

## Combining MOOCs with Social Media: An effective way of imparting LIS education in India

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### Abstract:

*The study explored opportunities that MOOCs linked to SM platforms can offer to LIS schools in India, and tried to put forth the perspective of LIS fraternity towards this idea. To realise said objective, 2 online surveys were conducted. First one involved surveying the websites of LIS schools, organisations and networks; and another used a structured web questionnaire as instrument for data collection. The study revealed that LIS faculty across India in coordination with INFLIBNET has developed/developing LIS-MOOCs, provided through “SWAYAM portal only”. SWAYAM is having its mobile app, facebook and twitter account. The study also reveals that Indian LIS fraternity have positive attitude towards using SM as a MOOC tool. They feel that it will create collaborative learning atmosphere, more engaging and motivating, providing learner a more comfortable platform for sharing thoughts, clearing their doubts and enhanced opportunity to get feedback and support from the participants and the course instructor. Although some respondents believe there might be reduced face-to-face communication and distraction from regular courses. At present the adoption of this learning method is at a slow pace but the policy initiatives proposed by UGC for SWAYAM MOOCs will definitely catalyse the process. The reported findings will encourage development of cMOOCs in India.*

**Keywords:** MOOCs, Social Media, Online Learning, LIS education, India.

### Introduction

Education is a crucial element for the progress of any country. In the country like India, there are several challenges to quality education, viz. lack of quality education resources. The solution to this lies in ICT and developing course modules for MOOCs. MOOCs provide mechanisms to reach a large number of learners at any stage in their education or professional development. They have made the learning process flexible and brought tremendous hope for the unprivileged people deprived of formal education. MOOCs can help ameliorate the problems of faculty shortage, scarcity of funds and limited infrastructure.

MHRD launched an indigenous platform of learning named SWAYAM which stands for Study Web of Active Learning by Young and Aspiring Minds for hosting Indian version of MOOCs in 2014. These MOOCs support the learning process, without the limitations of one being employed or from a different domain of knowledge or the fact that one wishes to obtain certain soft skills or update knowledge. SWAYAM is providing MOOCs in the field of Library and Information Science (LIS) as well. One significant reason for the relevance of LIS-MOOCs is being the variety of courses this field has to offer, running from Digital Libraries, Knowledge Management, Digital preservation, to Website designing, Human-Computer Interaction, and Information Architecture. It is difficult for a single university to provide all the courses with up-to-date infrastructure facilities. MOOCs, if linked with Social Media like Youtube, Facebook, Twitter, ResearchGate can give this learning paradigm shift, a new edge. Because then the visibility of these courses will increase in manifolds as each and every student is having account on either one of these social media platforms at least.

This paper aims to explore the opportunities that MOOCs linked to social media platforms can offer to LIS schools in developing countries to foster collaboration and help overcome major hindrances to quality education. This study also shed light on the perception of LIS professionals towards MOOCs and combining MOOCs with social media.

## **Literature Review**

### **MOOCs**

Technology Enhanced learning is growing rapidly. MOOC is one example of how technology is transforming and enhancing education these days. MOOCs can address the need of quality for people from developing economies. MOOC course organizations also claim that 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).

Pouzevara and Horn (2016) stated that discussion on MOOCs so far, highlight the potential for individuals from around the world to access coursework from elite universities and globally recognized subject matter experts without fees (Pouzevara and Horn 2016; Pujar and Tadasad 2016). (Gore 2014) defined MOOC as “Massive: Not required to bother on number of registration (with enrolment in some cases exceeding 100,000 students); Open: By exploiting the broadly available Open Educational Resources(OER) and allows open registration (however various MOOCs have pre-requisites, and for fee registrations, examinations or certificates of completion); Online: not required the physical face-to-face participation and attendance; and Course: The concept of a pedagogically designed learning journey”. “MOOCs pedagogy varies widely. There can be two types of MOOCs: cMOOCs and xMOOCs. cMOOCs are student-centered, emphasises on “connected” learning through social networking and knowledge co-creation. On the other hand, xMOOCs are instructor-centric courses that follow an instructivist learning model in which content is largely delivered through video lecture and reading materials, and feedback is given through computer-based quizzes and informal discussion groups (Pouzevara and Horn,2016).

Nowadays, MOOCs mostly include videos, online readings, and problem sets” (Pouzevara and Horn 2016; Martin 2012;McAuley, Stewart, Siemens and Cormier, 2010) with interactive discussion forums, but there is little scope for social activities (Saijing et.al, 2015).In a

MOOC, the instruction takes place where students are, removing geographical limitations (Pujar and Tadasad, 2016; Michalko, 2013; deWaard et.al., 2011) and there are no prerequisites to join a MOOC. They are presented over a set length of time, just as regular classes are, and follow a set syllabus.” (Martin, 2012). “MOOC participants are diverse when it comes to age, gender and dispersion across the globe (DeWaard et.al, 2011), thus MOOC builds on the active engagement of several hundred to several thousand “students” (McAuley, Stewart, Siemens, & Cormier, 2010) and thus provide opportunities for learners to network with other professionals in their field across the globe (Pouzevara, Horn 2016) and leading to creation of diverse learning environment and innovative uses of MOOCs (Kizilcec and Schneider, 2015).

But as every technology comes with some drawbacks, so is the case with MOOCs. “MOOC are graded using digital auto-graders, meaning that all assignments submitted in these classes would have to be multiple choice (Creed-Dikeogu and Clark (2013), reduced face-to-face interaction (Maharaj, 2012) Digital literacy, language, and culture (Pouzevara and Horn (2016) also pose barriers to participation in MOOCs”.

### **MOOCs and Social Media**

Application of Social Media to MOOCs can enhance learning outcomes. Online communities can be created on social media facilitating collaboration and participation among users (Bicen, 2017). It is emphasised to combine MOOCs with Social media platforms as it is reflected in certain studies that although MOOC learning management systems and social media platforms both enable file sharing, collaboration and discussion yet “social media platforms tend to be more popular with students for peer-to-peer interactions” (Veletsianos and Navarrete, 2012). In MOOCs, it is seen that the drop-out rate is high and engagement and motivation tend to be low, Social Media can be a remedy. The review of literature from 2013 to present is presented below:

Purser, Towndrow, and Aranguiz, (2013) reported that as participants in the MOOC “E-Learning and Digital Cultures” from the University of Edinburgh, offered on the Coursera platform in January 2013, the authors experienced deep and significant learning through social media. They engaged in peer-to-peer learning and were benefitted with something very fluid, open, student-initiated.

Saadatmand and Kumpulainen (2014) focused on participants' experiences and perceived value of participation in cMOOCs. The results suggested that participants find creating networks and developing professional connections advantageous. Kravvaris, Kermanidis and Ntanis (2014) conducted a survey on MOOCs from Coursera and explored how they link with social media. The findings revealed that the courses providing information about the assignments and the exams are mostly recommended on social media. Furthermore, they proved the correlation among the three largest social networks: Facebook, Google+, and Twitter, based on the data on information pages using statistical and machine learning methods.

Salmon et.al (2015) explored the benefits of using social media (Facebook and Twitter) in a MOOC developed for educators. It was identified that, some participants appreciated the networking and knowledge-sharing opportunities, others perceived that engaging on social media is a waste of their time. Authors recommended the usage of social media for educational purposes in formal online learning settings and MOOCs.

Saijing et.al. (2016) reported that high dropout rate is major issue and social media is used to improve student engagement and retention. Study reflected that students show higher engagement and retention in social media than in MOOC forums.

Bicen (2017) reported that the participants expressed that they had follow their social media accounts for obtaining information from pages. Participants preferred social media rather than obtaining information from pages related to MOOCs and they also used their social media accounts for transferring the information. Velatsianos (2017) used data mining techniques to retrieve a large-scale Twitter data set from 116 MOOCs with course-dedicated hashtags. Author concluded that findings suggested that learners did not find Twitter to be a useful space and demonstrates the need for greater intentionality in integrating social media into MOOCs.

So, it can be concluded from the literature review that while some students found combining MOOC with social media as enriched learning experience (Purser, Towndrow, and Aranguiz, 2013), others reported it as a waste of time (Salmon et.al 2015). The high drop-out rate and retention issue is extremely salient and MOOCs are integrating Social Media for improving student engagement and retention (Saijing et.al. 2016). Literature shows that the MOOC instructors have been linking their MOOCs to Social Media tools like Facebook, Twitter, Google+ etc, and the students have been using Social media accounts to obtain and transfer information on MOOCs, tweet and hashtag” (Kravvaris, Kermanidis and Ntanis 2014; Salmon et.al.,2015;Bicen 2017). In this paper, we aim to investigate the role of social media in the context of MOOCs. There is a large body of scholarly work on MOOCs and digital education, with little literature on use of social media in MOOCs. This paper is an attempt to contribute to this gap of knowledge and explore the opportunities the MOOCs linked to social media platforms can offer to LIS schools in developing countries. This study also shed light on the perspective of LIS fraternity on MOOCs and providing MOOCs through social media for imparting LIS education in India. The study put forward the potential of combining MOOCs with social Media platforms, like Facebook, YouTube, Research gate to foster collaboration in imparting LIS education.

## **Objectives**

The purpose of this study was to identify the Indian LIS-MOOCs and the extent to which these MOOCs have utilized the Social Media tools. The study also tried to explore the perspective of LIS fraternity towards the opportunities that MOOCs linked to Social Media platforms can offer to us. In view of this following objectives were framed:

- To find out the Indian LIS-MOOCs and their presence on Social Media.
- To assess the awareness level and readiness of LIS professionals to take MOOCs.
- To understand the perspective of LIS fraternity towards LIS-MOOCs linked to social media platforms for learning LIS in developing countries.

## **Methodology**

A desk-based study approach with quantitative methodology and descriptive statistics is used for this study. The study was conducted in two phases. In the first phase an online survey was conducted to find out the Indian LIS-MOOCs and LIS-MOOCs combined with social media. For this purpose the researcher visited the websites of all the LIS schools, government

organizations and networks. In the second phase, another online survey was conducted with the attempt to study the perception of Indian LIS professionals towards MOOCs and combining MOOCs with social media. A Structured Web Questionnaire was prepared by consulting studies of Bisen(2017), Sawant(2016) and Pujar and Tadasad (2017)for collecting data in this phase. It had 05 sections, personal details, Awareness on LIS-MOOCs, Learning through LIS-MOOCs, Perception towards LIS-MOOCs, Perception towards LIS-MOOCs and Social media, comprising of 17 Questions, out of which 13 were multiple choice questions, 02 open ended question and 02 questions of 5 point Likert scale type. The Cronbach's alpha reliability test number of the questionnaire has been found as 0.877 through SPSS. The questionnaire was distributed through email as Google form. The sample included both the faculty members (permanent and part-time) and library professionals working in academic and public libraries only, making sample of 587. Out of 487, 168 emails were bounced. Out of 419, 28 incomplete and 136 completely filled questionnaires were received, eliciting the response rate as 32.4 percent.

## **Findings**

### ***Objective 1: to find out the Indian LIS-MOOCs and their presence on Social Media.***

To realize this objective, the researcher conducted an online survey of all the websites of all the departments of library sciences in India, including, central, state and private universities; government organisations and networks. It was found that faculties at the various LIS department in India are involved in developing modules for various LIS-MOOCs which are provided through SWAYAM platform. Study Web of Active Learning by Young and Aspiring Minds (SWAYAM)is hosting Indian MOOCs since 2014. All LIS-MOOCs are free and in English language. There is SWAYAM app that can be downloaded from Google Playstore, Appstore and windows on mobile devices. SWAYAM's official Twitter account @SWAYAMMHRD, #SWAYAM and Facebook page is also very popular. But presently these accounts are used for advertising only. Steps should be taken to somehow combine MOOCs offered on SWAYAM with these platforms for increasing student engagement and retention (Saijini et.al.,2016). Table 1 provides list of LIS-MOOCs at the SWAYAM platform.

**Table 1: LIS-MOOCs at SWAYAM platform**

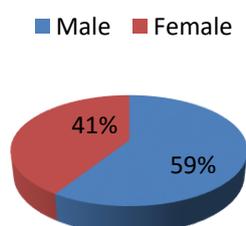
S.No.	Name of the course	Created by
01	Information Storage and Retrieval	Indian Statistical Institute
02	Information and Communication Technology for Libraries	INFLIBNET
03	Scientometrics	INFLIBNET
04	Management of Libraries and Information Centres & Knowledge Centres	INFLIBNET
05	Information Sources and Library Services	Indira Gandhi National Open University
06	Knowledge Society	INFLIBNET
07	Digital Library	INFLIBNET
08	Library Automation and Digitisation	Indira Gandhi National Open University
09	Document Processing and Organisation	Indira Gandhi National Open University
10	Database and Content Organisation	Indira Gandhi National Open University
11.	Information Sources System and Services	INFLIBNET
12	Advertising and Public relations	JamiaMiliaIslamia

**Objective 2: to assess the awareness level and readiness of LIS professionals to take MOOCs.**

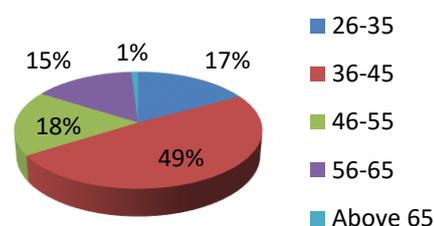
Two sections were dedicated in the questionnaire to help realise this objective. The results are presented below.

*Demographic details*

**Figure 1 : Gender**

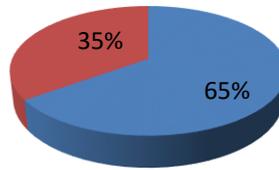


**Figure 2 : Age**



**Figure 3 : Category of Library Professional**

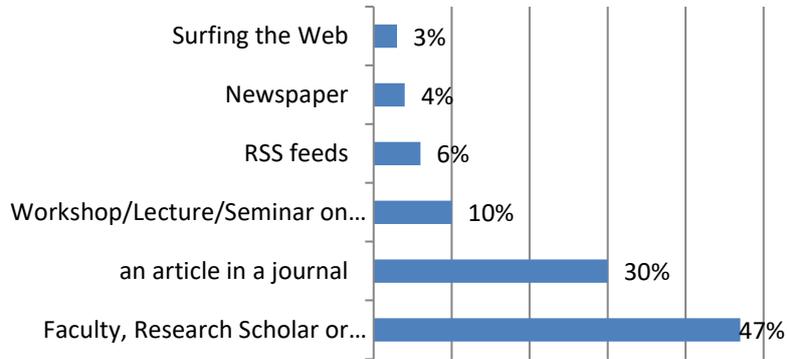
■ LIS faculty ■ Professionals working in libraries



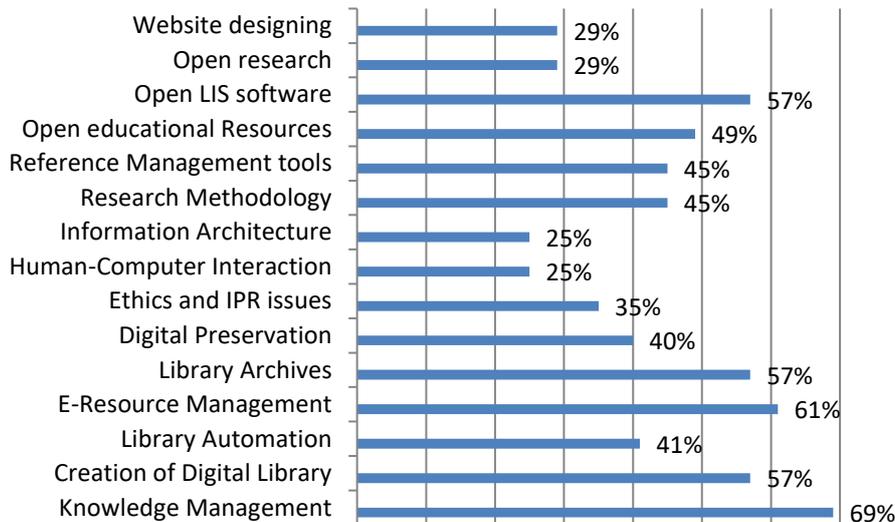
The Figure-1 shows that 59% male and 41% female responses were received. Figure-2 depicts that the maximum number of respondents belonged to age group (36-45) years with 49%.As per Figure-3, 65% responses were received from LIS faculty and 35% from professionals working in libraries.

*Awareness to LIS-MOOCs*

**Figure 4: Familiarity to MOOCs**

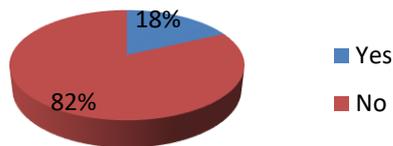


**Figure 5: LIS-MOOCs interested to study in future**

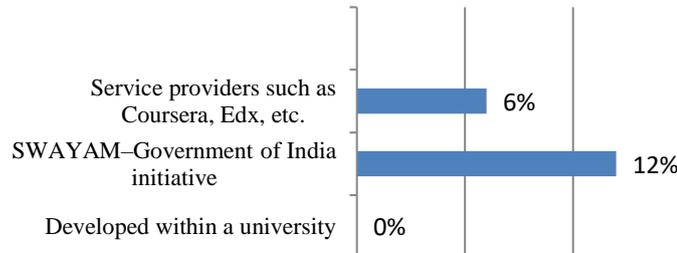


It was found that all respondents were aware of MOOCs, majority of them got to know from their faculty, research scholar or colleagues (see figure-4). Respondents showed keen interest to study MOOCs on Knowledge Management and E-Resource Management (see figure-5).  
*Learning through LIS-MOOCs*

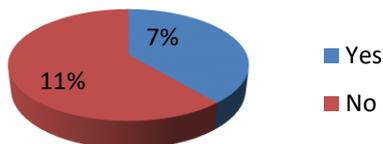
**Figure 6: Enrollment to LIS-MOOC**



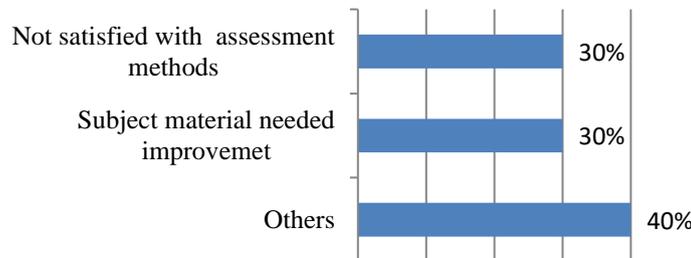
**Figure 7 : LIS-MOOC Platform**



**Figure 8 : Percentage of Drop-outs from LIS-MOOCs**



**Figure 9 : Reason to discontinue LIS-MOOC**



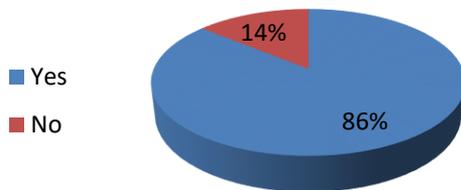
Only 18.38% participants enrolled to LIS-MOOC (see Figure-6), with approx. 12% on SWAYAM and 6% through service providers such as Coursera, Edx, etc. (see Figure-7) with majority of MOOCs being free. When asked if they dropped out of some MOOC, it was found that 7.35% participants discontinued LIS-MOOC (see Figure-8) reporting subject material needed improvement, time constraints as major reasons(see Figure-9). Table-2 presents the MOOCs taken by participants.

**Table 2: LIS-MOOCs completed by LIS professionals**

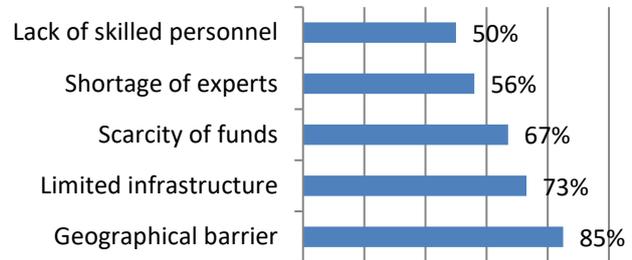
Big Data
Data Mining
Digital Library
Digging Deeper
Library Automation and networking
Metadata
Research and Data Management
Research Methodology
Semantic Web and Linked Data
SQL fundamentals
Text Mining

*Perception towards LIS-MOOCs*

**Figure 10: Potential of LIS-MOOCs to complement the traditional form of LIS education**

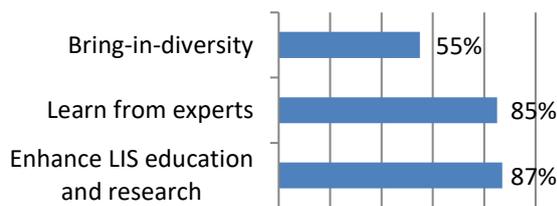


**Figure 11: LIS-MOOCs potential to address the challenges to quality education**

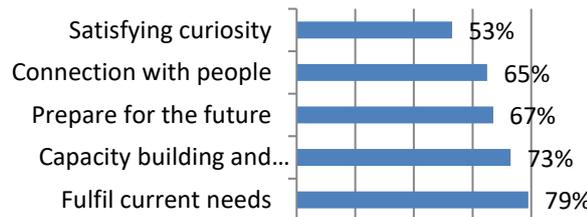


As depicted in Figure-10, 86% participants feel MOOCs can complement the traditional form of LIS education imparted in India and find MOOCs as remedy to geographical barrier(85%), limited infrastructure(73%), scarcity of funds(67%), shortage of teachers(56%) and lack of skilled personnel(50%) (see Figure-11).

**Figure 12: LIS-MOOCs foster collaboration**



**Figure 13: Motivational Factors**



Respondents feel LIS-MOOCs have the potential to foster collaboration, as 87% feel MOOCs can enhance the education and research in LIS, 85% medium to learn from experts and 55% believe MOOCs can bring in diversity as shown in Figure-12. Not only this, Respondents understand that people are motivated towards LIS-MOOCs as they provide the opportunity to fulfil current needs with 79% responses, followed by capacity building and acquiring knowledge with 73%, 67% preparing for the future, 65% for connecting with people and 53% satisfying curiosity, as shown in Figure-13.

***Objective 3: to understand the perception of LIS professionals towards LIS-MOOCs linked to social media platforms.***

To realise this objective, two questions of 5-point Likert type and two multiple choice questions were asked. Likert type scale of STRONGLY AGREE 5, AGREE 4, NEUTRAL 3, DISAGREE 2, and STRONGLY DISAGREE 1 was used, and the scores were calculated.

*Opinion regarding use of social media as a MOOC tool*

<b>Statement</b>	<b>Score</b>	<b>Rank</b>
I follow the educational pages on social media for my Self-development.	536	1
It is easier to follow educational pages on social media.	514	2
The social media is both my information obtaining and transfer tool.	506	3
I would like to access to MOOCs through social media	502	4
Watching educational videos for my daily life on through social media is informative	484	5
The duration of videos that I watch on social media is important.	478	6
I read the written materials with interest that I access on social media.	454	7
I would like to participate to the certificate programs via social media.	442	8
I like commenting on the posts published on social media.	442	8
Instead of becoming a member of pages about MOOCs, I prefer obtaining information from pages on my social media account.	378	9

The results show that the respondents follow educational pages on social media for self-development, take it as a good tool for obtaining and transfer of information and would like to access MOOCs through Social media, but they understand this fact that becoming member of pages about MOOCs is also necessary, they can't simple rely on obtaining information on MOOCs from pages on their social media accounts and thus was ranked lowest.

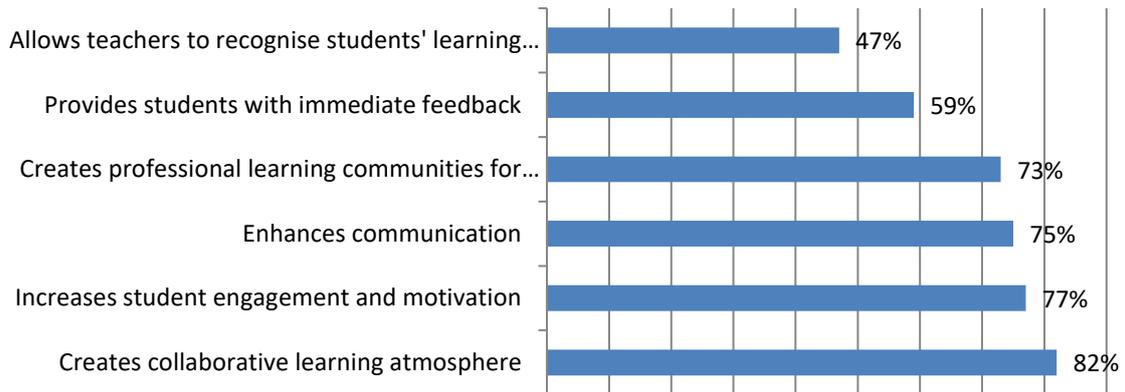
*Perception of learning in LIS-MOOCs through Social Media*

<b>Statement</b>	<b>Score</b>	<b>Rank</b>
It will encourage learners to use a range of Web 2.0 tools.	597	1
It will help participants develop personal learning environment (PLE).	579	2
This will encourage creation and involvement in online learning networks.	573	3
Learners' will get the added opportunity to receive support and encouragements from the course instructor.	561	4
This will develop learners' technological competency.	554	5
Learners' will receive enhanced opportunity to get feedback, support, and comments from the participants of the course.	548	6
This will improve self-directed learning.	544	7
It will provide learners' a more comfortable platform for sharing thoughts and artefacts.	542	8
This will be engaging and motivating.	542	8
Learning in MOOCs would be frustrating and confusing.	320	9

The results indicate that majority of respondents are aware of the positives of learning LIS-MOOCs through SM. They believe it will encourage use of a range of Web 2.0 tools, develop personal learning environment, yet few feel that it might get frustrating and confusing.

*Perceived advantages of combining LIS-MOOCs with Social Media*

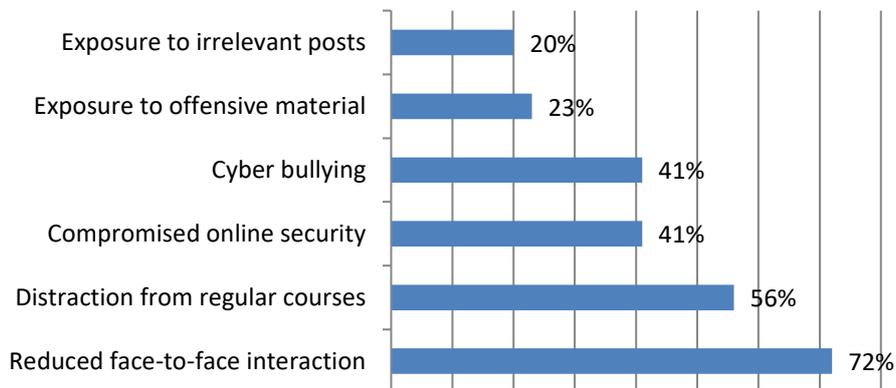
**Figure 14: Advantage of combining LIS-MOOCs with Social Media**



The respondents find delivery of LIS-MOOCs through Social Media advantageous as majority feels they create collaborative learning atmosphere (82%) and increases student engagement and motivation (77%) as depicted in Figure-14.

*Perceived drawbacks of combining LIS-MOOCs with Social Media*

**Figure 15: Drawbacks of combining LIS-MOOCs with Social Media**



The major drawbacks of combining LIS-MOOCs through social media as perceived by LIS professionals are reduced face to face interaction, distraction from regular courses compromised online security and cyber bullying.

*Any further comments on MOOCs*

The respondents suggested that flipped classroom MOOCs approach and blended teaching and learning system should be adopted. They shared their experience of learning in MOOCs, some liked the learning material, other the systematic approach of the instructor during the MOOC which was engaging enough for self directed learning. Some respondents even emphasised on the need to provide proper ICT infrastructure to LIS-schools for developing MOOCs.

## Conclusion

The findings indicate that presently there are 12 Indian LIS-MOOCs, developed by faculty from LIS departments all over India, and are provided through SWAYAM platform. SWAYAM is having its mobile apps, Facebook and Twitter account but currently these are used for advertising SWAYAM-MOOCs and reaching the possible participants of the future.

Further, the results indicated that LIS professionals are familiar with MOOCs and are interested to take LIS-MOOCs. Some respondents have taken LIS-MOOC on topics like Big data, Metadata and Digging deeper. They enrolled to these LIS-MOOCs either from SWAYAM or through service providers like Edx and coursera. Some even discontinued in-between due to time constraints or because they were not satisfied with the learning material and the assessment method, as mostly assignments submitted in MOOCs are multiple choice (Creed-Dikeogu and Clark, 2013) and there is less scope for students to assess themselves.

Majority of LIS professionals feel that MOOCs can complement the traditional form of LIS education, and understand that MOOCs are remedy to geographical barrier, limited infrastructure, scarcity of funds, and shortage of teachers and skilled personnel, that are major issues in providing quality education in developing countries, India being one of them. Respondents feel LIS-MOOCs have the potential to foster collaboration not only among Indian LIS schools, faculties and students but also among Indian LIS schools and LIS schools abroad. They have the potential to enhance the level of LIS education and research, provide medium to learn from experts world-wide and can bring in diversity. Similar positives were reported by Clobrige (2012) as well stating that MOOCs can help eliminate geographic and economic barriers to education, allowing students' access to multiple learning opportunities. Respondents believe that people are motivated towards LIS-MOOCs as they provide the opportunity to fulfil current needs, capacity building and acquiring knowledge, preparing for the future, connecting with people and satisfying curiosity.

LIS professionals have a positive attitude towards combining MOOCs with social media. They follow educational pages on social media for self-development, find it easier to follow such pages, a good tool for obtaining and sharing information and would like to access MOOCs through Social media. They are little ignorant towards the duration of videos they watch on social media and disagree with the idea of studying MOOC certificate courses through social media. Moreover they understand the fact that becoming member of pages about MOOCs is also necessary as they can't simply rely on obtaining information on MOOCs from pages on their social media accounts, opposite to what was reported by Bicen (2017). Majority of respondents are aware of the positives of combining MOOCs with social media. They agreed that it will encourage use of a range of Web 2.0 tools, develop personal learning environment, create online learning networks, providing learners' receive added support and feedback from instructor and participants of the course and mostly disagree that this will become frustrating and confusing. In addition to this, they believe it create collaborative learning atmosphere, increase student engagement and motivation, enhance communication. Siemens and Conole (2011) too stated that "new technologies like social and mobile technologies influence information creation and sharing, and how people socialize hold promise for adoption in education". The major drawbacks as perceived by LIS professionals are reduced face to face interaction, distraction from regular courses and exposure to irrelevant and offensive material.

The positives of MOOCs combined with social media will encourage LIS students to take MOOCs, the LIS educators to exploit them as a very effective and efficient tool for collaboration and the LIS schools to encourage development of cMOOCs in India.

### **Acknowledgments**

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