MOOCs as a means of continuing professional development for LIS educators in India

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Abstract:

The research study explored how massive open online courses (MOOCs), can be used as continuing professional development and to what extent the concept of MOOC is penetrated & utilized by Indian LIS educators. The descriptive survey research design using structured web questionnaire as instrument for data collection. The study found that MOOCs may offer LIS educators an opportunity to upgrade their skills or further their education. It throws light on their perceptions of the benefits and challenges of adoption of MOOCs for continuing professional development. The major benefits of MOOCs were that they help in professional and personal learning. On the other hand, the major professional challenges were basically not able to spend time to watch lectures and participate in online discussions, quizzes, and assignments, whereas half of the respondents was not able to integrate MOOC schedule into their existing work and personal schedule. The outcomes of present research will motivate LIS educators to overcome the challenges, and undertake and design MOOCs in LIS.

Keywords: MOOCs, India, LIS education, LIS teachers, continuing professional development

Introduction

MOOCs provide a splendid opportunity to fulfil a desire to get educated by every person regardless of he/she is from developed, developing and under developed nations. Interestingly to take up MOOCs normally doesn't require basic qualification, no age limit, free/minimal cost and no geographical boundaries. There might be language barrier as most of the courses are offered in English.

Massively Open Online Courses (MOOCs) defined as open and free courses by some of the world's leading universities, organizations, welfare trusts, governments and industry experts. Majority of the MOOCs offered by universities are the same or very similar to courses being taught using classroom method at their campuses and for much higher tuition prices. Most MOOCs offer a free Certificate of Completion for those who successfully complete the MOOC (Verified Certificate MOOCs, 2014). No doubt there are paid versions too.

MOOCs do not help to obtain a certificate/degree but they provide a platform for continuing professional development for those who are established in their careers. One can have experience of upgrading professional and non professional skills without physically going and attending workshops / training programs but virtually at their own pace.

The first MOOCs, started in 2011 at Stanford University which got huge response of 160,000 students that enrolled. There were less than 10 MOOCs existed worldwide at that time. According to December 2015 statistics, there were more than 500 universities offered almost 4200+ courses. The total number of students who signed up for at least one course had crossed 35 million—up from an estimated 16-18 million in 2014. MOOCs are now available in all subjects such as Arts and Humanities, Business, Computer/Data Science, Life Sciences, Math and Logic, Physical Science and Engineering, Social Science, Language Learning, Health & Medicine, Personal Development (Coursera.org). These are offered in 16 major languages, the English, Spanish and French being the predominant languages the courses are offered (Shah, 2015).

In library science profession first MOOC was introduced in 2013 by iSchool, Syracuse University in form of a course called 'New Librarianship'. Thereafter many prestigious library schools as well as libraries started offering online courses especially tailored for librarians to upgrade their skills or further education. At present there are 20+ free online courses and some 10+ paid courses available by these (Pujar & Tadasad, 2015).

Review of Literature
Wu (2013) reported on the current development of Massive Open Online Courses (MOOCs), the strengths and weaknesses of MOOCs, and possible relationships between academic libraries and MOOCs. Author recommended that librarians stay informed of the latest developments and get involved in the MOOC movement on an institutional as well as personal level. Similarly there were few articles reported the discussion of massive open online courses (MOOCs) and the library's involvement in this worldwide movement (Cervone, 2015; Massis, 2013; Ziegenfuss & Furse, 2016).

Although there is limited research studies conducted about MOOCs. The two series of studies were conducted by Harvard University in collaboration with MIT. The first series of studies reported (Ho et al., 2014; Reich et al., 2014; Seaton et al., 2014) the backgrounds and behaviors of course registrants and highlighted pedagogical and technological innovations that serve as resources for online, residential, and blended teaching. The second series of studies (Ho, et al 2015) revisited these earlier findings and reported that growth is steady in overall and multiple-course participation in HarvardX and MITx. Participation initially declines in repeated courses, then stabilizes. About 39% identified as a past or present teacher, and 21% of these teachers reported teaching in the topic area of the course in which they were participating.

A research study of students enrolled in at least one of the University of Pennsylvania's 32 MOOCs offered on the Coursera suggested that over two-thirds of those taking MOOCs self-identified as employees. Moreover, while just 13% were taking MOOCs to gain knowledge to earn a degree, 44% were taking them to gain specific skills to do their job better and 17% were doing so to gain specific skills to get a job. These findings suggested that a majority of students were taking MOOCs mainly to prepare for or advancing their current jobs (Christensen et al., 2013). **To** explore the current and future roles that MOOCs can play with employers, Duke University, in partnership with RTI International, surveyed employers and

interviewed about their awareness of MOOCs and their receptivity to using MOOCs in recruiting, hiring, and professional development. Results showed that though awareness of MOOCs was relatively low but higher percentage (83%) were using, considering using, or could see their organization using MOOCs for professional development. Interviews with employers suggested that obtaining evidence about the quality of MOOCs, including the long-term learning and work performance gains that employees accrue from taking them, would increase employers' use of MOOCs not just in professional development but also in recruiting and hiring (Radford et al (2014).

Lauver, Drum, Windsor & Miller (2013) examined why students choose to or choose not to take and their perspectives of online courses, by obtaining responses from both students who had and had not taken online classes. It was found that importance of flexibility and convenience in online courses was the main reason of taking online courses by students whereas cost of course influenced students to not to take the online courses. Wintrup, Wakefield & Davis (2015) reported in their research report, commissioned by the Higher Education Academy (HEA), to research the two MOOCs developed by the University of Southampton with the aim of exploring the type and degree of engagement reported by MOOC learners. The University of Southampton developed two new MOOCs, as a part of FutureLearn initiative that was launched by UK higher education in 2013. In the findings, learners reported that they were engaged in higher-order learning, which reflected mental activities such as memorising, evaluating, synthesising, analysing and applying information. It was reported that far fewer regularly interacted or collaborated with others. It was also observed that younger learners under 25 years of age, regardless of prior educational attainment, reported higher levels of engagement than others, although numbers were small.

In Indian context, Pujar & Tadasad (2015) conducted online preliminary survey to assess the views of LIS professionals in India about MOOCs. The study revealed that there is a great interest among Indian LIS professionals in further study through MOOCs, though the adoption of this learning method in Indian LIS schools is still a rarity.

Objectives
The purpose of this study was to explore how MOOCs can be used for continuing professional development and to what extent the concept of MOOC has penetrated among Indian LIS educators and is utilized by them. Considering these views, objectives were framed as follows:
- To examine the awareness of MOOCs among LIS educators in India
- To know their opinion about taking up MOOCs & overall conduct of MOOCs
- To recognize possible benefits and challenges in adapting MOOC for Continuing professional development

Research Methods
The descriptive survey research design was used, with a structured web questionnaire as the instrument for data collection. Questionnaire was consisted of 21 questions, out of 21, 19 were closed and two were open ended questions.

The questionnaire was send to five teachers for pilot testing. There were suggestions received from four teachers in case of three questions

First suggestion was in case of question where they were asked in which areas of LIS they would like to take up MOOC. Following six topics were suggested by two teachers:

Literature Search online/online Search Techniques Ethics and IPR issues, Open educational resources, Management issues such as Stock Verification, Library Policies, Library Audit, and Development of LIS journal/magazine using Open Journal System.

The second suggestion was in case of question where it was asked The MOOC which you did was free or paid. Teacher suggested that it should be asked also to those teachers who are currently doing MOOC. So the question was changed from 'The MOOC which you did was Free/Paid' to 'The MOOC which you did / undertaking is Free/Paid'.

The third suggestion was in case of question If you have not yet undertaken any MOOC, what is the reason? Teacher asked to add option 'I do not feel it is necessary'. So this option was added along with others.

Permanent faculty members, part-time/full time visiting faculty members, retired teachers and full time PhD scholars were included in the sample. There are 95 universities in India which offer LIS courses. Researcher visited web page of LIS schools and found email ids of 326 LIS teachers teaching in these universities. Another 20 emails ids of retired/guest lecturers/full time PhD scholars were found out by contacting teachers of various universities, making sample of 346. Out of 346 approximately 42 emails were bounced. Out of 304, 102 teachers responded to the questionnaire. But two filled up questionnaires were invalid, so making total response rate 34.60.

Limitations for data collection and representation
The email list of LIS educators is not exhaustive. The study was conducted in month of May which is usually a summer vacation time for LIS educators so could not get maximum responses to the study.
Although the study could get valuable data about perception of LIS educators about MOOCs but there were few limitation of the study. In case of some questions responses were incomplete. MOOCs use is a new phenomenon for Indian LIS educators so it was not possible to do evaluation or rating of MOOCs. As well as present research study cannot be compared and contrasted with other research studies because mostly these studies focussed on those who have enrolled or completed MOOCs.

Findings
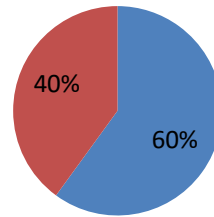General information about respondents is presented in form figures no. 1, 2, 3 & 4.

Fig No 1: Age Group

Less than 30   31-45
46-60   61 and above
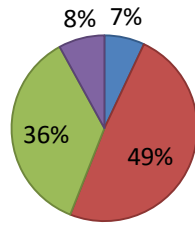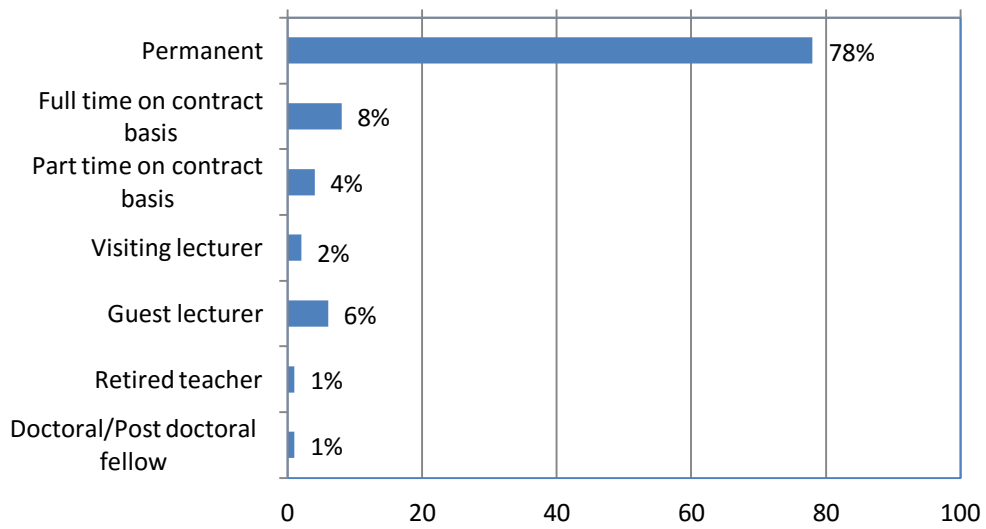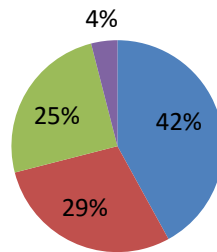

Fig No 2: Gender

Male   Female
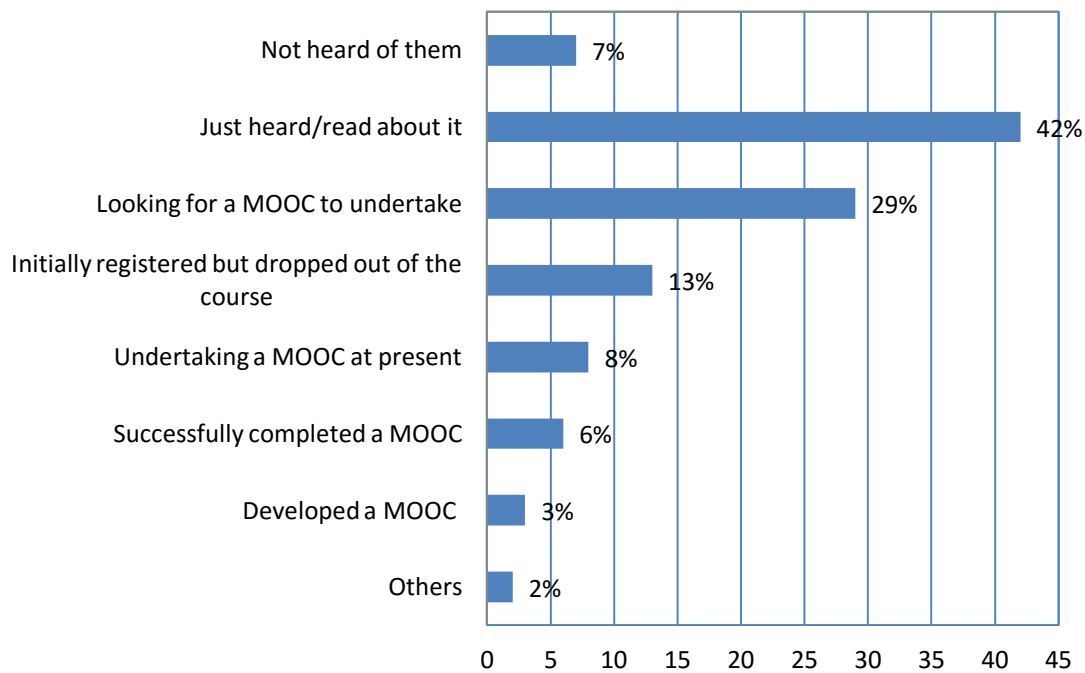

Fig No 3: Teaching Experience

1-10 years   11-20 years
21-30 years   More than 30 years


Fig No 4: Nature of appointment

What is your level of familiarity with MOOCs (Massive Open Online Courses)?

Fig No 5: Familiarity with MOOCs

It was observed that almost half of the respondents were knowing about MOOCs. Just 6% respondents had successfully completed MOOCs and 29% respondents were looking for a MOOC to undertake. In 'Other's one respondent mentioned that she suggested MOOC model for LIS in her PhD another mentioned that he was completely aware of different types of MOOCs.

Have you heard of following MOOC platforms
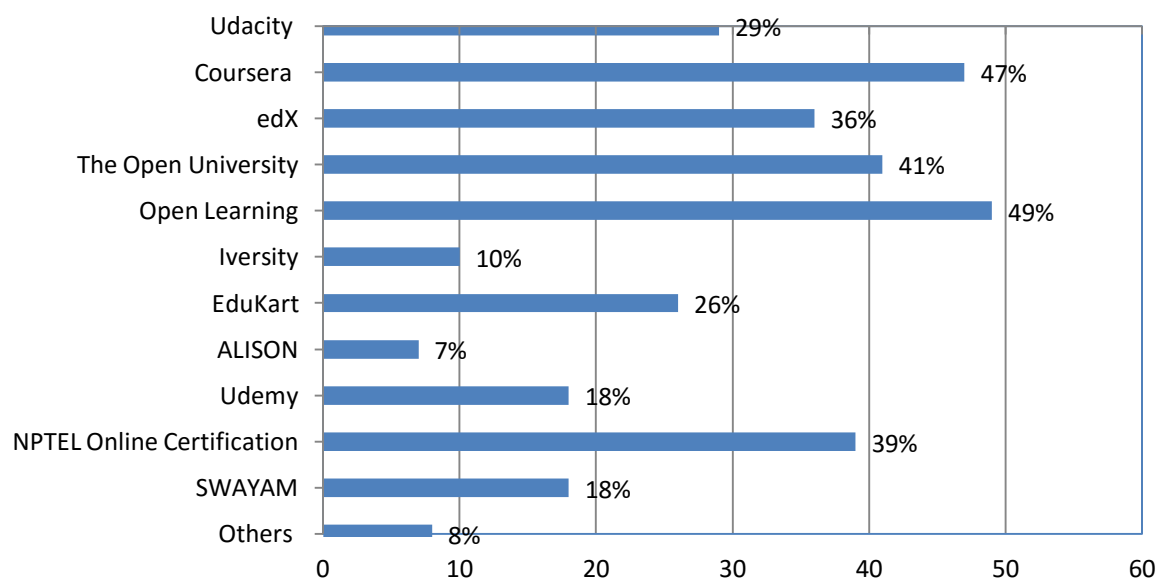
Fig No 6: Familiarity with MOOC Platforms

It was observed that Open Learning and Coursera were popular among LIS educators. Hopefully Indian initiative i.e. NPTEL Online certification was also known to them. In 'Other's out of eight, two respondents mentioned that they were not aware of these platforms,

whereas four mentioned following MOOC platforms that they were familiar with, INASP, Khan Academy, MIT Open courseware, Big data university, Open2study & INFLIBNET. But out of these only Big data university, Open2study are MOOC platforms.

How did you hear/read about MOOCS
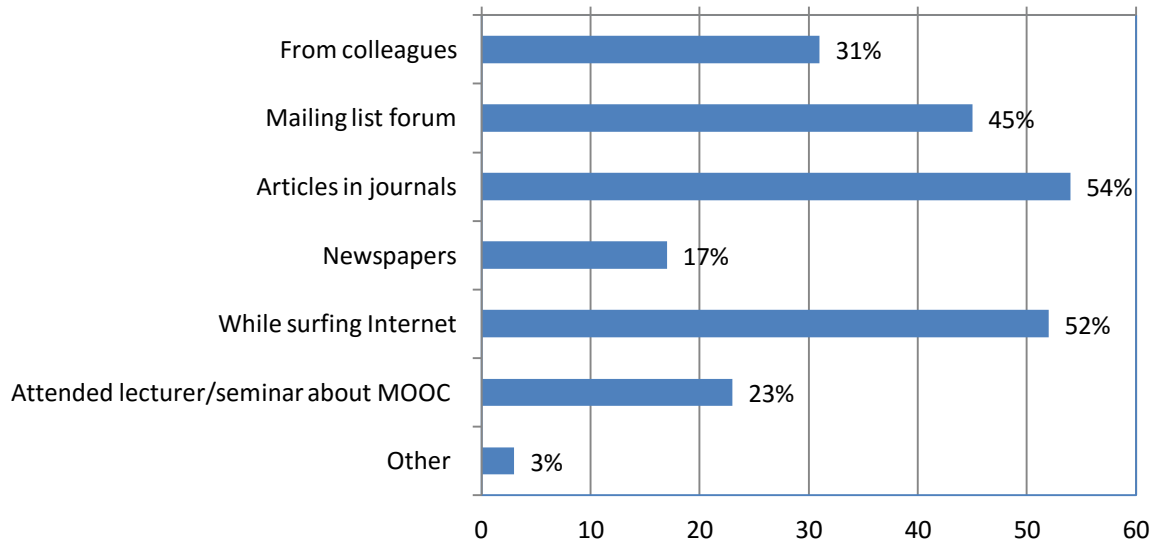
Fig No 7: How hear/read about MOOCS

Almost half of the respondents came to know about MOOCs through mailing list, articles in journals, and while surfing Internet. In 'Others' one respondent mentioned that she was invited to serve on the MOOC developed by UNESCO's named as Media and Information Literacy (MIL) while another mentioned that he came to know from UGC-JRF Scholars those working under his supervision. Third respondent mentioned newspaper as a source of information.

Have you completed/currently doing a course using MOOC
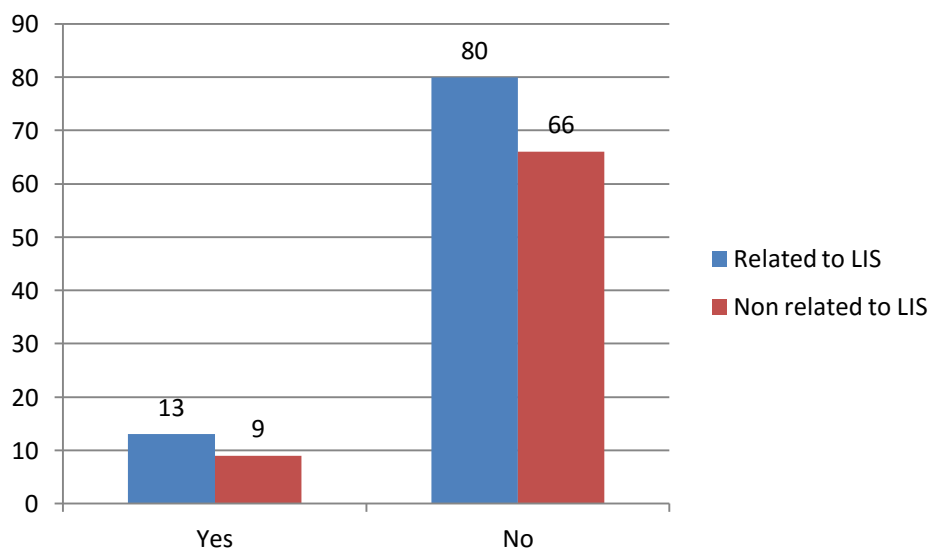
Fig No 8: Completed course using MOOCS

Almost 22% respondents mentioned that they had done/currently doing MOOCs related to LIS and Non LIS. The names of courses have been mentioned in Table no. 1.

If you have not yet undertaken any MOOC, what is the reason (If you have not undertaken any course pl skip following four questions)
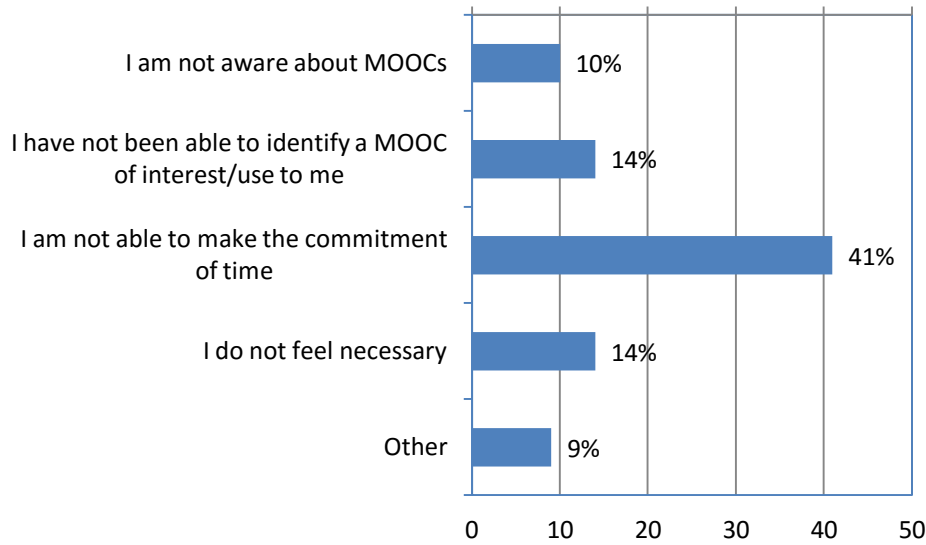
Fig No 9: Reasons of not undertaking MOOCS

It has been reflected from the responses that LIS educators were not able to make commitment of time to take up MOOCs. In 'Others' out of 9%, 1% respondent mentioned that she was too busy with in hand assignments, teaching and guiding research scholars. Another mentioned that he wanted to enrol in a MOOC called Big data but he couldn't fulfilled the requirement for registering the MOOC so did not appear. Rest of respondents mentioned that they were not interested in taking up MOOC.

If you have undertaken/are undertaking a MOOC please provide the name of the course, duration and the institution offering it.

It was observed that only 19 % respondents attempted the question. But out of 19%, 10% answers were valid but incomplete. The name of the course and its duration is given in Table No. 1.

Personality development
Foundation of teaching (1.5 month) & English composition (3 months) from coursera. Dropped out of one course on research because it was too much basic. Metadata course could not be completed because of teaching workload & time management
Research and Data Management
Coursera : Metadata (1.5 months)
Semantic Web and Linked Data, University of Southampton, 3 Weeks
Stanford University online courses
SQL fundamentals, Big Data University of California
Big Data by University of California
Data mining, Research methodology, Text mining
Undertook course in programming language but dropped

Table No 1: Name of MOOCS

MOOC which you did is Frre/Paid
About 30% respondents mentioned that they free MOOC while 4% respondents took paid MOOC.

Opinion of those who have half/fully completed MOOCs
A Likert type scale had been used in the question for responding: Likert type scale of AGREE 2 to SOMEWHAT AGREE 1. Apart from these options, one more option were given namely Do NOT AGREE 0.
Thus for each activity scores were obtained.

Opinion about MOOCs	Score	Rank
I gained theoretical/background knowledge about the topic	53	1
I gained awareness about an area about which I had almost no knowledge	51	2
I formed a deeper understanding of the topic	40	3
I feel prepared to apply facts, theories, or methods to new situations	40	3
I thought critically and analytically during the course	39	4
Course content was too basic. I realized that after starting course, it was not clear form course contents mentioned on website	37	5
I feel proud to get the certificate from a prestigious institution	36	6

Table No 2: Opinion about MOOCs

The results showed that LIS educators who did/undertaking MOOCs gained theoretical/background knowledge about the topic and even aware about an area which they had almost no knowledge. Surprisingly the respondents were less concerned about that they were getting certificate from a prestigious institutions.

Opinion about the following aspects of the MOOC you have undertaken
A Likert type scale had been used in the question for responding: Likert type scale of EXCELLENT 3 to QUITE GOOD 2 to FAIR 1. Apart from these options, one more option were given namely NOT SATISFACTORY 0.
Thus for each activity scores were obtained.

Opinion about MOOCs	Score	Rank
Coverage of the topic	75	1
Supporting documents such as practice problems, trial quizzes, and video lecturers provided as part of the MOOC	70	2
Ease of understanding	69	3
Balanced treatment of topics	62	4
Assessment methods	62	4
Level of treatment of topic	61	5
Applicability to my environment in India	59	6
Duration of course	48	7

Table No 3: Opinion about MOOCs

It seems LIS educators highly appreciated coverage of the topic, ease of understanding & supporting documents such as practice problems, trial quizzes, and video lecturers provided as part of the MOOCs. Furthermore they were unhappy about the duration of the course.

**What are the likely to be motivational factors taking up MOOC**
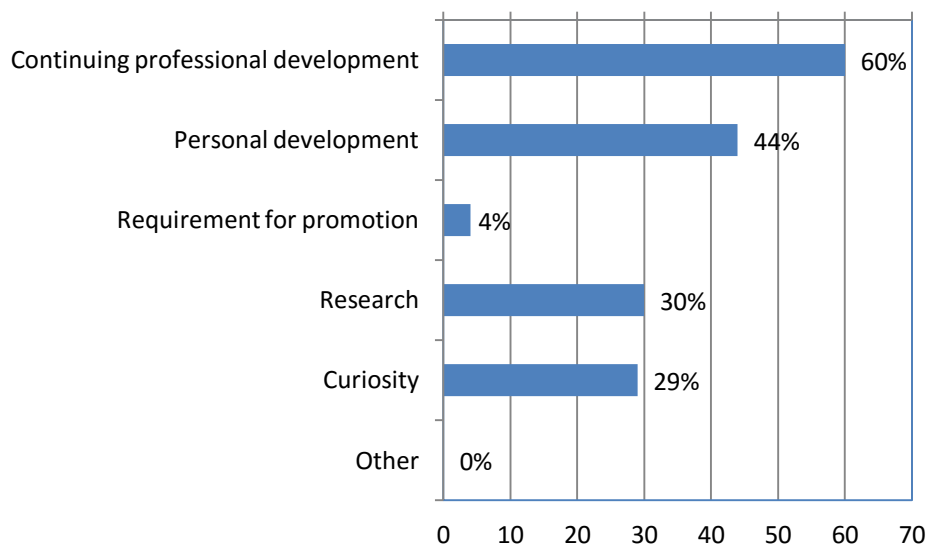
Fig No 9: Motivational factors

More than half of the respondents believed that MOOC can be considered as a means of continuing professional development and half of them believed that personal development can be done by taking up MOOCs.

Do you think continuing professional development programs for working LIS professionals in India can be developed through MOOC

It was observed that majority of respondents were in favour of possibility of development of MOOC

What do you think can be the major benefits to working professionals for taking up MOOCs for continuing professional development.
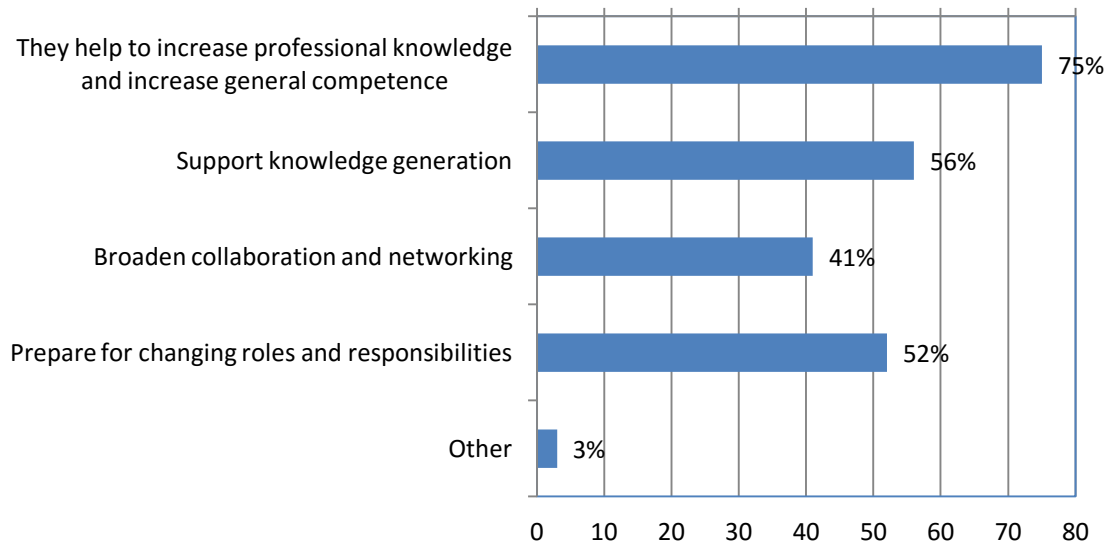
Fig No 9: Major benefits

It was revealed once again that LIS educators believed that MOOC being beneficial to increase professional learning and increase general competence and it will support knowledge generation. In 'Others' two respondents mentioned that time can be saved by doing MOOCs, the other mentioned that it will provide more opportunities in life.

What do you think can be the major challenges of taking up MOOCs for continuing professional development
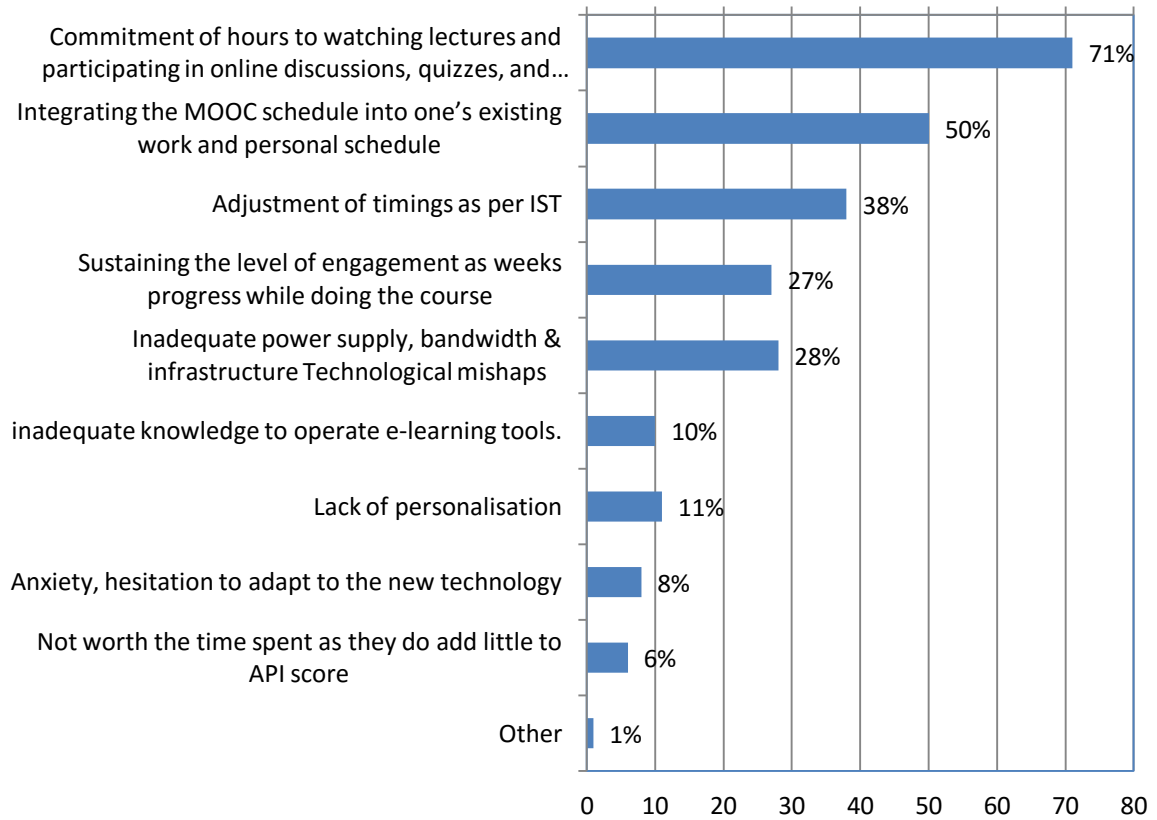
Fig No 9: Major challenges

Almost 3/4 respondents thought the major challenges would be to spend time to watch lectures and participate in online discussions, quizzes, and assignments, whereas half of the respondents believed that they might not able to integrate MOOC schedule into their existing work and personal schedule. In 'Others' one respondents mentioned that too much of workload doesn't allow him to take up MOOCs.

For your professional development, in which area(s) of LIS you would like to take up MOOC
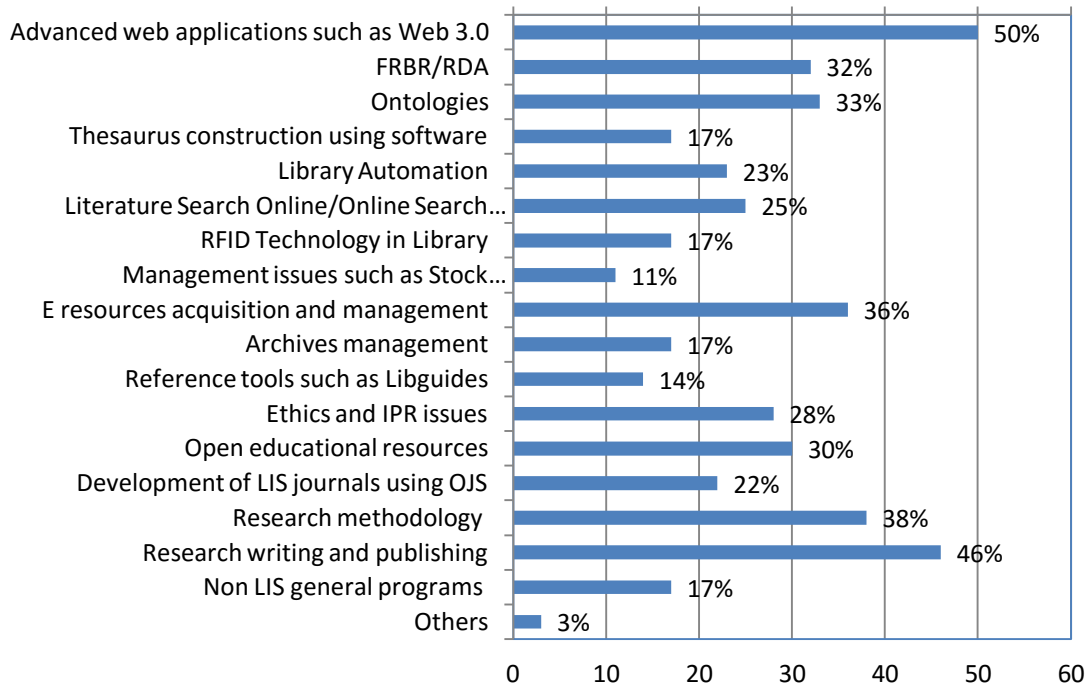

Fig No 9: Area(s) of LIS to take up MOOC

Half of the respondent's showed interest in taking MOOC in case of Advanced web applications & Research writing and publishing. This will definitely help LIS teachers to sustain in this field by learning contemporary ICT applications, carry out research and publish research reports in reputed journals. In 'Others' out of three, one respondent showed interest in taking up MOOC related to knowledge management. Remaining two respondents mentioned that they were interested in all topics.

Would you/your department be interested in developing MOOCs?
It was observed that 66% respondents were in favour whereas 15% respondents were not. About 10% respondents mentioned about the problems they face such as inadequate and incompetent staff, whereas few were confident about MOOCs as their future endeavours, few were not sure of developing MOOCs in the present situation.

Does your department have the following facilities to develop MOOCs
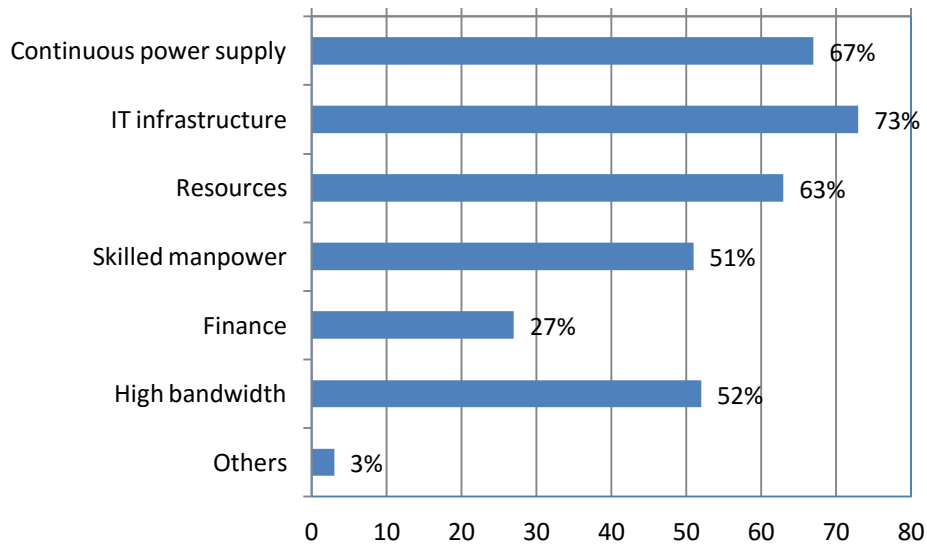
Fig No 9: Facilities to develop MOOCs

Fortunately more than half of the universities had maximum facilities to develop MOOCs. In 'Others' one respondent mentioned that there is need to contact welfare trusts and foreign universities that are successfully running MOOCs to better understand the working of MOOCs. Another mentioned that they need equipment's for capturing video lectures. The third respondent mentioned that these all facilities are not adequately available to them so enable to develop MOOCs.

Any further comments on MOOCs
About 25% respondents recorded their comments. Basically these comments suggested that LIS educators consider MOOCs as a new opportunity to enhance their teaching skills and knowledge. But few felt that it requires a lot of awareness to make MOOCs to be accepted by LIS educators. Many wish to take up as well as develop MOOCS but afraid about non uniformity in Indian LIS course contents especially to develop MOOCs for post graduate courses. Some recommended that like MOOCs course contents, teachers should develop MLISc course materials. Some regretted for not having fullfledge department & adequate facilities to develop MOOCs. Few wished to develop MOOCs by availing UGC funds.

Conclusion
It was observed that half of the population was middle aged having 1-10 years of teaching experience holding permanent position in the LIS departments. It was found that almost half of the respondents were knowing about MOOCs through mailing list, articles in journals, and while surfing Internet. Just 6% respondents had successfully completed MOOCs and 29% respondents were looking for a MOOC to undertake. It was found that LIS educators did or currently doing MOOCs related to ICT applications in LIS. So the situation looks promising though the number of MOOC aspirants was low.

Almost all LIS educators who did/undertaking MOOCs were free stuffs. But Shah (2015) reported that 3 MOOC providers such as Udacity, Coursera & edX have stopped recently to provide free MOOCs. It may be possible that other MOOC platforms will follow these ones.

This phenomenon will change the definition of MOOCs from Massive Open Online Courses to Massive Open but Paid Online Courses.

It was noted that Open Learning and Coursera were mostly known to LIS educators. The main hurdle for not undertaking MOOCs was that they were unable to make commitment of time to take up MOOCs.

The study claimed that LIS educators who did/undertaking MOOCs gained theoretical/background knowledge about the topic and even got aware about an area which they had almost no knowledge. Furthermore LIS educators highly appreciated coverage of the topic, ease of understanding & supporting documents such as practice problems, trial quizzes, and video lecturers provided as part of the MOOCs.

More than half of the respondents believed MOOC can be considered as a means of continuing professional development and half of them believed that personal development can be done by taking up MOOCs. The challenges that 3/4 respondents mentioned were basically not able to spend time to watch lectures and participate in online discussions, quizzes, and assignments, whereas half of the respondents was not able to integrate MOOC schedule into their existing work and personal schedule. So repeatedly the problems of Indian LIS educators have reflected in form of more workload, busy schedule, inadequate facilities etc. Inspite of these problems almost all respondent's showed interest in taking up MOOCs in Advanced web applications & Research writing and publishing.

The results showed that LIS departments have maximum facilities to develop MOOCs except finance which is no doubt is a global issue. LIS educators need to approach various Indian and foreign funding agencies to develop and support MOOCs not only for LIS teachers and library professionals but general learners too. The MOOC such as UNESCOS Media Information Literacy Programme can be developed by LIS educators. India having second highest population in world can take advantage to educate masses at minimal or no cost. At present Indian government developed SWAYAM web portal as well as supporting IITs & IIMs for their MOOC development. According to Bharati (2014) India is a home of second largest audience for MOOCS after US. To serve Indian learners community prestigious Indian LIS schools do have potential to join platforms such as not-for-profit edX and to offer MOOCs.

The study established the value of MOOCs for professional development of LIS educators and identified the associated challenges. The outcomes of present research will motivate LIS educators to overcome the challenges, and to undertake designing MOOCs as well as taking up MOOCs.

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