

Open Educational Resources (OER) and its role in higher education to improve the quality of education

Priyanaka Singh

Assistant Professor, Department of Education, Nehru Gram Bharti Vishwavidyalaya, Allahabad, Uttar Pradesh, India

Abstract

The development of the information society and the widespread diffusion of information technology give rise to new opportunities for learning. At the same time, they challenge established views and practices regarding how teaching and learning should be organized and carried out. Higher educational institutions have been using the internet several years. Yet, until recently, much of the learning materials were locked up behind passwords within proprietary systems, unreachable for outsiders. The open educational resource (OER) movement aims to break down such barriers and encourage and enable freely sharing content.

Open educational resources (OER) are materials used to support education that may be freely accessed, reused, modified and shared. These guidelines outline key issues and make suggestions for integrating OER into higher education. Their purpose is to encourage decision production, adaptation and use of OER and to bring them into the mainstream of higher education in order to improve the quality of curricular and teaching and to reduce costs.

Keywords: Open Educational Resources (OER), How OER help to improve the quality of education

Introduction

Open Educational Resources (OER)

Open educational resources are teaching, learning or research materials that are in the public domain or released with an intellectual property license that allows for free use adaptation and distribution. The historical functional definition of OER as given by UNESCO (2002) read as "Technology enabled, open provision of educational resources for consultation, use and adaptation by a community of user for non-commercial purpose... typically made freely available over the web or the internet."

The open education resource movement is part of a global effort to make knowledge available to all. OER is relatively new movement in education. Educator and learners as well as learning institutions are driving its development. OER provides an alternative to the rising costs of education. OER provides an opportunity to try new way of teaching and learning. Many of which are more collaborative and participatory.

Some educators are using OER as a way to students more involved, using the OER process as a way to collaborate with them on content creation. This process brings students into a larger context of leaning and sharing knowledge beyond the four walls of their classroom.

Flexibility is a key concept in OER materials can be adopted for your specific needs. Because these materials can be searched by a wide variety of criteria, you can quickly find what you specifically need.

Open educational resources are freely accessible, openly licensed documents and media that are useful teaching, learning, educational assessment and research purpose. Although some people consider the use of an open format to be an essential characteristic of OER, this is not a universally acknowledged requirement.

Open Educational Resources are defined as "technology-enabled, open provision of educational resources for consultation, use and adaptation by a community of users for non-commercial purposes". They are typically made freely available over the Web or the Internet. Their principal use is by teachers and educational institutions support course development, but they can also be used directly by students. Open Educational Resources include learning objects such as lecture material, references and readings, simulations, experiments and demonstrations, as well as syllabi, curricula and teachers' guides (UNESCO 2002). Open Educational Resources (OER) represents the combined international efforts to help equalize access to knowledge and educational opportunities throughout the world (Bissell, 2009). Another definition of OER was given by Bissell: OER is teaching, learning, and research resources that are in the public domain or have been released under an intellectual-property license that permits their free use or customization by others. Bissell (2009) also stated that OER is digitized materials offered freely and openly for educators, students, and self-learners to use and reuse for teaching, learning and research. They include learning content, software tools to develop, use and distribute content, and implementation resources (such as the open licenses themselves). There are also several benefits of OER. Initially, they can extend access of learning for everyone, including nontraditional groups of students and those from disadvantaged backgrounds, resulting in the widening of participation in higher education. OER can be an efficient way of promoting lifelong learning, bridging the differences between informal and formal learning. Additionally, they can be an asset for expanding education in developing countries. In short, they offer a dramatically new approach to the sharing of knowledge which can lead to economic success of individuals, communities, companies,

and, ultimately, entire countries (McDowell, 2010). One of the barriers to significant expansion of OER is the possible loss of intelligence property rights and copyrights. To ease the concern of maintaining copyrights to the material posted on the web, institutions and individuals have turned to Creative Commons and the Open Courseware Consortium (McDowell, 2010). OER can be a valuable resource to students and instructors for many reasons. From the student's perspective, OER had the following advantages:

- free materials;
- continuous access to resources;
- the ability to pursue a topic thoroughly;
- the ability to learn for personal knowledge or enjoyment; and
- Easy access to materials (Arendt and Shelton, 2009).

According to D'Antoni (2009), there are also several barriers in using OER:

- technical, such as lack of broadband access;
- economic, such as inadequate resources to invest in the necessary software and hardware;
- social, such as a lack of the skills needed to use technology;
- policy-oriented, such as the lack of academic recognition of the
- development of OER by teaching staff; and
- Legal, such as the time and expense associated with gaining permission to use third part owned copyrighted materials or its removal from material.

Many higher education institutions around the world have been using the Internet and other digital technologies to develop and distribute teaching and learning for decades. As with any other technology-related initiatives in education, OER is driven by technical, economic, social, policy and legal factors. Some of these factors provide either a favorable environment or a particular handle for bringing about changes and others may hinder a broader uptake of OER initiatives. Recently, OER have gained increased attention for their potential and promise to obviate demographic, economic, and geographic educational boundaries and to promote life-long learning and personalized learning. The rapid growth of OER provides new opportunities for teaching and learning; at the same time, they challenge established views about teaching and learning practices in higher education. At a minimum, OER possess at least three elements, (1) learning content, (2) the tools required to support the development and sharing of learning content, and (3) implementation resources such as intellectual property licenses that support the sharing and re-use of learning content.

Why use OER?

- As part of the open education movement, OER makes learning materials freely available to everyone, including those who may not traditionally have access. There is great societal benefit in sharing education and knowledge.
- For educators there may be efficiencies in re-using and re-mixing existing learning materials rather than creating all aspects of a course from scratch.
- OER may encourage the exploration of new, more

participatory ways of learning and the introduction of blended and flipped approaches to learning.

- Using OER, student can collaborate in content creation, share knowledge and work in a larger context beyond the four walls of the classroom.

OER and massive open online courses (MOOC) are being funded by some leading universities (including open universities) for student at tertiary level. There is a massive movement for development of quality course wares under the banner of OER so that the students of professional and non-professional courses as well as general courses can be benefited by such facilities. The learners and teachers should be encouraged to participate in creating, using, adapting and improving open educational resources. The teachers can create their own OER in collaboration with their own students, and share the OER with others.

How OER Improve The Quality Of Education:

There are various literatures that try to refine the understanding of OER by giving an explanation of their characteristics. This is a critical area in the understanding of what OER are and particularly on how they can best be articulated in the higher education learning systems.

The first characteristic is that of being “**open**”. This is based on the idea that knowledge should be disseminated and shared freely for the benefit of the whole society. This is the essence of enabling all parties to access and use it.

Second is being “**free**”. This characteristic transgresses the social domain that refers to ethical consideration, which includes freedom to use, contribute and share. The concept also embraces the literal meaning that it is availed without cost.

“Educational” is the third characteristic, which refers to a source of knowledge in various disciplines that exist within the domains of education.

The fourth characteristic is that of being a “**resource**”. This emphasizes on various formats in which the OER may be availed, for example, software, course content, course modules, teaching materials and the like. The materials may be focused on students, educators, self-learners as well as researchers (OECD, 2007).

It is the conviction of the author that the above mentioned characteristics sound positive as they seem to enable the learner through improved access and cost effectiveness; hence likely to encourage various parties and countries to join such a movement, while reasons for Tanzania not being engaged in such a movement is an avenue for other studies.

Advantages of Using OER

Several advantages of using OER in teaching have been widely documented and discussed at various conferences (Downes, 2006). Some of the advantages can be summarized as follows:

- **Wide Availability:** The Internet is now available in vast parts of the world; hence, the possibility of accessing such resources is guaranteed. This ensures access to more learners hence effectively curbing shortage of learning materials.
- **Free availability on the internet:** Having free license to use, adopt, re-use and distribute resources facilitates their

access to academic institutions all over the world. This provides an environment whereby all humankind has access to the OER, an aspect which could be difficult for people in the developing world to manage taking into account high cost involved.

- **Participatory use, referring to open Educational Practices (OEP):** Since the use of OER requires a change of *locus* of power from “teacher centered” to “learner centered”, the role of a teacher has to change accordingly. This pedagogical change implies that student is guided to perform most of the learning activities, while the teacher has to support the learning process. Such educational system, which applies participatory learning, enhances learner’s understanding of the subject matter, particularly skills acquisition.
- **Shared among many institutions:** Course Modules, teaching materials and journal articles resolve the scarcity of instructors /resources in some countries or institutions within a single country. OER utilization standardizes materials and methods hence enhancing quality of education.
- **Encourage Production of OER over vast parts of the World:** Different parts of the world require different types of educational resources. Therefore, the adoption of other institutions’ OER calls for customization, an aspect that enhances OER production skills among teaching staff. The original OER becomes basic and exemplary to the user institutions’ staff. This reduces faculty time on lecture materials development. New programmers’ are a bit eased to develop as the existing OER may provide basic information.

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