OPEN EDUCATIONAL RESOURCES: ROLE OF LIBRARIES

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Abstract: Learning resources play an important role in the teaching-learning process as they help teachers organize an effective classroom environment and help students actively participate in learning. Apart from traditional learning resources, information and communication technology (ICT) The development of Open Educational Resources (OER) has provided various innovative teaching-learning resources that teachers need to use in their teaching-learning activities. Open Educational Resources are resources that are easily available on the Internet. Teachers are free to use such resources. They need to select, adapt and integrate those OERs in the teaching-learning process. The present paper discusses the concept of Open Educational Resources, and the role of libraries in promoting Open Educational Resources.
Keywords: Open Educational Resources, OER, Open Educational Resources: Role of Libraries

Introduction: The development of information technology is playing an important role in the restructuring of libraries. Internet and Web technologies have brought about unprecedented changes in the nature and functioning of library and information resources and services in the digital environment. In the information age, data (contents) is available in different forms; it can be in printed form, electronic form, or Internet (online) form, etc Availability of information in digital formats forced libraries to transform into hybrid libraries and the libraries are handling both traditional as well as digital information sources. Also, with the widespread use of digital technologies, many educational resources (learning objects) are available on the Internet/online (public domain) and can be accessed via digital devices like computer, iPod, etc.

What is OER?
Open Educational resources (OER) are freely available online materials that anyone can be used for teaching, learning, research and other purposes.

Definition of OER:
The 2019 UNESCO definition describes OER as "teaching, learning and research materials that make use of appropriate tools, such as open licensing, to permit their free reuse, continuous improvement and repurposing by others for educational purposes.
OER coined at UNESCO's 2002 Forum on Open Courseware and designated "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."
OER can consists of audio lectures, video lectures, activities in labs, forums, case study, curriculum, journals, newspapers, thesis, standards discussion, lecture notes, lesson plan, syllabi, textbooks, full course, images and illustration etc.

Concepts of OER:
The concept of Open Educational Resources (OER) describes any educational resources including audio lectures, video lectures, full course , course materials, activities in labs, forums, case study, curriculum, journals, newspapers, thesis, standards discussion, lecture notes, textbooks, images and illustration, and any other materials that have been designed for use in teaching and learning that are openly available for use by educators and students, without an accompanying need to pay royalties or license fees. The open educational

resources (OERs) movement has empowered researchers and educators to become more innovative in their teaching and learning, through the openness and flexibility. OER is simply an educational resource that incorporates a license that facilitates reuse – and potentially adaptation – without first requesting permission from the copyright holder.

Open Educational Practices:
- Production, management, use and reuse of OER
- Breaking down barriers to learning
- Open learning and gaining access to open learning opportunities.
- Networking between teaching practitioners
- Open sharing of teaching ideas and know-how
- Sharing good practice
- Using open technologies (web-based platforms, applications and services) in an educational context.

So, the use of open educational resources is:

As Educators: To use and reuse for teaching, learning and research purpose.

As Students: To use for learning purpose.

As Self-Learners: OER playing very important role as lifelong learners.

The 5R's of open education: the ability Retain, Reuse, Revise, Remix and Redistribute.

Retain: can keep the work forever

Reuse: can use the work for your own purpose

Revise: can adapt, modify or translate the work

Remix: can combine it with another resource to make a new work

Redistribute: can share the work with others.

Open Educational Resources (OER):

Some Major Open Educational Resources are:

- **SWAYAM:** SWAYAM is a programme initiated by Government of India and designed to achieve the three cardinal principles of Education Policy viz., access, equity and quality. The objective of this effort is to take the best teaching learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy.URL: *https://swayam.gov.in/*

- **SWAYAMPRABHA:** The SWAYAM PRABHA is a group of 40 DTH channels devoted to telecasting of high-quality educational programmes on 24X7 basis using the GSAT-15 satellite. Every day, there will be new content for at least (4) hours which would be repeated 5 more times in a day, allowing the students to choose the time of their convenience. The channels are uplinked from BISAG-N, Gandhinagar. The contents are provided by IITs, UGC, CEC, IGNOU. The INFLIBNET Centre maintains the web portal.URL: *https://swayamprabha.gov.in/*

- **NCERT:** The National Council of Educational Research and Training (NCERT) is an autonomous organization set up in 1961 by the Government of India to assist and advise the Central and State Governments on policies and programs for qualitative improvement in school education. The major objectives of NCERT and its constituent units are to: undertake, promote and coordinate research in areas related to school education; prepare and publish model textbooks, supplementary material, newsletters, journals and develops educational kits, multimedia digital materials, etc. organize pre-service and in-service training of teachers; develop and disseminate innovative educational techniques and practices; collaborate and network with state educational departments, universities, NGOs and other educational institutions; act as a clearing house for ideas and information in matters related to school education; and act as a nodal agency for achieving the goals of Universalization of Elementary Education. URL: *https://ncert.nic.in/*

- **e-PG Pathshala** *:* e-PG Pathshala is an initiative of the MHRD under its National Mission on Education through ICT (NME-ICT) being executed by the UGC. The content and its quality being the key component of education system, high quality, curriculum-based, interactive e-content in 70 subjects

across all disciplines of social sciences, arts, fine arts and humanities, natural & mathematical sciences, linguistics and languages have been developed by the subject experts working in Indian universities and other R & D institutes across the country. Every subject had a team of principal investigator, paper coordinators, content writers, content reviewers, Language editors and multimedia team.URL: *https://epgp.inflibnet.ac.in*

- **eGyankosh:** A National Digital Repository to store, index, preserve, distribute and share the digital learning resources developed by the Open and Distance Learning Institutions in the country. Items in the eGyankosh are protected by copyright, with all rights reserved by IGNOU, unless otherwise indicated. URL: *https://egyankosh.ac.in/*

- **National Programme on Technology Enhanced Learning (NPTEL)** : NPTEL is a joint venture of the IITs and IISc, funded by the Ministry of Education (MoE)Government of India, and was launched in 2003. Initially started as a project to take quality education to all corners of the country, NPTEL now offers close to 600+ courses for certification every semester in about 22 disciplines.URL: *https://nptel.ac.in/*

- **Shodhganga :** Reservoir of Indian Theses The Shodhganga@INFLIBNET Centre provides a platform for research students to deposit their Ph.D. theses and make it available to the entire scholarly community in open access. The repository has the ability to capture, index, store, disseminate and preserve ETDs submitted by the researchers. URL: *https://shodhganga.inflibnet.ac.in/*

- **Shodhgangotri :** Shodhgangotri hosts electronic version of approved synopses and research proposals submitted to the universities in India by research scholars for registering themselves for the PhD programme. All universities and research institutions should make it mandatory to submit approved synopses and research proposals at the time of their PhD registration to make it experience the pulse of ongoing Indian research. URL: *https://shodhgangotri.inflibnet.ac.in/*

- **E-Shodhsindhu:** e-ShodhSindhu merging three consortia initiatives, namely UGC-INFONET Digital Library Consortium, N-LIST and INDEST-AICTE Consortium. The e-ShodhSindhu will continue to provide current as well as archival access to more than 7,200+ core and peer-reviewed journals and number of bibliographic, citation and factual databases. URL: *https://ess.inflibnet.ac.in/*

- **DOAB:** The Directory of Open Access Books (DOAB) is a digital directory that provides free access to academic books published under an open access license. It covers a wide range of subjects, ensures high-quality content, and promotes open access. URL: *https://www.doabooks.org/*

- **DOAJ:** The Directory of Open Access Journals (DOAJ) is a database that indexes and provides access to high-quality, peer reviewed journals across all subjects and languages. It serve several purposes, including increasing visibility and ease of use, ensuring quality through rigorous application processes, promoting open access to scientific research, and providing data for research.URL: *https://doaj.org/*

- **National Digital Library Of India (NDLI):** MHRD under its National Mission on Education through ICT has initiated the National Digital Library of India project. It is being developed at IIT , Kharagpur,2006.To develop a framework of virtual repository of learning resources with a single window search facility. Filtered and federated searching is employed to facilitate focused searching so that learners can find the right resource with least effort and in minimum time. NDLI is designed to hold content of any language and provides interface support for leading vernacular languages. It is being developed to help students to prepare for entrance and competitive examinations. It enable people to learn and prepare from best practices from all over the world and to facilitate researchers to perform inter-linked exploration from multiple sources. URL : *https://ndl.iitkgp.ac.in/*

Role of Library in OER: Academic library is playing an important role in higher education. The rapid development of ICT has changed the traditional concept of libraries. Modern academic libraries are more powerful dynamic and reach their users without the restrictions of geographical boundaries. Digital environments provide learners with many opportunities for creative and collaborative efforts with digital content, tools, and services in the learning process. One such collaborative opportunity is the creation, evaluation, and sharing of open content and learning experiences. In a global affected economy accessible to information via the Internet, the self-paced and independent learning process is rapidly changing and enhanced by the Open Educational Resources and other Open Access initiatives. The OER movement aims to break down barriers and encourage and enable everyone to freely share content called Open Educational Resources. There are many libraries and library associations that have taken the initiative to create resources for all. Libraries should provide print reading materials as well as e-resources to meet the needs of their users.

Library professionals should have knowledge of open educational resources and organize various training Programmes, workshops to create awareness about OER for the users. Library professionals, who are experts in various fields, can be contributors to the open educational commons by creating OER. Library professionals should have skills and knowledge to provide better and effective advanced services using advanced technology and become a smart librarian. In the present digital era, libraries can provide seamless services to their users and make the library smart by using new technology like Internet of Things, Artificial Intelligence, RFID, Cloud Computing etc. The academic library website can play a role to support research in higher education through providing access to OER and internet research tools.

Conclusion: Open Education Resources (OER) are undoubtedly a significant development in field of education as its content, media and resources are freely and openly accessible to all. The use of OER in education is transforming the way that educators and learners approach teaching and learning. By providing cost savings, increased access to high-quality materials, flexibility, customization, collaboration, and innovations, OER are helping to create a more exclusive and effective educational system. Librarians can support faculty and learners by providing instruction in information and digital literacy, advising on copyright matters and open licenses, encouraging their creation and use, fostering accessibility and visibility, as well as curating and ensuring its quality. With the changing time LIS professionals need to stay abreast and remain open to the changing trends in the educational world and also gain experience with changing technologies.

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