OPEN EDUCATIONAL RESOURCES (OER) : ANOVERVIEW

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Abstract : Large numbers of educational institutes access educational resources for their teaching and learning to the teachers and students through the internet. But it is considered Intellectual Property. So these resources are restricted to access as per legal policy. The term Open Educational Resources is the right way to view, free access, run, download, and free education. In the education process, some Indian and global innovative initiatives are useful for OER to provide free access, reuse, retain, revise, remix, and redistribute for quality education and also share learning materials and pedagogy with others. So the main part of this paper is wide importance of OER for teachers and students for teaching and learning process, research scholars, academicians, managers, institutes, individuals and professional in their respective field

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1. Introduction :

In recent years, the revolution of Information Technology serves its contribution to individuals, institutes and organizations. As information Technology made learning materials more readily available, a large number of digital resources in the education system from many sources are becoming available. Many teachers access in their teaching materials for learning to students on the internet in the classroom. But the qualitative educational materials are not freely available on the net. Many resources are available on a paid basis. So the libraries have to subscribe to the consortia and provide the access to these resources. Sometimes Higher education institute are unable to meet their needs due to a lack of technical support, trained personnel, funds, bandwidths, modern infrastructure and so on. The Open Educational Resources (OER) has surpassed all the above things and elements. The Open Education Resources as a term mentioned in a conference organized by UNESCO in 2002. Open Educational Resources mean those qualitative teaching and learning materials are freely available in any format and anywhere on the net and under an open license to grant for freely reuse, change and share with few or no restrictions. Open Educational Resources (OER) provide a strategic opportunity to improve the quality of education as well as facilitate policy dialogue, knowledge sharing and capacity building.

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2. Operational Definitions :

Open Educational Resources :

The William and Flora Hewlett Foundation provide the following definition of open educational resources:

"OER are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open Education Resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge."

"Open Educational Resources (OERs) are any type of educational materials that are in the public domain or introduced with an open license. The nature of these open materials means that anyone can legally and freely copy, use, adapt and re-share them. OERs range from textbooks to curricula, syllabi, lecture notes, assignments, tests, projects, audio, video and animation." - UNESCO, Home Page dated 2nd October 2013

Open Education :

Open Education encompasses resources, tools and practices that are free of legal, financial and technical barriers and can be fully used, shared and adapted in the digital environment.

Open education is a collective term to describe institutional practices and programmatic initiatives that broaden access to the learning and training traditionally offered through formal education systems. The qualifier "open" of open education refers to the elimination of barriers that can preclude both opportunities and recognition for participation in institution-based learning. One aspect of openness in or "opening up" education is the development and adoption of open educational resources.

Resources :

According to Sukula, "An E-resource is an electronic information resource that can be accessed on the web, on or off campus. User can get the information what him or her want, when it is needed."

3. Open Educational Resources :

The OER has been used to refer to teaching and learning materials. According to our perception, Open Educational Resources for teaching and learning such as :

1. Open Courseware and Content
2. Software tools
3. Open materials (online tutorials, textbooks Lecture Open notes etc.)
4. Teaching and Learning Management Tools

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i.   Educational Courses :

4. Stake Holders :

Individuals, Organizations, Societies, Professionals in different fields including library professionals, and all teachers from primary to higher education level are Stakeholders of Open Educational Resources. All of the above can access open educational resources for development in their respective fields.

5. Major Innovative Initiatives :

There are large numbers of innovative Indian and Global initiatives of Open Educational Resources (OER) useful for students and teachers. Some of the OERs are as follows:

Indian Innovative Initiatives :

i.   ePathshala :

ePathshala provides all textbooks (504) in digital version of NCERT. Stakeholders can easily access resources (3886) through desktops, laptops, tablets, kindles, smartphones etc. Availability of resources are in multiple languages i.e English, Hindi, Kannada, Marathi, etc. also storehouse of audios, videos, e-publications. 4.5 M stakeholders have download ePathashala app for access e resources and digital textbooks.
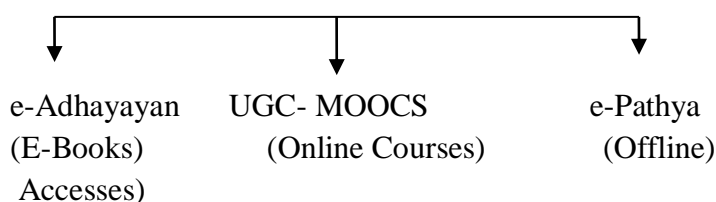
ii.   NROER (National Repository on Open Educational Resources):

NROER is launched on August 2013. The platform of the NROER is to collect digital learning resources and provides to interested primary school education to higher education institutes across India. NROER is storehouse of national repository of resources that can be used teachers in teaching and learning process.

iii.   E-PG Pathshala :

E-PG pathshala is an initiative of the Ministry of Human Resource development and developed by NCERT. Information and Library Network (INFLIBNET) is an organization that supports and provides facilities to libraries and information resources for Indian Higher Education and research. E-PG pathshala provides Open educational resources more than 20000 e-texts and 19000 videos in different courses.

E-PG Pathshala is a gateway to all post graduate courses.

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e-Adhayayan          UGC- MOOCS              e-Pathya
(E-Books)           (Online Courses)         (Offline)
 Accesses)
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iv. NPTEL (National Programme on Technology Enhanced Learning) :

NPTEL is a project of the MHRD initiative by a joint of the IITs and IISc. NPTEL is a qualitative e-learning platform for university-level science subjects across India and provides 600 e-learning courses and offers online courses, and certifications in various subjects. The Mission of NPTEL is to increase the quality of technological education in the country after providing open license online courseware. NPTEL was initiated by seven India Institute of Technologies (IIT) along with the Indian Institute of Science, Bangalore in 2003. NPTEL also initiated open online courses/MOOCs in 2014 and also recommended advance courses to AICTE to be sanctioned as Faculty Development Programme (FDP).

v. National Digital Library of India (NDLI) :

Ministry of Human Resource Development (MHRD) under its National Mission on Education through Information and Communication Technology (NMEICT) has initiated the National Digital Library (NDL) as a pilot project to develop a framework for the virtual repository of learning resources with a single-window search facility in 2016. The large volume of quality educational resources are available from primary to post-graduate levels in a different formats in different subjects i.e. science and technology, arts and the social sciences, the medical sciences, and legal studies. NDL also provides an Institutional digital repository to many educational and research institutes and interested personnel.

vi. OSCAR (Open Source Courseware Animations Repository) :

OSCAR Project is an imitative of IIT Bombay to provide a quality repository of web-based interactive animations in science and engineering at the higher education level, and mathematics and science at the primary level for students and teachers to view, run and download these learning objects.

Global Innovative Initiatives :

i. Commonwealth of Learning (COL) :

COL provides free or open access to global quality education materials and an overview and discovers concepts related to copyright and creative commons License. Also online courses platform for different courses. It is designed to all levels of teachers, administrators, librarians, students etc.

ii. British Columbia Open Text Book Project :

Open textbooks collections can be accessed by educators in British Columbia and beyond to be used anywhere in an institute learning management system or teaching and learning platform.

iii. MERLOT (Multimedia Educational Resources for Learning and Online Teaching) :

MERLOT has been developed by the California State University Centre in 1997 is an online repository and free international community for Educators, Learners, and Researchers

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of OER from around the world to shares learning materials with others. MERLOT provides access to integrated online learning and related materials and content creation tools.

iv. Skills Commons :

The aim of Skills Commons OER resources is expedite to democratization of education through Open Educational Services and resources to prepare unique identity for successful employment in the 21st century.

v. IFLA (UNESCO) :

IFLA refers to the role of libraries as curators in OER, underlines the importance of copyright literacy for all relevant actors to ensure confidence in creating and using OERs, and strongly welcomes the recognition of libraries as having an important role in the sector.

6. Benefits of Open Educational Resources :

The benefits of the Open Educational Resources (OER) are as following :

i.   OER learning materials are available anywhere anytime free of cost to the students and teachers for teaching and learning for retain, reuse, revise, remix, and redistribute without restrictions.

ii. To assist the improve of quality education after using OER

iii. To increase the number of stakeholders connected and involved in educational process

iv. Different types of materials in different format in different languages are available on OER. Therefore, interested students and teachers can access desired learning materials for improving knowledge

v.   By using OER, students are exposed to different educational resources that are in accordance with their learning style. Learners can become more active participants in educational process through collaboration in virtual communities of learning. Teachers can compare and share their own teaching materials with other teachers around the world. They can learn how to release their work under an open license and to improve quality of teaching practice and encourage pedagogical innovation and OER can reduce the cost of accessing educational materials (McGraw Heal et al, 2013).

7. Barriers of Open Educational Resources :

i.   Now a day, e-learning materials, resources, and digital /virtual repositories are available in different formats in different languages. But most of the learning materials and resources are available and published in the English language. However, it's very challenging to understand, view, run, and download for regional and local language students and researchers. Therefore, the content in the English language should be made available in the regional and local languages.

ii.   Due to lack of technical support from the staff of Schools and colleges, students and researchers are facing technical issues using Open Educational Resources

iii. To use Open Educational Resources, various issues are facing students, researchers, and institutions like lack of awareness, lack of funds, no supports from management

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level, lack of bandwidth connectivity, lack of time management, lack of infrastructure and facilities, lack of information on the quality of OER, etc.

iv.   OER in audio and video materials is available in different formats. Due to the different versions of computers, some of the formats do not support on desktops, laptops, tablets, etc. Therefore, the common format should be develop that can be used on any version of computers, laptops, tablets and Android devices.

8. Conclusion :

Open Education Learning materials will assists to the teachers for access related to teaching course materials and students will get benefit from it. They will get opportunity to listen the lectures of teachers in the classroom. A major role of libraries is to encourage open education, Lifelong learning and Open Educational Resources. Stakeholders of OER are students, teachers, academicians, policy makers, Institutes etc. They can access open educational resources for development in their respective fields. Large number of resources is available in English language. Their content requires in regional or local language. A large number of innovative initiatives of OER are useful for students and teachers around the world. OER learning materials are useful for reuse, retain, revise, remix, and redistribute with few and no restrictions to the teachers and students. Learning materials and resources are available in digital /virtual formats in different languages and also institutional digital repository of many educational and research institutes to interested personnel. Students and teachers need to use OER to the optimum level of their personal improvement.

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