QUALITY ASSURANCE IN OPEN EDUCATIONAL RESOURCES (OER) AND MASSIVE OPEN ONLINE COURSES (MOOCS) : BEST PRACTICES AND CHALLENGES

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ABSTRACT

The Role of Open Educational Resources (OER) and Massive Open Online Courses (MOOCs) in Promoting Inclusivity and Accessibility in Online Education from a Quality Perspective argues regarding the involvement of library and information science professionals in MOOCs environment. Open Education gained more visibility due to the emergence of Open Educational Resources (OER) and Massive Open Online Courses (MOOCs). This article discusses ensuring best practices, challenges, strategies, and recommendations for ensuring the quality of OER and MOOCs in fostering inclusivity and accessibility in open education initiatives.

Keywords*:* Open Education Resources, Massive Open Online Course, Library and Information Science, SWAYAM.

1. Introduction

The topic of Open Education has become increasingly complex in recent years. The first of a series intended to contribute to a better understanding of that complexity, this article considers whether Massive Open Online Courses (MOOCs) should be regarded as Open Educational Resources (OER). This question is crucial because it addresses the distinction between a conception of Open Education based on open content and Open Education based on open and innovative pedagogy (Christian et al., 2019).

According to the 2019 UNESCO Recommendation on Open Educational Resources (OER), Open Educational Resources (OER) are teaching, learning and research

materials in any medium – digital or otherwise – that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions. The five areas of action of OER Recommendation are i. Capacity building, i.e., developing the capacity of all key education stakeholders to create, access, re-use, re-purpose, adapt, and redistribute OER, ii**.** Developing supportive policy, i.e., encouraging governments, education authorities and institutions to adopt regulatory frameworks to support open licensing of publicly funded educational and research materials, develop strategies to enable the use and adaptation of OER in support of high quality, inclusive education and lifelong learning for all, supported by relevant research in the area. iii. Effective, inclusive and equitable access to quality OER, supporting the adoption of strategies and programmes, including through appropriate technology solutions that ensure OER in any medium is shared in open formats and standards to maximize equitable access, co-creation, curation, and searchability, including for those from vulnerable groups and persons with disabilities. iv. Nurturing the creation of sustainability forms of OER in education and learning. v. Fostering and facilitating international cooperation for accessible educational materials in multiple languages and formats.

Today's world is a digitations world. All students and teachers mostly used the internet to find new concepts and learning methods. Students & teachers use Open Educational Resources in teaching, learning and research. OER is a crucial part of open education. This resource provides freely digitized material for educators, students and teachers. Some examples of OER are complete courses, course modules, syllabi, homework and all digital materials collected worldwide. OER has a strong link to online learning. OER involved various digital documents, i.e., modules, collections, student guides, videos, images, textbooks, research articles, interactive materials such as stimulation and plays, and other valuable educational materials. This is always freely available. OER mainly focuses on education purposes, so there are no significant barriers to getting knowledge or any information to users. OER raises issues around being more flexible and open to mainstreaming OER and removing obstacles from within the OER movement, i.e., available educational resources (OER) see these resources as a panacea for all education problems. (Mishra, 2019).

MOOC stands for Massive Open Online Courses; it is "an online course designed for a large number of participants that can be accessed by anyone anywhere, as long as they have an internet connection (via web), is open to everyone without entry qualifications and offers a full/complete course experience online for free". In addition to traditional course materials such as filmed lectures, readings, and problem sets, many MOOCs provide interactive user forums to support community interactions between students, professors, and Teaching Assistants (TAs). Nowadays, most users use MOOCs services in open educational resources. MOOCs mean

Massive Open Online Courses. MOOCs are an online learning model that anyone can use through a computer and the internet. Open Educational Resources and Massive Open Online Courses are crucial tools for Enhancing the quality of Online Education. (Kaushik, 2015).

2. Importance of the Study

This study is essential for Academic libraries. Many online courses are available online, but OER & MOOCs play essential roles in online courses. Many students, teachers, and researchers also use MOOCs facility. In various areas, MOOCs are used in library and information science. The study aims to ensure that quality assurance in OER and MOOCs can contribute to advancing effective practices, policies, and strategies that enhance the quality and impact of open education initiatives.

Several libraries and consortiums have taken the forefoot in producing resources for all. Librarians, whose ranks are filled with specialists and experts in various fields, can contribute to the open educational commons by creating OERs. OER was developed in India by NCERT. NCERT was the first to start digitising all documents, which is helpful for all students. They digitized all its textbook (from class I to class 12), and more than one thousand audio and video programmes and made them available at the SAKSHAT portal, an imitative by MHRD.

3. Literature Review

Agrawal and Singh (2018) explained information about Massive Open Online Courses (MOOCs). MOOCs are free online courses available for anyone to go anywhere. MOOCs are also developed very well, for example, SWAYAM, NPTEL etc. This paper explains the importance of MOOCs in library and information science education, and Some of the main advantages of MOOCs are listed.

Bachalapur & Hugar (2021) conducted a descriptive survey on librarians' awareness of open educational resources in India. Open educational resources (OER) are freely accessible, openly licensed text, media, and other digital assets useful for teaching, learning, assessing, and research. They concluded with the note that library professionals have to make more and more awareness and training about the OER in all the higher educational institutions in India.

Bisal (2011) found the history of OER and how to benefit from using LIS professionals. it is also explaining how OER works in a library. OER users also easily use an automated library. Upadhyay and Upadhyay, in this research paper, OER plays a role important in academic libraries. It states how academic libraries are preparing themselves for the new type of resources that emerged as "OER" and getting recognition among the academic community.

Christian et al. (2019) studied the Open Education gained more visibility as a result of the emergence of Open Educational Resources (OER) and Massive Open Online Courses (MOOCs). This article discusses whether MOOCs should be considered OER. Open Education and OER can be treated as two strands with different historical roots even though, in theory, OER is an aspect of Open Education. Different OER definitions and typologies are analyzed about their dimensions and categorizations. Furthermore, the four conditions and two original categories of MOOCs are discussed, leading to a debate on their quality.

Dill & Cullen (2020) observed that not only are librarians influencers in the OER movement, but the OER movement has impacted librarians in their roles as educational collaborators, information literacy instructors, and instructors of future librarians and educators.

Kaushik (2015) introduced the evolving concept of free online education, MOOCs; its history has also been outlined. The paper also discussed the MOOCs' know-how and structure, such as course syllabus, readings, assignments, discussion forums, and multiple-choice quizzes. It has further traced down major players of MOOCs, for example, Coursera, edX, UDACITY, future learning, and Khan Academy. In addition, it has also provided the list of MOOCs offered in Library and Information Science.

Kaushik (2019) highlighted the future of MOOCs, such as offering a Master's degree in computer science (Georgia Tech University) through a series of massive open online courses and starting the MOOC.org website.

Sanjeeva and Powdwall (2017**)** discussed awareness about open educational resources. It tries to examine the possible roles of academic's libraries and the barriers perceived by academic librarians. It presents the result of a survey on awareness, integration and involvement of academic libraries in Open Educational Resources.

4. Objectives of the study

The present study has taken up the following objectives:

- To Identify the key factors and mechanisms through which Open Educational Resources (OER) and Massive Open Online Courses (MOOCs) can enhance inclusivity and accessibility.
- To Investigate the potential benefits and outcomes of integrating OER and MOOCs in online education for diverse learner populations, including students with disabilities, underrepresented groups, and learners from different socioeconomic backgrounds.

- To Identify best practices, challenges, strategies, and recommendations for ensuring the quality of OER and MOOCs in fostering inclusivity and accessibility in online education**.**

5. Uses of OER and MOOCs in the Library

Open Educational Resources (OER) and Massive Open Online Courses (MOOCs) have become valuable resources in the academic library landscape. Libraries can use OER and MOOCs to supplement traditional curricula. Libraries are no longer just spaces for academic study; they are evolving into centres for lifelong learning. Libraries can support the professional growth of educators, librarians, and other professionals by offering access to MOOCs that focus on specific skills, teaching methodologies, technology usage, or other relevant topics. OER can also be used to create and curate professional development resources for staff. Librarians can actively advocate for using and creating open educational materials, contributing to the open education movement. OER and MOOCs can help bridge the digital divide by providing free educational content to individuals who may not have access to traditional educational resources. Libraries can offer internet access and computer facilities to those without personal devices, ensuring they can benefit from these online educational opportunities. Integrating OER and MOOCs into library services aligns with the mission of libraries to promote knowledge dissemination, support education, and foster lifelong learning for their communities (Sathish Kumar et al., (2021).

5.1 Indian OER repositories

- **Shodhgangotri-**http://shodhgangotri.inflibnet.ac.in
- **Shodhganga-** http://shodhganga.inflibnet.ac.in/
- **E-shodhsindhu-** http://ess.inflibnet.ac.in
- **ICSSR Data Service-** http://icssrdataservice.in
- I**ndcat-** http://indcat.inflibnet.ac.in
- **Vidwan-** EXPERT DATABASEhttp://vidwan.inflibnet.ac.in
- **Swayamprabha-** https://www.swayamprabha.gov.in/
- **eGyanKosh/ Gyandarshan educational channel-** https://egyankosh.ac.in/
- **SAKSHAT: A One-Stop Education Portal**

5.2 Massive Open Online Courses (MOOCs):

MOOC can be seen as a form of free open education through online platforms. In India, the SWAYAM project was started recently by MHRD, Govt. of India. This project aims to blind online and offline education together. It is a MOOCs platform launched. SWAYAM stands for "Study Webs of Active Learning for Young Aspiring Minds".

5.2.1 SWAYAM distributed the following project by education.

1. **School Education:** NIOS, NCERT.
2. **Out of School Education:** IGNOU, NITIR.
3. **Under Graduate Education:** NPTEL, AICTE, CEC, IIMB.
4. **Post Graduate Education:** NPTEL. AICTE, IIMB, UGC.

This is because all online courses are working in various education fields.

5.2.2 National Coordinators for MOOCs

- **AICTE-** (All India Council for Technical Education) for self-paced and international courses NPTEL (National Programme on Technology Enhanced Learning) for Engineering
- **UGC-** (University Grants Commission) for nontechnical post-graduation education
- **CEC-** (Consortium for Educational Communication) for undergraduate education
- **NCERT-** (National Council of Educational Research and Training) for school education
- **NIOS-** (National Institute of Open Schooling) for school education
- **IGNOU-** (Indira Gandhi National Open University) for out-of-school students
- **IIMB-** (Indian Institute of Management, Bangalore) for management studies
- **NITTTR-** (National Institute of Technical Teachers Training and Research) for the Teacher Training programme.

Choice-based credit system starts in higher education in universities of India. MOOCs provide various opportunities to learn choice-based courses which different schools and universities offer. MOOCs also support unlimited learning throughout the entire life of the users.

5.3 Benefits of OER

- OER can support life-long and non-formal learning by being available to people outside the formal educational system, regardless of age and previous studies.
- OER is a free online course with no technical barriers. Sometimes highly cost textbook users cannot purchase; this time, OER solves the users' problem.
- OER materials come from various sources and regions, reflect multiple perspectives, and are available in many languages. So, it is beneficial for various users.
- Most significant use is OER generally allows for the reuse of information. For example, any information or database users can access many times and share it themselves.
- OER can take part in the creation of educational resources. So OER can create a dynamic experience for learners.

5.4 Benefits of MOOCs

- MOOCs can easily be accessible on smartphones, benefiting students easily. Because students can pursue these online courses quickly.
- MOOCs are online learning courses, so users can easily access information anywhere and anytime. Many users can use MOOCs at the same time.
- MOOCs are free online courses, so it is ample opportunity for students to use this course. No educational fee and no other educational platform.
- Digital India will encourage large amounts of educational content to be accessed easily in gram panchayats nationwide. MOOCs are helping to improve digital India.

6. Best Practices and Challenges Related to Quality Assurance in OER and MOOCs:

Quality assurance ensures the effectiveness, credibility, and value of Open Educational Resources (OER) and Massive Open Online Courses (MOOCs).

6.1 Best Practices:

- Establish rigorous *review and evaluation processes* to assess the quality and relevance of OER and MOOCs. This could involve peer reviews, expert evaluations, and user feedback to identify and address content or instructional issues.
- Curate OER and MOOCs from reputable sources and institutions. Libraries, universities, and organisations can play a significant role in curating high-quality

content and ensuring the resources align with educational standards and objectives.

- Encourage using *open licenses, such as Creative Commons*, for OER. Clear licensing enables users to understand how to use, adapt, and share the resources while maintaining appropriate attribution and copyright compliance.
- Ensure that OER and MOOCs are *accessible to all learners*, including those with disabilities. Content should conform to accessibility standards and be available in formats that accommodate various learning styles and assistive technologies.
- Regularly update OER and MOOCs to keep them current and relevant. Outdated or incorrect information can negatively impact learners' experiences and the credibility of the resources.
- Encourage collaboration among educators, subject matter experts, and learners to continually improve and refine OER and MOOCs. Building a community of contributors and users fosters a sense of ownership and responsibility for the quality of the materials.

6.2 Challenges:

- OER and MOOCs come from diverse sources, and their quality can vary significantly. Ensuring consistency and reliability in the content can be challenging, especially when contributions come from various authors and institutions.
- MOOCs, in particular, need help gaining widespread recognition and accreditation. The lack of formal recognition may deter some learners from fully embracing these courses as valid credentials.
- Determining OER's appropriate licensing and copyright status can be complex. Misunderstandings or misuse of licensed content can lead to legal challenges and abuse of intellectual property.
- Many learners may need technical assistance or guidance on effectively engaging with MOOCs. Providing adequate support for learners who face technical challenges or require pedagogical assistance can be resource-intensive.
- Maintaining the quality and availability of OER and MOOCs over time requires sustainable funding and support. With proper funding and institutional commitment, resources may become updated and inaccessible.
- Encouraging educators to contribute to OER and MOOC development can be challenging. The need for incentives, recognition, and career advancement

opportunities for those involved in open education initiatives can hinder widespread adoption (Yuan, MacNeill, & Kraan, 2008).

Addressing these challenges and implementing best practices can enhance quality, increase adoption, and broader accessibility of OER and MOOCs, making them valuable components of modern education ecosystems.

7. Conclusion

Ensuring quality assurance in Open Educational Resources (OER) and Massive Open Online Courses (MOOCs) is paramount to creating an effective and inclusive learning environment. Adopting best practices and overcoming challenges can significantly enhance the overall educational experience for learners and educators alike. In this rapidly changing landscape where technology is changing at shallow intervals and changing the information-seeking behaviour of students and Research scholars, Research scholars will continue to require support and guidance from library and information science professionals in navigating the requirements of open access and the development, management and promotion of OERs. MOOCs technology provides space for library and information science professionals to become familiar with MOOCs concept, structure and other aspects and to develop their skills towards MOOCs as a whole so that LIS professionals can play imperative roles in the development of massive open online courses in different disciplines and support of MOOCs movement at a significant level. By upholding best practices and addressing challenges, we can unlock the full potential of OER and MOOCs, democratising education and empowering learners worldwide.

Reference:

1. Agrawal, A., & Singh, R. (2018). Massive Open Online Course (MOOC) in India: with particular reference to library and information science. *Journal of Indian Library Association, 54*(4), 211 -216.
2. Bachalapur, M. M., & Hugar, J. G. (2021). Librarians awareness on Open Educational resources in India. *Library Philosophy and Practice(E Journal)* , 7-8.
3. Badi, D., & Ali, D. (2016). Massive Open Online Courses (MOOC) Their Impact on the Full Quality in Higher Education Institutions "Rwaq: Saudi educational platform for MOOC". *Journal of Library and Information Sciences*, *4*(1). doi: 10.15640/jlis.v4n1a6.
4. Christian, S. M., Stephen, D., Grainne, C., Fabio, N., & Daniel, B. (2019). Are MOOCs Open Educational Resources? A literature review on history,

definitions and typologies of OER and MOOCs. (pp. 331-341). Spain: Open Praxis.

5. Dill, E. & Cullen, M.A. (2020). Introduction: Open Educational Resources and the Academic Library. *Library Trends,* 69(2), 352-342. doi:10.1353/lib.2020.0036
6. Kaushik, A. (2015). Massive Open Online Course (MOOC): A New Online Learning Approach to LIS Professionals. *Library Waves*, *1*(2), 110-118.
7. Kaushik, A. (2016). Massive Open Online Course (MOOC) in Library and Information Science Domain. *Pearl: A Journal of Library and Information Science*, *10*(2), 79. doi: 10.5958/0975-6922.2016.00010.3.
8. Mishra, S. (2017) Open educational resources: removing barriers from within, Distance Education, 38(3), 369-380, doi: 10.1080/01587919.2017.1369350
9. Sanjeeva, M. & Powdwal, S. (2017). Open Educational Resources: Role of Libraries. *SRELS Journal of Information Management*, *54*(5), 260. doi: 10.17821/srels/2017/v54i5/113211.
10. Sathish Kumar, K., Fathurrochman, I., Mahendraprabu, M., Ramnath, R., & Sasi Kumar, N. (2021). Usage and Performance of Open Educational Resources among State Universities of Tamil Nadu Research Scholars. *International Journal of Management and Humanities (IJMH), 5* (10), 1-8.
11. Yuan, L., MacNeill, S., & Kraan, W. (2008). Open Educational Resources-Opportunities and Challenges Hor Higher Education. *Educational Cybernetics: Reports* , 38-42.
12. UNESCO (2022) The 2019 UNESCO Recommendation on Open Educational Resources (OER): supporting universal access to information through quality open learning materials. Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000383205 [Accessed on 28/6/2023]