

## Review on Open Educational Resources - Opportunities and Challenges

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### ABSTRACT

This paper pertains to the latest technological issue in the field of higher education. The conversion of the traditional means of teaching and the learning pedagogy into the e-mode has been detailed throughout the paper. The various corners of the open educational resources are discussed in the systematic means and narrated in a scientific approach. As the investigators are associated with the field of teaching, OER in and of collegiate education forms the prime focus of the study. In addition, the two major factors such as; opportunity and challenges found in OER towards Science and Arts were highlighted.

*Key words: OER, HRM, Opportunity and Challenges*

### Introduction to OER

Open educational resources (OER) are any resources available that can be used for teaching, learning, or research. Traditionally it includes textbooks, course readings, and other learning content used for educational purposes. Basically electronic resources inclusive of multimedia structures released under creative commons or license that supports open use of e-content are OER. OER can originate from colleges and universities, libraries, archival organizations, government agencies, commercial organizations such as publishers, or faculty or other individuals who develop educational resources with willing to share. OER totally mean digital resources which enforce the utility of online or hybrid learning atmosphere, whereby electronic content are utilized face to face environments as well. For each and every resources license is delivered that says about how to use .Few materials are used in its original type. While in other situations, learning resources can be modified, remixed, and redistributed. OER are

mostly seen in collections or groups which are being offered from institutions such as colleges or universities create online resources from their courses, it may be groups of materials collected from individuals or departments or separate institutions. The users namely trainers and learners can use them by downloading OER.

In 2002, MIT released Open Course Ware Project that turned to be the longest running and largest profile OER initiatives. Today it provides course materials from approximately 2000 MIT courses. More number of colleges and universities are practicing Open Course Ware model, thereby the complete course materials are made online for those who are in need of it to use. Connexions at Rice University, Carnegie Mellon (Open Learning Initiative), as well as the University of the People and iTunes U are few of its kind. OER normally supports educators with browsing latest educational matters, open resources kindle for pedagogical innovations, and creating new forms for effective teaching. It has the energy to keep the students and trainer intact throughout the lengthy content, normally not available for educational utility at large. Thus segregating the cost involved among wide number of users, OER provide wide spectrum of tools to more users with in short span.

Educational resources loose its value since periodic updating is missing and most of the open resources are not of recent information. Even within an OER repository that is operated and sanctioned by a respected institution, individual resources might not be held to the same standard of quality as the institution's other offerings. The other side of the flexibleness of open resources is that they have to suit the utility of departments or institutional requirement to fulfill the local needs. The wide availability of OER makes the users to spare more time in searching resources that suits their requirements, there by multiplies the volume of OER. OER archives, tools to assess and decimating resources have to enhance their capacities to support trainers and learners to stimulate the growing sea of open content. This process has to appraise the credibility of individual or group resources in-spite resource deemed accurate and effective, whereby new systems are to emerge to support this. Positively speaking, OER environment will have a future in which all spheres of education will be accessed only in online for free of cost and the learners will develop course, according to the vibrant and varied pool of open content. More over OER expands its coverage to adult learners, full time students, and nontraditional students, thus open resources is reachable for independent and self-study. Open resources have the potential to facilitate new styles of teaching and learning. Teachers and trainers are given chance to choose

and select individual resources they prefer and restructure those resources in a specific way that assures wide diversity of learning environments.

### **Vision of OER (till 2012)**

Educators are creating a world where each and every person on earth can access and contribute to the sum of all human knowledge...” In order to achieve this vision, three strategies are formulated to enhance the reach and influence of open educational resources. These are:

- Encourage educators and learners to actively participate in the emerging open education movement. Developing and utilizing open resources have to be unique for education and have to be backed with appreciation accordingly;
- Open educational resources should be freely shared through open licenses which facilitate use, revision, translation, improvement and sharing by anyone.
- Governments, school boards, colleges and universities should make open education a high priority. Basically tax payer- sponsored educational resources have to be OERs. Similarly accreditation and utility processes have to give priority to OERs.

### **Open educational resources policies**

OER policies are set rules and regulations practiced by government departments to sustain the utility of open content and usage in educational environment. Generally these policies need public sponsored resources to be licensed, now these policies are mushrooming at country, state and regional level. Major part of the initial work on open educational resources was sponsored by universities and associations/ trust like William and Flora Hewlett Foundation who formed the pioneer financial supporter of open educational resources in the yester years and contributed beyond \$110 million in the 2002 to 2010 period, in that more than \$14 million went to MIT. While Shuttleworth Foundation supported collaborative content creation along with British government with a tune of £5.7m. UK funding bodies JISC and HEFCE and UNESCO took initiative to make countries aware of OER and its competencies. During 2008, ISKME installed OER Commons Teacher Training Initiative insisting on enhanced open educational practices and creating opportunities for sequential change in teaching and learning. Curriki, a nonprofit organization, supplied an internet site to enable open source curriculum (OSC) development, to support universal access for free curriculum and materials for students below the age 18. Within

10 weeks, 50 chapters were generated by 150 authors to CCMOOC eBook and companion site. During 2011-12, OER Portal with free resources on Micro and Macro Economics, along with Soft Skills for global learners were contributed by University of Mumbai, India. Saylor Foundation took fee less education initiatives wherein 80% of their goal of supporting 241 college-level courses across 13 subject areas were accomplished. Nordic OER which is Nordic network co-sponsored by Nordplus to enhance open education and association among stakeholders in all educational sectors. Central Institute of Educational Technology, a Unit of NCERT, India - digitized more than thousand audio and video programmes for school education (text books in e-form) available at Sakshat Portal. In addition, NROER houses variety of e-content.

### **OER Models in Higher Education (Wiley, 2006)**

Wiley (2006) summarized three models for open educational resource projects in higher education: These three models exhibit an instructive diversity in their size, organization and provision of IP-clearance, content creation, and other services.

- The MIT Model is highly centralized and tightly coordinated in terms of organization and the provision of services, relying almost exclusively on paid employees. The Aim of MIT OCW is to print all 1,800 courses in the university catalogue at a particular time and to reprint new versions of courses and archive older versions.
- A hybrid of centralization and decentralization of both organization and services is USU Model. It aims for printing all courses in USU course catalogue and faculty members should volunteer to coordinate this kind of work.
- The Rice Model is fully decentralized and volunteers provide all services and materials. Its aim is to make worldwide authors to associate development of educational models and courses. Full documentation on the online site extends guidance for course generation, technical assistance and support in copy right matters.

### **Opportunities of OER in higher education**

- Provides a long-term conceptual framework for alliances in creation, sharing and provision of educational resources based on strong emphasis of reusability

- Allows for a higher return on investment of public funds through better cost-effectiveness when reusing resources (e.g. sharing development costs among institutions / professional communities)
- Promotes digital competence for the knowledge society beyond basic ICT skills through making available tools and content that allow learners to develop critical thinking and creativity
- Enriches pool of resources (content & tools) for innovating curricula, teaching & learning practices, including resources from information agencies, libraries and cultural organizations
- Leads to a leverage in the educational quality of content through quality control, feedback and updates in the content and networks.
- Provide learning communities such as teachers and learners with easy-to-use tools to set up collaborative learning climate (e.g. Wikis /Weblogs, social network, content feeds, etc.)
- Promote user-centered approaches in education and lifelong learning; users not only consume educational content but develop their own ePortfolios, and share experiences.
- Fosters pedagogical innovation and relevance that avoids teaching from the textbook and broadens use of alternatives to textbooks while maintaining instructional quality.
- Institutional policies should be reviewed to: encourage judicious selection and adaptation of existing OER as well as development of new materials;
- Promote publication of educational materials as OER within institutional protocols; and research on using, reusing and repurposing OER;
- Promote students publishing their work (with guidance of academic staff and within institutional protocols) under an open license as OER;
- Build OER into mechanisms for institutional and individual monitoring; and promote collaboration both within and beyond the institution in developing materials;
- Provide staff with appropriate incentives and rewards for the development, acquisition and adaptation of learning materials; and ensure that staff workload models allow for curriculum, course and materials design and development.

### Challenges of OER in higher education

- Sustainability: A challenge of any fixed-term, externally funded initiative is long-term sustainability by an entity other than the original investor
- Curation and Preservation of Access: As digital OER content grows, so will the need for systematic reliable infrastructure for curating and preserving access will take place.
- Object Granularity and Format Diversity: interoperability between digital objects composed into complex objects get influenced by digital learning object, granularity and diversity effects
- Intellectual Property Issues: in opening up course material to the world, institutions must invest the time and expense to scrub the material to be sure that materials licensed for utility in its original form is not allowed worldwide.
- Content Quality Assessment and Enhancement: The challenge here is how we might close the loop on the use of open educational material so that we can create virtuous learning loops that constantly improve the material through use. Hence Quality of available OER materials is inconsistent, thus no common standard exists to review OER's accuracy and quality
- Computing and Communication Infrastructure: access to the supporting technology, especially, but not exclusively, in the developing world cannot be taken for granted.
- Potential barriers comprises of; Technical- lack of broadband access; Economic- inadequate resources to invest in software and hardware; Social- lack of the skills needed to use technology; Policy-oriented towards lack of academic recognition of the development of OER; Legal -time associated with gaining permission to use third part owned copyrighted materials.
- Faculty face a series of challenges including: Time constraints in preparing curriculum and selecting, developing teaching and learning materials; The need to address the diverse needs of their learners and demonstrate gender sensitivity; Changing teaching and learning environments (from teacher-centered to learner-centered); Increased student access to online materials and online publishing opportunities; Legal requirements to broaden access; The need to cover a broad and growing knowledge base; The need to update ICT skills regularly.

## Conclusion

It is observed from the above study that the importance of open educational resources places a vital role in the field of higher education. Even though it is a new concept, our governments, both central and state have felt the need of it. Through state bound policies, open licensing system and national ICT networking, access to OERs is made friendly. Similarly the institutions have to support their teaching fraternity to work for OERs portals in different syllabi. Publishing research papers in the online journals and access the online materials in various forms at the subsidized or free price becomes order of the day. Similarly students ought to be encouraged to participate in the development and enhancement of OERs as they are the native of this digital era. The content as well as the quality of OERs has to be assessed and enhanced at periodic intervals. On the whole the opportunities and challenges of OER in the field of Human Resource Management have observed.

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