories. That's way MOOC is gaining its importance in every sector of learning and educating. a recent library blog post indicated that, while a textbook is often assigned to a MOOC, at present, "Even in a class with multiple writing assignments, such as 'A History of the World since 1300', students aren't asked to seek, read, or reference evidence to support their theses" (Barlow, 2012).

Librarians have an opportunity to extend their influence beyond their established roles as reference and research experts to an essential one as "educational collaborators" (Dill, 2012) where librarians and others become an essential partner in the conversation. Overall, colleges must ask, "What sort of investments in educational professionals, such as learning designers, librarians, media specialists and technologists, are necessary to provide resources for faculty in the creation of high quality blended and online programs" (Kim, 2013). "This is a chance for librarians to present themselves as public thinkers, public learners, public instructors, and

public knowledge makers. This is an opportunity to fully participate in the total learning process-or at least a greater share of it" (Mathews, 2012).

This thesis is an attempt, to explore a global scenario of MOOC providing institution and analysis their content. In this paper we tried to find out the benefit of the MOOC and its content which is good for the library service. There are different types of MOOC in the world. Some of them are business based and some are educative. We analyze all those content in this criteria. Some of them contain library related content. But maximum people do not know what are they giving and giving for what. They do not know how easily they can manage those content

Our library can improve its facility by using the MOOC content. In this digital world every library must need well and rich services. A rich collection of electronic material must be needed in the library. MOOC can enrich library service.

1.7 Research design and methodology

Methodology is the systematic, theoretical analysis of the methods applied to a field of study.it comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge. Research methodology is defined by the process or step how to collect data and how to analyze. Generally two types of data are required in a research work, qualitative and quantitative data.

The strategy applied in this research is a case study and an inductive approach to reasoning. We select the MOOC providers as a case for analyzing its content to find out its potentialities.

A case study is a research method involving a detailed investigation of a single individual or a single organized group. According to J. Creswell "data collection in a case study occurs over a sustainable period of time". In case studies , a particular individual, program or event is

studied in depth for a defined period of time, usually relying on a variety of sources of data, including a observation, interviews and reviews of existing document (Leedy & Ormrod, 2005) . The case study method enables a researcher to closely examine the data within a specific context (zainal,2007) . On the other hand, Yin (1984) presented three conditions for the design of case study. Neuman (2003, p.172, p66,) asserted that inductive research begins with empirical data and theory develops from the ground up as the researcher gather and analyze data.

We followed an exploratory case study and an inductive approach as research strategy. We used the mixed method approach to design the research. We also combine qualitative and quantitative data.

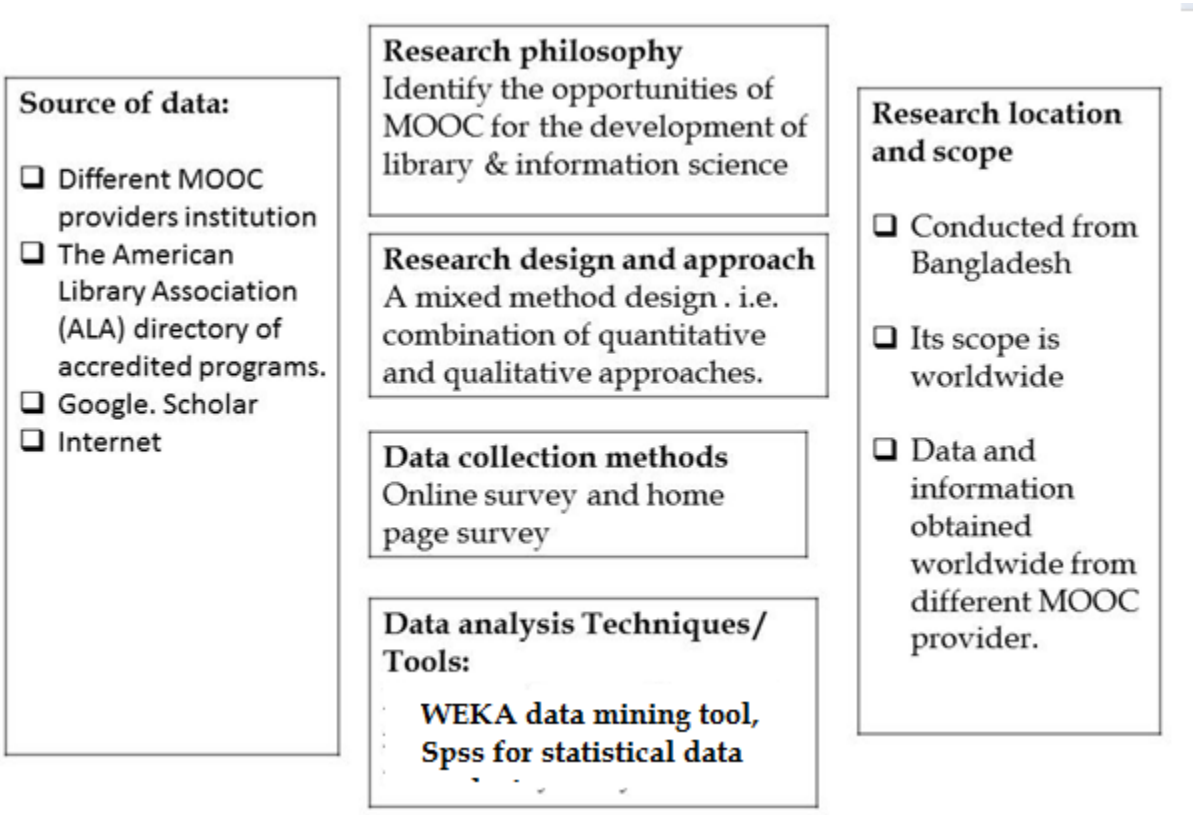

Figure: 1.1 : The research methodology employed in this research

1.7.1 Online home page survey of MOOC

For this purpose we conducted an online homepage survey. We had selected some of the MOOC provider through all over the world and collected both quantitative and qualitative data for analysis. We explore only those homepages whose provide easy access and only in English language. We used content analysis method for this purpose.

1.8 Definition of the terminology used in the thesis

1.8.1 Massive Open Online Course (MOOC):

Open online courses, sometimes called "massive" (MOOCs) due to their high enrolment numbers (McAuley et al. 2010), offer a middle ground for teaching and learning between the highly organized and structured classroom environment and the chaotic open web of fragmented information. In a traditional classroom or online course, learning designers and educators structure the readings, learning resources, lectures and activities of learners. As a result, learning is directed toward clearly articulated goals and outcomes. The educator provides shape and direction to the learning experience by forming groups and providing assessments, assignment focuses or guidelines.

1.8.2 Coursera

a for-profit "social entrepreneurship company that partners with the top universities in the world" (Coursera Website). It was established by two Stanford professors and has contracts with 33 universities, eight of them from outside the US (including the Ecole Polytechnique Fédérale de Lausanne, the University of Edinburgh and more recently, the University of London International Programmes).

According to the website, more than two million students participate in Coursera Websites. It has been frequently remarked that the quality of courses offered is very diverse. Apparently, Coursera, but also its partner universities, leave it entirely to the individual academics to decide how they want to teach. Website: https://www.coursera.org

1.8.3 edX

Not for-profit venture established and governed by Harvard and MIT. Currently it offers HarvardX, MITx and BerkeleyX classes. University of Texas System and Wellesley (a selective women's liberal arts college) are going to join, and apparently, more than 200 institutions have confirmed interest. Harvard and MIT announced that they are principally interested in taking additional universities into the "University X
Consortium", but strictly based on quality standards. They also announced that data is collected to allow an assessment of the learning success, and confirmed that courses will remain free of charge. Website: https://www.edx.org

1.8.4 Udacity

(www.udacity.com) was started by Stanford Professor Sebastian Thrun with Mike Sokolsky and David Stavens, and then joined by University of Virginia Professor David Evans. It is offering about 20 courses.

1*.8.5 Udemy*

Udemy Is a portal that facilitates online courses, mainly in the area of entrepreneurship, IT, software use, design, arts and sports. It invites learners to develop personal and professional skills in a cost efficient, flexible and more interesting way than traditional study courses. On the provider's side, it allows everybody to offer a MOOC, and the website announces that its courses are offered by the "world's top experts, including New York Times best-selling authors, CEOs, celebrities, and Ivy League professors". It is not clear whether or not these experts are selected, and whether there is any quality assurance – other than users' demand. UDEMY is financed by "Insight Venture Partners, Light bank, MHS Capital, 500 Startups and other investors who previously foresaw the internet giants YouTube, LinkedIn, Twitter, Group on and

Yelp" (company website). But it also charges moderate fees for some of its courses. Website: (http://www.udemy.com/about)

1.8.6 Futurelearn –

Futurelearn was established in late 2012, as the first "nationally" defined initiative and the first one launched outside of North America. According to the website, it "will bring together a range of free, open, online courses from leading UK universities, in the same place and under the same brand." According to the Times Higher (TH), courses are planned to start in the second half of 2013. Initially Futurelearn will be a limited company financed and owned by The Open University, UK. In a first round, in addition to the Open University, another 11 UK universities will participate (8 Russell Group, 2 from 1994 Group, and 1 non-aligned). Website: http://futurelearn.com/

1.8.7 OpenUpEd –

First Pan-European MOOC initiative, with support of the European commission. It includes partners from 11 countries.

1.8.8 iversity –

A company with a diverse interdisciplinary team from Berlin presently offering MOOC production fellowship and collaboration network for academia. (www.iversity.org)

1.8.9 OpenHPI –

OpenHPI is the educational Internet platform of the German Hasso Plattner Institute, Potsdam, focusing on courses in Information and Communications Technology (ICT). (www.openhpi.de)

1.8.10 P2Pu

(https://p2pu.org/en/) was launched in 2009 with funding from the Hewlett Foundation and the Shuttle worth Foundation. P2PU offers some of the features of MOOCs, but is focused on a community centered approach to provide opportunities for

anyone that is willing to teach and learn online. There are over 50 courses available and the process of improving the quality of the courses relies on community-review, feedback and revision. There are no fees or credits, but P2PU's school of Web craft adopted a badge reward system to integrate elements of gamification into the learning process

1.8.11 Khan Academy

(https://www.khanacademy.org/), another well-known free online learning platform, is a not-for-profit educational organization with significant backing from the Bill & Melinda Gates Foundation and Google. The Khan Academy, started by Salman Khan in 2008, offers over 3,600 video lectures in academic subjects with automated exercises and continuous assessment.

1.9 Structure of the thesis

This thesis is organized into six chapters as shown in figure -- . This introductory chapter provides the research background, statement of the problems, research aims and objectives, research questions, research design and methodology, as well as overview of the thesis. The following chapters are structured as follows:

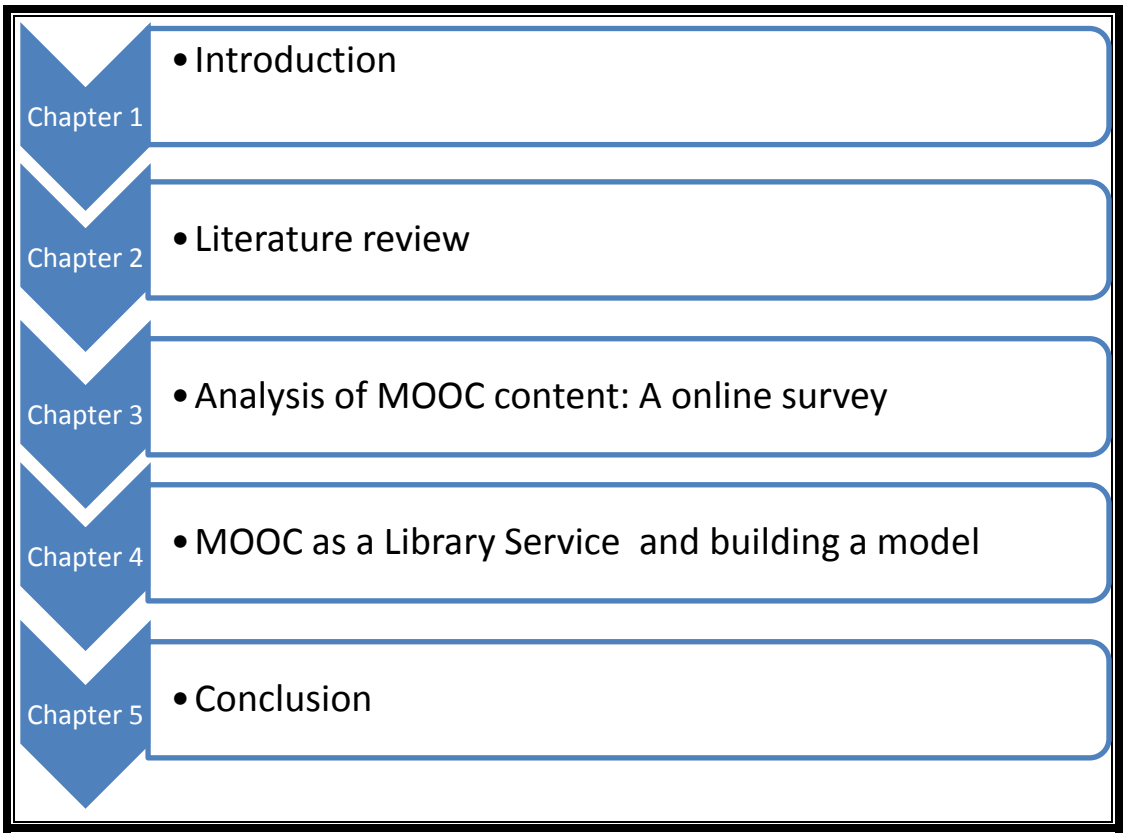

Figure: 1.2 structure of the thesis

Chapter 2 provides an extensive review of the literature covering the following streams: background, MOOC concept theories and technologies, characteristics of MOOC, latest perception regarding MOOC, MOOC content, who takes MOOC, MOOC problem, library service and MOOC and potentialities for library involvement.

Chapter 3 analyzes collected data from different MOOC providers which we selected for online survey. This chapter also carries out a quantitative data analysis. In contains findings with an exploratory data analysis. It shows the opportunities of MOOC in different aspects. How many course and library related courses are being provided by MOOC, this chapter shows.

Chapter 4 analyzes data obtained from questionnaire and online survey. This chapter provides a clear concept of relation between MOOC and library. In the last part of this chapter we build a model plan for the library.

Chapter 5 answers the research questions, presents the practical implications of the study for the LIS professionals and for the students, discuss the limitations of the research , as well as finally directions for future research.

Chapter 2

Literature review

2.1 Introduction

This chapter begins with a brief concept of Massive Open Online Courses (MOOC) and its content. It shows previous work on MOOC and library services. There are many researchers' worked on MOOCs, their types and their potentialities. It also briefly discuss about online library service. It reviews related literature about MOOC contents and library services. At the end this chapter, it reviews the relationship between library Services and MOOC.

2.2 Background

The first known MOOC was offered in 2008 by George Siemens, researcher at Canadian open university Athabasca University, and Stephen Downes, researcher at the National Research Council of Canada, based on their for-credit class simultaneously offered at the University of Manitoba (EDUCAUSE Learning Initiative, 2011). According to the short time span MOOCs have existed outlined in, "Connectivism and Connective Knowledge" (CCK08), by George Siemens and Stephen Downes, Manitoba University in Canada is considered to be the first free global MOOC (Downes, 2011). This latest generation of MOOCs is ideologically different compared to the previous one. In that sense, Siemens (2012) . Siemens and Downes envision MOOCs as an environment for enacting connectivist pedagogy, an approach to teaching focused on building networks between participants based on, but moving rapidly beyond, a foundation of shared content. Downes (2011) writes: "At its heart, connectivism is the thesis that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks. Knowledge, therefore, is not acquired, as though it were a thing. It is not transmitted, as though it were some type of communication." Connectivist MOOCs draw on tools such as social media to foster shared, dialogic, student-controlled exploration. Siemens, Downes, and other early pioneers of connectivist MOOCs such as Dave Cormier and Jim Groom have offered numerous MOOCs on

topics such as learning theory, personal learning environments, and digital storytelling and continue to be active in this space, often in collaboration with each other (Downes, Siemens, Cormier, & Kop, 2010; Groom, n.d.; Parry, 2010).

MOOCs garnered mainstream attention in 2011 through the work of Stanford University research professor and Google fellow Sebastian Thrun and Google Director of Research Peter Norvig, whose MOOC "CS221" on artificial intelligence enrolled more than 160,000 participants (Lewin, 2012; Markoff, 2011). Like Siemens and Downes in 2008, Thrun and Norvig modeled their MOOC on a for-credit class that they taught simultaneously, in this case an on-campus Stanford course (Thrun & Norvig, n.d.). CS221 followed more traditional instructivist pedagogy emphasizing linear content acquisition: participants viewed instructor-generated video tutorials that worked through a predetermined curriculum and, to earn a statement of accomplishment, completed graded homework assignments and scheduled exams (Thrun & Novig; Leckart, 2012). Moving the course online enabled Thrun and Norvig to reach exponentially more students, involve students in decision-making around discussion topics, and encourage students' creation of new learning tools (Leckart). Thrun co-founded the company KnowLabs to run the course, which was offered in partnership with Stanford (Leckart). In January 2012, soon after completing CS221, Thrun announced the launch of a new KnowLabs project, Udacity, a for-profit platform for MOOCs (Leckart)

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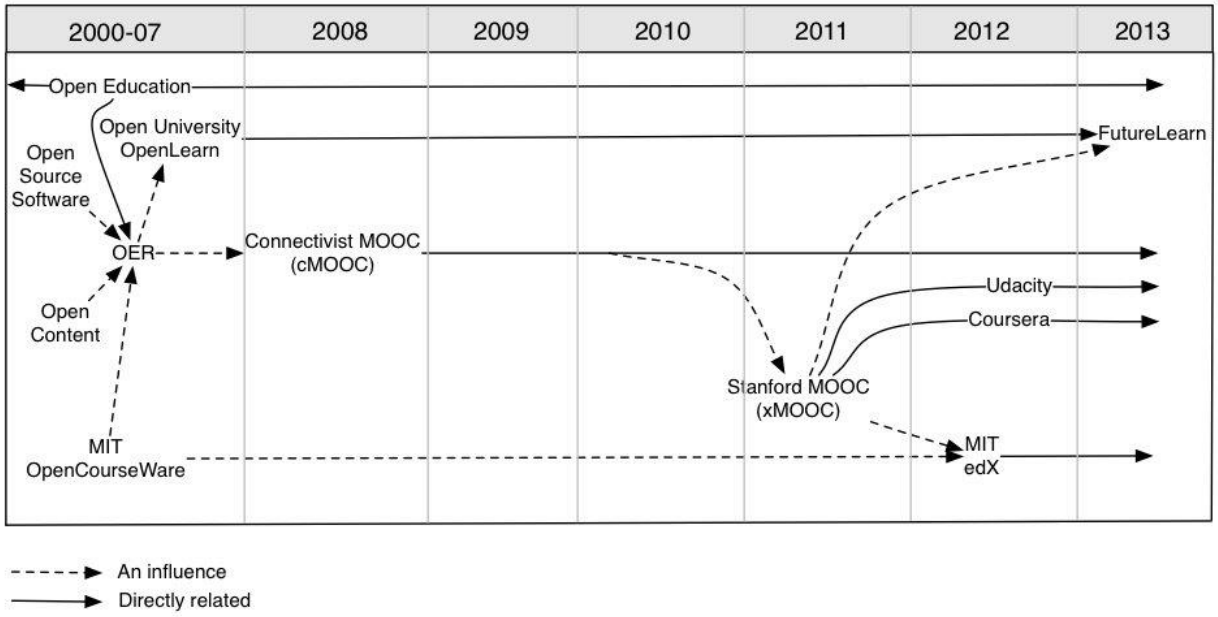

figure 2.1 : emergence of MOOC

(Yuan, Li, and Stephen Powell - Yuan, Li, and Stephen Powell. MOOCs and Open Education: Implications for Higher Education White Paper. University of Bolton: CETIS, 2013)

The MOOC landscape has expanded rapidly. Udacity was immediately joined by Coursera, a second for-profit MOOC platform also announced in January 2012 by Stanford professors Daphne Koller and Andrew Ng (Watters, 2012). Coursera emphasizes its partnership with several major universities, offering classes in collaboration with Princeton, Stanford, University of California Berkeley, University of Michigan, and University of Pennsylvania (Coursera, n.d.-a). Udacity and Coursera have a predecessor to some extent in Udemy, a for-profit venture launched in 2010 that provides free and paid courses unaffiliated with existing universities to “disrupt and democratize the world of education by enabling anyone to teach and learn online” (Udemy, 2012a). Most Udemy courses appear to be completed solo, without the learning community that MOOCs create. Just four months after the launch of Coursera, Harvard University and the Massachusetts Institute of Technology announced edX, their own jointly run, not-for-profit MOOC platform (Harvard, 2012). Khan Academy is a second not-for-

profit venture that seeks to leverage technology to expand access to and improve the quality of education. However, Khan Academy offers videos, exercises, and learning statistics focused around topics rather than courses, in part to enable "flipped classrooms" ("Flipping," 2011; Khan Academy, 2012). Khan Academy inspired Udacity founders Thrun and Norvig (Markoff, 2011) but does not yet offer MOOCs.

Despite the different approach of each major MOOC platform, founders of Udacity, Coursera, and edX all emphasize the goal of expanding access to quality education. EdX founders envision "a global community of learners" (EdX, 2012), while Coursera founders seek "to empower people with education that will improve their lives, the lives of their families, and the communities they live in" (Coursera, n.d.-b). EdX founders also stress opportunities for research and development around teaching and learning, specifically the effective use of technology in online and offline education (EdX, 2012). It does appear that MOOCs offered via the large platforms of Udacity, Coursera, and edX differ significantly in pedagogy from MOOCs run by Siemens, Downes, and their connectivist-oriented colleagues. As Siemens (2012, "Massive") writes, the courses offered by Udacity and similar ventures "are largely instantiations of existing educational practices. Their primary innovation is scaling." Elsewhere, Siemens (2012, "MOOCs") argues that "our MOOCs value ontology first and epistemology second … . The Stanford MOOCs are more traditional as they emphasize knowledge development not ontological development." Furthermore, for-profit platforms Udacity and Coursera maintain copyright over their materials, unlike connectivist MOOCs and edX that draw more heavily upon openly licensed resources and software (Reich, 2012). In short, some MOOCs are more open than others. However, as Salmon (2012) argues, welcoming a diversity of approaches is productive at this early stage. Time will tell which approach is most sustainable and better suited to achieving which goals.

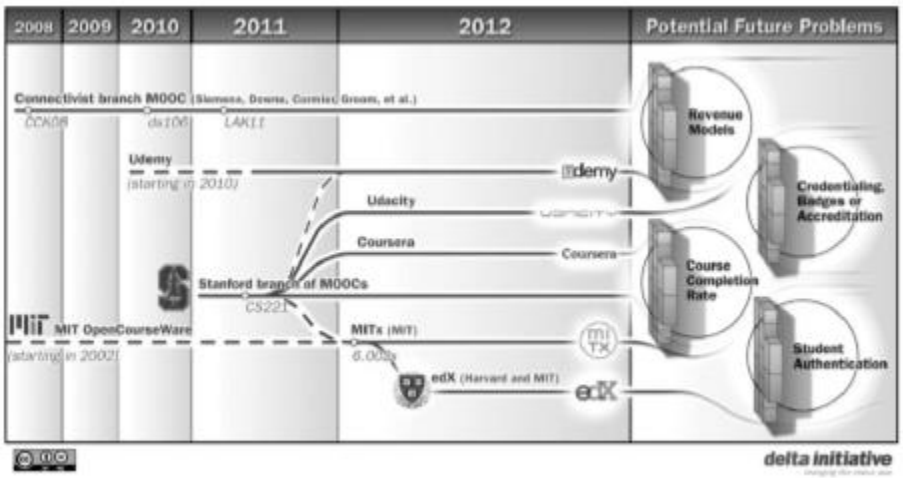

Figure 2.2: History of MOOCs (from Hill 2012).

2.3 MOOC concepts, theories and technologies

MOOC stands for “massive open online courses”and is an online education system which aims at a large-scale interactive participation of users with the help of web. MOOC aims to provide quality education with the help of various features like videos, study materials, quizzes and online exams and trying to make it more efficient than traditional education system. In MOOC, “M” stands for Massive which represents scalability of Communities and connections of users, “O” stands for Open which represents that it is at free of cost to everywhere in the World where internet can be accessed, second “O” stands for On- line which represents that it can provide a real time interactions between users and finally “C” stands for Courses which represents that different kind of courses can be offered by this system. Consider the following for better understanding the term MOOC.

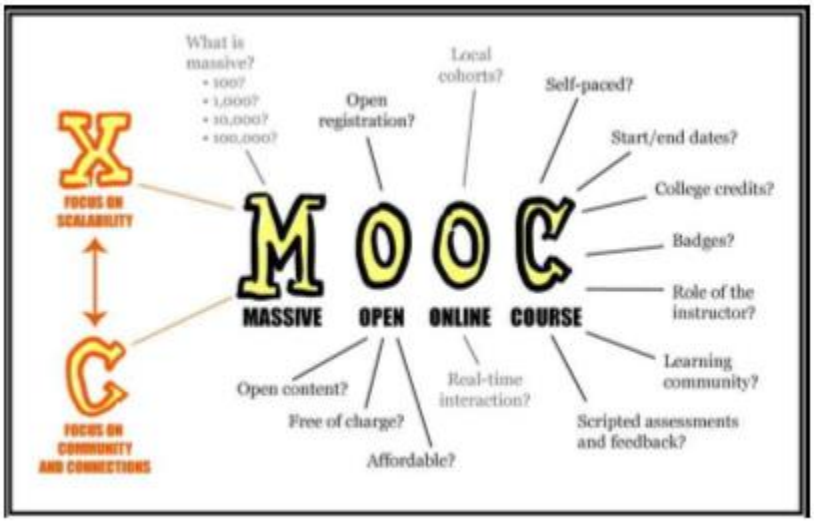

Figure 2.3: Massive Open Online Courses

Being a online web application, the MOOC can offer global network, learning analyt- ics, software development, social media and the main aim of the MOOC is "Community and Connection" and "Scalability" as it is shown[52] in the Figure 1.2 (taken from the website - [56]). At the time of 2002 year, The MIT came up with a application called MI-TOPENCOURSEWARE and at 2006 KHAN ACADEMY came to exist. The first MOOC is CCK08(Connectivism and Connective Knowledge)and it was aims to offer a new theme every week to feed the learners with the help of news-letters, video snippets, debates and discussion forum.

Specifically, MOOCs are:

• **Massive,** involving hundreds and thousands of students. The scale of "massive" is somewhat relative. Early MOOCs had in the range of 2,000 students, but offerings by Coursera and Udacity have exceeded 100,000 registrants. An important benefit of large numbers of students is the opportunity for sub-network formation by participants. For example, in CCK08, students formed sub-networks around language, geographical locations, physical "meet-ups," technology spaces such as Second Life, and different education segments (primary and secondary, higher education, corporate learning). While the concept of massive raises concerns about isolation

and overwhelming student-instructor ratios, at least some students use the size and diversity of networks to personalize their learning through forming sub-networks.

• **Open,** in terms of access. MOOCs, particularly those offered by for-profit firms such as Coursera, are not necessarily openly licensed, but students can access the course content and participate in guest lectures without fees.

• **Online,** exclusively. In some instances, learners arrange physical meet- ups, but most of the learning activity — content and interactions — occurs online.

• **Courses.** MOOCs have a set start and stop time. Even if MOOC archives are made available after the course, social interactions in forums and blogs occur during the set times of the course offering. While there are some areas of overlap and use of open education resources with MOOCs, the content is somewhat structured and sequenced, even when multiple sources of learning content are used.

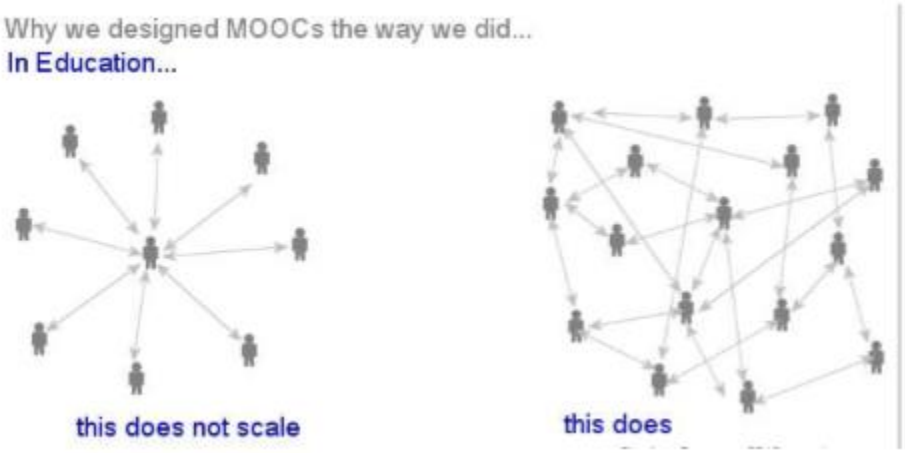

Figure 2.4: Typical representation of Scalability

2.4 MOOC Structure and Features

MOOCs offer students the chance to take courses from celebrated specialist presenters, without any required course prerequisites. They are presented over a set length of time, just as regular classes are, and follow a set syllabus. Students are provided videotaped lectures accompanied by weekly homework problem sets, online resources, online reading lists, practice questions, midterms and finals; however, there are no predefined participation expectations, and students may complete as little or as much of the course as they wish and at their own pace (Martin, 2012).

MOOC course organization differs depending on the presenter and the university offering it. For example, some course presenters may offer virtual office hours for student consultation, along with online discussion forums, while others only offer discussion forums and no direct access to the course presenters. Coursera presenters, for example, use the flipped classroom approach, providing recorded web lectures along with hands-on course activities, since they claim their mission is to "give everyone access to the world-class education" that would "empower people…to improve their lives, the lives of their families and the communities they live in" (Byerly, 2012, para. 7).

Kop, Fournier, and Hill (2011) describes all MOOCs as having four similar types of activity: aggregation, where access is provided to a wide variety of reading, video and web resources in the course; remixing, where after using resources in the course, that content is then reused in another format, in a blog, or in discussion board postings elsewhere; repurposing, where "participants were encouraged to create something of their own" (p.79) and feeding forward, where "participants are encouraged to share their work with other people in the course and with the world at large" (p.79). DeWaard et al. (2011) suggests there are four phenomena common to all MOOCs: internal diversity, internal redundancy, neighbor interactions and decentralized control.

An additional commonality is, how through connects, "knowledge is distributed across a network of connections" so that "learning consists of the" learner‟s "ability to construct and traverse those networks"(Mahraj, 2012, p. 361). When it comes to internal diversity and

redundancy, MOOC students are very diverse when it comes to age, gender and dispersion across the globe. They interact by using a common language (even though not all learners are native English speakers) and are "willing to share ideas" about their common interest in the MOOC. When it comes to neighbor interactions, it was found that in order for the MOOC format to work for global learners (neighbor interactions), these "must interact with one another" and share "ideas, hunches, queries…in the hope that these interactions will trigger other insights" since "knowledge is social in nature and constructed through a process of collaboration, interaction and communication among learners in social settings" (DeWaard et al., 2011, p.104). When it comes to decentralized control, it was found that with most MOOCS, there was a centralized coordinator or facilitator, but in the end, "participants could...put forward discussion topics that were then taken up by others" and "this then happened as a result of decentralized authority and the fact that participants were in control of their own learning" (DeWaard et al., 2011, p. 105).

2.5 Characteristics of MOOCs

A MOOC is not the online version of a face-to-face (F2F) class. It is not a collection of "recorded classroom lectures" and lecture notes. It is a "born digital" class, even if it's adapted from an existing F2F class. Video lectures are the core of MOOCs. MOOC providers leverage technologies to create a rich learning environment by incorporating at least one and often most of the following elements: professor speaking directly to the camera while accompanied by PowerPoint slides, notes, or animated illustrations on digital whiteboards; in-video quizzes; additional video clips that are not part of the professor talk; and video interviews of guest speakers.

Video quality and design vary greatly from institution to institution. Due to the shorter attention span of a typical online user (Weatherhead, 2012), most videos are no more than 20 minutes long. The Udacity videos are especially impressive, not only for their consistent and polished look, but also their user-friendliness. Udacity videos are finely segmented into bite-size chunks (e.g. a few minutes per segment) for easy

viewing. The transition between segments is seamless; if you stop watching anywhere in a video, you can "resume" the class from that exact spot, regardless of the device you use the next time.

In addition to video lectures, MOOCs strive to compensate for the lack of synchronous interaction by maximizing the usage of the asynchronous discussion forums (e.g. forum participation is required in some courses); encouraging the forming of virtual study groups based on language, geography, or interest; and even providing links to location-based "meet ups", where students can socialize or study together in real life. Some professors offer "online office hours" using either the MOOC platform or third-party tools like Google Hangout to answer questions voted up in the discussion forums, sent in via Twitter, or raised by students that participate in the real-time video chat. Computer-graded quizzes are the main assessment method, while peer reviews, where students anonymously grade the randomly chosen written works by several other students, also seem to be quite popular.

MOOCs, so far, can be characterized as follows:

- they are online courses
- with no formal entry requirement
- no participation limit
- are free of charge
- and do not earn credits. (Michael Gaebel, January, 2013)

2.6 Latest Perceptions regarding MOOCs

Only a very small segment of higher education institutions are now experimenting with MOOCs with a somewhat larger number in the planning stages. Most institutions remain undecided.

1. Only 2.6 percent of higher education institutions currently have a MOOC, another 9.4 percent report MOOCs are in the planning stages.

2. The majority of institutions (55.4%) report they are still undecided about MOOCs, while under one-third (32.7%) say they have no plans for a MOOC.
3. Academic leaders remain unconvinced that MOOCs represent a sustainable method for offering online courses, but do believe they provide an important means for institutions to learn about online pedagogy.
4. Academic leaders are not concerned about MOOC instruction being accepted in the workplace, but do have concerns that credentials for MOOC completion will cause confusion about higher education degrees.

Elaine Allen, Ph.D.(2013)

2.7 MOOC content

Online learning offers flexibility of access to course materials from anywhere at any time (Allen and Seaman, 2005; Means, *et al.*, 2010) which is not possible in a solely face–to–face environment. Face–to–face courses also become largely impractical when class sizes exceed available physical room capacities. There are few face–to–face courses that do not include the flexibility of online access to lecture materials and recordings. It has also been shown that if lecture videos and material are provided to students, attendance at the actual lectures declines (Traphagan, *et al.*, 2010). One reason for this is that the students see there being an equivalence between the recorded and live experiences.

Several meta–analyses found no significant differences in student achievement when university students accessed content via online means or through face–to–face (Bernard, *et al.*, 2004; Cavanaugh, *et al.*, 2004). Cavanaugh and colleagues determined that achievement in distance education for high school students is comparable to traditional instruction and concluded that educators should not anticipate any significant differences in performance as a result of online learning. These finding were supported by comparative studies that also found no difference in academic achievement (Barker and Wendel, 2001; Kozma, *et al.*, 2000; Summers, *et al.*, 2005).

Lapsley, *et al.* (2008) found that online learning pedagogy may even be superior in the overall effect on student performance. Indeed, this is supported by a meta–analysis conducted by Shachar and Neumann (2003) who found that distance education actually surpasses the more traditional teaching format

Online learning is not without its disadvantages, however. Some researchers argue that interaction and timely feedback, are quite often absent in online instruction (El–Tigi and Branch, 1997; Olson and Wisher, 2002). It has also been widely recognized that online courses experience much higher attrition rates than classroom based courses (El–Tigi and Branch, 1997; Olson and Wisher, 2002; Merisotis and Phipps, 1999). In addition, specialised skills are required to work with the technology often resulting in sound and video production that is less than broadcast quality (Kerka, 1996). Students must also display greater learner initiative as there is less supervision than in a classroom environment and there is also the potential for online students to experience social isolation (Kerka, 1996).

Despite these criticisms, the majority of literature does support the notion that online learning is as effective, if not more so, than traditional classroom teachings (Gagné, 1985; Joy and Garcia, 2000; McDonald, 2002; McKissack, 1997; Russell, 1999; Wegner, *et al.*, 1999). With class sizes increasing as universities try to rationalise the number of courses offered, online delivery is the only way of maintaining learning outcome quality with the available resources of space and teaching staff (Means, *et al.*, 2010).

2.8 Who takes MOOC

From the paper “MOOC the phenomenon” G Christensen, A Steinmetz, B Alcorn, A Bennett, D Woods, EJ Emanuel he showed that

83.0% of students have a post-secondary degree (2 or 4 years), 79.4% of students have a Bachelor’s degree or higher and 44.2% report education beyond a Bachelor’s degree. In BRICS countries, where according to the Barro and Lee educational attainment dataset,

updated in 2010, 5.1% of the population over 25 years old has a tertiary degree while 79.4% of MOOC students from the same countries have a tertiary degree.

In addition to being highly educated, the Coursera student population tends to be young, male, and employed, with a majority from developed countries . Over 40% of MOOC students are under 30 years of age, with less than 10% over 60. Significantly more males(56.9%) than females take MOOC courses ($p<0.001$). More than half (62.4%) report being employed full-time or self-employed, while only 13.4% report being unemployed or retired.

		Total (34,779 respondents)	US (11,933 respondents)	Non-US OECD (10,784 respondents)	BRICS (5,151 respondents)	Other developing countries (6,911 respondents)
Gender	Male	56.9%	48.1%	58.4%	67.9%	61.5%
	Female	41.3%	49.4%	39.9%	31.1%	37.3%
Age	Under 30	41.1%	23.5%	37.1%	63.4%	58.8%
	Over 30	58.9%	76.5%	62.9%	36.6%	41.2%
Employment	Student	17.4%	9.8%	16.4%	28.2%	23.9%
	Part-time employed	6.9%	7.2%	7.5%	5.3%	6.6%
	Full-time employed	50.0%	51.1%	48.9%	49.4%	50.0%
	Self-employed	12.4%	11.2%	14.2%	11.8%	12.0%
	Unemployed	6.6%	6.6%	8.2%	4.1%	5.8%
	Retired	6.8%	14.0%	4.8%	1.2%	1.7%

Copy of July 2013 University of Pennsylvania Survey

Table 2.1 : MOOC participants

2.9 MOOC Problems

MOOCs are not an educational panacea. One major problem is MOOC professors often grade papers using digital auto-graders, meaning that all assignments submitted in these classes would have to be multiple choice. This means students never have the opportunity to

write lengthy papers on topics discussed in their MOOC. Students also cannot build relationships with the professors or get in-depth feedback about their educational progress. Mahraj (2012) also emphasizes this problem by stating "many MOOC‟s replicate lecture-based "sage on the stage" instruction and lack effective instructional design"(p.363); suggesting the loss of face to face interaction that is necessary for most lecture type classes to be successful; and the need for more MOOCs to follow instructional design best practices so that they would "enable dialogue, creativity, collaboration, mastery and problem-solving on a global scale" (p. 363) between participants and instructors. MOOCs often provide student message board access during their classes, but since message board participation is not mandated in MOOCs, students who do not participate in message board activities may not have the opportunity to interact with their peers about any of the course content. This is particularly problematic because peer-interaction in the online classroom setting is vitally important to student learning.

2.10 Library Services and MOOC

Librarian participation in MOOCs is a strategic next step from our involvement in content-oriented initiatives around open access and open educational resources. Instruction-oriented initiatives such as MOOCs can benefit greatly from increasing availability of open content but also need the support of information professionals who can help course designers and participants organize and manage information, clarify and support information needs, and enhance information literacy skills. As Cormier and Siemens (2010) argue, "the actions of institutions like MIT [to create MIT OpenCourseWare, an open educational resource repository] suggest that the true benefit of the academy is the interaction, the access to the debate, to the negotiation of knowledge—not to the stale cataloging of content" (p. 82). Librarians must make the transition from open content to open instruction to participate more fully in shaping the future of higher education and helping online educators provide a valuable experience to students. The most straightforward way for librarians to engage in MOOCs is to start a MOOC

MOOCs are an excellent opportunity to expand education in information literacy, "a set of abilities requiring individuals to 'recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information'" (ACRL, 2000, p. 2).

Librarians can expand this work into a full-blown MOOC by implementing a lengthier curriculum enriched by social media and problem-solving exercises, perhaps aligned to a pre-existing set of standards for information literacy.

There is a table shows characteristics of MOOCs and their benefits

Table 1: Characteristics of MOOCs and their related pedagogical benefits.

MOOC characteristic	**Pedagogical benefits**
Online mode of delivery	Efficacy of online learning
Online quizzes and assessments	Retrieval learning
Short videos and quizzes	Mastery learning
Peer and self–assessment	Enhanced learning through this assessment
Short videos	Enhanced attention and focus
Online forums	Peer assistance, out–of–band learning

David George Glance (2011)

Table : 2.6 : benefits of MOOC

Recent interviews indicate that teachers praise MOOCs for their ability to distribute lectures to very large audiences, while students enjoy the flexibility, free tuition, and access to elite university faculty (Ripley, 2012). Companies hosting MOOCs are also responding to this sudden demand by expanding their course offerings. For example, Coursera cofounder Daphne Koller recently stated that within five years, Coursera will expand from around 200 courses to 3,000. This is roughly the same number of courses offered in the academic catalogs of large research universities (Koller, 2012). Given their apparent early success, MOOCs are likely to be part of the higher-education landscape for years to come. Therefore, academic librarians need to be aware of how these developments may impact their responsibilities and role within a university.

librarians are involved in MOOC-related copyright issues including the "[u]se of copyrighted works in instructional materials such as online lectures or modules (the equivalent of traditional classroom teaching); assignment of copyrighted works for outside reading (the equivalent of assigned texts and course reserves)…." (Butler, 2012, p. 3).

In addition to helping their institutions properly use resources, academic librarians should be involved in teaching and promoting information literacy skills to students taking MOOCs (Mahraj, 2012).

Students in MOOCs must have strong information literacy skills as connectivism, the theory of learning utilized in MOOCs, "…stresses that two important skills that contribute to learning are the ability to seek out current information, and to the ability to filter secondary and extraneous information." (Kop & Hill, 2008 p. 2).

Furthermore, connectivism "…puts the responsibility of information gathering, the validation of sources, and the learning process in the hands of the learning…." (Kop, Fourtier, & Mak, 2012, p. 75). Many students do not have the ability to handle this responsibility without assistance and instruction in information literacy. Academic librarians know from years of interacting and teaching students that most students need instruction in, at the very least, the basics of finding, evaluating and using information. Mahraj (2012)

2.11 Potential Opportunities for Librarian Involvement

Academic librarians should expect to become involved in the MOOCs their institutions offer or are planning to offer. For the most part, librarians can expect to take on roles that are similar to those they have with traditional courses. Two of these roles are handling copyright issues and teaching information literacy (Mahraj, 2012).

According to an Association of Research Libraries *Issue Brief*, librarians are involved in MOOC-related copyright issues including the "[u]se of copyrighted works in instructional materials such as online lectures or modules (the equivalent of traditional classroom teaching); assignment of copyrighted works for outside reading (the equivalent of assigned texts and course reserves)…." (Butler, 2012, p. 3). Academic

librarians are used to assisting their institutions with copyright law and may feel comfortable with their knowledge in this area. However, applying copyright law to MOOCs will most likely be a challenge.

The problem is that copyright law does not address the unique structure and features of MOOCs, so permissible uses of materials in a traditional class might constitute an infringement in a MOOC. The use of copyrighted materials in a MOOC does not fall neatly within the descriptions of fair use exemptions (Butler, 2012). Ergo, there are a number of gray areas, meaning that academic librarians should work closely with their institutions‟ legal counsel to make sure materials are being used in a way that complies with copyright law and are being used appropriately. Butler (2012) reports that the "campus counsel for one library has advised that fair use is not an option in the context of MOOCs." (Butler, 2012, p. 2).

2.12 Summery

The review of literature reveals that some studies in libraries have reported on MOOC. This chapter reviews some literature of past researcher who worked on MOOC. We reviewed a lot of literature on MOOC, its content and relation between MOOC and library.

Chapter -3

Analysis of MOOC content: An online survey

3.1 Introduction

The Main objective of this chapter is to analyze MOOC contents from MOOC provider institutions. Now-a- days, the universities and many profit and non-profit organizations are providing various kinds of courses and video lectures. There are different types of lecture they provide. This chapter shows how we gather data and analyze data.

The following section of this chapter is organized as follows:

3.2 Research Methods

The strategy of research employed in this chapter, was online survey and a case study. We conducted an online survey of MOOC provider institution, homepage globally followed by a case analysis. We analyzed some selected MOOC provider and search their content. All the MOOC providers have search option to search their course. We search their course and content by clicking their home page. We conducted this survey by some categories such as searching by country, by subject, by language, by department, by subcontinent etc. To perform the search this study defined MOOC as a department or a unit. Which offers education on library and information science, library science, information science, knowledge management, knowledge sharing, information management, Archive management, etc.

3.2.1 *Research Sampling*

We selected 25 MOOC providers for our survey. We have done our sampling technique based on their content and courses and different types of degree they provide. We explore their homepage and gathered data. All the home page were in English language. We have searched world-wide MOOC provider. Data were gathered from Wikipedia, Google search engine, ALA (American Library Association) directory of accredited programs, IFLA world guide to library, MOOC list (https://www.mooc-list.com) and from the internet. The course and

contents were categorized according to five broad geographical areas, covering Asia, Europe, America, Africa and Australia. We selected those homepages were written in English and which had easy access to their homepages and courses of study. The geographical distribution of the sample in figure indicates the majority.

3.2.2 *Data collection and Analysis*

Data Analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data. Here data were gathered from the home page of MOOC provider institutions, particularly from the description of different certificated and non-certificated programs. This programs are like as Associates, Bachelor, Masters, diploma, doctoral. We analyzed all data by the help of WEKA data mining tool for clustering courses. A content analysis of the programs was carried out to explore the opportunities of MOOC content. We used a content analysis method, explained by Powell (1997) as a systematic analysis of occurrence words, phrases and concepts.

3.3 Findings of the online homepage survey

3.3.1 Selection of MOOC providers

For this online survey we select some MOOC providers. Here we select the best MOOC providers of the world. They are very famous and known in every world. We kept on eye on them and search their home page. Those MOOC are.

MOOC Provider	**Address**
Alison	www,Alison.com
Apnacourse -	*www.**apnacourse**.com*

Canvas Network	www.cancas.net
Carnegie Mellon University	www.cmu.edu
Class central	www.class-central.com
Coursera	*www.**coursera**.org*
Curricki	www.curriki.org
EdX courses	www.edx.org
FutureLearn	www.futurelearn.com
iTunesU -	*www.apple.com/education/ipad/**itunes-u***
iversity	www.iversity.org
Janux -	www. Janux .ou.edu
Miríada X	www. Miríada X.net
MIT Open CourseWare	www. *ocw.**mit**.edu/*
MOOC.fr -	www. MOOC.fr -
NovoEd -	www.novoed.com

Open2Study	www.Open2Study.com
Open Education Europa,	www.Open Education Europa.eu
Open HPI,	www.openhpi.de
Open Learning courses	www.Openlearning.com
Open Learn	www.openlearn.edu
P2P University	www.p2pu.org
Qualt -	www.qualt.com
SyMynd courses	www.symynd.com
Stanford's Free Online Courses	www.stanford.edu
Udacity courses	www.udacity.com
Udemy	www.udemy.com
University of the People	www. *uo**people**.edu*
Unow	www.unow.fr
WikiEducator content	www.wikieducator.org

Wikiversity	www.en.wikiversity.org
Open Yale courses	www.oyc.yale.edu
Universitat Politècnica de València	www.upvx.es

Table: 3.1 MOOC providers and their web address

3.3.2 Geographical distribution of MOOC providers

The findings of the online survey of MOOC provide a clear picture of the situation of the MOOC countries which are taking part in this online course. The geographical distribution of MOOC taking countries shows that, from 25 MOOC providing institution 17 institutions provide their content to the American country. Most of them provide in North part of America and a few number in South part of America. In Europe among 25 it provides in 13 countries. Asia stands 3rd in this purpose. 3-4 MOOC providers provide their content to the Asian country. They provide a few numbers in Australia and Africa. Although some Australian Universities are providing MOOC on their own university, but they are few in number. We have made a calculation which shows percentage where America contain 42%, Europe contain 29%, Australia contain 13%, Asia contain 12% and Africa contain 4%.

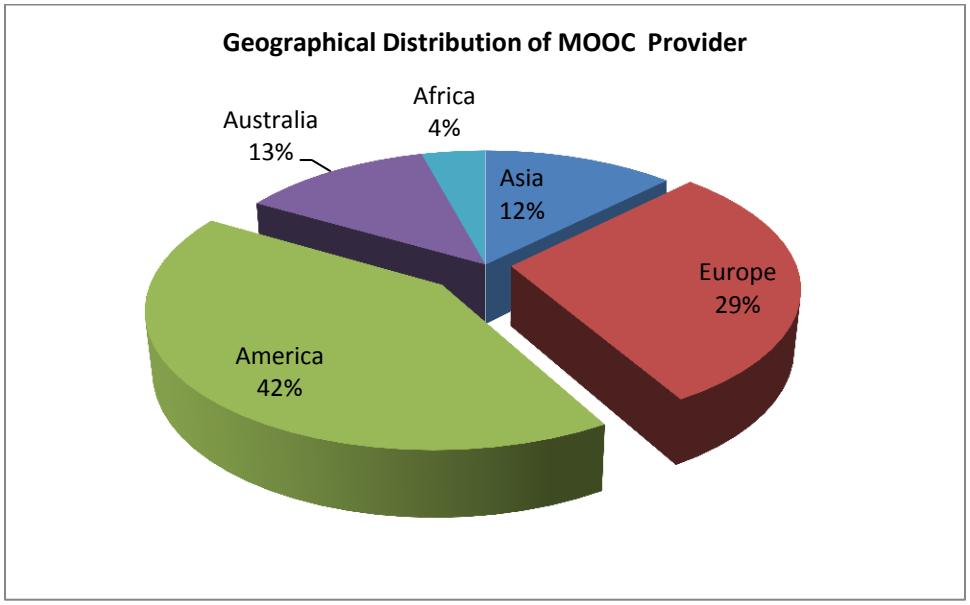

Fig: 3.1 Geographical description of MOOC provider

3.3.3 MOOC content through different levels

MOOC providers provide different contents in different degree level. They give their lecture in every aspects of higher education. Not only higher education they also provide lecture for the children as Khan Academy (www.khanacademy.org) Many MOOC providers provide their content free and they provide no certificate. They don not give any degree. From our selected MOOC providers we find them to give

Certificate	**Non certificate**
Master's	Children's course
Graduate	High school
Doctoral	Professional course

Bachelor	Part of an Xseries
Diploma	Video tutorial

Table 3.2: Types of course provided by MOOC institution

Most of the MOOC do not provide any certificate. They are just non-profit organizations which are giving knowledge to the general people.

3.3.4 MOOC and profit issue

Some of the MOOC provide their content free and some MOOCs are commercial. They provide their lecture full free. A list of commercial and non-commercial MOOC we find. We make a survey on 22 MOOC provider institutions. As a result we found 13 of them are non-profit institution and the rest 9 of them are commercial institution. As a result we show that 57% of them are non-profit organization and 43 of them are commercial organization. Non-profit MOOCs provide their lecture free for the student. Any student can take their course freely in charge. Commercial organizations are not free. They provide their lecture on charge. Learners have to take their course by giving a fixed charge.

Provider	**Type**	**Example institutional participants**
UPEx	Non-profit	USC, UCLA, Khan Academy, NPTEL
Stanford Online	Non-Profit	Stanford University

Provider	**Type**	**Example institutional participants**
Coursera	Commercial	University of Maryland, Wharton School, University of Virginia, Stanford University, University of Houston System, University of Tokyo
iversity	Non-profit	Universidad Autonoma de Madrid, University of Florence, University of Hamburg
edX	Non-profit	MIT, Harvard University, UC Berkeley, Kyoto University, Australian National University, University of Queensland, IIT Bombay, Dartmouth College
Eliademy	Commercial	Aalto University Executive Education,
Canvas Network	Commercial	Santa Clara University, University of Utah, Université Lille 1
One Month	Commercial	School of Visual Arts
OpenLearning	Commercial	University of New South Wales, Taylor's University, University of Canberra
Udacity	Commercial	Georgia Institute of Technology, San Jose State University,

Provider	Type	Example institutional participants
		Google, Salesforce, Facebook, Cloudera, Nvidia, Autodesk, Cadence
Academic Earth	Non-profit	UC Berkeley, UCLA, University of Michigan, Oxford University
FutureLearn	Non-profit	University of Birmingham, University of Reading, Open University, Monash University, Trinity College Dublin, Warwick University, University of Bath, University of Southampton
Peer to Peer University	Non-profit	n/a
Khan Academy	Non-profit	n/a
Acade.me	Commercial	Universidad Latina
Saylor.org	Non-profit	n/a
Udemy	Commercial	n/a
MOOEC	Non-profit	University of Queensland, Griffith University, University of Technology

Provider	**Type**	**Example institutional participants**
NovoEd	Commercial	Stanford University, Carnegie Foundation, Universidad Católica de Chile
WizIQ	Commercial	IIT Delhi, Des Moines Area Community College
France Université Numérique	Non-profit	Conservatoire National des Arts et Métiers, École 1normale supérieure de Cachan
		, University of Paris-Sud
School of Business and Trade - Sobat.org	Non-profit	n/a

Table: 3.2 economic issues of MOOC

Economic issues of MOOC in pie chart,

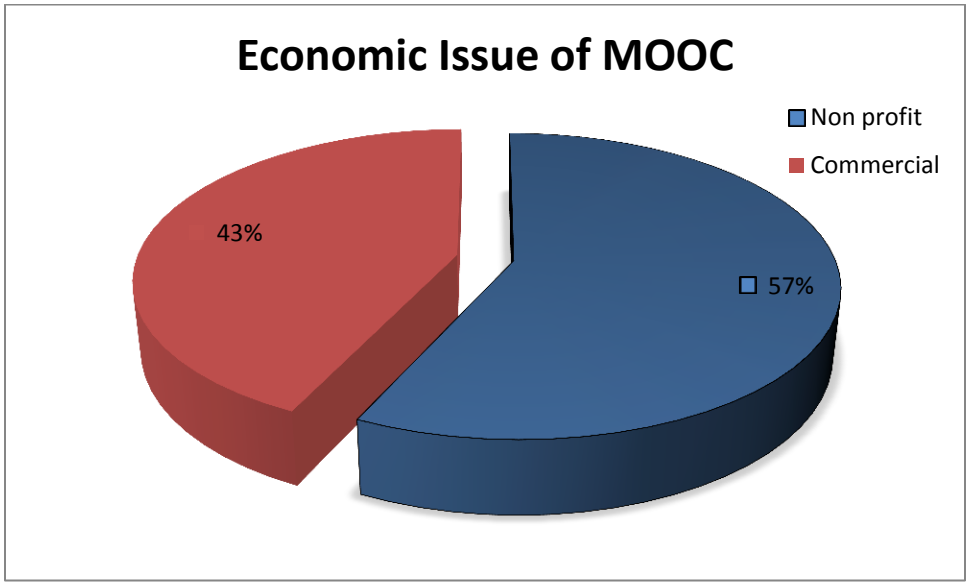

Figure: 3.2 Economic Issue of MOOC

3.3.5 Some online course related to library provided by MOOC institution

MOOC institution rarely provide course on library service. Some university related MOOC (http://online.stanford.edu/) and library related institution such as American Library association (ALA) provides library related course.

Stanford Online – Stanford university provide some of the courses related to the library archive and cataloguing. " digging dipper making manuscripts" "changing knowledge: open the global courses of learning" 'Stanford digital repository"

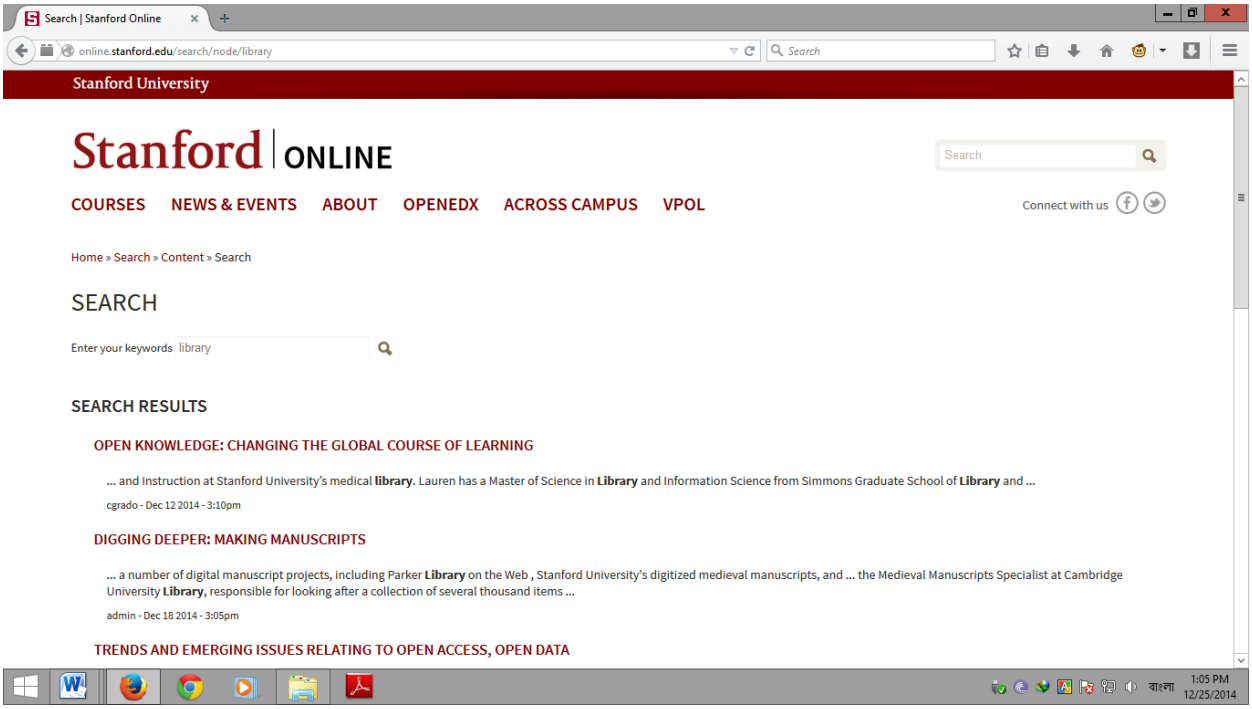

Figure: 3.3 : Stanford University website homepage

Udemy – It provides a course titled “sell your books and e-books to library”

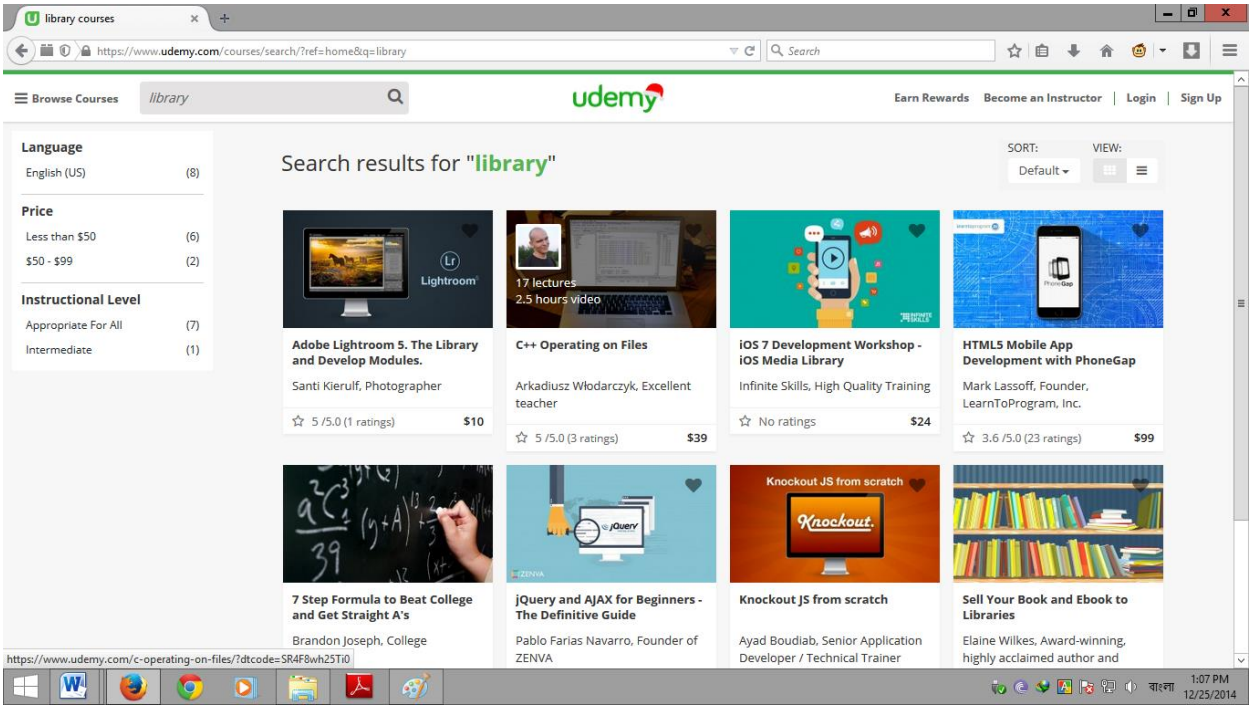

Figure: 3.4 Udemy website homepage

Udasity It provides only a few courses about library. It provides some courses of knowledge management and information literacy.

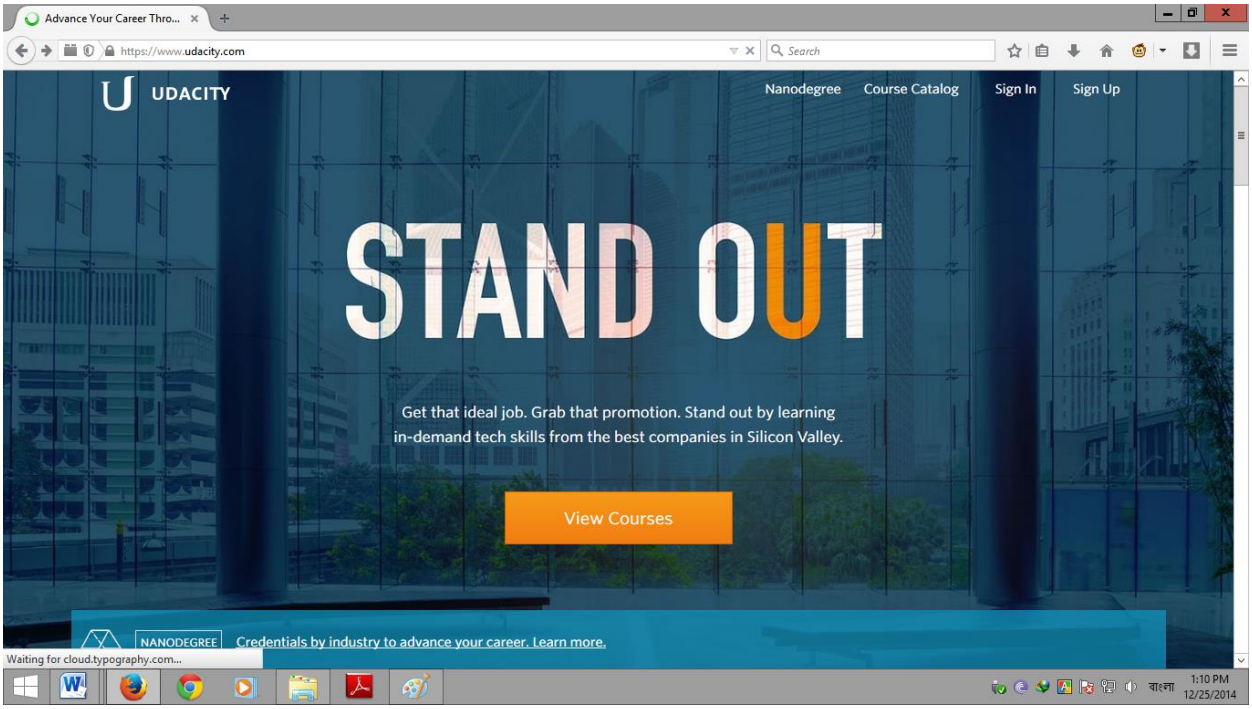

Figure: 3.5 udacity website homepage

edX – It provides a course named " library advocacy unshared"

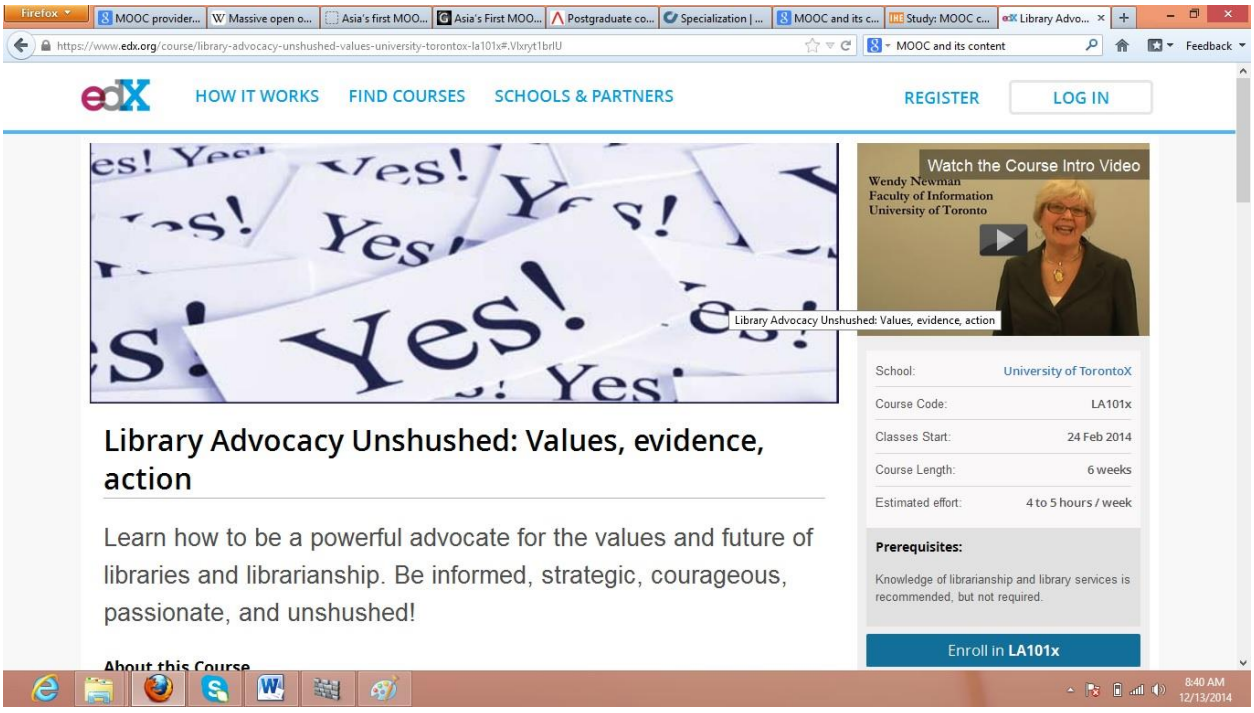

Figure 3.6 : edx website homepage

Canvas _ it provides some course like as " technical library research strategy", " digital library 1" " digital library 2" etc

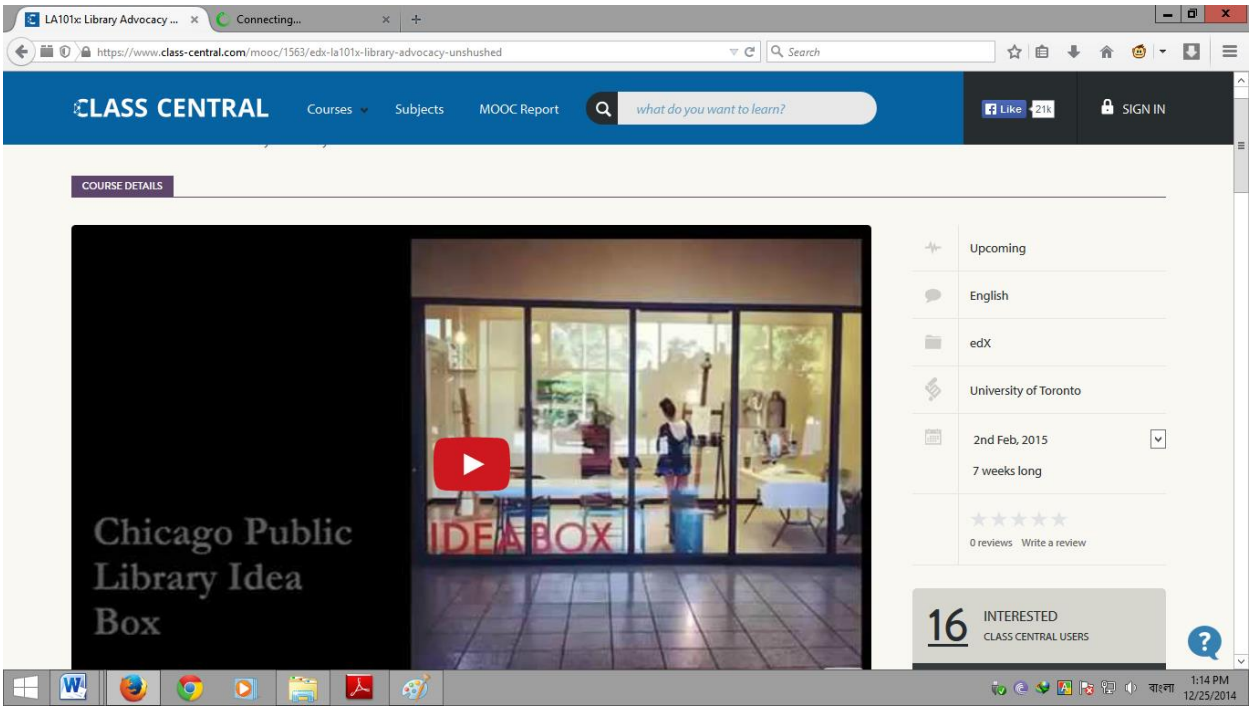

Figure 3.7: canvas network homepage

Idaho State Library ABLE – The Alternative Basic Library Education program offers online tutorials for free that covers all basic library related skills.

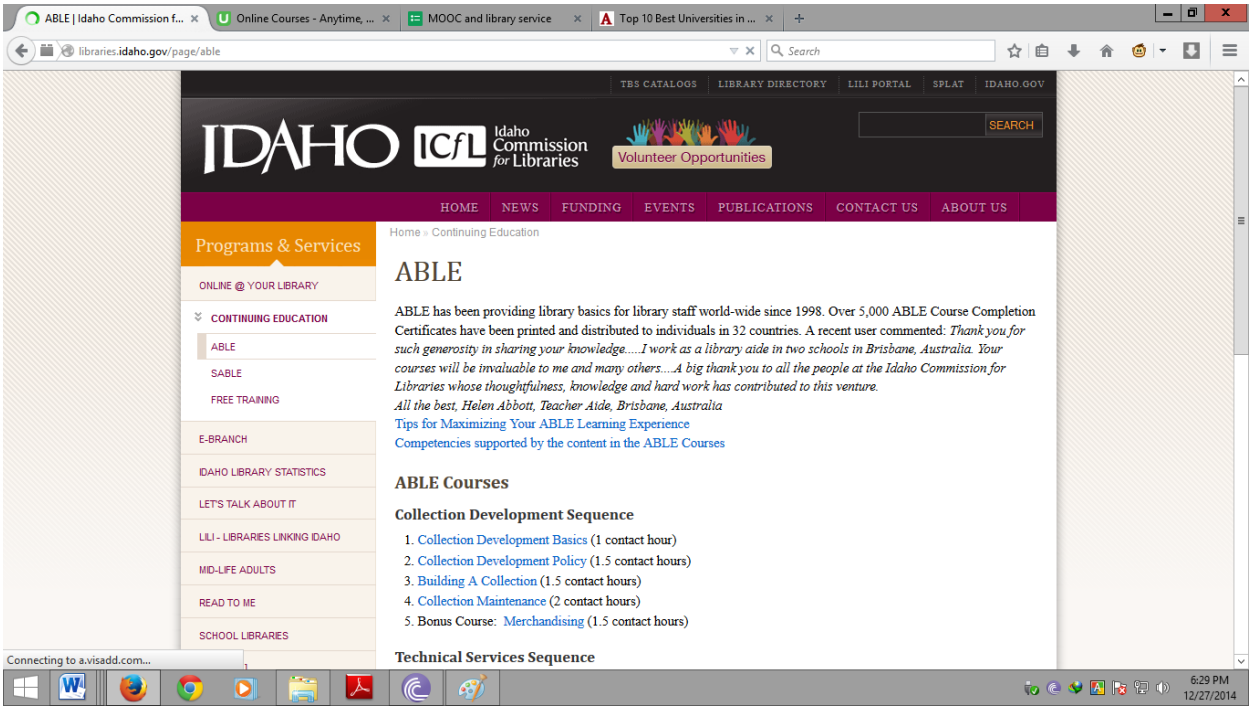

Figure 3.8 : Idaho state library homepage

Library of Congress Professional Development Workshops – These online modules are offered by the most famous library in the country and cover a wide range of different topics. Possible courses to choose from include: primary sources, basic technology, and more.

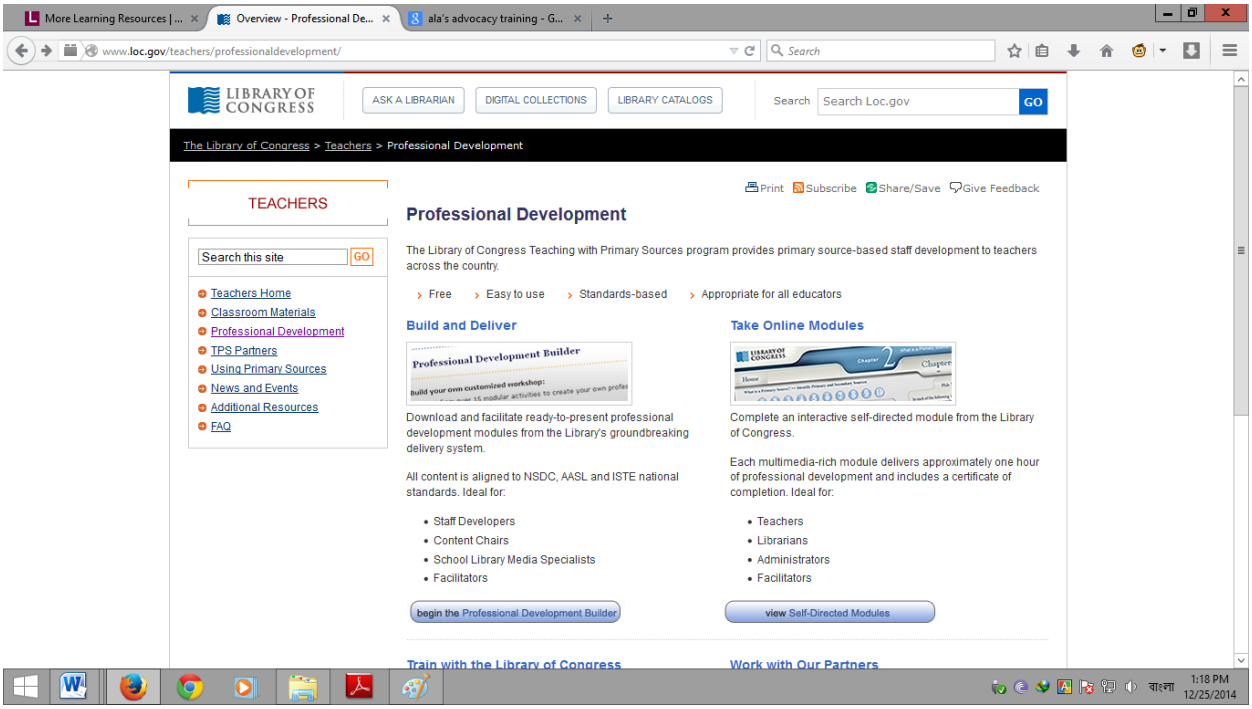

Figure 3.9: library of congress website homepage

Library of Congress Webcasts – These are an additional option that is basically short seminars on different topics that librarians will find informative, interesting, and useful.

ALA's Advocacy Training: Communication 101 **–** Offered by the ALA, this program helps to boost one's ability to effectively communicate with patrons as needed, and is important for anyone struggling with the communication side of librarianship.

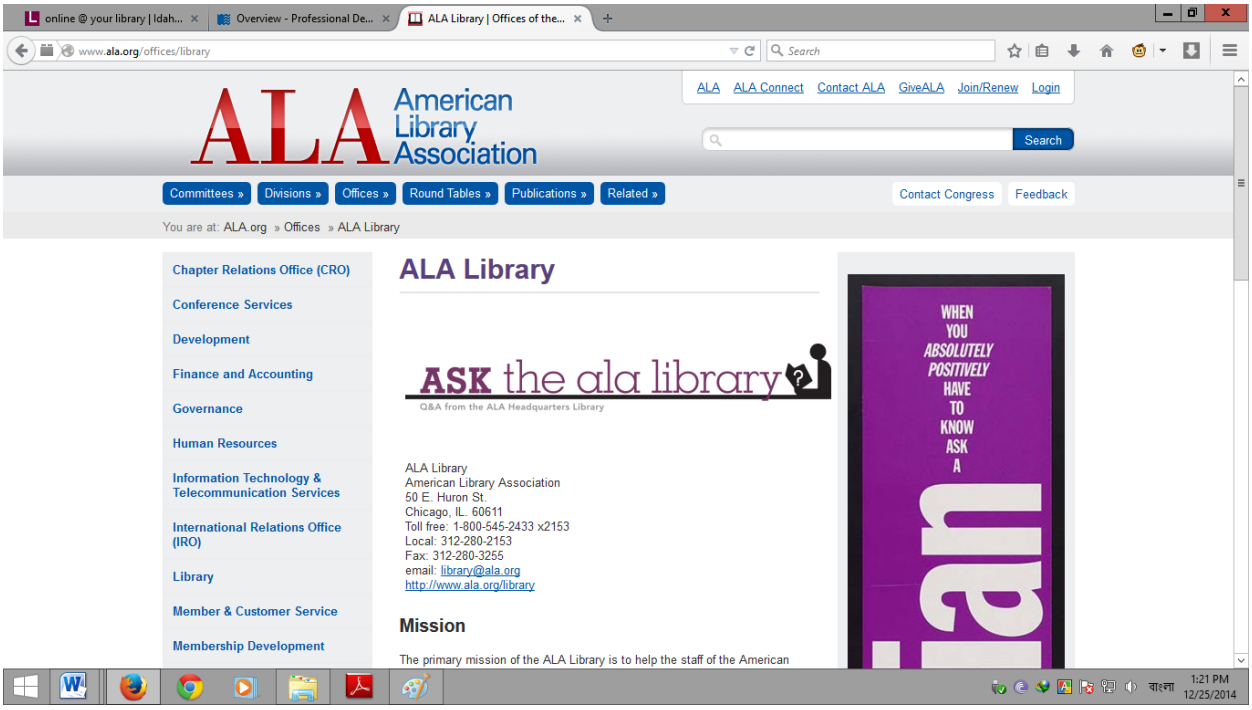

Figure 3.10: American Library Association's homepage

Tech Atlas – This site provides free courses so you can learn how to use TechAtlas for technology planning, as well as hardware and software inventory management in your library.

Utah State Library Cataloging Basics – Here you'll be able to find a wide range of tutorials and links to information that help provide a solid education on the basics of good, effective cataloging. Since this is one of the most important skills to master in the field, it's a resource well worth visiting.

Texas State Small Library Management Program – This site provides a wide range of courses that cover all aspects of librarianship, including closer looks at the skills needed to effectively manage small libraries.

WebJunction Online Learning Opportunities – There are some fee based courses here, but there are also numerous free programs that offer an education in the field of librarianship that make this site worth a visit.

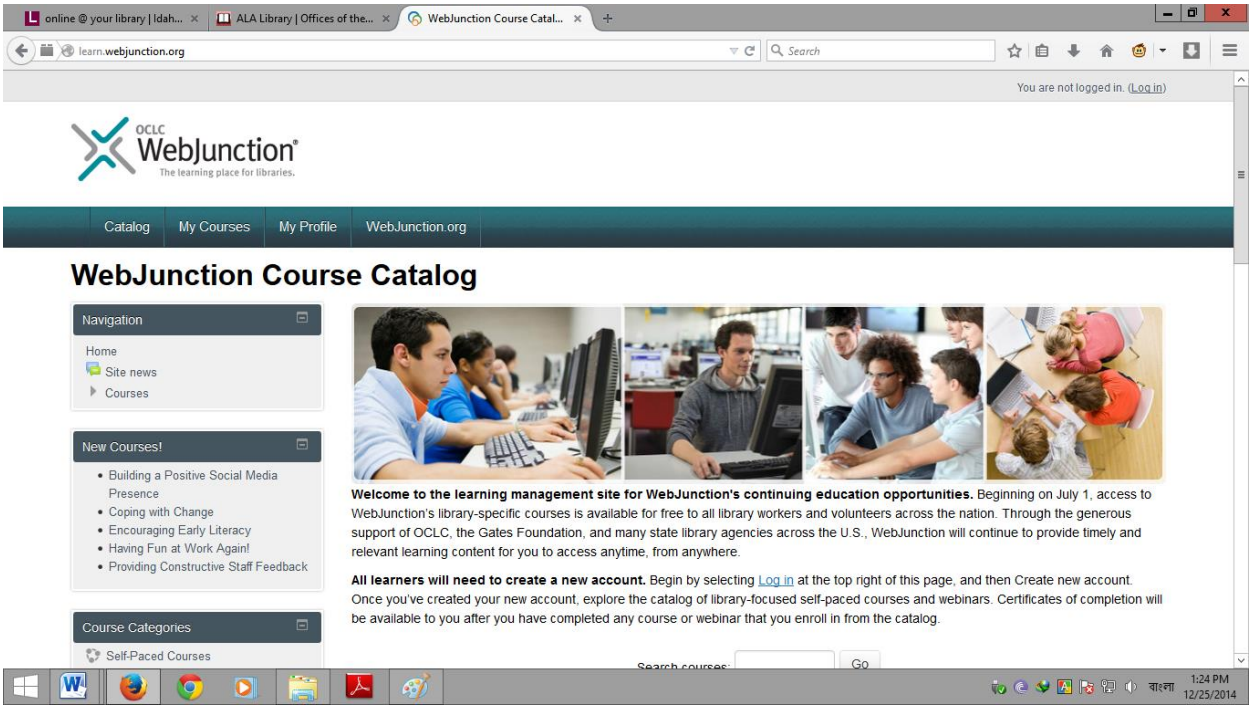

Figure 3.11: webjunction's homepage

OPAL – OPAL is a collaboration by several international libraries that focuses on providing free web based training for library users. It's a must-see for anyone looking to enter the field as well as for those who are looking to enhance their current skillset. It's a collection of podcasts that can be listened to on MP3 players or on computers.

Internet Library For Librarians – This is a free resource available online that helps librarians locating various online information about their field.

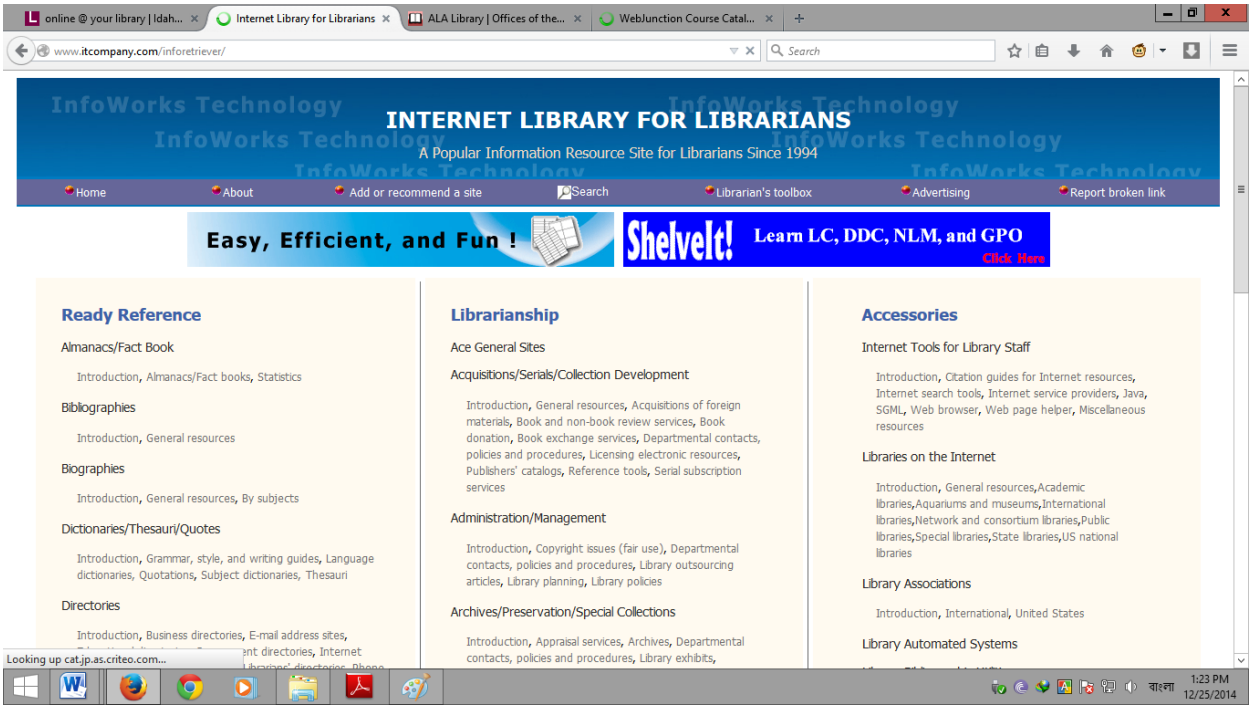

Figure 3.12: Internet library for librarian's home page

Infopeople – These are free online workshops that include a wide range of different tools including PowerPoint presentations, handouts, worksheets, exercises, and more. There are numerous subjects including computer skills, communication skills, and more.

University of Wisconsin – Stout – This online university offers some free classes to librarians. You can take classes in how to organize a school library, and how to hone your skills as a media specialist in a variety of libraries.

Library Support Staff Training – Basically, this is an online resource that links up different information and training materials from various libraries in an ability to help librarians understand more about the field and how to thrive in it.

Sirsi Dynix – This is a collection of online web seminars that helps to provide references and support to librarians around the country. There are numerous seminars that focus on a wide range of different subjects

WebJunction – WebJunction is home to numerous free and fee based courses that cover a huge range of different subjects including many that apply to the use of technology in the field.

USC Beaufort Library Bare Bones to the Internet – This is one of the oldest and one of the best free online training programs that is designed for library employees. It's also produced by library staff and provides the very best information that you can find, totally for free.

eLearning Center of the State Library of Ohio – This is an online collection of resources and seminars that are totally free. They're mainly focused on helping the staff of the State Library of Ohio, but most of the skills and information found there applies to pretty much any library around the world.

Colorado Libraries – This free web training will provide you with the librarian skills that you need to thrive with Web 2.0. This free librarian class focuses on communication, collaboration, visual communications, personal learning environments, productivity tools and a capstone.

eduMooc – This site has a series of educational videos on how to make common library materials more accessible.

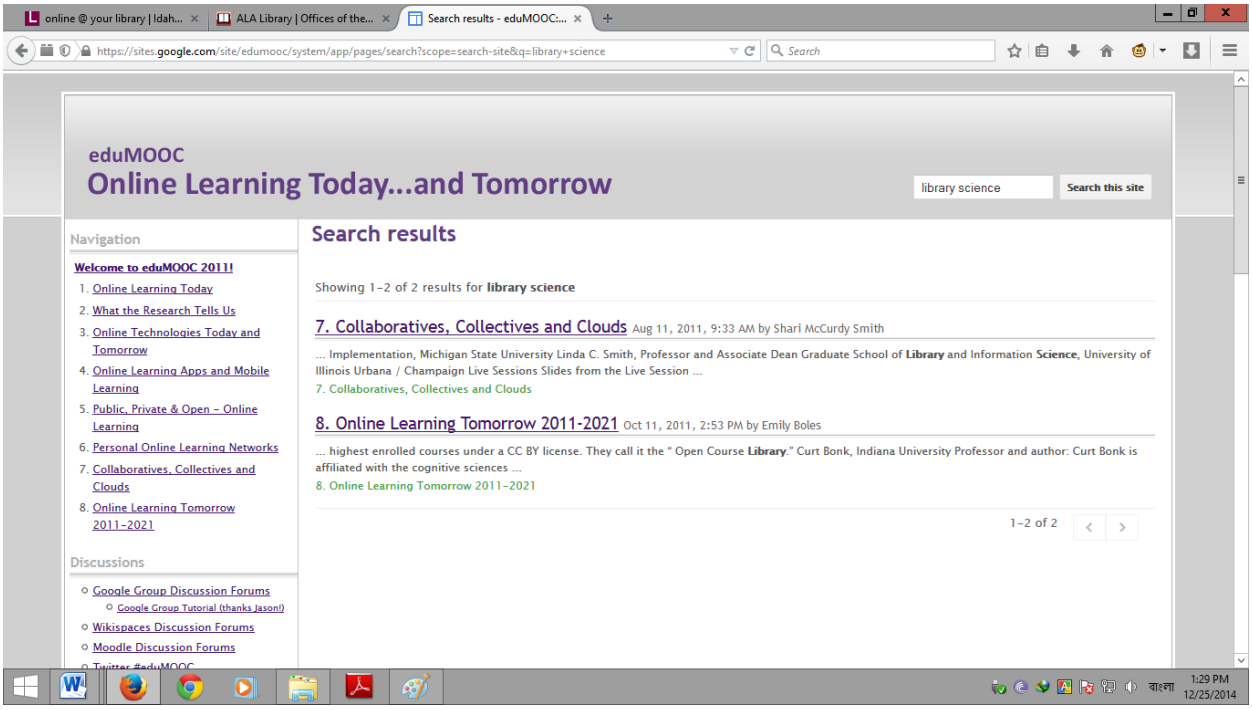

Figure 3.12: eduMOOC's website

Hot Courses – This Website has many free library classes that are of particular use to people who live in the United Kingdom.

Info People – If you want to sharpen your professional librarian skills, you can take free classes at Info People. These classes are based upon hands on, real world situations in libraries and all classes are tailored to the needs of librarians.

Library of Congress Catalogers Learning Workshop – The Library of Congress has several free classes that will train you on how to organize and classify bibliographic information.

There are many additional free online resources available that can one to help to move his level of knowledge forwards. There's no doubt that mastering the field of librarianship is worth doing, but it does contain many more challenges than most people realize. The sites listed above are good starting points to begin your journey for knowledge, and could help to become a master in this regularly evolving.

3.3.6 Some Online MLIS degree program

Some of the online MLIS degree programs include:

1.University of Southern California -- *LibraryScienceList.com Featured Partner* - This program offers a **Master of Management in Library and Information Science** that is designed to give the leadership skills that need to manage information centers and libraries in universities, government institutions, digital environments and private businesses. This online program features a strong focus on leadership, management and information sciences both on paper and on the Web and other digital sources.

2.San Jose State University **-** With **Master of Library and Information Science** master's, it prepare many exciting information-related careers. It provides courses to be a digital asset manager, a virtual services librarian or even a web developer, this program teach the skills online that is required to meet career goals.

3.Drexel University - The **Master of Library and Information Science** at this university is known as one of the best in the field of digital information management. US News and World Report recently ranked Drexel's degree in the field as one of the best. It provides Archival Studies, Competitive Intelligence and Knowledge Management, Digital Libraries, Library and Information Services, School Library Media and Youth Services.

4.University of North Carolina – This Master of Library Science provides a superior grasp of the foundations of librarianship and information services. It teaches a great deal of applied knowledge in information systems and research methods. One can choose either a school media librarian track, or academic/special/public librarian. Required coursework in this online degree program include Foundations of Librarianship, Selection and Use of Information Sources, Organization of Information and Management and Systems.

5.Texas Woman's University – This Master of Library Science degree is 100% online and will provide you with the with the skills and background to work in many environments, including

academic, school and public libraries, as well as corporate and other types of special libraries. It includes Foundations of Library and Information Studies; Information Organization and Retrieval; Information and Communication Technology; Collection Development; Information Sources and Services; Library Management and Practicum.

6.University of Buffalo – This master's degree, provides special knowledge and training in many kinds of reference services. It also provides skills that a librarian need to help all users with their reference needs, and to help them evaluate information from electronic sources.

7.Wayne State University – This Master of Library and Information Science prepares a librarian for many types of leadership roles in libraries and many other information organizations. It educate in the core areas of librarianship, such as information access, organization, management and services. It learns critical information about electronic media, including digital collections, competitive intelligence, information architecture and website development.

8.University of Pittsburgh – The Master of Library and Information Science degree is fully accredited by the American Library Association, which will assure you that you have the maximum amount of career flexibility and mobility. This master's program also is ranked in the top 10 programs in library science by US News and World Report. This online program may be completed in two years. You can specialize in Archives, Preservation and Records Management, Digital Libraries, Information Technology, and Resources and Services.

9.Kent State University – The Master of Library and and Information Science is accredited by the American Library Association. Kent State is well known for scholarship in library and information science, and is one of the top such programs in the US, according to US News and World Report. Required classes are Tools for MLIS Success, Access to Information, Organization of Information, IT for Library Professionals, and Foundations of Library and Information Science.

3.4 Exploring the opportunities

Now-a-days MOOCs are getting popularity. There may be many reasons for offering MOOC in LIS education, including benefit from the LIs programs, as well as the students.

3.4.1 Overcome geographical barrier: MOOC contents are available for any country student. Any one from any country can get their courses.

***3.4.2 Provide access to professional qualification*:** It provides an easy access to the web site and an easy way to get a good professional to learn. Many qualified lecturer from good universities provide their lecture

3.4.3 Informal setting : In MOOC learning, formality is not required. Any one from anywhere any time can get lecture. Formal class room, formal dress up, formal educational material is not required.

3.4.4 Lifelong learning: It improves lifelong learning. In MOOC learning there is not any age limit. Any one from any age can be a student of MOOC.

3.4.5 Affordable: Many of the MOOC service are free of cost, some other take a minimum cost for the content. A learner can easily get their course. Money is not a big deal here.

3.4.6 Independent learning: It offers independent learning. A learner has full independent over his course. Some MOOC providers provide their lecture in a fixed period of time, others do not.

3.4.7 Peer to peer contact: In MOOC service teacher and student get a per to per contact which help the student much.

***3.4.8 Lifestyle oriented*:** student can finish and fulfill their course as the pace that fits into their lifestyle.

3.5 MOOC Participant

From this survey we searched for the student who took MOOC courses. We conducted this survey over 1,000 students from different MOOC. There we found 567 of them are male and 433 of them are female. The result shown in the pie chart.

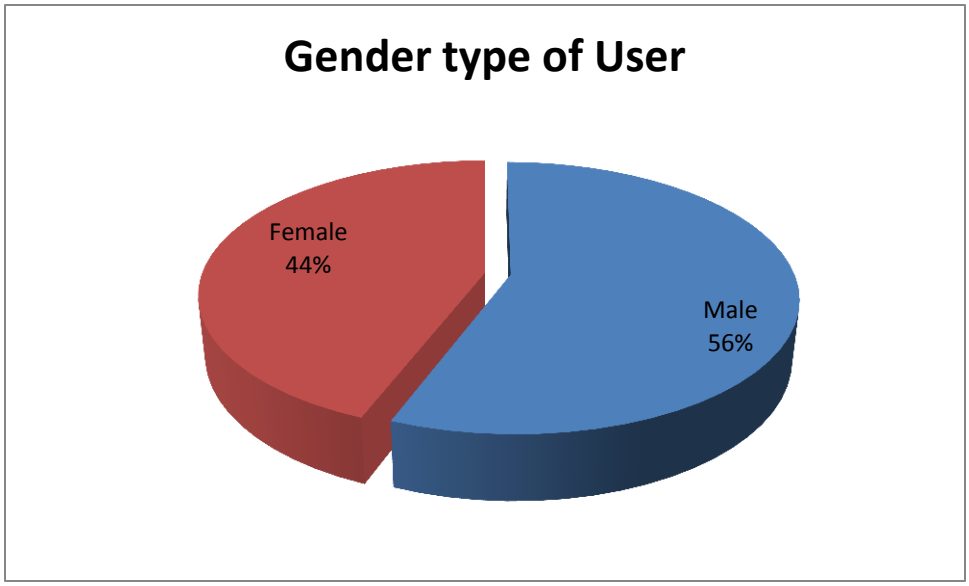

Figure 3.13 : Gender type of User

We also conducted a survey on the age of participant student of MOOC. We take a scale of 30 year. From those 1000 student we found 413 of them are under 30 year age and 587 of them are over 30 year old. From this survey shows that 42% students are under 30 age and 58% of them are over 38 years old. That shown in the pie chart

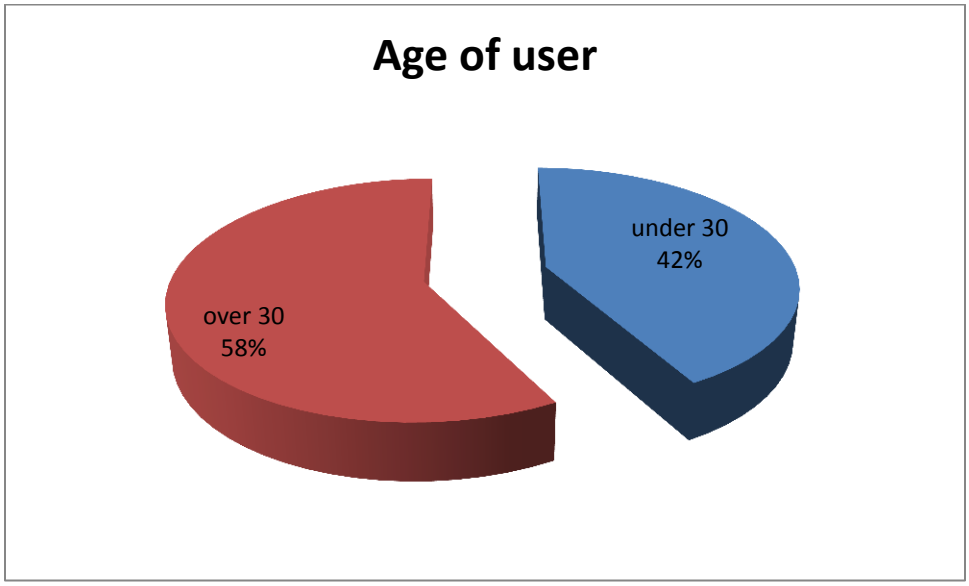

Figure 3.14: Age of the user

We also made a survey of students those who are engaged with MOOC. We conducted this survey on their employment status. Many of the MOOC users are only student and many of them are part time employed and many of them full time employed. Some of them are self-employed and some of them are un-employed. And a very few are retired person. From the survey we found – 18.2% of the respondents are students and 5.7% are part-time employed and 52.8% are full-time employed, 11.9% are self-employed, 7.2% are unemployed and 4.2% are retired person.

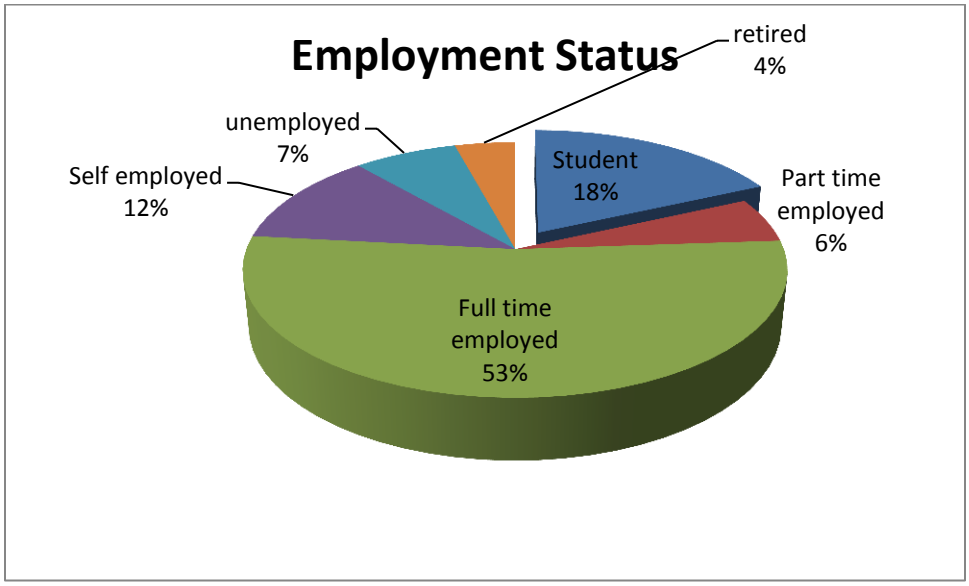

Figure 3.15: Employment Status of Enrolling Student

3.6 Courses Taken by students

There are two main reasons survey respondents cite for enrolling in a MOOC course: advancing in a current job and curiosity. Nearly half of MOOC students report their reason for enrolling in a course as "curiosity, just for fun" while 43.9% report enrolling to "gain skills to do my job better." This result differs depending on the type of course. Form survey 74.6% of respondents report taking humanities courses, such as poetry, Greek mythology, or world music, out of curiosity and only 11.9% report taking such courses to do their job better. Conversely, more than half of respondents (54.1%) report taking social science courses to "gain skills to do my job better" while nearly half did it for curiosity. Similarly, 39.0% of students selected science, health science and math courses for gaining skills to do a job better. In the United States the highest percentage of students (44.6%) enrolled in Science and Healthcare-related classes while in the rest of the world the highest percentage enrolled in Social Science, Economics, and Business courses.

The reasons for enrolling in MOOC courses varied by countries. Students from the U.S. were less likely to enroll in courses to enhance their skills for a job or for a degree and more likely than students from BRIC and other developing countries to take courses for curiosity

3.7 How MOOCs Work

MOOCs are online courses where lectures are typically “canned,” quizzes and testing are auto- mated, and student participation is voluntary. They attain large scale by reducing instructor con- tact with individual students; students often rely on self-organized study and discussion groups. An alternative model allows students to vote on which questions should rise to the professor’s attention (e.g., Coursera). edX encourages stu- dents to rely on each other, awarding “Karma points” to students who correctly answer other students’ questions. As points accrue, students’ roles can expand, e.g., to a teaching assistant. Initial MOOCs have often been from disciplines that lend themselves to quantitative assessment, such as engineering, computer science, and math. However, MOOCs are becoming applicable to all fields as the platforms enable assessment methods such as peer review.

MOOCs generate massive quantities of data about learner behav- ior, which can be used to understand cognitive growth and how to improve instruction. Some platforms may evolve from course-delivery systems toward adaptive learning platforms— systems that personalize the experience based on the learner’s performance. MOOCs embody a convergence of technology and culture that is creating new energy around e-learning. On the technology side, the tools enabling web-based instruction are more effec- tive and reach greater scale than ever before. E-learning technologies that are widely used in MOOCs include:

The New Players MOOC Platforms Coursera: A Stanford spinoff focusing on elite institutions and faculty. Major university partners include University of Virginia, Duke University, University of Pennsylvania, and University of Illinois. edX: The Harvard, MIT, and Berkeley collabo- ration to offer the best of all three institutions free online. Udacity: Disseminates select MOOCs in part- nership with individual professors. Founded by ex-Stanford professor Sebastian Thrun after his MOOC went viral. Udemy: Allows anyone to create and offer a course, whether free or for a fee. Adaptive Learning Platforms While not MOOCs, Knewton and Khan Academy offer massively online material. As students work, these platforms track and correlate data generated—from time of day to clicks and response patterns—to person- alize instruction. Ultimately all platforms may use data to adapt instruction to the learner.„

- High-quality indexed video „
- Data capture and analytics „
- Delivery platforms that combine the qualities of social networking sites like Facebook with the con- tent delivery, discussion, and grading functions of the traditional learning management system From a cultural perspective, communication, collaboration, and knowledge discovery via the web have become commonplace.
- Sites like TED, Khan Academy, iTunesU, and YouTube, which house rich collections of instructional material, have paved the way for MOOCs.

3.8 Institutional capacity required to deliver

MOOCs require investment. Whether the MOOC is self-hosted or offered through a commercial platform, integrated course support is required. Support requirements include: „

- Technical (e.g., videography, editing, graphic design) „
- Instructional (e.g., instructional design, teaching assistant support) „
- Library (e.g., resource discovery, copyright clearance)

Institutions intending to self-host MOOCs will need a sophisticated, highly scalable LMS-like platform, the ability to effectively market the courses, and the capacity to offer technical sys- tem support remotely and at scale.

3.9 Challenges and Advantages of MOOC

The challenges of MOOC to provide higher education:

1. Accreditation

2. Self-regulation and motivation

3. High dropout rate

4. Standards and grading

5. Automated grading

6. Peer grading? Teaching assistant grading?

7. The lecture dominates most courses

8. Assuring academic integrity

9. Application in the humanities

10. Learning analytics - a digital portfolio of participant activities?

The advantages of MOOC as an educational model:

1. Learner can use any online tool that is relevant.

2. People have no access to former higher education can participate.

3. Informal and can be organized easily.

4. Content can be created and shared as the course progresses.

5. Learning will be possible by the collaboration of learners and instructors.

6. Learners are learning from one another by discussion forums and social activities not by the facilitators.

7. Enrolment is open to anybody in the World, no fee, no credentials needed but applicant should have the internet access.

8. Supports career opportunities.

9. peer grading supported.

3.10 Latest Perceptions regarding MOOCs

Only a very small segment of higher education institutions are now experimenting with MOOCs with a somewhat larger number in the planning stages. Most institutions remain undecided.

1. Only 2.6 percent of higher education institutions currently have a MOOC,

another 9.4 percent report MOOCs are in the planning stages.

2. The majority of institutions (55.4%) report they are still undecided about

MOOCs, while under one-third (32.7%) say they have no plans for a MOOC.

3. Academic leaders remain unconvinced that MOOCs represent a sustainable

method for offering online courses, but do believe they provide an important

means for institutions to learn about online pedagogy.

4. Academic leaders are not concerned about MOOC instruction being

accepted in the workplace, but do have concerns that credentials for MOOC

completion will cause confusion about higher education degrees.

Elaine Allen, Ph.D.(2013)

3.11 Summary

This chapter includes research methodology and analysis of data. We collected data from different MOOC providers and analyzed them. The findings of the data shows the potentialities of MOOC which is our SRQ.

Chapter 4

MOOC as a Library Service and building a model

4.1 Introduction

MOOC or online education is growing all over the world at an astonished rate. (wiki 2012) Most of the universities are trying to adopt this method of education. In May 2012, Harvard and MIT launched EdX.org, a collaboration between the two universities to offer these types of free courses. (edx, 2012) The site has gained popularity over the world. Now they have more than 1.3 million students. The number of the student is raising day by day. It has become a popular way of academic education. Libraries are not far behind. American Library Association (ALA) has been providing various library related online video. Though they are not course contents ALA has been providing various e-learning materials contents over online. Libraries are perfectly situated to deliver the institutional support and physical infrastructure that can help students engage with online courses. The library that delivers support services to a student need not be the one affiliated with a course's originating institution.

After the third chapter, here we tried to make a connection between library and MOOC provider. First we conduct an online survey on different libraries and their website. We searched those libraries which are easily accessible. We analyze their content and created a statistical probability, if it is possible to connect the MOOC content with the library homepage. We also saw the copyright act of MOOC provider. We conducted a short online interview of the librarians, if they are ready to receive the MOOC.

New York Public Library embarked on one such venture with its first foray into blended learning, combining MOOC technology with in-person help. In the experiment, the library provided its space as a so-called learning hub for a Coursera class. New Yorkers who signed up for the six-week class. Each week the library tracked student attendance, their level of engagement with the materials and the range of their skills. "Among the goals of the

experiment is to explore what MOOCs mean for libraries," said Luke Swarthout, New York Public Library's (NYPL) director of adult education services. "We're excited to see how this goes." NYPL is offering another MOOC in poetry in the fall, which uses a community of enthusiasts online to act as facilitators.

Libraries are also taking the lead in addressing the impact of MOOCs on educational norms — on privacy, content sharing, intellectual property and accreditation. Librarians are especially well positioned to help universities navigate copyright legislation

Second section of this chapter includes data collection and data analysis. The third section discusses and analyzes the finding of the study. In the fourth section we build a model for the library.

4.2 Research Methodology

The method adopted for this chapter included an online survey of different library website. A short online questionnaire survey was conducted to gather experiences and data from library administrators. We collected email address of some librarians from the websites and asked them 3 questions about MOOC. We used simple mailing address to send email and received data. Basically this research is based upon another online survey of library homepage. We found out the environment by taking a random sampling of librarian if they are ready to serve MOOC as a library service. For conducting online search we used Google as a search engine (Www.google.com). We used (www.docs.google.com) to prepare a questionnaire as well as link, and sent the link to the questionnaire to the librarian from different countries whose have well and fully digital library website.

4.2.1 The Sample

We searched 20 homepage of libraries selected from different regions. We selected those libraries from different continents and from different countries. We selected those libraries for our survey. We selected 4 Asian libraries, 9 American, 3 Australian, 3 European and 1 African library for our survey. The geographical description of those libraries are

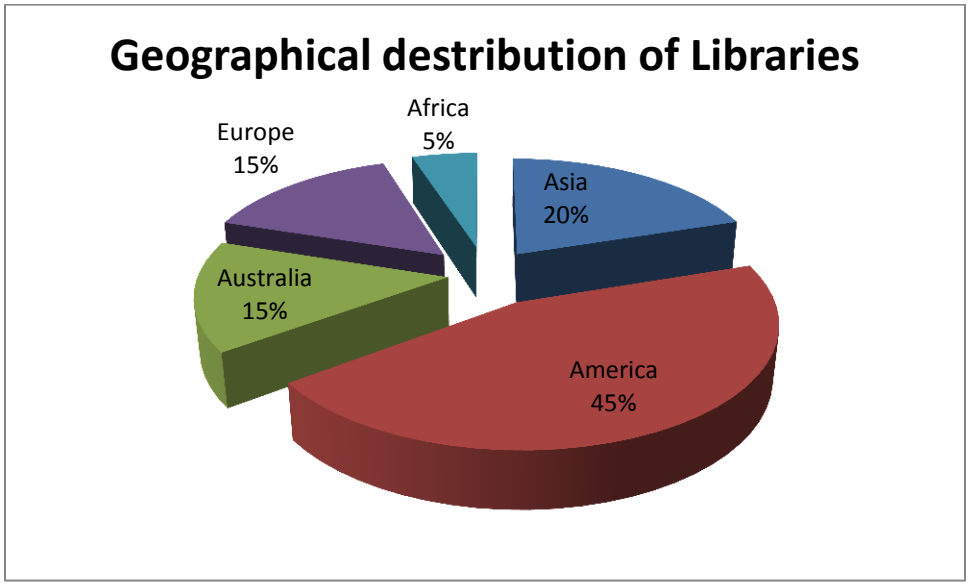

Figure 4.1: Geographical distribution of libraries

We selected 2 libraries (Stanford University Library, Nursing Library of online education) whose provide MOOC on their website. Other libraries do not provide MOOC on their service.

List of the libraries we selected for the survey

Name of the library	**Types**
Stanford university library	Academic library
MIT university library	Academic library
Indian Institute of Information Technology library	Academic library
Nursing library of online education	Online library
JAIST library	Academic Library

Harvard University Library	Academic library
University of Illinois library	Academic library
Australian national university library	Academic library
Central Europian university library	Academic library
Yale University library	Academic library
Oxford university library	Academic library
University of Tokyo library	Academic library
New south wales university library	Academic library
Georgia institute of technology	Academic library
Indian public library, kolkata	Public library
University of paris library	Academic library
University of cape town library	Academic library
University of Melbourne library	Academic library
Monash university library	Academic library
Cleveland Public Library	Public library
Brantford Public Library · Brantford, Ontario, Canada	Public library
Library of Birmingham	Public library
National library of Australia	Public library
National library of south Africa	Public library
Library of congress	Public library

Table 4.1 : Libraries and their types

4.2.2 Data Collection and Analysis

In chapter 3 we conducted our survey on 25 MOOC providers home page. We analyzed their content and benefits. In this chapter we make a relation with those content to library. We searched 20 libraries 9 shown in table 4.1) and their homepage. Some of them are academic library and some of them are public library. We select 17 academic and 8 public libraries for our research.

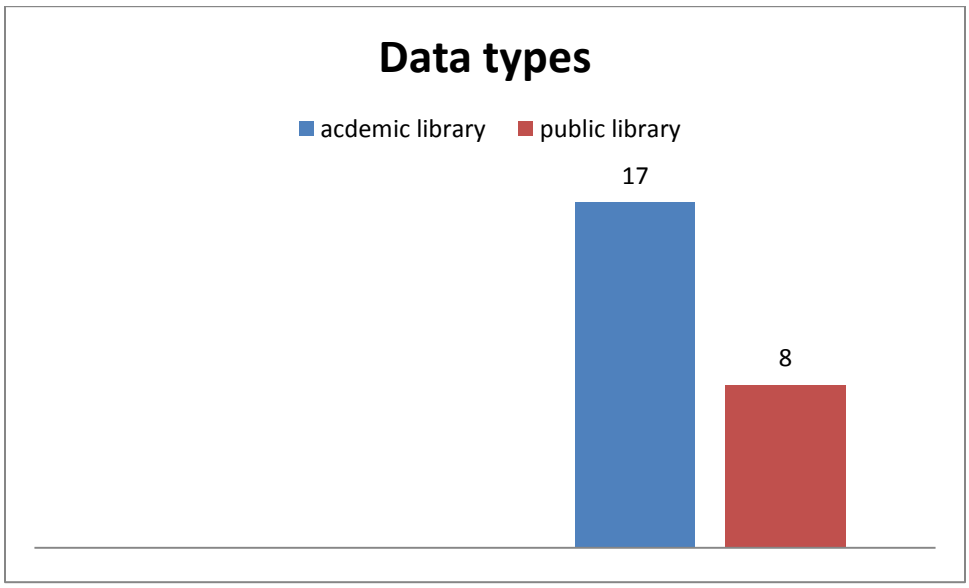

Figure 4.2 : Number of the selected Libraries

From these two types of library, we collected information and searched their environment and capacity to capture the MOOC. Academic libraries are more structured then public libraries.

4.2.3 Questionnaire design

The questionnaire on "MOOC and library service" (see Appendix A) was designed to collect primary data about relation between MOOC and library at www.docs.google.com that include three close ended questions. First we asked those librarians, are they think library can use MOOC content as a library service? Our second question was do they know about MOOC.

And the last question is, are you ready to provide MOOC as a library service? We give them this questionnaire via email and collected data from email.

(https://docs.google.com/forms/d/1ItfJiz1THymfWclwJnDX_r9YrC517-xGX_5xfiltvyk/viewform?edit_requested=true) is our link. This short questionnaire is given for taste their position on MOOC. Above all, the design of the questionnaire was finalized after consultations with the academic supervisor.

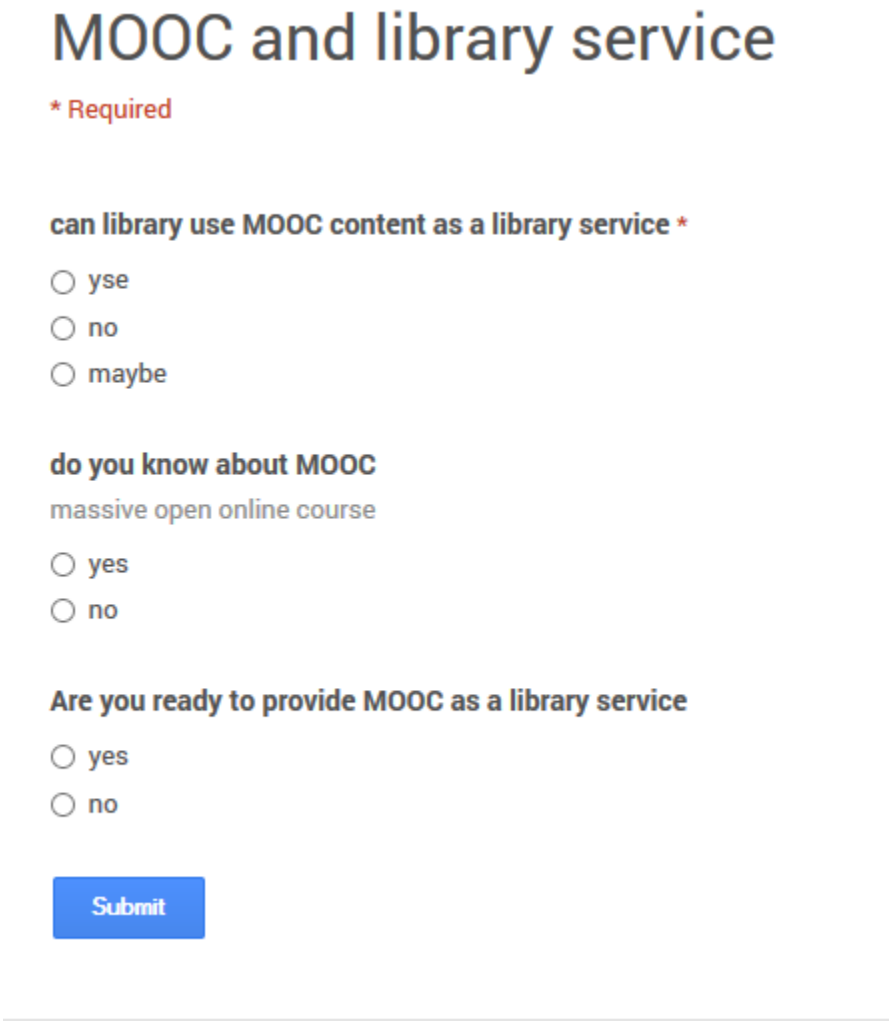

Figure 4.3. : Questionnaire about MOOC and library.

4.3 Findings

We searched to be confirmed the libraries provide MOOC or not. We found that only 1.2 percent of libraries currently have a MOOC, another 6.4 percent report MOOCs are in the planning stages. The majority of the libraries 92.4% percent of the library do not have a plan for taking MOOC as a service. They either do not know about the service or they are not interested about this matter. Stanford university library is providing fully MOOC content on their web site.

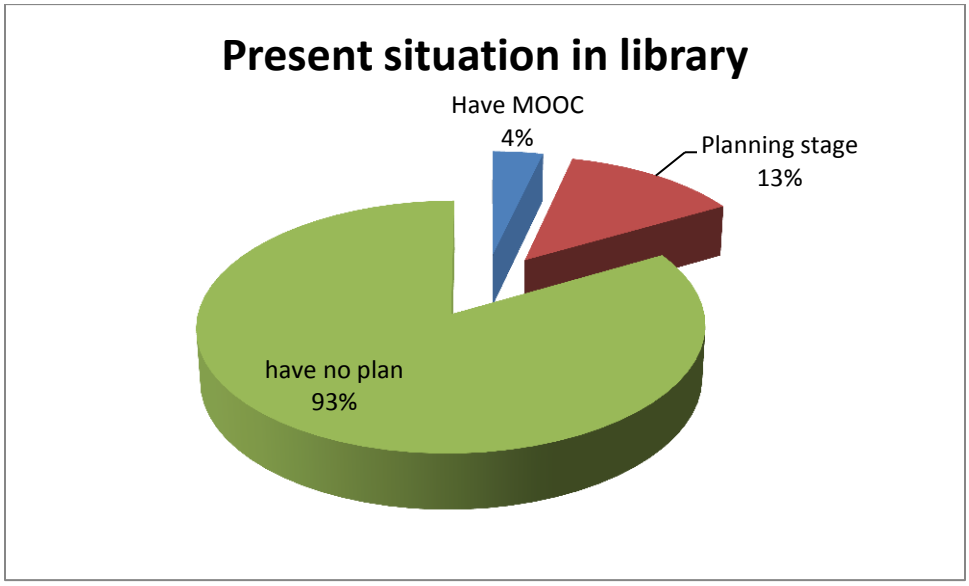

Figure 4.4: Present situation of MOOC in library

Between these two types of libraries academic libraries are more capable to use MOOC as its content. Those 4% who has MOOC most of them are academic library. Though most of the MOOC providers provide their content at no cost or charge, academic libraries are capturing MOOC more than public library.

20 librarians from 25 selected libraries responded our questionnaire. We analyzed Data found from the questionnaire responded by the librarian. From there 13 librarians said library can use MOOC content as a library service. Which calculate value is 65%, and 35% librarian think library can not use MOOC as a library service. In regarding 2nd question 18 librarians know about MOOC which calculate value is 90%. In regarding 3rd question 5 librarians answered that

they are ready to provide MOOC as a service. Which means 25% librarian are ready to provide MOOC as a library service.

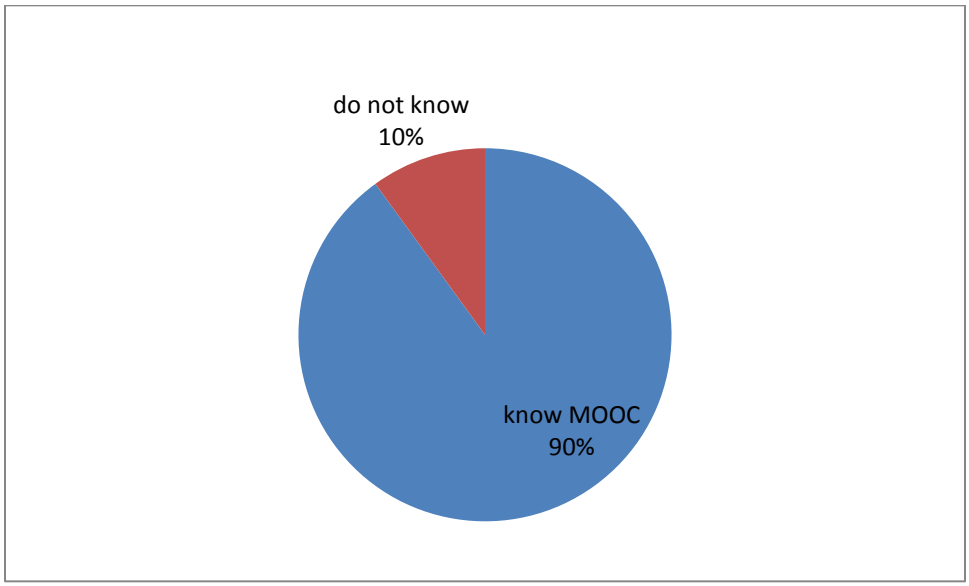

Figure 4.6. : Librarian knowledge about MOOC

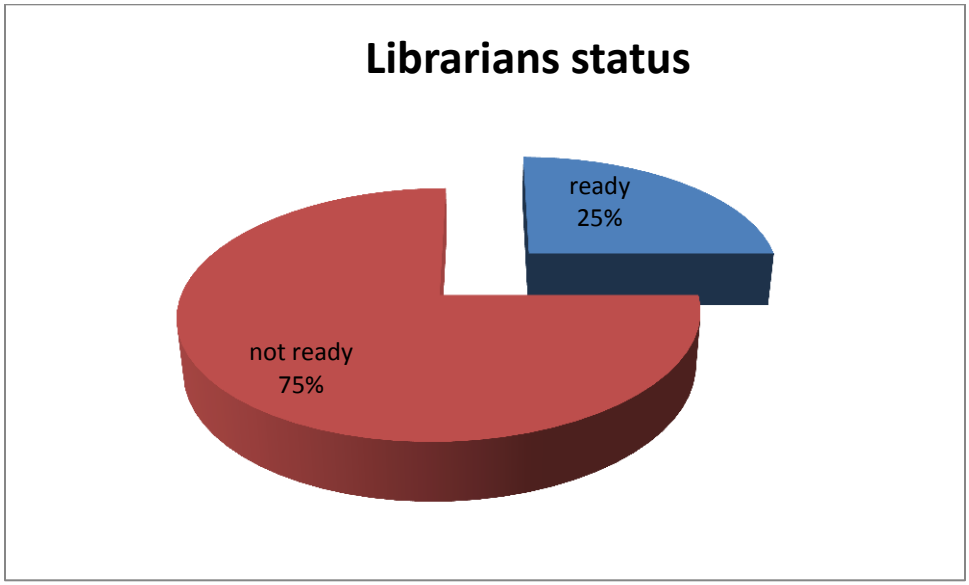

Figure 4.7. : Librarians status about MOOC

Most MOOCs have completion rates of less than ten percent, according to Katy Jordan, a Ph.D. student in the Institute of Educational Technology at the Open University who is studying MOOCs. But that ten percent still represents more students than most professors would teach in person in a lifetime.

4.4 MOOC as a library service

The library's online courses are a risk-free way for someone who has not been in a classroom for decades to prepare and practice for a professional course of study. For those of us who need to upgrade our skills to land full-time employment but cannot afford to take classes without incurring substantial debt, the AFPLS program is a much needed program.

Lynda.com, which offers about 1,700 instructional videos, also focuses on practical online training, much of it technical. The site recently partnered with New York Public Library's Science, Industry and Business Library (SIBL) to provide free access to its content and is pursuing partnerships with other libraries.

Michael Stephens, an assistant professor in the School of Library and Information Science at San José State University (SJSU), CA, for example, is offering a MOOC pilot that is limited to 500 students—about the size of a large lecture hall.

The major question for MOOC providers and universities alike in the coming years will be whether or not these courses will be eventually recognized for transfer credit at major institutions. To date, there has only been discussion on this topic, and no on-campus university has publicly indicated that they will begin accepting these courses in the near future. However, some academic administrators have proposed a role for MOOCs within traditional higher education. John Mitchell, the newly appointed Stanford University Vice Provost for Online Learning, envisions substituting traditional lectures with MOOCs so that on-campus time is spent collaborating and discussing rather than lecturing (Ashbrook, 2012). This is commonly referred to as the "flipped classroom" approach to learning. UMass-Lowell Professor Fred Martin endorsed a similar view in his article, "Will Massive Online Open Access Courses Change How We Teach?" (Martin, 2012). Other academic policy watchers such as Jeff Salingo, editor-at-

large at the Chronicle of Higher Education, predict that universities will evaluate the performance of high school students in MOOCs to identify strong candidates for admission (Ashbrook, 2012). Academic librarians will have to pay careful attention to these developments. As MOOCs gradually integrate into university curriculum, librarians may find whole new responsibilities.

The four letter acronym, MOOC (Massive Open Online Course), has been hailed as a potent defense against the rising cost and insular culture of attending a traditional college. Recent interviews indicate that teachers praise MOOCs for their ability to distribute lectures to very large audiences, while students enjoy the flexibility, free tuition, and access to elite university faculty (Ripley, 2012). Companies hosting MOOCs are also responding to this sudden demand by expanding their course offerings. For example, Coursera cofounder Daphne Koller recently stated that within five years, Coursera will expand from around 200 courses to 3,000. This is roughly the same number of courses offered in the academic catalogs of large research universities (Koller, 2012). Given their apparent early success, MOOCs are likely to be part of the higher-education landscape for years to come. Therefore, academic librarians need to be aware of how these developments may impact their responsibilities and role within a university.

Several regional higher education associations have published policies indicating their commitment to library support in distance learning. For example, the Northwest Commission on Colleges states that institutions must provide "access to library and scholarly resources with an appropriate level of currency, depth, and breadth to support the institution's mission, core themes, programs, and services, wherever offered and however delivered" (as cited in Francis, 2012). Additionally, the Association of College and Research Libraries' (ACRL) Distance Learning Section established the policy that every higher education student is "entitled to the library services and resources of that institution, including direct communication with the appropriate library personnel, regardless of where enrolled" (as cited in Nickel & Mulvihill, 2010).

Several other higher education associations offer similar explicit commitments to library support of distance classes. Clearly, these policies were created before the advent of MOOCs,

which exist outside the conventional online course environment. But that does not mean that academic librarians are powerless to help MOOC students if these courses eventually integrate into standard university curriculum. The following section will explore some current methods used by librarians to serve online students, evaluating which methods would best serve the MOOC platform.

4.4.1 Problems of MOOC as a library service

Two characteristics defining MOOCs make them particularly difficult for the integration of library services. First, their enrollment far exceeds that of conventional online courses offered by degree-granting institutions. This reality prevents librarians from applying some of the recent approaches for integrating library services in online learning. For example, in contained online courses with enrollment limits, the "embedded librarian" approach has some documented success. At SUNY-Oswego, librarians have negotiated with faculty members to include research assignments and tutorials in the course management systems of their online learning platform (Held, 2012). Similarly, Dominguez-Flores and Wang successfully taught literacy skills to a group of undergraduates through librarian interaction with online learning communities at Nova Southeastern University (Dominguez-Flores & Wang, 2012). However, even in these contained online environments, librarians expressed frustration over the time-intensive nature of creating research exercises, as well as difficulty persuading faculty to share time in their course. Therefore, given the challenges of huge student enrollment, it is unlikely these approaches would translate to MOOCs.

The second characteristic of MOOCs that will prove challenging to librarians is that they are hosted by third-party companies. This presents numerous technical and proprietary issues. Most online courses offered by degree-granting institutions use course management systems such as Blackboard to post assignments, lectures, and other educational content. Therefore, in instances where librarians are integrated in these online courses, they have to tailor their support to the technical and structural requirements of their university's system. Unfortunately, because MOOCs use their own platform to host course content, the work done by librarians within their university's course management system, such as embedding lesson

plans or offering an "Ask a Librarian" feature, would not easily transfer to outside MOOC platforms. This means librarians would have to create research assignments for multiple online environments if they want to be involved with MOOCs to the same extent that they are involved with their university's online courses.

4.5 How to connect MOOC with the library

The most practical option for librarian involvement in MOOCs is to start small with a solution that is scalable. First and foremost, this means reaching out to the faculty member teaching the MOOC. Just like in any university setting, librarians must convince faculty that learning from scholarly resources is a critical element of higher education, and the first step towards that end is making the student aware of their available resources. The next step should be to provide the faculty member with links to the "tutorials" and "research guides" sections of their affiliated library's website. At this juncture it is important for librarians to review the scope and content of their tutorials and research guides, because most will include paths to proprietary databases which will not be accessible to many MOOC students. This does not necessarily mean that librarians will have to immediately create new, open-access only tutorials. Luckily, peer-reviewed research tutorials are freely available from the American Library Association, as well as the Multimedia Education Resource for Learning and Online Teaching initiative, which can supplement current tutorial offerings.

By providing links to open access research guides and tutorials, librarians are at the very least offering services that can be repeated by large numbers of students with varying affiliation to the hosting university and faculty. This approach addresses two major challenges of integrating library services in MOOCs, specifically by providing services to a range of students far outnumbering traditional university course enrollment, as well as bypassing some of the technical requirements of embedding library resources in a third-party platform.

4.5.1 Emergence of Hyperlink library

Emergence of hyperlink library is a result of connecting MOOC and library service. Hyperlink library is a library that provides link of other libraries or MOOC.

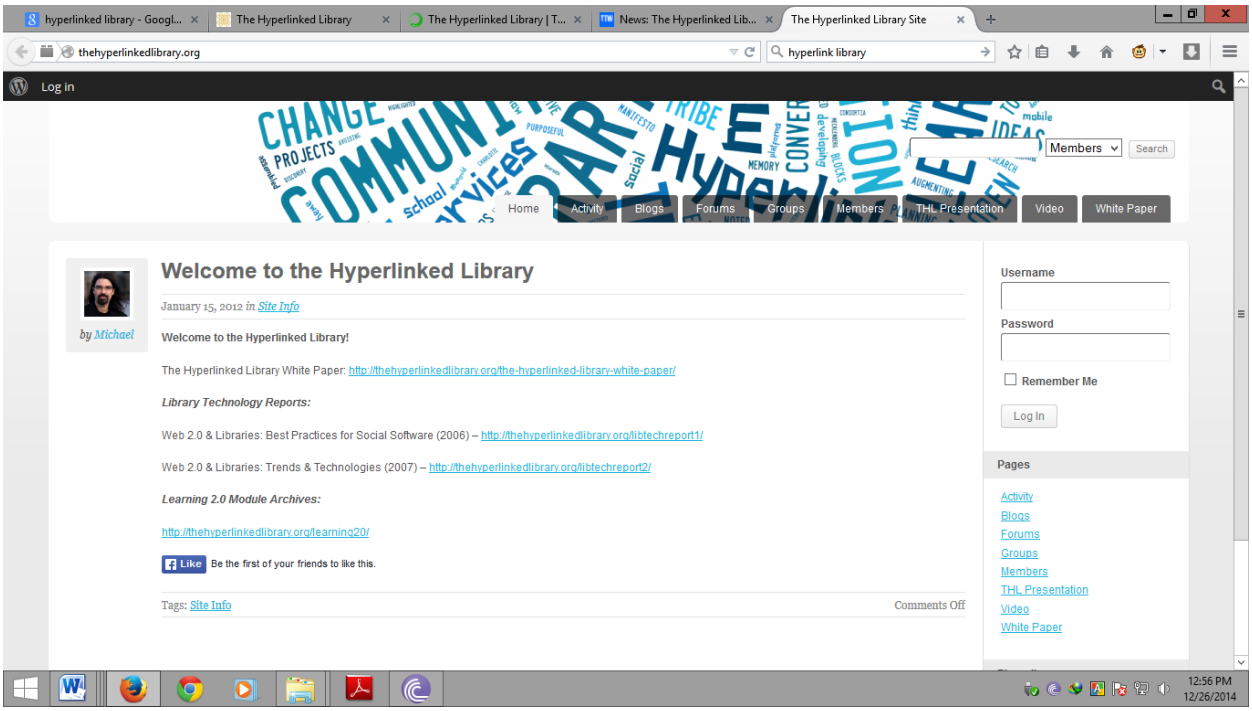

Figure 4.8: homepage of hyperlink library

The Hyperlinked Library is an open, participatory institution that welcomes user input and creativity. It is built on human connections and conversations. The organizational chart is flatter and team-based. The collections grow and thrive via user and staff involvement. Librarians are tapped in to user spaces and places online to interact, have presence and point the way. From this concept libraries should go one step ahead to make MOOC as its own service.

4.6 A framework for connecting MOOC to the library

Now academic libraries are trying to connect with MOOC. Academic libraries can easily provide MOOC as their library. They provide the link of courses provided by their own faculty and own member. They do not need any copy right law. But for the public library it must be needed. And if the MOOC providing institution is commercial it is difficult to add their content

to the library collection. Libraries have to count a lot amount of money to take them as one of their resource. In that case most of the libraries are step behind. Non-commercial MOOC provider can easily share their content with the library. In that case both must have to follow the copyright law. Libraries can provide copyright law for the MOOC providers. Libraries can also act as a advertiser.

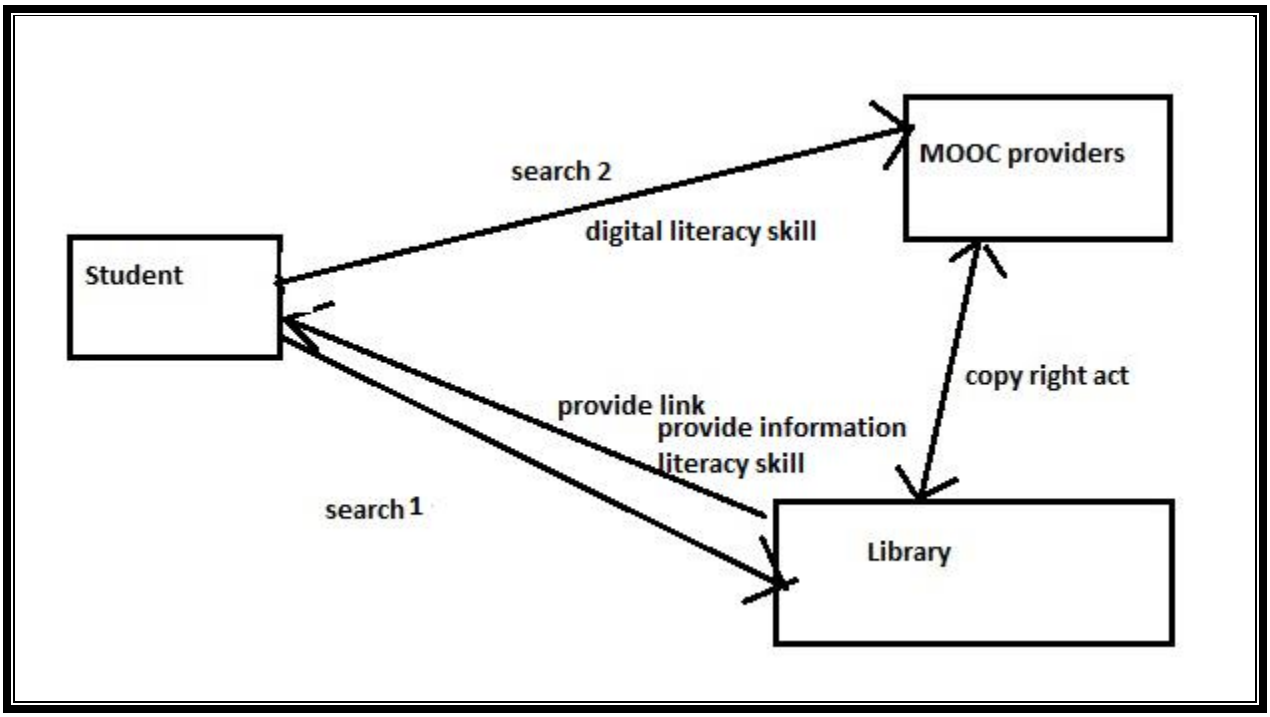

Figure 4.9 : A model plan for library

This figure shows how libraries and MOOC are related with each other. When a student want to get online educational content and do not know where to go or which will best suit for him. He can get help from the librarian. In that case a librarian must know all the things about MOOC. Here in that model search 1 process directly connects the students to let him/her know about MOOC and its content. Here library is working as a reference link provider. MOOC providers can give their content and lecture to the library to enrich library collection.

4.6.1 Opportunities of Library

Participants of MOOC are raising day by day. Students are taking part at a large number. Libraries have to play a role in this purpose. Experts called this age as a age of MOOC (New York Times, 2012). Therefore the librarian of this age must have the knowledge about MOOC.

4.6.1.1 Libraries have to provide information literacy skill

To get an online course one must need information literacy skill. In this regard library must have to play a great role. They can provide literacy skill and content (such as video, audio, classes, tutorial etc) about this purpose. American Library Association (ALA) is providing online lecture on their website. It helps student to get MOOC content.

4.6.1.2 Libraries have to provide link of different MOOC

Libraries have to provide link of different MOOC and MOOC providing institution to the library. When a student or user comes to the library, it must have to provide link to the user so that user can get his appropriate course.

4.6.1.3 Library can provide MOOC content:

As Stanford university library, library can provide MOOC content as its service. Here copy right law is a burning question. In this purpose academic libraries are one step ahead from public library.

4.6.1.4 Libraries have to maintain copyright act

Libraries must have to provide copy right act and maintain this act for the library. If MOOC providing institutions connect their content to the library, there must need a copyright act. And libraries have to play this role.

4.6.1.5 Library can create own MOOC

The most straightforward way for librarians to engage in MOOCs is to start a MOOC by its own. MOOCs are an excellent opportunity to expand education in information literacy, “a set

of abilities requiring individuals to 'recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information'" (ACRL, 2000, p. 2). Librarians at Columbia University provide a glimpse into the potential for such an initiative with a six-video course in library research offered via Udemy, while librarians participating in eduMOOC's Libraries and Librarians study group have crafted a space for discussion about the intersections of librarianship, online education, and information literacy (EduMOOC, n.d.; Udemy, 2012b).

4.7 Summary

The aim of this chapter is to give a guideline to connect the MOOC with the library. This chapter is an analysis of collected data from different library. In this chapter we built a model for the library to acquire MOOC as a service.

Chapter 5

Conclusion

5.1 Introduction

This final chapter summarizes the overall findings of this research, and sheds light on the major findings of the study to provide the answer of research questions which was designed and formulated in chapter 1. The rest of this chapter is structured as follows: The second section answers three subsidiary questions (SRQs) and one major research question (MRQ). The third section elucidates the theoretical implication of the research, particularly the theoretical process model for adopting MOOC and its content.

5.2 Answers to research questions

The findings of this study provide the answers of the research questions. We are now in position to go back to our research questions and provide answers to recalling three SRQs and one MRQ.

SRQ1: What are likely to be the potentialities of MOOC that could be used for the library?

In the 3rd chapter we have discussed about the potentialities of MOOC. New York Times had declared 2012 as the year of MOOC.(New york times,2012). Most of the famous university adopted this service and many are adopting. MOOC provides a great service to the education sector. It provides learning facility to all type of learners. As a result we see that 42% American, 29% European, 13% Australian and 12 % Asian student. (shown in figure 3.1)

Maximum MOOC providers are providing there content freely. It's a great opportunity for the learner (Shown in figure 3.2). For that anybody can learn MOOC courses. Many of the MOOC providers are providing library related courses (shown in 3.3.5) those

courses are vary much needed for the library. Any librarian can get this content. Library can make their service from that.

In figure 3.13 we showed that 44% female and 56% male are taking this content. Among them 58% are over 30 years old. It's a great potentiality of MOOC that it has no age limit. Anybody of any age can learn from their courses.

More than half (53%) of the student are full time employed person. It also meson that it gives chance to all those who want to learn. A student just need wish to be learn. It also giving chance to the employed person (like as full time librarian) to get a degree from famous University.

SRQ2: What are likely to be the suitable contents of MOOC and use those contents for enriching library services?

Based on the findings of the study, we found that many of the MOOC providers are providing library related course. From chapter 3 in 3.4 we showed two types of course MOOC provide, certificate and non-certificate course. From 3.6 we found different course content delivered from MOOC provider institution. All those courses are very much important for library service.

American Library Association (ALA) and library of congress are providing various non-certificate course for the library professional. Udacity, coursera , edx are providing certificate course on this purpose. Those online courses are very much important for Information and library studies. MOOC providers are providing MOOC into a various certificate and non-certificate course (shown in table 3.1). Information professionals easily can get those course and can learn a from MOOC content.

SRQ3: Are libraries ready to take MOOC as a library service?

Libraries can use MOOC as a library service. Are librarians of new world ready for this service? In this regard, 4th chapter shows that 90% of the librarians know about MOOC (Figure

4.6) and 75% librarians are interested about MOOC and ready to take MOOC as a library service. 25% librarians feel no interest about MOOC. As a result they are not ready to take MOOC as a library service.

Major Research Question (MRQ)

How to build a model for library utilizing MOOC?

Academic libraries can easily provide MOOC as their library. They provide the link of courses provided by their own faculty and own member. They do not need any copy-right law. But for the public library it must be needed. And if the MOOC providing institution is commercial it is difficult to add their content to the library collection. Libraries have to count a lot amount of money to take them as one of their resource. In that case most of the libraries are step behind. Non-commercial MOOC provider can easily share their content with the library. In that case both must have to follow the copyright law. Libraries can provide copyright law for the MOOC providers. Libraries can also act as an advertiser

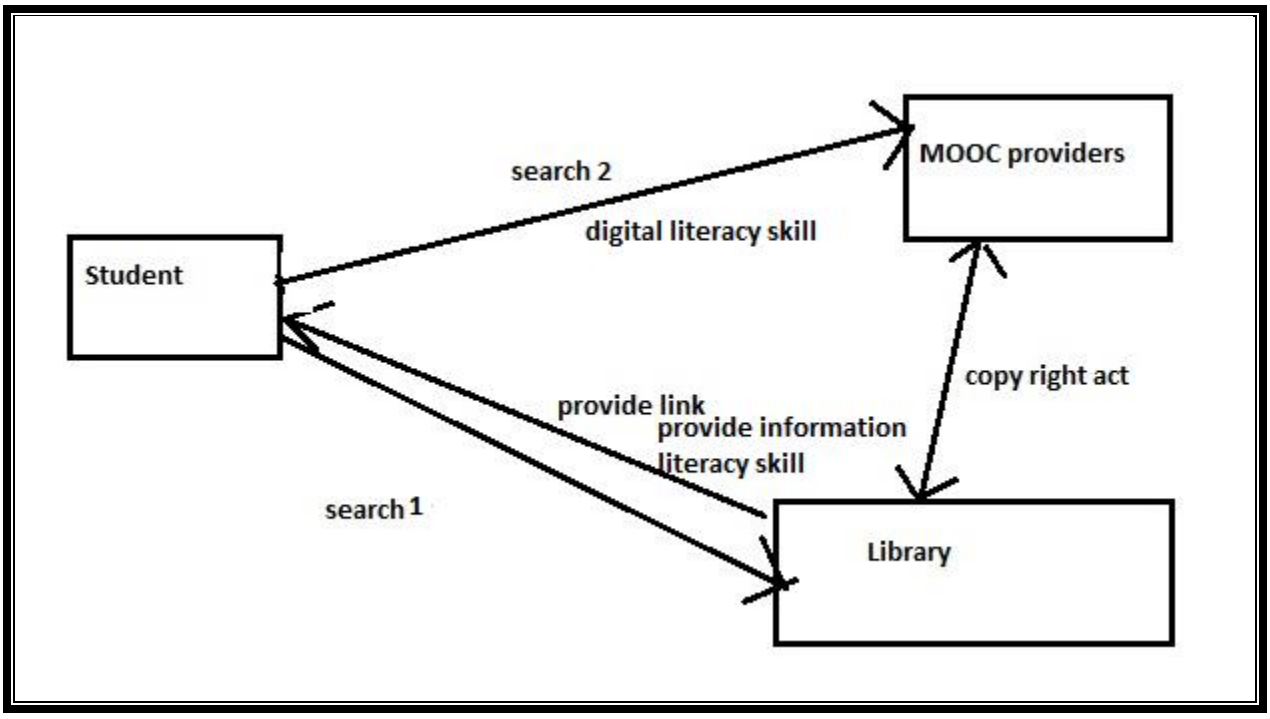

Figure 5.1 : A model plan for the Library

This Figure 5.1 shows how libraries and MOOC are related with each other. When a student want to get online educational content and do not know where to go or which will best suit for him. He can get help from the librarian. In that case a librarian must know all the things about MOOC. Here in that model search 1 process directly connects the students to let him/her know about MOOC and its content. Here library is working as a reference link provider. MOOC providers can give their content and lecture to the library to enrich library collection.

5.3 Practical Implication

The following practical implications and benefits can be expected from the study:

5.3.1 Implications for library and information science professionals

For LIS professionals, the findings of this study offer a clear concept of MOOC and its content. This qualitative analysis of different MOOC and its content will give them a clear concept of relation between library and MOOC. They can get a guide line to adopt this new form of education. The findings offer a set of guideline (in 4.6.1) to the librarian to serve as a good hyperlink librarian or a good reference librarian.

5.3.2 Implications for MOOC provider

The findings of this research provide a clear picture to the MOOC provider about the relation of library and MOOC providing institution. MOOC must need library knowledge to make a systematic arrangement of MOOC content. If MOOC contents are being linked with the library he service will become more efficient.

5.3.3 Implication for academics and students

The findings of this study also offer benefits to both academics and students. For academia and student they can get a proper guide line of MOOC and library. Those who are searching for MOOC can get a clear picture of current status of the MOOC providing institution.

5.4 Limitations of the Research

The main limitation of the research was that the scope of data was very limited. Due to insufficiency of time and fund, the collection of data was limited. Due to a short period of time we could not increase our respondent number.

5.5 Directions for future Research

Based on the experiences of this research, the directions for future research will be:

1. To extend the sample to incorporate other libraries and MOOC provide institutions
2. Future research may combine different methods, such as- content analysis, questionnaire, or case studies, as these methods can collect opinions of faculty members, LIS professionals and library user and MOOC provider.
3. To deeply investigate data for a long period of time

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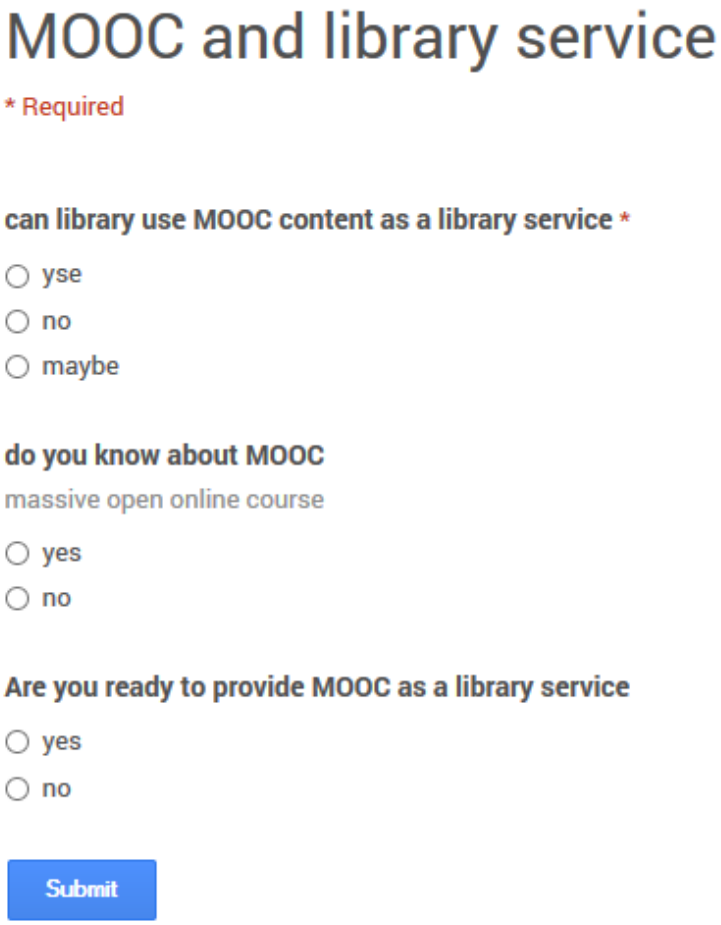
Appendix

A short online questionnaire for the librarian and information professionals.



MOOC and library service

* Required

can library use MOOC content as a library service *

- ○ yse
- ○ no
- ○ maybe

do you know about MOOC

massive open online course

- ○ yes
- ○ no

Are you ready to provide MOOC as a library service

- ○ yes
- ○ no

Submit

Thank you very much for your participation and cooperation