
A Study: Importance of Open Educational Resources (OER) for Teaching and Learning Process

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Abstract

OERs are any form of teaching-learning materials with an open license and are freely available in the public domain. Generally, OERs refer to online materials that can be adapted, reused, shared and even used for commercial purpose. Thus, OERs are reusable teaching-learning materials. OERs can be as short as small text, pdf files, audio, video, image file, graphics, animations etc., as well as big files like textbooks or whole courses. The OERs that are arranged in a logical and sequential manner to accomplish particular objectives are called “learning objects”. And, OERs developed as a whole course are called as massive open online course (MOOC). Open educational resources (OER) cover a wide range of online formats, including online textbooks, video recorded lectures, You Tube clips, web-based textual materials designed for independent study, animations and simulations, diagrams and graphics, some MOOCs, or even assessment materials such as tests with automated answers. OER can also include power point slides or pdf files of lecture notes. In order to be open educational resources, though, they must be freely available for at least educational use.

Keywords- Oer, Mooc, Swayam.

Introduction

Educational resources (or audio-visual aids, graphics, animation or teaching-learning resources) play an important role in the teaching-learning process. Educational resources help educators to effectively communicate content and students to actively participate in the learning process. Learning is more active and effective in class (Online/Offline) that uses educational resources. Apart from the conventional teaching-learning resources such as blackboard, model, chart, etc., the development in information and communication technology (ICT) has provided various innovative educational resources, which you can use in your teaching-learning process.

Open Educational Resources (OER) are learning, teaching and research materials in any format and medium that reside in the public domain or are under copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others. They can include textbooks, lecture notes, syllabi, assignments and tests. The teachers can also use open educational resources (OERs) for teaching. OERs are digital educational resources that are free to use without taking permission of the creator. OERs are mostly available in the internet. You can also select, adapt and integrate OERs in your teaching-learning processes.

OER In Teaching-Learning:

The term Open Educational Resources (OER) was first introduced at a conference hosted by UNESCO in 2000 and was promoted in the context of providing free access to educational resources on a global scale. There is no copyright issue for the term OER at present; the most often used definition of OER is, “digitalized materials offered freely and openly for educators, students and self-learners to use and reuse

for teaching, learning and research” (OECD, 2007). With regard to this working definition, it is important to note that “resources” are not limited to content but comprise three areas, these are (OECD, 2007):

- **Learning content:** Full courses, courseware, content modules, learning objects, collections and journals.
- **Supporting Tools:** Software to support the development, use, reuse and delivery of learning content, including searching and organization of content, content and learning management systems, content development tools, and online learning communities.
- **Implementation resources:** Intellectual property right (IPR) to promote open publishing of materials, design principles of best practice and focused content. (OECD, 2007)

According to Wiley (n.d.), OERs gives the users five legal permissions. They are as follows:

1. **Reuse** - Content can be reused in its unchanged original format (e.g., in a class or study group, on a website, in a video).
2. **Retain** - Copies of content can be retained for personal archives or reference (e.g., Download, duplicate, store and manage).
3. **Revise** - Content can be modified, adjust or reformed for specific needs (e.g., Translate the content into another language).
4. **Remix** - Content can be adapted with other similar content to create something new (e.g., incorporate the content into a mashup).
5. **Redistribute** - Content can be shared with anyone else in its original or revisions or remixes format (e.g., give a copy of the content to a friend).

Various Type of OER:

Teaching-learning tools (audio-visual aids) are of different types and are classified into projected and non-projected aids. A second classification is as audio aids, visual aids and audio-visual aids. Open educational resources are also teaching-learning aids. However, those educational resources having an open license and that are freely available in the public domain make OERs different from other teaching-learning aids. The public domain here refers to the internet (world wide web). Thus, digital educational resources with an attached open license are called open educational resource. But non-digital educational resources also fall within the purview of OERs.

Similar to the types of teaching-learning aids, there are different types of OERs, they are as follows:

- The first type projected is based on the license attached to OERs.
 - The second type is based on the media. The media based OER includes image, video, video lecture tutorial, e-book, open text book, chapters from text book, infographic, whole course, audio podcast, interactive game, test, quiz, slide and presentation, individual unit or module, syllabi, lecture, assignment, game, etc.
1. **MIT Open Course Ware:** <https://ocw.mit.edu/about/> Since 2001, MIT (Massachusetts Institute of Technology) Open Course Ware has been creating new opportunities for millions of learners and educators, sharing Open Educational Resources (OER) from MIT and helping to lead a global revolution in free access to knowledge.
 2. **National Programme on Technology Enhanced Learning(NPTEL) :** <https://nptel.ac.in/courses> 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.

3. **SWAYAM:** <https://swayam.gov.in> SWAYAM is a platform that facilitates hosting of all the courses, taught in classrooms from Class 9 till post-graduation to be accessed by anyone, anywhere at any time. All the courses are interactive, prepared by the best teachers in the country and are available, free of cost to any learner. More than 1,000 specially chosen faculty and teachers from across the country have participated in preparing these courses.

The courses hosted on SWAYAM are in 4 quadrants – (1) video lecture, (2) specially prepared reading material that can be downloaded/printed (3) self-assessment tests through tests and quizzes and (4) an online discussion forum for clearing the doubts. Steps have been taken to enrich the learning experience by using audio-video and multi-media and state of the art pedagogy / technology.

4. **e-Pgpathshala:** <https://epgp.inflibnet.ac.in/> e-pgpathshala is an initiative of the MHRD under its National Mission on Education through ICT (NME-ICT) being executed by the UGC.
5. **Spoken Tutorial:** <https://spoken-tutorial.org> Spoken Tutorial is a multi-award-winning educational content portal. Here we can learn various Free and Open-Source Software all by oneself. Our self-paced, multi-lingual courses ensure that anybody with a computer and a desire for learning, can learn from any place, at any time and in a language of their choice. All the content published on this website are shared under the CC BY SA license.
 - The third type of OERs are based on the quality of OERs published and it includes OERs that are self-published, peer reviewed, refereed, journal etc.
 - The fourth type is based on the authorship style and includes OERs developed by individuals and through collaborative work. In the context of education, a single teacher or group of teachers can develop OERs.

You Tube: www.youtube.com A great revolution that has been brought about in the field of education is on YouTube. It's a video sharing website that provides good quality education that has been developed a lot during the past few years. In the modern era that we live in today, YouTube is a great platform. By using YouTube, a student from one country can have access to education free from another country. Therefore, learning on YouTube has gained tremendous importance.

- The fifth type is based on the nature and format. This OERs includes reading materials, texts, courses, audio-video programs, images, etc.
1. **NCERT:** <https://ncert.nic.in/textbook.php> This online service offers easy access to the NCERT textbooks. The service covers textbooks of all subjects published by NCERT for classes I to XII in Hindi, English and Urdu. The Entire book or individual chapters can be downloaded provided the terms of use as mentioned in the Copyright Notice is adhered to.
 2. **Shod Ganga: a reservoir of Indian Theses-** <https://shodhganga.inflibnet.ac.in/#> 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.

3. Uttar Pradesh Higher Education Digital Library:

<https://heecontent.upsdc.gov.in/Home.aspx> it is a great initiative of up higher education department to create such platform where students can access knowledge free of cost.

Sharing of OER:

Many OERs are available on the internet. We are free to use such OERs in our teaching sessions. But we can also develop OERs and make them available on the internet so that others can use it. For that, you need to share your OERs. The possible ways of sharing OERs are:

- Own Website
- Institutional Website
- OER repositories
- Build online
- Social media platform's

OER Benefits:

There are many reasons for using OERs in learning and teaching. For teaching staff, OERs can supplement and add value to existing curriculum resources. At the same time, it can reduce the cost of education for your students (reducing financial stress by removing textbook purchases).

For students, using OERs can expose students to a wider range of digital learning opportunities in the form of open texts, open images, open courseware, and self-assessment tools. According to JISC, learners can benefit from: enhanced quality and flexibility of resources seeing/applying knowledge in a wider context than their course may otherwise allow (international dimension)

support for learner-centered, self-directed, peer-to-peer and social/informal learning approaches.

Challenges of OER in India:

- Quality/reliability concerns – some online material can be edited by anyone at any time, which may result in irrelevant or inaccurate information.
- Limitation of copyright property protection – OER licenses change "All rights reserved." into "Some rights reserved.", so that content creators must be intentional about what materials they make available.
- Technology issues – some students may have difficulty accessing online resources because of slow internet connection, or may not have access to the software required to use the materials.
- Awareness within educational institutions– limits use of OER for research, teaching and learning.

Conclusion:

OER is a Learning resources with cost-saving, quality and flexibility of access, which Enhanced opportunities for self-learning at home. For a self-learner OER is a best choice some provider gives him a classroom type environment and boost her knowledge skill Through regular test, quiz, assignment and exam and provide a certificate. OER provide easily Skills development: digital literacy skills for searching, reusing, recreating, disseminating, branding, networking, OERs to learning community. The educator helps their students that how they can use and choose the valuable and reliable content from the available OER.

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