Exploring the Integration of Massive Open Online Courses in Social Sciences at Universities in Delhi: A Librarian's Perspectives

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ABSTRACT

The study aims to understand the integration of massive open online courses (MOOCs) in social sciences in Indian universities. Therefore, the present study comprehends the awareness of librarians on MOOCs in social sciences and their perspectives on the integration of MOOCs in formal education. The responses were received from senior library professionals at universities in Delhi, and their responses were analysed and presented in tables and figures. The study found that 85.71 % of respondents from universities stated MOOCs enhance the knowledge of learners. Besides this, 71.43 % of librarians consider MOOCs are found self-effective and also help in self-assessment. Furthermore, 71.43 % of librarians revealed the integration of MOOCs with formal education is required. And, 71.43 % of librarians opined that MOOC courses are a time-consuming process. Interestingly, 100 % of respondents expressed that MOOCs are flexible, useful and supplement to academic and professional growth. All respondents agree that learning concepts are easy in MOOCs. The study also found that accredited MOOCs stretch the learners' capabilities and 85.7 % of respondents expressed that the user interface of the MOOCs are well designed and easy to navigate and functions well. Furthermore, found that MOOCs enhance professional development and career progression for employees, improving the curriculum. All respondents under study are aware of the Indian Copyright Act 1957 and related amendments.

Keywords: SWAYAM; MOOCs integration; MOOCs for academic growth; Online education; Self-learning; Delhi

1. INTRODUCTION

The role of academic libraries has shifted from merely providing resources to being actively involved in the learning process. The shift has been demonstrating a significant change from service provider to partner in academic achievement[1]. Academic libraries have been helping students in numerous ways by actively in content creation and subscription of content[2]. However, many believe that the availability of alternative means of content has reduced the importance of libraries[3]. Users' expectations have changed and traditional library roles need to be adapted to meet contemporary learning behaviour[4]. LIS professionals participate in MOOC development so that users can benefit[5]. The role of librarians in MOOCs can be varied such as: providing reference services, collection development, content creation, and imparting information literacy instructions regarding various resources and services[6]. Furthermore, library and information science professionals can also play a significant role in the following three areas viz. (i) Copyright clearance and identifying the open access content; (ii) Course production and (iii) Establishing policies based on best practices[7]. Libraries can also play a vital role in MOOCs success

by organising the contents, educating users about various MOOCs and providing leadership to make the MOOC programmes successful[8]. Furthermore, libraries should also develop robust network infrastructure so that users can access MOOC content seamlessly[9]. Moreover, there is a significant opportunity for libraries to develop their MOOCs to address the demands of diverse groups of users. The cutting-edge technologies and evolving education system provide ample opportunity for libraries to succeed in the area of developing MOOCs. A large amount of public funds has been used in India to provide MOOCs freely to students studying in HEIs and the general public. However, no study has been conducted to understand the integration of MOOCs in social sciences in Indian universities. Therefore, the present study is timely and comprehends the awareness of librarians on MOOCs in social sciences and their perspectives on the integration of MOOCs in formal education so that significant progress can be made by libraries in this area.

2. LITERATURE REVIEW

A thorough literature review was conducted to elucidate the discrepancy between various studies on the perception of MOOCs. Okwu[10], *et al.* studied the MOOCs adoption in Nigeria and found that MOOC adoption is still in its formative stage due to lack of

knowledge and poor network infrastructure. The study recommended that the Nigerian Library Association and the Librarian Registration Council of Nigeria should conduct various events to enhance awareness about MOOCs. Another study by Stričević I, Rubinić[11] found that teachers and librarians agree on the importance of students' skills development through MOOCs, but there are differences in their expectations. Further study recommends the cooperation between academic librarians and teachers for achieving success in the area. Francis[12] highlights that MOOCs offer inexpensive courseware and unlimited access to materials and categorises MOOCs into three categories as follows: cMOOCs, xMOOCs, and quasi-MOOCs. Libraries are regaining their status as academic hubs by maintaining unfettered access to knowledge through MOOCs. However, libraries have been facing numerous challenges such as intellectual property, licensing, technology, and data storage and control.

Another study by Sharma & Nathani[13] investigates MOOCs in higher education and found it directly enhance educational achievements, with a 65 % boost in results. The findings support the hypothesis that MOOCs have a positive impact on higher education. Tiwary[14], et al. mentioned the students' preference about electronic content, however, they need assistance accessing them. Libraries should subscribe to a wider range of electronic resources and promote open-access articles. Therefore, the study also supports that libraries can start varied services to MOOCs including assisting users in accessing electronic content in MOOCs. The study conducted by Twinomurinzi, Cilliers & Murire[15] revealed the following reasons South African citisens enroll in MOOCs lifelong learning, control over learning, and flexibility in learning. Merkle[16], et al. examine student perceptions of the effectiveness of print textbooks and e-books in marketing curricula. A field-based quasi-experiment with 259 students found varying impacts of e-books on engagement. E-books moderate the relationship between textbook effectiveness and academic performance engagement, with highly effective e-books leading to higher engagement levels. Bagdi[17], et al. found all constructs positively influence Gen Z's online learning adoption, except for information technology infrastructure's influence on perceived usefulness. Jong, Munnik & Will[18] study also supports it and found that academic libraries play an essential role in the development of open education communities and open educational resources on a small scale can be successful if the library adopts a tailored method.

Lazarus & Suryasen[20] stated that the library is an ideal organisation to lead the way in introducing MOOCs to the curriculum[21]. Gore[22] stated that MOOCs are widely regarded as disruptive technologies in the realm of education, and revealed several key topics that are directly related to the needs of academic libraries, such as information literacy, and involvement in the production process of MOOCs. Eisen, Vogt & Deimann[26] expressed that MOOCs are becoming increasingly popular in libraries because of the interesting opportunities they provide. Libraries not only assist MOOC developers in a variety of ways, but they also have the potential to create their MOOCs[27]. Shahara & Nowrin[28] listed several potential advantages for the use in academic libraries, for instance in clearance and licensing of copyrighted material, the safeguarding of MOOC content by users, and the promotion of collaborative course building between academic institutions.

3. OBJECTIVES AND SCOPE OF THE STUDY

The study aims to understand the librarian's perspective in the integration of MOOCs in social sciences in universities in Delhi. Therefore, the study has the following objectives:

1. To study the familiarity level of librarians working in seven universities in Delhi about MOOCs in social sciences;
2. To study the perception of librarians on MOOCs in social sciences and their integration into formal education at universities in Delhi;
3. To understand the characteristics of accredited social science MOOCs integration in formal education;
4. To know the strategy used by libraries in promoting MOOC integration in social science education;
5. To understand the assessment of librarians in using MOOCs in social sciences and different resources and help services provided by libraries in supporting integration of MOOCs; and
6. To identify the awareness level of librarians on the Indian Copyright Act and collection development for MOOC learners in social sciences in universities in Delhi.

The study is limited to universities (seven) in Delhi . The responses received from senior library professionals have been analysed, and inferences have been drawn. The selection of universities is based on basis of the university offering at least one course in social sciences. Therefore, the following seven universities were selected under the study: (i) University of Delhi (DU), founded in 1922 (ii) Jamia Milia Islamia (JMI), established in 1920 (iii) Jawaharlal Nehru University, which was founded in 1969 (iv) Guru Gobind Singh Indraprastha University (GGSIPU) founded in 1998 (v) Indian Institute of Law (ILI), founded in 1956 (vi) National Law University (NLU), New Delhi established in 2008 (vii) Dr B R Ambedkar University Delhi. (AUD) was established in 2008.

4. METHODOLOGY OF THE STUDY

Figure 1 illustrates all steps followed in the study to achieve the objectives. The study is conducted at universities in Delhi and the selection of HEIs is based on a purposive sampling method. All these universities under study offer at least one course in social science because the study focuses on social sciences MOOC integration in formal education. To

collect the data from seven university libraries in Delhi an open-ended questionnaire was designed. The questionnaire was finalised after conducting a pilot study at the University of Delhi in April 2023 and the questionnaire was finalised after minor modifications to collect data from the librarians of the higher education institutions in Delhi. The data was collected from seven universities from May 11 to August 30, 2023. The questionnaire is divided into four groups. The first group focuses on general information and includes six questions. The second section of the questionnaire includes 15 questions on learners and institution preparedness. The answers to the second part are provided by the MOOC admin in the HEI study. The third part of the questionnaire focuses on the sources and services of information, with thirteen questions posed to respondents. The final and fourth parts of the questionnaire address the perception of librarians regarding the integration of MOOCs in the social sciences in Higher Education Institutions (HEIs), with ten questions. The main questions included in the questionnaire are as follows:

- Librarians' familiarity with MOOCs in social sciences
- Understanding librarians' perception of integration of accredited MOOCs in formal education
- Characteristics of accredited social science MOOCs integration in formal education
- Different tools of information used in library strategy for promoting MOOCs
- Librarians' assessment accredited MOOCs integration in formal education
- Contents provided by libraries to MOOC learners
- Help services and online training provided by libraries to MOOC learners, and
- Collection development by libraries for MOOC learners and librarians' awareness regarding Indian Copyright Laws.

These institutions were visited multiple times to collect data from senior library professionals. The data was transmitted in a Microsoft Excel data sheet and analysed. The datasets are presented in tables and figures. The results are discussed also compared to prior published studies as per the defined objectives.
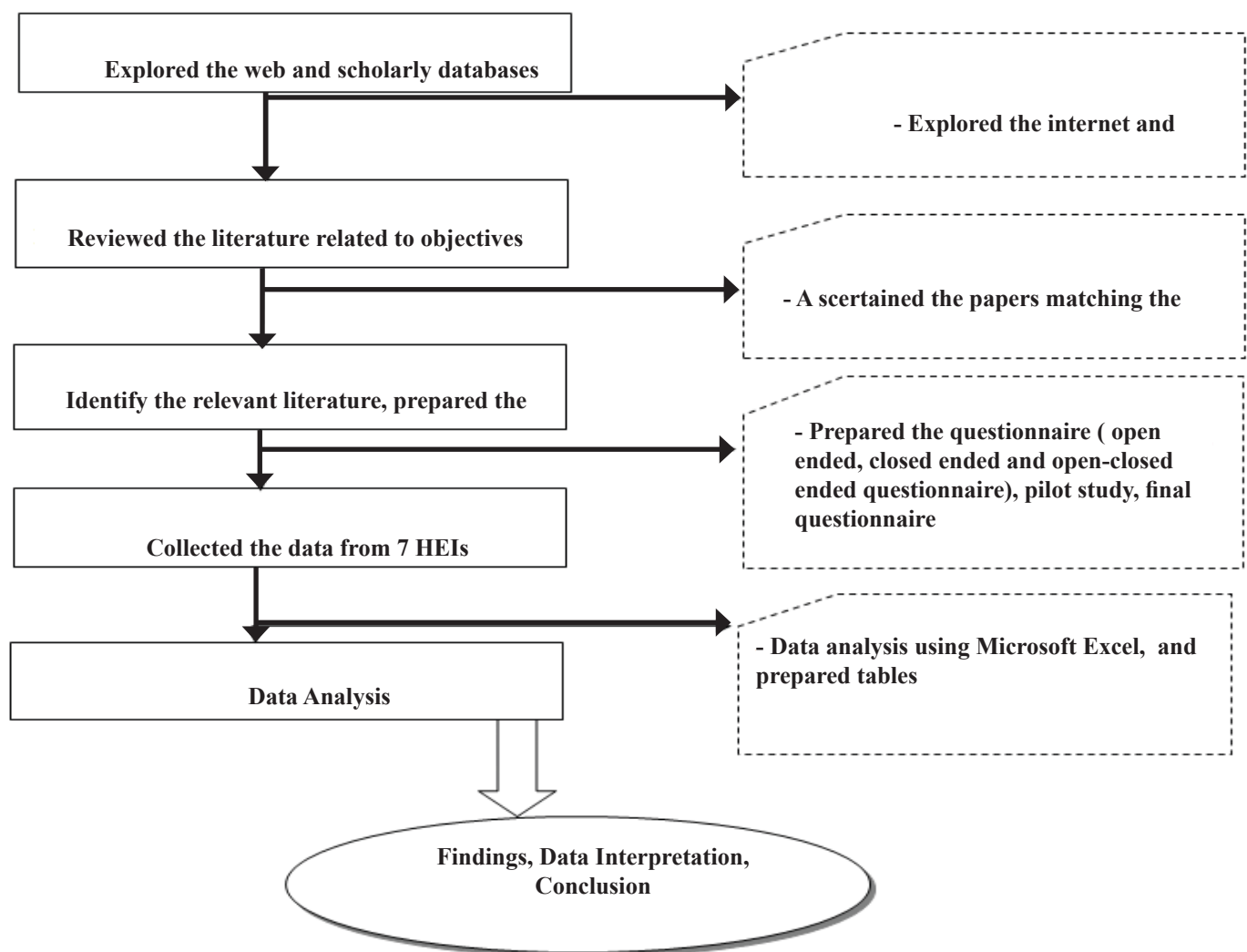

Figure 1. Step-by-step approach followed in methodology.

5. RESULTS

All the responses received from senior library professionals were analysed and presented in tables and figures. The responses were analysed and discussed with similar findings so that a comprehensive understanding can be obtained in the area of study.

5.1 Librarians' Familiarity Level with MOOCs

A question was posed to respondents regarding their familiarity level with MOOCs. The reason to ask this question was to know whether librarians are competent to deal with MOOC integration in formal education in universities. Table 1 illustrates those 5 (71.43 %) librarians (JMI, JNU, ILI, GGSIPU, and NLU) out of seven respondents revealed they have completed few online courses. While only 2 (28.57 %) librarians of JNU and DRBRAUD mentioned that they heard about MOOCs but never enrolled on them. It is also ascertained that 2 (28.57 %) librarians i.e. JNU and DRBRAUD revealed that they have a basic understanding of the MOOCs landscape in social sciences.

5.2 Librarian Perception About the Integration in Formal Education

Most students around the world still aspire to attend leading universities, particularly those from developing countries. MOOCs have enabled affordable access to education for millions of students around the globe. Free MOOCs are widely available and being offered by reputable educational institutions. These courses motivate learners, but they are also widely accepted by educational institutions and employers as an indication of educational excellence. The integration into university curricula is a leap forward to address the growing workload. MOOCs offer flexible learning plans and revolutionise the learning experience by transferring control from the instructor to the learner and providing equal access to resources to all participants via various online channels.

Therefore, a question was posed to librarians working in seven universities under study in Delhi about their perception of the integration of accredited MOOCs. Table 1 illustrates their responses that 6 (85.71 %) librarians of universities under study namely JMI, DU, JNU, ILI, GGSIPU, and NLU consider MOOCs to enhance the knowledge of learners. Besides this, 5 (71.43 %) namely DU, JNU, ILI, AUD, and NLU librarians consider MOOCs to be good in academic self-effectiveness and help in self-assessment.

MOOCs enhance academic self-confidence, and the efficacy of formal education and facilitate better self-assessment. Furthermore, 5 (71.43 %) librarians of JMI, DU, ILI, AUD and NLU stated integration of MOOCs with formal education is required. The study also found that 4 (57.14 %) (DU, JNU, ILI, and NLU) students can perceive the usefulness of MOOCs. Additionally, four out (57.14 %) of the seven (DU, JNU, AUD, and NLU consider that the presence of instructors during the discussion enhances its efficacy. Two institutions, JMI and DU, think that there are time constraints to earn credits using MOOCs. Furthermore, DU and ILI consider that MOOC courses can lead to additional workload for library personnel and faculty. Only one institution i.e. JMI indicated that the university has not provided any prior information regarding the incorporation of MOOCs in their prospectus.

5.3 Characteristics of Accredited MOOCs

MOOCs integration pose several challenges to administrators, teachers, and libraries. More than half of the LIS practitioners had been exposed to MOOCs through digital sources, indicating their increasing popularity. MOOCs had a significant impact on the ongoing professional development and education of practitioners, suggesting that there was considerable potential for their use in the field[19]. Therefore, the study ascertained the characteristics of accredited MOOCs in social sciences. During the study, we found that all respondents 100 % expressed that MOOCs are flexible, useful and supplement

Table 1. Librarians' perception about the integration of accredited MOOCs

Perception	JMI	DU	JNU	ILI	GGSIPU	DBRAUD	NLU
MOOCs are found the academic self-effectiveness	✗	✓	✓	✓	✗	✓	✓
Instructor presence during the discussion increases effectiveness	✗	✓	✓	✗	✗	✓	✓
Students can perceive the usefulness	✗	✓	✓	✓	✗	✗	✓
Effectiveness on students' commitment to learning	✗	✓	✓	✗	✗	✗	✓
It helps in self-evaluation	✗	✓	✓	✓	✗	✓	✓
Increasing the existing knowledge	✓	✓	✓	✓	✓	✗	✓
It unnecessarily bothers me	✗	✗	✗	✓	✗	✗	✗
Time constraints to earn credit through MOOCs	✓	✓	✗	✗	✗	✗	✗
No prior Information given by university in the prospectus	✓	✗	✗	✗	✗	✗	✗
No information was given in the orientation about it	✓	✗	✗	✗	✗	✗	✗
Additional work to library staff and faculty	✗	✓	✗	✓	✗	✗	✗
Integration with formal education is required.	✓	✓	✗	✓	✓	✓	✓
Online course credit should not be transferred to regular courses.	✗	✓	✗	✓	✗	✗	✗

Note: ✓ means Yes and ✗ means No

academic and professional growth. And, all agree that learning concepts are easy in MOOCs. It is ascertained that accredited MOOCs stretch the learners' capabilities. Therefore, all viewed that accredited MOOCs improve educational outcomes. Five respondents (JMI, JNU, ILI, AUD, and NLU) *i.e.* 71.43 % of librarians opined that MOOC courses are a time-consuming process. Three respondents opined that MOOCs are less effective compared to in-person learning while two JMI and NLU responded that they disagree with the fact that accredited MOOCs are less effective. Another two respondents were neutral on this issue.

5.4 Promotion of MOOCs

MOOCs present valuable opportunity for librarians to assist faculty in incorporating innovative tools for teaching and learning, while also contributing towards making education more affordable for students. It has emerged as a valuable tool for personal and professional development, offering abundant learning opportunities. Nevertheless, many librarians may not be aware of the potential methods of promoting MOOCs among library users. Therefore, the study sought responses from the libraries of seven universities about methods employed by them for the promotion of MOOCs among users. To reach learners and encourage them to sign up for MOOCs libraries need to adopt different methods such as communication through mobile, email, postal correspondence, personal meetings, workshops, seminars, poster displays, etc.

Table 2 shows that 7 (100 %) university libraries use e-mail to reach out to users regarding it and opt for the workshop method to engage students and encourage the adoption of various MOOCs. Notably, 6 (85.71 %) university libraries namely JMI, DU, JNU, GGSIPU, AUD, and NLU also revealed they prefer communication through Mobile to engage students and encourage the adoption. Six HEIs (DU, JNU, ILI, GGSIPU, AUD, and NLU) use "seminars" as a strategy to engage students and encourage the adoption of various OERs and MOOCs. JMI, DU, JNU, GGSIPU, AUD, and NLU libraries use personal meetings as a strategy to influence learners to use MOOCs. Three out of the seven libraries namely JMI, DU, and GGSIPU use "poster displays" as a strategy to engage students and encourage the adoption of MOOCs. Only the GGSIPU library revealed the use of postal correspondence" influence the learners.

5.5 Librarian's Assessment of Accredited MOOCs

LIS professionals familiar with MOOCs for a minimum of three years revealed a significant obstacle in the form of a lack of specialised abilities and skills associated with MOOCs. The study further suggests this trend is likely to continue to grow in the future[23]. Sanni & Ajiboye[24] stated that academic librarians have a key role to play in promoting and improving the utilisation of MOOCs in HEIs. Thus, libraries should organise specialised workshops, seminars, and discussions to equip faculty with the necessary knowledge and skills to effectively teach MOOCs. Additionally, they must provide relevant information materials to ensure quality instruction[25]. It is found that all university libraries agree that UGC has created an encouraging eco-system on MOOCs for teaching the teaching-learning process. Except for one library DBRAUD with a neutral response, all university libraries expressed that the user interface of the course is well designed, it's easy to navigate and functions well. MOOCs enhance professional development and career progression for employees, improving the curriculum. Respondents from JNU and GGSIPU agree while JMI, DU, ILI, and NLU respondents support their integration, while the DBRAUD librarian remains neutral on integration. Further, these six librarians also revealed interface and delivery on integrated MOOC platforms are well. The majority of librarians 6 (85.7 %) stated that integration of MOOCs will improve the quality of teaching and increase the confidence and research aptitude of students.

5.6 Resources Provided by Libraries to Learners

Library provides diverse study resources, including electronic materials for MOOC students, in response to the growing demand for online learning. These include E-books, E-magazines, E-newspapers, E-question papers, E-syllabi, research articles and more. In response to this question, many universities, like DU, NLU, JNU, ILI, and GGSIPU, are providing library material to enrolled students in accredited MOOCs, while only JMI and AUD are not providing any library material to facilitate enrolment in accredited MOOCs. Table 3 shows that online resources offered by university libraries at various institutions include the following: DU offers e-books, e-magazines, e-newspapers, e-question papers, e-syllabus, information on MOOCs, online courses, scholarship details, audio contents, research articles, news, and book reviews.

Table 2. Methods of promoting MOOCs

Tools	JMI	DU	JNU	ILI	GGSIPU	DBRAUD	NLU
Communication through Mobile	✓	✓	✓	×	✓	✓	✓
Email	✓	✓	✓	✓	✓	✓	✓
Postal Correspondence	×	×	×	×	✓	×	×
Personal Meeting	✓	✓	✓	×	✓	✓	✓
Workshops	✓	✓	✓	✓	✓	✓	✓
Seminars	×	✓	✓	✓	✓	✓	✓
Poster Display	✓	✓	×	×	✓	×	×

Note: ✓ means Yes and × means No

JNU offers e-books, magazines, newspapers, question papers, syllabuses, information on MOOCs, and online course materials. ILI offers research articles, news, book reviews, MOOC-related material, e-books, e-magazines, e-newspapers, and e-question papers. NLU provides the following study materials to their learners: e-books, e-magazines, e-newspapers, e-question papers, e-syllabi, MOOC-related information, online course information, society activity information, scholarship details, and news. GGSIPU offers e-books and e-journals to their online learners. Five HEIs (DU, JNU, ILI, GGSIPU, and NLU) provide e-books as study material online to learners. Four HEIs (DU, JNU, ILI, and NLU) provide e-magazines, e-newspapers, MOOC-related information, and online course information for their learners. Three out of seven institutions (DU, ILI, and GGSIPU) provide online access to research articles to their learners. Three out of seven institutions (DU, ILI, and NLU) provide news to their online learners. Three institutions, Du, JNU, and NLU, are providing e-syllabus. Du and NLU are providing e-question papers and scholarship details to their online learners. DU and ILI also provide various book reviews to facilitate their learners. Only DU provides audio content to their learners, while NLU provides society activity information to their learners.

5.7 Help Services and Online Training For Learners

One of the key elements to success for a student on an Internet course is support. Although several strategies for supporting learners have been reported in the past, little is known at each stage of the teaching cycle as to what interventions could be used within an e-learning curriculum. Online students require support services beyond material learning and teaching to interact with institutions, and teachers, and make connections for successful studies or employment transition, making learner support services the most crucial aspect of open and distance learning. Respondents were asked to select the most effective online training mode for using accredited MOOC and help services such as peer help, online chat, online librarian help, FAQ, email help/discussion, and contextual. Table 4 and Figure 2 illustrate the responses. Four HEIs (DU, JNU, GGSIPU, and NLU) are providing an email service and discussion forum to help learners get important notifications and updates on time. Four HEIs (JMI, DU, JNU, and NLU) are providing FAQs to their learners to resolve queries and address issues. Only two institutions (DU and NLU) responded that they use online chat to address the learners' issues, while two HEIs (GGSIPU and NLU) are using peer help to provide help services.

5.8 Collection Development and Copyright Laws

Library collection refers to the process by which a librarian creates and maintains a library's collection to cater to the needs of its users or learners. It involves developing both print and non-print material for their users. Academic librarians generally develop their collections as per the demand from learners, donations, publishers, and reviews from various sources.

This study establishes a collection development method for learners in the institution's library. Table 5 illustrates how libraries develop collections for learners in your institutions. In these responses, we can identify the sources that university libraries use to build their collections for students. Delhi University's library, JMI, expands its collection through demand from learners, donations, and reviews from various sources. JNU's library grows its collection through requests on demand from learners, donations, and publishers.

Table 3. Content provided by libraries to MOOC learners

Library materials for MOOCs	JMI	DU	JNU	ILI	GGSIPU	DBRAUD	NLU
E-Book	×	✓	✓	✓	✓	×	✓
E-Magazines	×	✓	✓	✓	×	×	✓
E-Newspaper	×	✓	✓	✓	×	×	✓
E-Question papers	×	✓	×	×	×	×	✓
E-Syllabi	×	✓	✓	×	×	×	✓
MOOCs related information	×	✓	✓	✓	×	×	✓
Online courses information	×	✓	✓	✓	×	×	✓
Societies activity Info	×	×	×	×	×	×	✓
Scholarship detail	×	✓	×	×	×	×	✓
Audio contents	×	✓	×	×	×	×	×
Research articles	×	✓	×	✓	✓	×	×
News	×	✓	×	✓	×	×	✓
Books reviews	×	✓	×	✓	×	×	×
Notes	×	×	×	×	×	×	×
Any other	×	×	×	×	E-Journals	×	×

Note: ✓ means Yes and × means No

Table 4. Help services and online training for learners

Help features	JMI	DU	JNU	ILI	GGSIPU	DBRAUD	NLU
Peer help	×	×	×	×	✓	×	✓
Online Chat	×	✓	×	×	×	×	✓
Online Librarian help	×	×	✓	×	×	×	×
FAQ	✓	✓	✓	×	×	×	✓
E-mail Help/Discussion form	×	✓	✓	×	✓	×	✓
Contextual	×	×	×	×	×	×	✓

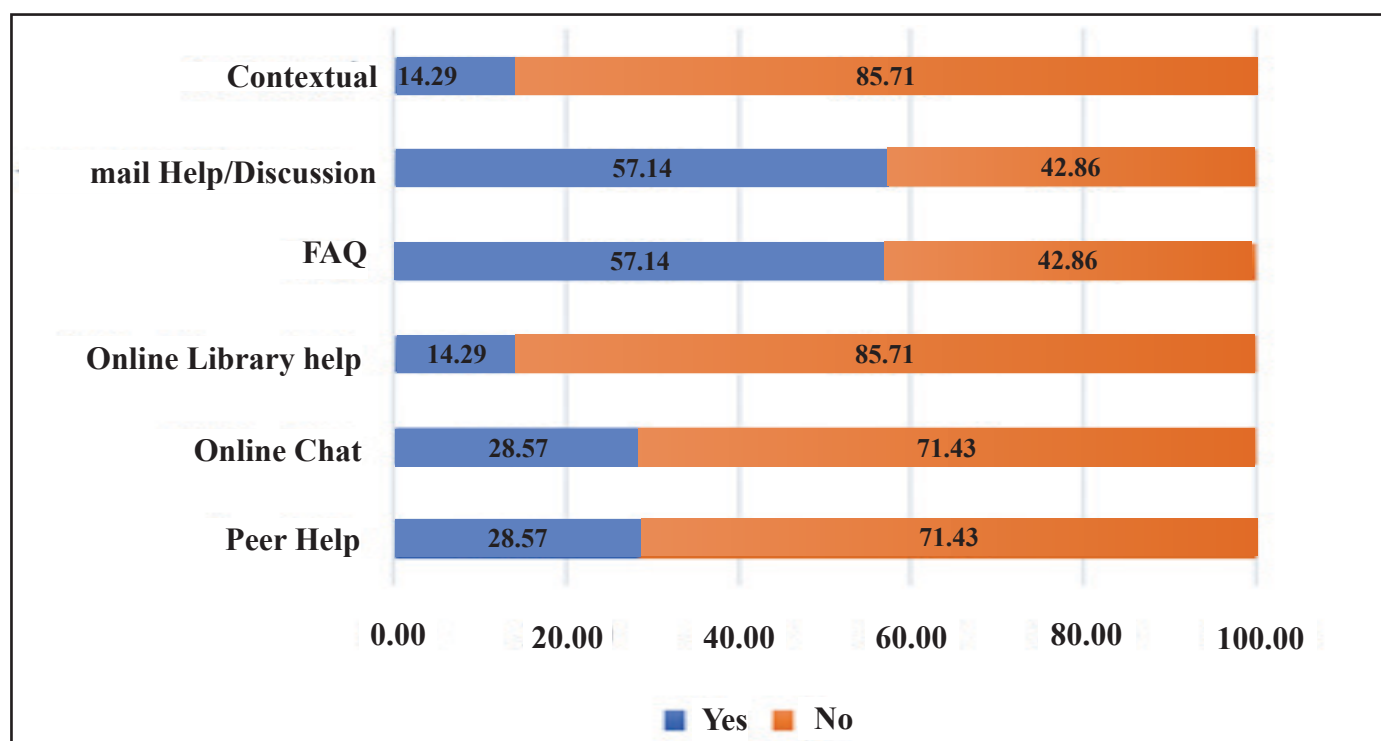Note: ✓ means Yes and × means No

Figure 2. Help services by libraries.

Table 5. Methods of collection development

Library developing collection	JMI	DU	JNU	ILI	GGSIPU	DBRAUD	NLU
On-Demand from learner	✓	✓	✓	✓	✓	✓	×
From Donation	✓	✓	✓	✓	×	×	×
Publisher	✓	×	✓	×	×	✓	×
Reviews from various sources	✓	✓	×	✓	×	✓	✓
Any other	×	×	×	×	×	×	Open Domain Resources

Note: ✓ means Yes and × means No

While at the Indian Law Institute, the collection grows because of student requests, donations, and reviews from many sources. Guru Gobind Singh Indraprastha University is expanding its collection to meet student demand. Six HEIs (JMI, DU, JNU, ILI, GGSIPU, and AUD) are developing their collections by considering demand from learners. While five HEIs (JMI, DU, ILI, AUD, and NLU) are developing their collections by taking reviews from various sources, Four out of seven institutions (JMI, DU, JNU, and ILI) are developing their collections through donations. Only three out of seven institutions (JMI,

JNU, and AUD) are developing their collections through publishers. The Copyright Act 1957 and Amendment 2012 safeguard the author's rights against duplicate copies of their original work, ensuring the invention of the author. University librarians must be aware of and conduct proper reviews to prevent plagiarism.

Table 6 shows that seven university librarians confirmed their awareness of the Indian Copyright Act, of 1957, and its 2012 amendment, stating it is their responsibility to protect author rights by avoiding plagiarism.

Table 6. Awareness of the Indian Copyright Act, 1957 and related amendments

Awareness of the Indian Copyright Act, 1957	JMI	DU	JNU	ILI	GGSIPU	DBRAUD	NLU
Yes	✓	✓	✓	✓	✓	✓	✓
No	-	-	-	-	-	-	-

Note: ✓ means Yes and × means No

6. LIMITATION

The study is conducted at seven universities in Delhi, and the responses are limited to these institutions. Consequently, one of the major limitations of the study is its focus on these universities alone. Universities located in other states or regions are not covered. Furthermore, the study does not provide a specific list of MOOCs in any particular subject. Instead, it focuses on perceptions related to MOOCs in the social sciences. Additionally, features and content vailable on various MOOC platforms are not included in the scope of this study.

7. DISCUSSION AND CONCLUSION

MOOCs are becoming increasingly popular among millions of students around the world, particularly in developing countries, due to their cost-effectiveness. Therefore, academic librarians must continuously learn and utilise the MOOCs in library services. Over the years, MOOCs have been inspiring learners and are accepted by educational institutions and employers as a mark of educational excellence. Higher educational institutions can address increasing workloads and expectations, increase student enrolment, provide flexible learning schedules, and shift authority from instructors to learners. MOOCs present new challenges and opportunities for educational libraries, requiring professional development for librarians. MOOCs are crucial for librarians to provide leadership and advice on developments.

The present study found that JMI, JNU, ILI, GGSIPU, and NLU are among the institutions that are aware of MOOCs, with six out of seven respondents revealed MOOCs help increase existing knowledge. Five out of seven institutions agree that MOOCs improve academic self-efficacy and enhance the effectiveness of formal education. Five HEIs (JMI, JNU, ILI, GGSIPU, and NLU) highlighted they first discovered about MOOC courses after enrolling in a couple of courses. Respondents from DU and AUD they knew about it, however, never signed up for MOOC. JNU and AUD respondents revealed that they are somewhat familiar with MOOCs. Respondents from JNU mentioned they came to know about MOOCs through training on MOOCs.

Five of the seven institutions (DU, JNU, ILI, AUD, and NLU) believe MOOCs improve academic self-confidence, increase the effectiveness of formal education, and enable better self-assessment. Six HEIs (JMI, DU, JNU, ILI, GGSIPU, and NLU) universities mentioned MOOC courses facilitate the acquisition of new knowledge. Moreover, MOOC course development is seen as requiring interaction with traditional education revealed by five of the seven institutions namely, JMI, DU, ILI, AUD, and NLU. Furthermore, DU, JNU, ILI, and NLU-four institutes agree that integrating MOOCs help students understand their worth. And, four of the seven (DU, JNU, AUD, and NLU) stated that having teachers present throughout the conversation increases effectiveness. Interestingly, seven HEIs (JMI, DU, JNU, ILI, GGSIPU, AUD, and NLU) employ various strategies to engage students and promote the adoption of Open Educational Resources (OERs) and MOOCs. These include email, workshops, communication through mobile, seminars, personal meetings, poster displays, and postal correspondence. Many universities, including DU, NLU, JNU, ILI, and GGSIPU, offer library materials to enrolled students in accredited MOOCs. These resources include e-books, e-magazines, e-newspapers, e-question papers, e-syllabus, information on MOOCs, online courses, scholarship details, audio content, research articles, news, and book reviews. Only JMI and AUD do not provide library materials for enrolment in MOOCs. These institutions provide a wide range of study materials, including e-books, e-syllabus, e-question papers, scholarship details, and book reviews.

The research also revealed that five of the seven institutions stated MOOCs are adaptable. The organisation uses various communication methods to reach learners and encourage them to use open educational resources. Four out of seven university librarians strongly agree that the user interface of accredited MOOCs is well-designed. The study found that all seven university librarians are familiar with the Indian Copyright Act 1957, which was amended in 2012.

Librarians have been playing a pivotal role in promoting and supporting the learning, teaching, and research endeavours of the university. With an increasing emphasis on cost-effective measures, librarians are actively engaged in investigating and implementing ideas put forth by students. The study found that librarians of universities under study believe that incorporating MOOCs into university curricula can effectively manage the increasing workload and demands of higher education institutions, given the limited resources available. MOOCs offer librarians distinct opportunities to influence the conversation on higher education. And, guide policy makers, educators, and students through these transformations.

Respondents of universities under study opined that MOOCs are flexible, useful for self-learning, and additional work for faculty and staff. However, only three institutions, JMI, DU, and JNU, strongly agree with this view. The study found that some MOOC courses are of inferior quality, time-consuming, and stretch learners' capabilities. Respondents opined that MOOCs can improve educational outcomes, but not as effectively as in-person

learning. Thus, MOOCs ensure equal access to resources for all participants through various online channels, revolutionising the educational approach. Therefore, librarians must harness the power of MOOCs and align their services to it so that learners can benefit.

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