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OPEN EDUCATIONAL RESOURCES CHANGING THE DYNAMICS OF TEACHING AND LEARNING

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ABSTRACT :

Open Educational Resources (OER) are educational materials and resources offered freely and openly for anyone to use and under some license to adapt, copy and redistribute. Open educational resources can include course syllabi, presentation slides, image collections, animations, videos, textbooks, research papers and self-assessments. Open educational resources have the potential to advance the delivery of education by increasing the availability of relevant learning materials and stimulating the active engagement of teaching staff and students in creating learning resources. Open Educational Resources are any resources available at any little or on cost that can be used for teaching, learning or research. OER typically refers to electronic resources including those in multimedia formats and such materials are generally released under a Creative Commons or GNU Licenses or similar license that supports open or nearly open use of the content. OER can begin from schools, colleges, libraries, chronicled associations, government offices, business associations, for example, distributers or staff or different people who create instructive assets they are eager to share. The central to the idea of open educational resources is openness in the creation, sharing and reuse of learning and teaching materials with barriers of cost or access for the student or end-user reduced as much as possible. Open educational resources also exercise some benefits like self-learning, learning at individual pace and grasping, without time bondage, open learning etc. along with the draw backs like no motivation, no control, more informative than holistic. The investigator in the present paper focuses upon the meaning of open educational resources, open licenses and distribution models, the role of open educational resources in teaching and learning process. Further the author also elaborated on open educational resource content repositories and advantages and disadvantages of open educational resources in teaching and learning process.

KEYWORDS : *Massive open online courses, Open Educational Resources, Open Courseware, OER Content repositories, Online courses, ICT.*

INTRODUCTION:

In the world of globalization, like all other phenomenon, the concept of education has also undergone a radical change. Like economical equality, globalization aims at educational equality. To achieve this educational equality and to increase the participation; irrespective of class, national and financial status, various new models are exposed to learners and researchers in higher education. Traditional education system being closed to Nations had its own resources that were adequate to fulfill the requirements of the learners. In modern times, education being global in its scope and framework, thereby it is no longer closed to National requirements only. To fulfill the global requirements and to encompass the largest number of target learners Open Educational Resources (OER) are introduced, so

that crossing the boundaries of location, time and other constraints more and more learners can join the stream of higher education and add to quality research.

The open educational resources movement (a term adopted at UNESCO meeting in 2002) was famously initiated in 2001 by the Massachusetts Institute of Technology in the United States with its Open Courseware initiative. Since that time, development and use of OER has picked up significant momentum, making notable inroads onto the agendas of the higher education sectors in less-developed countries. OER provide free access to courses, curricula and pedagogical approaches and other teaching learning methods.

"Open Educational Resources (OER) depicts any instructive assets (counting educational programs maps, course materials, reading material, gushing recordings, interactive media applications, webcasts and whatever other materials that have been intended for use in instructing and realizing) that are straightforwardly accessible for use by teachers and understudies, without a going with need to pay eminences or permit charges". Neil Butcher, "A Basic Guide to Open Educational Resources (OER)".

Open educational resources are educational materials and resources offered freely and openly for anyone to use and under some license to adapt, copy and redistribute. Open educational resources can include course syllabi, presentation slides, image collections, animations, videos, textbooks, research papers and self-assessments. The expression "Open Educational Resources" was first adjusted at UNCESCO's 2002 Forum on the Impact of Open Courseware for advanced education in Developing Countries. Open educational resources have the potential to advance the delivery of education by increasing the availability of relevant learning materials, reducing the cost of accessing educational materials and stimulating the active engagement of teaching staff and students in creating learning resources. A wealth of public domain and fair use of learning materials are currently available via the Internet that faculty can reciprocate for its use in their classes so as to replace some of the books required for purchase by students. Open educational resources are any resources that are available at little or no cost and that can be used for teaching, learning or research. Open educational resources typically refers to electronic resources, including those in multimedia formats and such materials are generally released under a Creative Commons or similar license that supports open or nearly open use of the content. Open instructive assets can start from schools and colleges, libraries, recorded associations, government offices, business associations, for example, distributers or workforce or different people who create instructive assets they are eager to share. In January 2007 the Organization for Economic Co-task and Development (OECD) recognized more than 3000 open courseware courses accessible from 300 colleges around the world.

The vision visualized by the Cape Town Open Education announcement to advance OER states that, "Instructors worldwide are building up a tremendous pool of instructive assets on the Internet, open and allowed to all to utilize. These instructors are making an existence where every single individual on earth can access and add to the whole of human information" (Yuan, McNeil, Krann, 2008). This vision leads to the understanding that Open educational resources contains sea like reservoir of information on almost all topics, subjects issues oldest and latest which is open to all for access and also promote the idea of learning.

WHICH MEANS AND DEFINITIONS OF OPEN EDUCATIONAL RESOURCES

The term Open Educational Resources (OER) is to a great extent synonymous with another term: Open Courseware (OCW), in spite of the fact that the last might be utilized to allude to a particular, progressively organized subset of Open Educational Resources. An Open Courseware is characterized by the OCW Consortium as "a free and open computerized production of fantastic college level instructive materials. These materials are composed as courses and frequently incorporate course arranging materials and assessment tolls just as topical substance". OER has developed as an idea with extraordinary potential to help instructive change. Significantly, there is just a single key differentiator between an OER and some other instructive asset: its permit. In this manner, an OER is basically an instructive asset that joins a permit that encourages reuse and possibly adjustment, without first mentioning authorization from the copyright holder . The central to the idea of OER is openness in the

creation, sharing and reuse of learning and teaching materials with barriers of cost or access for the student or end-user reduced as much as possible.

"OER are instructing, learning and research assets that live in the open area or have been discharged under a scholarly p[property permit that allows their free use or re-purposing by others. Open Educational Resources incorporate full courses, course materials, modules, reading material, gushing recordings, tests, programming, and some other apparatus, materials, or methods used to help access to learning".—William and Flora Hewlett Foundation.

The wide cited meaning of Open instructive assets clarifies it as, "digitized materials offered unreservedly and straightforwardly for instructors, understudies and self-more slender to utilize and reuse for educating, learning and research. *OER includes open access to both the content and the technology such as Open Software, Open Standards and Open Licenses to distribute the material"* (OECD, 2007).

"Free sharing of programming, logical outcomes and instructive assets fortifies societal improvement and lessens social imbalance. From a progressively singular outlook, open sharing is professed to build attention, notoriety and the joy of offering to peers"— Jan Hylen, OECD Center for Educational Research and Innovation.

OPEN LICENSES AND DISTRIBUTION MODELS

Open Educational Resources main rule is to open access to an educational content by sharing it according to various free models of distribution. Models of distribution over the Internet mainly rely on the type of license the producer is going to choose to diffuse its work. Using an Open License model does not mean the author is going to lose his rights. It is exactly the opposite. Open licenses help the owner of any Open content to protect it, by defining conditions under which the material can be used, modified and distributed. There are some questions which are answered depending upon the type of license chosen by the author. Will you allow commercial use of your training material? Should I mention the source if I use it? Can I distribute a new version of your work under any type of license? All this depends on the type of Open License chosen by the author. Two different types of licenses are used by OER producers are recommended by the OER community. These are: Creative Common Licenses (CC licenses) and GNU License.

Creative Common License

This is a non-profit organization devoted to expanding the range of creative work available for others legally to build upon and share. The organization has released several copyright licenses known as Creative Common Licenses. Globally, a CC license answers two different questions, namely; do you allow commercial use of your work? And second question is Do you allow modifications of your work? For the second question, the answer can be Yes, No or under "Share Alike" (which means the licensor permits others to distribute derivatives works only under a license identical to the one of the original work). This mechanism is also known as copy left.

GNU license

GNU licenses are widely used to license Free and Open Source Software (FOSS) as well as documentation. The GNU General Public License (GNU, GPL), is a widely used software license and was originally written by Richard Stallman for the GNU project. The GPL is the most popular and well known example of the type of strong copy left license. Another interesting GNU license is the Free Documentation License (FDL). GNU FDL or simply GFDSL is a copy left license for free documentation, designed by the Free Software Foundation (FSF) for the GNU project.

The Role of Open Educational Resources in Teaching and Leanring Process

OER are teaching and learning materials that are freely available online for anyone to use, whether you are an instructor, student, or self-learner. OER can exist as smaller, stand-alone resources that can be mixed and combined to form larger pieces of content or as large course modules or full

courses. These definitions locate OER online, but it is arguable that any resource used for teaching and learning that can be freely accessed is an OER. It is usually safe to assume, however, that OER refers to online materials in most contexts. They can range from singly file resources (reading lists, image files, video clips), through meaningfully structured collections as single units (sometimes called 'learning objects') to textbooks and whole courses. These last two types of resource, open textbooks and whole courses (Massive Open Online Course or MOOCs) have their own advocates and models for application. The currently most used definition of OER is: "*Open Educational Resources are digitized materials offered freely and openly for educators, students and self-learners to use and re-use for teaching, learning and research*".

The main aspect is that the object is usable to improve education. The following classification shows parallels to other initiatives:

1. **Learning resources:** Currently, the main research field is how to make learning objects (specific digital objects created for learning purposes) available and re-usable. This includes multimedia documents, simulations but also simple html web resources.
2. **Articles, textbooks and digital equivalents:** The class of resources contains typical objects provided by libraries, such as articles, papers, books or journals
3. **Software tools:** These are used for different purposes, such as producing/authoring learning resources but also for communication and collaboration. Objects of this class are usually referenced as Open Source or Free Software (OSFS).
4. **Instructional/didactical designs and experiences:** Educators are highly dependent on successfully planning and designing their learning experiences---this class of resources includes access to instructional designs, didactical plans such as lesson plans, case studies or curricula. It also includes one of the most valuable resources: sharing experiences about materials and lessons between colleagues. This class of objects is also called Open Educational Practices.
5. **Web assets:** This class of objects regards simple resources (assets) like pictures, links, or short texts which are not usable on their own in a learning context but cal be used to support or illustrate a certain topic. In many ways, these are objects found by Google or similar search engines.

Massive Open Online Courses or MOOCs

Massive Open Online Courses are recent development that is reshaping the trend of higher education on the web. It represents an emerging methodology of online teaching, based on the philosophy of connectives. This term was coined by George Seimens and Stephen Downs in 2008. 'Massive' here refers to the large number of students that can be engaged in an online course and its 'openness' is associated with software used, registration ton anyone who has access to web, open curriculum, learning resources and assessment. Pedagogically it characterizes an open, constructivist and connectivity approach of knowledge production, even though these courses provide a structured curriculum, learners are permitted to be autonomous and self organize their participation according to their learning needs, prior knowledge and skills, and common interests. The first generation MOOCs were referred to as cMOOCs since they aimed at maximizing connections between learners, whereas those emerged in 2012 are termed as xMOOCs, since they adapted behaviouristic and top-down style of teaching. Some of the MOOC providers are EDx, courseeera, Open Courseware (http://ocw.mit.edu), Udacity, Future learn and OpenUpEd.

Advantages of Open Educational Resources

The following are the advantages of Open Educational Resources in teaching and learning process:
1. **Innovative teaching method:** Fosters pedagogical innovation and relevance that avoids teaching from the textbook.
2. **Revised and latest:** Open educational resource materials are often more up-to-date than textbooks purchased on a multi-year replacement cycle.

3. **ICT application:** Many higher education institutions are looking to shift to a one-to-one computing environment, where every student has a tablet, laptop or other device.
4. **Collaborating and Partnerships:** OER provides a foundation to collaborate with other group. Importantly, they also create powerful partnering opportunities at the classroom level by enabling educators to see, develop, share and reuse quality open educational resources so as to meet their students' unique requirements and needs.
5. **Exchanging the knowledge:** OER enables knowledge sharing for the benefit of all students and educators by widening access to high quality resources.
6. **Cost Savings and Efficiency:** By sharing and reusing educational materials, the costs for content development can be cut dramatically and allow educators to make better use of available resources. The minimal funding for professional development and training to develop content can be far less than the recurring costs for printed materials. OER are a cost effective way to provide digital content.
7. **Concern about quality:** OER quality improves over time by enabling continuous improvement of online and other digital learning resources by professional peers.
8. **Support for Independent Learning:** OER help students access additional learning resources, enhance supplemental materials in support of academic plans, become better prepared, learn independently and pursue learning guided by personal interest. Open educational resources offer students access to high quality material that may be more engaging and in-sync with their own interests.
9. **OER encourage adaptability enabling users to:** Translate content into a local language, adapt content to specific learning needs, connect with collaborators at other institutions.
10. **Benefits of OER for Faculty:** Use openly licensed materials to build our own resources, license our own OER so that others can use it, promote our work to a global audience.
11. **Benefits of OER for students:** Provide supplemental learning materials for courses, determine what classes or program to enroll in and better prepared for classes.

Disadvantages of Open Educational Resources

The disadvantages of Open Educational Resources in teaching learning process are as following:
1. The quality of open educational resources can be inconsistent.
2. There is no common standard for review of open educational resources accuracy and quality.
3. Need of proper way to check accuracy of content.
4. Customization is necessary in order to match departmental and/or college curriculum requirements.
5. Technical knowledge is necessary for the accessing of open educational resources.
6. Need of supportive and compatible software and hardware so as to access OER.

Some Important Open Educational Resource Repositories

Many new initiatives have been launched during the past five years in the filed of Open Educational Resources. The list of websites related to OER content repositories are as following:
1. Common Content: www.commomcontent.org
2. Wikiversity: www.en.wikiversity.org
3. The Open Course Ware Consortium (OCW): www.ocwconsortium.org
4. OER Commons: www.oercommons.org
5. The Open Training Platform---UNESCO: www.opentrainingplatform.org.
6. OpenCourse.org: www.OpenCourse.org
8. Merlot: www.merlot.org
9. Carnegie Mellon Open Learning Initiative : www.cmu.edu/oli
10. The Open Learn Initiative: www.openlearn.open.ac.uk
11. OER search engines: www.learn.creativecommons.org/projects/oesearch
12. OpenContentOnline: www.opencontentonline.com
13. Curriki: www.curriki.org

14. Commonwealth of Learning (COL): www.col.org
15. The William and Flora Hewlett Foundation (WFHF) OER Initiative: www.hewlett.org/programs/Education/OER/
16. Center for Open and Sustainable Leanring (COSL) : www.oslo.usu.org.
17. Open Learning Content Observatory Services (OLCOS): www.olcos.org
18. ccLearn—the education division of Creative Commons: www.learn.creative.commons.org
19. Eduforge: www.eduforge.org
20. China Open Resources for Education (CORE): www.core.org.cn
21. Western Cooperative for Educational Telecommunications (WCET): www.wcet.info
22. International Institute for Educational Planning (IIEP)—OER useful resources: www.oerwsiki.iiep-unesco.org/index.php? title=OER_useful_resources

CONCLUSION

Present generation of learners being techno savvy, have easily developed the habit of using technology and through it self-learning. Since the syllabus is turned from text based to task based, the traditional resources are proving to be inadequate to keep pace with and fulfill the requirements of contemporary higher education. In this sense open educational resources are proving to be an opportunity for a learner to be at global level even being local. Through OER, even a local learner can irrespective of academic diversity and multicultural framework of respective education systems, cope up with the global demands.

While pointing out the features of higher education, N./V. Varghese (Varghese, UNESCO, 2011) fingers at one challenge faced by higher education that, it is a sector that is expanding in all regions of the world. It is between 1991 and 2006; the number of students enrolled in higher educational institutions worldwide more than doubled from 68 to 143.9 million students (UNESCO-UIS-2008). The gross enrolment ratio (GER) increased from 13.8 to 25% during this period. However this expansion of higher education was uneven between regions. Along with large number of learners, paucity of infrastructure, finance, qualified faculty are some of the additional challenges, that are to be met. On one hand higher education is needs to be spread to the farthest corners of the world; on the other hand number of diversities is needed to be coordinated. An open educational resource seems to be the best suitable solution to meet the above mentioned extreme ends.

Open educational resources are educational materials and resources offered freely and openly for anyone and under some license to adapt copy and redistribute. Open educational resource has emerged as a concept with great potential to support educational transformation. OER is simply an educational resource that incorporates a license that facilitates reuse, and potentially adaptation, without first requesting permission from the copyright holder. The central to the ideas of open educational resource is openness in the creation, sharing and reuse of learning and teaching materials with barriers of cost or access for the student or end-user reduced as much as possible. OER movement encourages the creation of free, high-quality content for community college courses to replace commonly used textbooks. In higher education institution can create sustainable academic resource for students and provide professional development opportunities for faculty by promoting the use of open educational resources.

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