

# OPEN EDUCATIONAL RESOURCES: E-RESOURCES-A PARADIGM SHIFTING IN OPEN AND DISTANCE LEARNING

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**Abstract:** Now-a-days, our society has been changed radically. The need of the users has changed simultaneously. Information Communication Technology (ICT) extends rise to new advantages and opportunities for teaching-learning process. It is an important task that benefited for storing and processing of the information in electronic platform and to share, to retrieve and to disseminate of that information from the digital forms in a single click. In this regard some challenges are established in respect of open and distance learning regarding how teaching and learning should be organised and managed. Presently, most of the Higher Educational Institution is using the ICT and its technology for better educational services to its learners. But much of the learning materials were locked up behind its passwords within proprietary systems. These are not easily accessible for the outsiders. The movement of Open Educational Resources (OER) is to break down such barrier and to develop the different process and techniques for searching and retrieving the appropriate information freely. OER accept only the process of e-learning in the field of open and distance learning mode. OER addressed a good number of issue and prospective towards e-learning in open and distance learning mode that highlighted a paradigm shifting in higher education in India. This paper presents the conceptual and contextual aspect on OER and discusses the e-learning process and indicate that how to attach with the OER environment. It also focuses the some issues and perspectives in case of open and distance learning with the help of e-learning in India.

**Keywords:** OER; 5R's; E-resource; Management; Initiatives; NPTEL; Challenges

## **1.0 Introduction:**

We are in digital era. All information may be available through internet. ICT (Information Communication Technology) is a process which is benefited for storing and processing the information in digital form and searching, retrieving and disseminating of that information from the digital forms by a single click. Information is growing firstly in our present decade. For the effect of technological development, our society has been moved into modern-technological society. By the way, our educational institutes (like School, College, University, Research Institute etc.) have been changed their platform (teaching-learning process, course materials, syllabus, modules etc.) into modern e-based platform where modern technologies (i.e. Computer, Internet, E-mail, Website, Blog etc.) are used. All educational institutions are trying to provide right education to all learners. They are using ICT and its technologies for better educational services to its learners. But much of the learning materials were locked up behind passwords within proprietary system. These are inaccessible for the outsiders. The movement of Open Educational Resources (OER) is to break down such barriers and to develop the different process and techniques for searching and getting the appropriate information freely. In respect of open and distance learning in Indian, there are many

initiatives and policies have been adopted. These are NPTEL, NROER, A-VIEW, e-Gyankosh etc. OER accept only the process of e-learning that offers a good number of advantages and opportunities for teaching-learning process in open and distance learning i.e. a) free of cost materials, b) lifelong learning facilities, c) open access facilities, d) easy to use and reuse etc. But, some issues and challenges are established in the implementation of OER. These are a) quality and standardisation issue, b) technological issue, c) terminological issue, d) IPR issue etc. However, it is needless to point out that OER as well as E-learning is the vital issue for every higher educational institute that reflects a paradigm shifting in open and distance learning.

## **2.0 Open Educational Resources (OER):**

### **2.1 Historical Aspect:**

In the globalise situation all the digital data and information intend towards reusable as open source. Most of the research-reports are basically describe the terminology of Open Educational Resources (OER) and Open Educational Practice (OEP). These reports concluded the meaning of 'Open' is as 'OER' and other concept is as 'Open Content' and 'Open Access'. Due to development of Information Communication Technology (ITC), information is growing fast changes from one content to other content. Learning resources are often considered key intellectual property in a competitive higher education around the world. However, more and more institutions and individuals are sharing their digital learning resources over the Internet, openly and for free, as Open Educational Resources (OER). Innovation of Computer is changed their platform and environment. Now the term 'Open' is used as reusable resources without any paying money.

The term OER was first come into use at a conference hosted by UNESCO in 2002, defined as, "the open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes". In simple words, the term OER is used to mean any one can freely access to the learning materials without any paying on global area.

Organisation for Economic Co-operation and Development (OECD) defined in 2007, "digitised materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning and research"

Thus the historic concept of OER is educational resources can be used freely or openly in the world.

## **3.0 Conceptual framework:**

### **3.1 Open :**

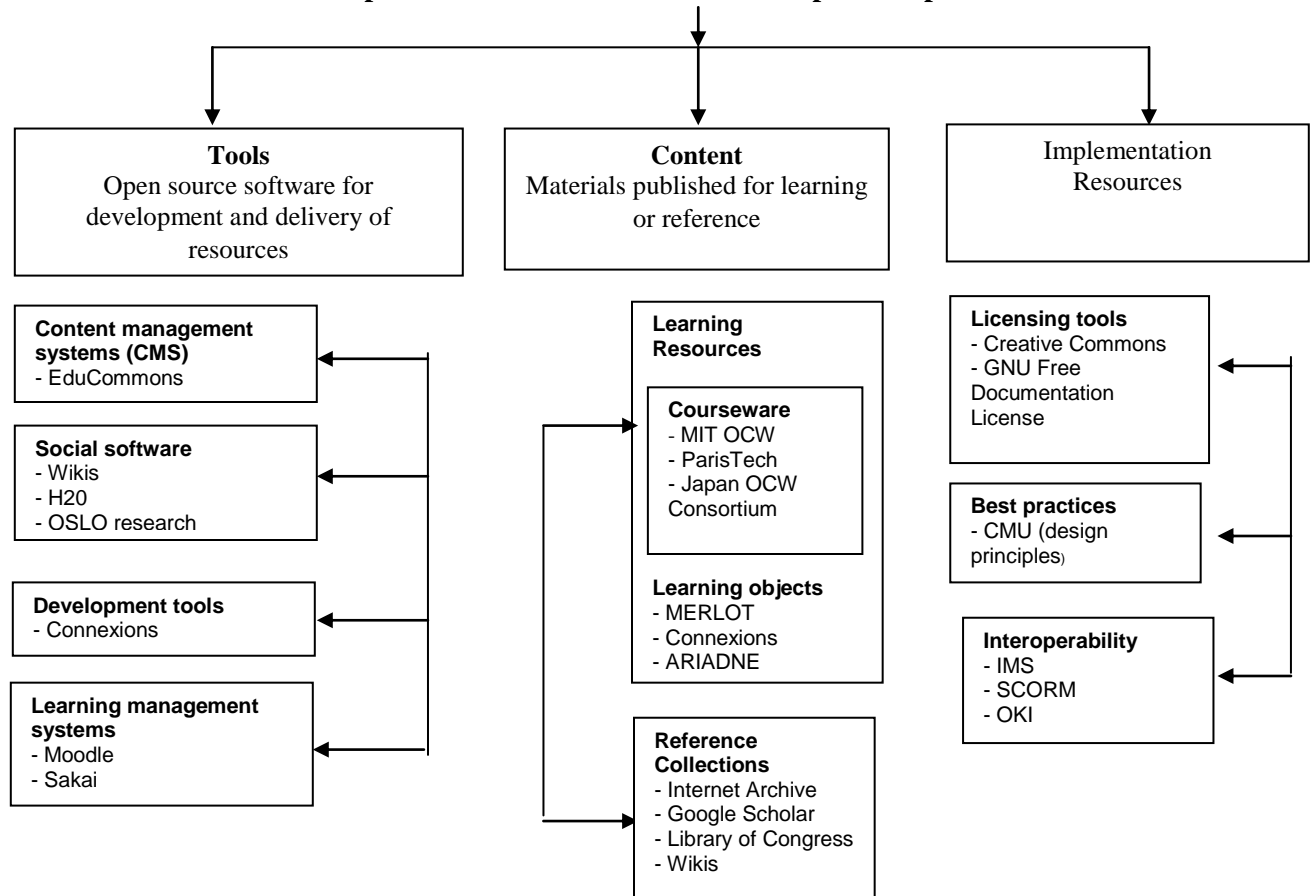
There are some considerations for the term use as open i.e. no boundaries, freely access and reuse the resources. According to Materu (2004), the present decade can be called the O-decade i.e. Open Source, Open System, Open Standard, Open Archives, and Open Everything. In our digital era, all the digitised information is available over the internet with free access. It is possible only when the Open Source Software (OSS) is used. OSS is computer software, where source code is available as freely. If it is possible to use, contribute to and share the source code, it is considered as free or open base software. Thus, the term open is interpreted into as OSS.

### **3.2 Educational:**

Education is a lifelong learning process. There are two types of education systems i.e. regular mode and distance mode. Regular mode is involved within class room. But distance mode has no class room. It is open course. By the way, only study materials are prepared for this course.

The term education is using in OER to increase the learning process for development of learners and teachers as well as social benefit. Thus education should be replaced by 'learning' and a better term would be "open learning resources".

**Open Educational Resources: a conceptual map**



Source : Margulies, 2005

**3.3 Resources :**

Resources mean educational materials or assets. In the context of OER, resources mean the materials which are as digitised version. Digitised materials, which are usable on the basis of electronic devices in electronic platform i.e. CDs, DVDs, Pen Drives etc. It can be copied and used without destroying the original stock. Thus it is considered as renewal resources. It helps to the learners to understand the learning materials. So educational resources are anything that can be used to organise and support learning process.

**3.4 Component of OER:**

- A. Learning Content: Full course of learning objectives-which are include full text, images, contents, data, collections and references etc.
- B. Tools: The software which is full featured i.e. capabilities of use, reuse, searching, organising, disseminating of learning content.
- C. Implantation Resources: Intellectual property licence to create open publishing of materials, design principles of best practice and localise content.

**3.5 Rights of OER (5R's):**

As per the definition of Willey (2006), five rights (5R's) are a) Retain; b) Revise; c) Remix; d) Redistribute and e) Reuse. Individual can perform within his / her five rights when materials are openly available in its free source code.

- A. Retain: The rights to download, duplicate, store and manage the content.

- B. Revise: The rights to adapt, adjust, modify, or alter the content itself.
- C. Remix: The rights to combine the original or revise content with other open content which are newly created.
- D. Reuse: The rights to use the content in global platform.
- E. Redistribute: The rights to share the content of original or modified or revised with other users.

#### **4.0 E-resource Materials:**

The electronic resources are defined as those resources which are accessible through computer or any other electronic gadgets that deliver a collection of data as well as information. These are in the form of full text databases, electronic books, electronic journals, images, other multimedia applications and numerical, graphical etc., which are commercially available in the marketed as CD-ROM, DVD, tape, internet version. From the several years, a numbers of technical attitudes have been developed to create and to distribute the information in the form of electronic version that are available with the help of modern technologies i.e. ICT, computer, internet, website etc. in our digital era. The sources of information regarding E-resources and its collection have vast impact in respect of open and distance learning. A lot of benefits towards collection development of E-resources are extended in the field of distance learning that are included in searching, processing, storing and retrieving. The electronic material is an alternative way for collection of learning materials in distance mode.

According to AACR2, 2005 update, an electronic resource is “Material (data and / or program(s)) encoded for manipulation by a computerised device. This material may require the use of a peripheral directly connected to a computerised device (i.e. CD-ROM drive) or a connection to a computer network (i.e. the internet)”. But it does not include electronic resources that do not require the use of a computer, for example, music compact disk, and video disk.

Thus, E-resources are that resources, which perform within the electronic platform and the information stored in electronic form through electrical signal normally.

#### **4.1 Features:**

There are several features that are included in E-resources. These are-

- i. 24 hours access facilities.
- ii. Easy to transmission and communication.
- iii. Support to develop the teaching-learning process i.e. audio-visual process.
- iv. Create in multimedia nature i.e. textual, audio/video format.
- v. Huge storage capacity and longevity.
- vi. Useable in Virtual Environment.
- vii. Easy to migration of information from one media to another.
- viii. Flexible and reliable.

#### **4.2 Types:**

##### **Online E-resources:**

###### **➤ E-book:**

- Best 16 website to downloaded E-book  
([www.honhkiat.com/blog/best-website-to-download-free-e-books](http://www.honhkiat.com/blog/best-website-to-download-free-e-books))
- Many Books; b) Free Book Spot; c) Blue Portal; d) Online Computer EBooks; e) Snip Files; f) Book Yards; g) The Online Book Page; h) Asks am eBooks; i) Bean Free Library; j) GetFreeEBooks; k) Ebooks Lobby; l) Scribbed; m) Free Computer Books; n) Globusz; o) eBooks and p) Online Free eBooks.

###### **➤ E-journals:**

- Indian academy of Sciences- [www.ias.as.in](http://www.ias.as.in)
- Open J-Gate- [www.Openj0gate.com](http://www.Openj0gate.com)
- Directory of Open Access Journals- [www.doaj.org](http://www.doaj.org)
- Economic and Political Weekly- [www.epw.in/epw/user/userindex.jsp](http://www.epw.in/epw/user/userindex.jsp)
- Spinger- [www.spingeropen.com](http://www.spingeropen.com)
- iii) E-thesis:

- Shodhganga- INFLIBNET initiatives- [www.sodhganga.inflibnet.ac.in](http://www.sodhganga.inflibnet.ac.in)
- Network Digital Library of Thesis and Dissertation- [www.ndltd.org/find](http://www.ndltd.org/find)
- Vidyanidhi- [www.vidyanidhi.org.in](http://www.vidyanidhi.org.in)

➤ **E-patient:**

- National Information Centre- [www.patinfo.nic.in](http://www.patinfo.nic.in)
- Indian Patent design and trademark office- [www.ipindia.nic.in](http://www.ipindia.nic.in)
- United States- [www.patft.uspto.gov](http://www.patft.uspto.gov)

➤ **E-newspaper:**

- Online Newspaper- [www.onlinenewspapers.com](http://www.onlinenewspapers.com)
- Newspaper- [www.newspaperseites.net](http://www.newspaperseites.net)

➤ **E-entertainment:**

- Free online games- [www.dailygames.com](http://www.dailygames.com)
- Videos- [www.youtube.com](http://www.youtube.com)
- Other E-resources:
- CD-ROM
- Diskettes
- Other portable computer databases.

#### **4.3 E-resource Management system in respect of open and distance learning:**

Wikipedia defines as “the practice and software systems used by libraries to keep track of important information about electronic information resource, especially inter- based resources such electronic journals, databases and electronic books”.

Digital Library Federation considers as “management of the information and data that is necessary to effectively select, evaluate acquire, maintain, renew and provide informed access to E-resources in accordance with their business and licensing agreements”.

According to Ellen Finnie Duranceau termed as “the support of an electronic resource from selection through purchase, access, license management, end-user support, evaluation and renewal and cancellation”.

Now-a-days, the digital references resources are increasing due to technological development. Presently, the open and distance learning is using a large number of E-resources. Due to information explosion, variety of demand of the users, explosion of different types of literature and other allied issues, a large number of digital resources are used in collection development for the benefits of users’ satisfaction. So that library should have a management process for organisation of digital reference resources.

However, a managerial process, which is included the electronic data and information in the various types of electronic forms to effectively select, acquire, maintain, renew and to provide the easy to access system beyond its business and licensing agreement, is taken as E-resource management system. A good number of ICT techniques and procedures are involved to effectively manage the E-resources in the field of open and distance learning. Computer and its technologies are more powerful tools for management of E-resource system.

#### **4.4 Selection Process:**

➤ **Tools:**

- Publisher catalogues through vendors.
- Reviews in electronic periodicals or journals.
- Vendor websites like GIST.
- Observation of other library resources.
- Publishers’ demos in seminars / conferences.
- View from experts / faculty.
- Enquiry with on hand vendors.

- Trail offered by publishers and vendors.
- Consortiums.
- **Issues:**
  - Technical possibility.
  - Functionality and Reliability.
  - Vendor support.
  - Supply.
  - Licensing.
  - Value for money.
  - Duplication.

#### **4.5 Licensing:**

Before selection of digital reference resources, an agreement has to be followed for using the digital reference resources. This is a licensing process. It is a written contract or agreement between the library and the publisher. It included different aspects- a) payment method; b) users' definition; c) restriction on use; d) right to handle and use etc. Printed materials are for ownership, but for digital resources, library gets license for access rights.

#### **4.6 Acquisition:**

It involved different activities. These are-

- a) Determining the price
- b) Negotiating with the vendor
- c) Completing the licensing agreement
- d) Allocation of funds
- e) Placing the order
- f) Verifying if the title is accessible
- g) Communicating with the vendor if it is not accessible
- h) Processing the invoice for payment

#### **4.7 Staffing:**

If digital reference resources are selecting for using in the libraries, a good number of LIS professionals that have IT knowledge and skills, sound technical knowledge, and good academic qualification, are highly needed in dealing with digital format.

#### **4.8 Budgeting:**

A specific budget for digital materials has to be made before procuring of digital reference resources in the libraries.

#### **4.9 Cataloguing:**

Digital reference resources should be catalogued and displayed in the library's OPAC (online public access catalogue). A list which may not catalogued should be provided in the website and link them also.

#### **4.10 Preservation:**

Some activities have to be followed regarding preservation of the digital reference resources. These are-

- a) Regular maintenance is highly required.
- b) Providing extra grant for preservation of them.
- c) Check the website regularly.
- d) Handle with take care.
- e) Strong security is needed.
- f) Expertise staff is required.

#### **5.0 Initiatives for open and distance learning:**

#### **5.1 National Programme on Technology Enhanced Learning (NPTEL):**



The National Programme on Technology Enhanced Learning (NPTEL), a project funded by the [Ministry of Human Resource Development](#) (MHRD), provides e-learning through online Web and Video courses in Engineering, Sciences, Technology, Management and Humanities. NPTEL is a curriculum building exercise and is directed towards providing learning materials in science and engineering by adhering to the syllabi of All India Council for Technical Education and the slightly modified curricula of major affiliating Universities. It has developed curriculum based video courses and web-based e-courses targeting students and faculty of institutions offering UG engineering programs.

### **5.2 National Repository of Open Educational Resources (NROER):**

National Repository of Open Educational Resources (NROER) is a collaborative platform, which brings together everyone interested in school and teacher education. Initiated by the Department of School Education and Literacy, Ministry of Human Resource Development, Government of India and managed by the Central Institute of Educational Technology, National Council of Educational Research and Training, the Repository runs on the Meta Studio platform, an initiative of the Knowledge Labs, Homi Bhabha Centre for Science Education.

### **5.3 e-Gyan Kosh:**

e-Gyan Kosh- 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 eGyanKosh are protected by copyright, with all rights reserved by IGNOU, unless otherwise indicated. To access the items in repository registration is required. Registration is free.

### **5.4 National Institute of Open Schooling (NIOS):**

Open Education Resources (OER) through ICT initiated by NIOS. The National Institute of Open Schooling (NIOS) formerly known as National Open School (NOS) was established in November, 1989 as an autonomous organisation in pursuance of National Policy on Education 1986 by the Ministry of Human Resource Development (MHRD), Government of India. The National Institute of Open Schooling (NIOS) initiated [Open Educational Resources \(OER\)](#) specifically for Vocational programmes to be offered at Secondary and Sr. Secondary (+2) levels, including stand alone programmes, in partnership with state level institutions and organizations. These educational resources will not only be beneficial for the students pursuing their studies through Open and Distance Learning (ODL) system at school level, but also will be accessible to millions of learners interested in development of their skills in various vocations. This will also help in vocationalisation of the curriculum at Secondary and Sr. Secondary levels across the Boards in the country.

### **5.5 Govt. of West Bengal, Department of School Education:**

It is the great opportunities that Govt. of West Bengal, Department of School Education has taken many initiatives for OER. E-resources are available in its website, anyone can access to use freely in e-platform.

### **6.0 Opportunities:**

- a) 24 hours learning facilities are available.
- b) Easy to study, modify and update the learning content by using very simple technique.
- c) Large number of user uses the e-learning materials simultaneously.
- d) Easy to access into the data base in anywhere in the world.
- e) Effective course materials.
- f) Cost benefits facilities.
- g) Time reduce process.
- h) Flexible in nature.
- i) Increase the capacity of knowledge regarding use of e-materials.
- j) At a time more information are available.

### **7.0 Challenges:**

There are some challenges established when OER is implemented and applied. These are as following-

- a) Quality Issue: There are more OER materials available in the website. But many institutions process an internal review before releasing OER materials. They cannot update the OER materials in time-to-time. So, quality issue is a vital challenge in OER.
- b) Terminological / Language Problem: Many of OER materials are available in English language. So, it is a problem to the users who use and know other than English language.
- c) Technological Issue: Some users, who may not have any computer knowledge or knowledge in handling modern technologies, face the trouble in operation of OER materials.
- d) Creative Common Licence Issue: Any one can access and use the OER materials without any difficulty. Because creative common licences are fully non-revocable. That means, there is no turn back and cannot be stopped when creative common licence are choosing in OER. Others can pass it beyond its limitations that creator established with the initial submission.
- e) Lack of Interaction Process: Self-learners may access the materials from outside of a class room environment, they will miss out on the discussion and interaction process that make in such classes.
- f) Sustainability Issue: Initial funding and maintaining charges are costly and expensive. But without regular maintenance and up gradation, OER resources become obsolete and quality will be lost. So, how to sustain the OER materials in future.

### **8.0 Conclusion:**

In fine, we may conclude that, OER means freely access to the learning materials anywhere around the world. By the effect of ICT, it provides more opportunities to the learners that show the multimedia course materials are available on online mode. Anyone can easily search and retrieve the information from OER system. OER accepted only e-learning process in open and distance learning. A process of modern education system, where computer and its technology are deeply attached, it is mean as e-learning process. Now-a-days, our modern decade is called as O-decade i.e. Open Source, Open System, Open Standard, Open Archives and Open Everything. In this situation, traditional concept of education system has been shifted to the e-base environment. In India, with about 160 core people, only some educational institutions have initiated to convert its course materials from book version to digitised version till now. But other institutions have followed their traditional processes. For this, it is very much difficulty and barrier in our education system for open and distance learning process. Self-learners are not benefited and not use the learning materials in global way. The suggestions are- a) all educational institutes compulsorily accept the OER policy and method, b) regular training programme for “how to use OER materials” will be organised, c) awareness programme, seminar and workshop should be organised in vast way, d) knowledge resources must be shared in decentralised way. Thus, OER process is a fruitful solution in open and distance learning environment for right education to all learners in our Indian educational perspective.

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