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Research Paper Title: **Open Educational Resources (OERs): A Boon for Digital Education**

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DECLARATION

I, the undersigned, hereby would like to explicitly state that the write-up titled, **"Open Educational Resources (OERs): A Boon for Digital Education"** is original and has not been published earlier, or that it is not under consideration for possible publication elsewhere.

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Open Educational Resources (OERs): A Boon for Digital Education

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Abstract

Technological advances have emerged as a replacement of various traditional ways of doing the things. Education sector which is one of the most intangible service sectors also cannot keep itself away from these technological advances. This paper is an attempt to touch key learning and basic concepts regarding online educational resources. Introduction of online distance teaching–learning is a reason behind the existence of open educational resources. Here researchers try to find about OERs and how they can make a contribution towards the development of national education.

Introduction

Though 'Right to Education' is having official existence in India, it has been facing continuous challenges and hurdles to come into actualization. The set goal 'equitable access to quality education' is not far away from its accomplishment. There are various barriers including geographical and demographical barriers including shortage of 'Qualified Educators'(CARRHE, 2009) and

restrain access to educational institutions (Lall, 2005). Along with these, many of the educational institutions faced additional basic hurdles like number of students are more than the sitting capacity of the classrooms, outdated teaching aids and facilities, old-fashioned and outdated teaching-learning and evaluation methods (Stella, 2002). Increasing Indian population shows a considerable gap between 'demand for higher education' and 'the infrastructure for the fulfillment of the demand.' This shows a need for Online Distance Education (ODE) and preparation of reliable and useful Open Educational Resources (OER). The various OER include open textbooks, videos, course materials, lesson plans, software and educational games as well.

Open Educational Resources

To enhance the quality education in India, Indian Government in 2007 enacted 'Right to Education Act' to promote universal education. The National Knowledge Commission (NKC) recommended (2007) that the role of Open Educational Resources (OER) be elevated to support access to quality education for all.

Objectives of the Study

1. To define learn the constitution of OER.
2. To study the value of OER to solve real world problems.
3. To learn 5Rs of OER.
4. To discuss advantages of OER.

Definition of OER

"Any type of educational materials those are available to the university community with little or no cost. It may also be the case with PSU-OER that the nature of these open materials means that students, faculty, and staff can legally and freely copy, use, adapt, and re-share them within the university community."

-According to Penn State University working definition of OER
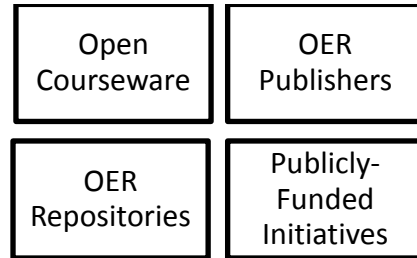
Similarly, OER definition is identified by various agencies or Universities based on their implications and applied characteristics. These are summarized in the following Table 1:

	Requirement of Open copyright license	Does not limit use or form	Non-discriminatory	Right of access, adaption and re-publication
Hewlett Foundation	√	√	√	√
OECD				√
UNESCO	√	√	√	√
Cape Town Declaration	√		√	√
Wiki educator OER handbook		√	√	√
OER Commons		√	√	√

Table 1: Various definitions of OER from various sources.

OER Movement

The first recognized OER project was the MIT open courseware project. In 1998, David Wiley coined the term 'open content' and in 2002, OER was first used at UNESCO's forum. The OER movement can be included in following 4 major categories

Open Courseware	OER Publishers
OER Repositories	Publicly-Funded Initiatives

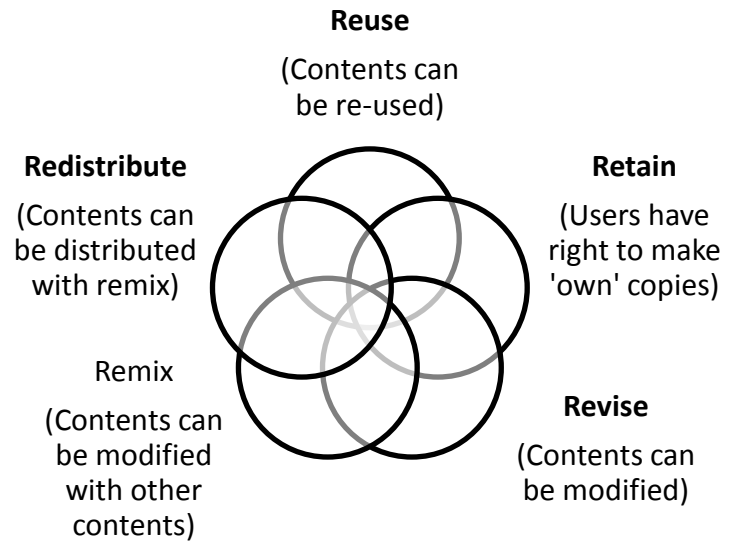|	
Open Courseware (OCW)	• In Open Courseware enhanced quality educational study materials are freely available through online mode. • It is digital publication where openly licensed open resources are online available 24*7. • They are having thematic contents with course plan and evaluation tools and a large-scale participation through online learning is possible.
OER Publishers	• There is increasing demand of textbooks and everyone is searching and demanding affordable alternatives for traditional textbooks. • This search can be fulfilled by OER. Specific collection and edition of OER can be developed depending upon the course requirements. • Saylor Publication can be one of the examples of OER Publisher.
OER Repositories	• Digital content repository can be termed as digital content warehouses. • It is more like a convenient place where one can search, share, edit, and mix OER from various sources. • There are variety of portals and gateways which provide open access to OERs.
Publicly-Funded Initiatives	• If we study OER policy in Europe and POERUP, we can see that many countries are keen to develop OER and adoption of OER is increasing at National, state and local levels. • Funding is made available for development of OER.

Five Rs of Openness

There are various types of OER, which include open access journals, text books, reading materials, course materials, educational audio and videos, digital PowerPoint presentations, etc. Though the

term is 'open content' or 'OER,' it describes any form of a copyrightable educational material in the software or digital form. This can be in public domain or in licensed manner which may be freely (without cost) accessible to all users and learners with everlasting authorization to engage in 5 Rs openness initiative described as follows:

1) **Retain:** It means the right of the authors to make and own the digital content and having a control over download, storage, duplication of the contents.

2) **Reuse:** It means the right about the usage of the contents over a wide range such as preparing a video, learning in a classroom or study group, etc.

3) **Revise:** It means the right to modify or alter, adjust and adopt the available content such as translating the contents from national level language into regional languages.

4) **Remix:** It means the right to revise the available content and make a combination with other content for making a more customized content relevant for a particular course.

5) **Redistribute:** It means the right to share the originally available or

remixed version of the contents with other learners.

Reuse
(Contents can be re-used)

Redistribute
(Contents can be distributed with remix)

Retain
(Users have right to make 'own' copies)

Remix
(Contents can be modified with other contents)

Revise
(Contents can be modified)

Advantages of OER

The overall advantages of OER include:

i. Creation of reliable savings which students can count

ii. Increase in academic freedom for the teaching staff

iii. Improvement in learners' knowledge and saving their money

iv. Making the course more attractive for potential learners

v. Learners can gain knowledge with faster pace

vi. Revenue enhancement for the institutions

Advantages of OER for the teachers

i. Extension of academic profile

ii. Provision of more engaging study materials for their students

iii. Increase in retention of the students as reduction in the costs

iv. Supports academic freedom and customized study material to alter and modify the contents

Advantages of OER for the learners

i. Learners get access to quality digital contents and OER for free or at lowest possible costs

ii. It is easier to 'find' and access required study material from available OERs

iii. More customized and relevant contents for the learners

Conclusion

OER has been found to be more reliable open access and less costly source for the teachers and learners. OER supports preparation of higher quality study materials and course contents. Academic flexibility can be achieved for the teaching staff and this might help learners to get customized study materials from various reliable sources. In India various OERs such as Swayam portal, NPTEL, TESS-India, etc. are continuing the worldwide OER movement and this seems to continue for next few decades.

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