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Open Educational Resources

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Abstract

Open Educational Resources (OER) remarked enormous use in the field of education that all the levels of education like primary, secondary, higher secondary and higher education, professional education, technical education and even in field of research. Those resources help us in **teaching, learning and research materials**, that exist in the public province or released under an open license that permits no-cost access, adaptation, use, and reorganization by others with no or limited restrictions. Now a day conferences and seminars and workshops going on regarding Open educational resources which really became part of academic endeavour. The present paper through on light on concept and key elements with illustration of Open Educational Resources.

Keywords: Open Educational Resources, OER Inventiveness in India

Introduction

Around the world, openness has already altered education at all levels. It has helped students and instructors, as well as influencing the way things are done. Openness has had an impact on studies across the country. It has brought together national leaders to debate how wealthier countries may help poorer countries gain access to free and open education.

The concept of openness has evolved over time. The "open" movement grew out of a desire to meet the demands of many technologies, groups, and communities. The ideals of "open" were embraced by open universities about a century ago to reflect "learning 'anywhere, anytime' and open entry and exit points, which were the basis of open universities and as well as its correspondence and distant learning models"

Learning is truly just a click away thanks to the Open Movement. The advent of Open Educational Resources, or resources that are licenced to be used and re-used in a larger as well as specific educational context, has made education widely accessible and instantaneous. These movements and philosophies play an important role in the development of an education niche and the promotion of educational opportunities.

The term Open Educational Resources (OER) was first used at a UNESCO conference to refer to offering free global access to high-quality educational resources. OER is defined as "digitised materials supplied freely and openly for educators, students, and self-learners to use and reuse for teaching, learning, and research" by the OECD in 2007.

Sharing and openness are commonly anticipated and believed to benefit stakeholders in the educational community. Traditional traditions, habits, managerial techniques, and greater legal complications, on the other hand, are hurdles to the sharing process.

The process of learning and teaching is critical to the country's development as a worldwide powerhouse. Learning resources can be identified by their granularity levels in addition to their informational content. Through digital assets (picture, video, or audio clip), information objects, learning objects, and learning activities, a learning activity should be embedded with information content.

The 2012 Paris OER Declaration, issued by the UNESCO World Open Educational Resources (OER) Congress on Friday, June 22, 2012, called on governments to freely licence publicly financed educational assets. The proclamation, which emphasises the importance of open educational resources and makes suggestions to governments and institutions around the world, was unanimously endorsed by UNESCO member states.

Examples for Open Educational Resources

- **Open Courseware:** OpenCourseWare (OCW) is a free and open digital publication of high-quality educational materials for college and university students. These materials are structured into courses, and they frequently include materials for course preparation and evaluation, as well as topic content."
- **Learning Modules:** "A learning module is a tool that distributes course materials in a logical, sequential order, guiding students through the subject and assessments in the order chosen by the instructor," according to Wikipedia. Instructors can add prepared text, files, online links, discussion topics, assignments, tests and quizzes, and evaluations in the near future. Students can be required to complete content if it is arranged in a certain way.
- **Open Textbooks:** Faculty generally write open textbooks, which are then released on the web with the help of institutions or new commercial firms. This new business model allows textbooks to be accessed for free online.
- **Streaming Videos:** Streaming video is content that is supplied over the Internet in compressed form and shown in real time by the viewer. A Web user does not have to wait for a file to download before playing it with streaming video or streaming media. Instead, the media is delivered as a continuous stream of data, which is

played as it arrives. A player, which is a particular programme that uncompresses and transfers video data to the computer, is required by the user.

- **Open Access Journals:** Open access journals provide "free, immediate, online availability of research articles combined with the rights to use these articles fully in the digital environment. Open access is the needed modern update for the communication of research that fully utilizes the Internet for what it was originally built to do—accelerate research
- **Online Tutorials:** self-study activity designed to teach a certain learning result is known as an online lesson. They are typically given through a course management system, although they can also be delivered via the Internet or on DVD. Online tutorials are divided into two categories:
 - **Recorded tutorials** are video or screencast recordings, typically of a subject expert presenting information and ideas or giving a demonstration.
 - **Interactive tutorials** are a structured collection of navigable web pages. Individual pages can contain any combination of text, images, audio, video, self test questions and other interactive activities. Interactive tutorials can also contain screencasts.
- **Digital Learning Objects:** Small, modular, discrete units of learning built for electronic transmission and application are known as digital learning objects. A learning object is "packed" to include a lesson, an activity, and an assessment to promote reuse with minimal effort. The most reusable learning items will have a tangible and core learning outcome that can be applied to a wide range of courses.



Open Educational Resources inventiveness in India

The recent Indian Government is much more interested to go digitization. All the office works have been digitized, introduced Adhaar Card, all the bank transactions are digitized, implemented e-Governance. For these internet facility have been improved. Like wise lot of importance have been given to educational resources. Lot of initiatives had been incorporated on open educational resources also, those are mentioned as below.

The National Repository of Open Educational Resources (NROER):

It was launched in New Delhi on August 13, 2013. Collection of open educational resources that can created by CIET and NCERT. It was unveiled at the National Conference on Information and Communication Technology (ICT) in School Education. in partnership with the Ministry of Human Resource Development's Department of School Education and Literacy. Government of India's Ministry of Human Resource Development. Metastudio, the platform that houses the repository, is a project of Mumbai's Homi Bhabha Centre for Science Education's Knowledge Labs. NROER has a huge amount of educational resources for Primary, Secondary, and Senior Secondary levels in a variety of disciplines and Indian languages. Resources are

provided in a variety of formats, including Video, image, audio, document, and interactive are all examples of multimedia. Aside from that, every NCERT book is accessible in Flipbook format. NROER is a collaborative platform that aims to reach the unreached, with educational content contributed by SCERT, SIERT, SIE, Vigyan Prasar, CCERT, Gujarat Institute of Educational Technology (GIET), SIET, and other stakeholders.

National Programme on Technology Enhanced Learning (NPTEL)

In 1999, IIT Madras launched the NPTEL (National Programme on Technology Enhanced Learning) effort to improve the quality of higher education in India. As part of this project, all IITs, as well as IISc Bangalore, will develop a set of video lecture-based courses in all engineering disciplines. This initiative has gained wide popularity in India.

Consortium for Educational Communication (CEC)

The University Grants Commission established the Consortium for Educational Communication (CEC) as one of the University Centers (UGC). CEC was established largely to meet the needs of higher education via the employment of powerful television medium and adequate information and communication technology (ICT). The CEC creates educational programmes.

E-PG Patshala: The Ministry of Human Resource Development, working under the auspices of the National Mission on Education through ICT (NME ICT), has tasked the University Grants Commission (UGC) with developing e-content in 77 postgraduate disciplines. The EPatshala covers a wide range of topics in the arts, humanities, languages, and education.

e-Gyankosh :

It is a national digital repository for storing, indexing, preserving, disseminating, and sharing digital learning resources generated by India's Open and Distance Learning Institutions. Copyright protection applies to everything in e Gyankosh. The course materials are free to download in PDF format. A one-time registration is required to access resources.

Virtual Learning Environment (VLE):

Institute of Life Long Learning: Another OER effort of the University of Delhi is the Virtual Learning Environment Institute of Life Long Learning. At both the undergraduate and postgraduate levels, VLE offers e-learning in the fields of Commerce and Management Studies, Humanities and Social Sciences, Sciences, and Mathematical Sciences.

National Institute of Open Schooling (NIOS):

The National Institute of Open Schooling (NIOS) is another OER effort of India's Ministry of Human Resource Development. It claims to be the world's largest schooling system. NIOS was founded with a mission to provide universal and flexible access to high-quality school education and skill development, as well as a vision to promote sustainable inclusive learning.

SWAYAM

SWAYAM is a government-sponsored initiative aimed at achieving the three cardinal principles of education policy: access, equity, and quality. The goal of this initiative is to make the best teaching and learning tools available to everyone, especially the most disadvantaged. SWAYAM aims to close the digital divide for students who have been left out of the digital revolution thus far.

UGC-MOOCs

A vertical of SWAYAM. UGC has launched MOOC, a vertical of the Study Webs of Active–Learning for Young Aspiring Minds (SWAYAM) portal, with the goal of enabling access, equity, and quality in the sphere of education for aspirants. Learners can access free online courses at their leisure, 24 hours a day, seven days a week.

Khan Academy

In 1999, IIT Madras launched the NPTEL (National Programme on Technology Enhanced Learning) effort to improve the quality of higher education in India. As part of this project, all IITs, as well as IISc Bangalore, will develop a set of video lecture-based courses in all engineering disciplines. This programme has garnered a lot of traction in India and the United States.

TESS-India

The Open University and Save the Children India are leading the initiative, which is supported by UK Aid. It's a bilingual teacher professional development programme that uses freely available and customizable OER to promote India's national education policy. The OER is a collaboration between Indian and UK educational specialists and policymakers that focuses on improving pedagogic methods.

CK-12 Foundation

The CK-12 Foundation is a non-profit organisation established in California whose stated aim is to lower the cost of K-12 education and increase access to it in the United States and around the world. CK-12 offers free, completely customizable K-12 open educational resources that are linked with state curriculum standards and personalised to meet the needs of students and teachers.

GOORU

Teachers have access to millions of free online multimedia resources and quiz questions, which can make creating a learning experience tailored specifically for their pupils challenging and time-consuming. Gooru is a free personalised learning system that enables instructors to search, remix, and share web resource collections on any K-12 topic.

Institute for the Study of Knowledge Management in Education (ISKME)

It is a nonprofit organisation that aspires to improve the practise of continuous learning, cooperation, and transformation in the education sector. ISKME, which was founded in 2002, conducts social scientific research, produces research-based innovations, and encourages innovation in education. Throughout the world, ISKME supports innovative teaching and learning techniques. ISKME also works with policymakers, foundations, and educational institutions to develop, evaluate, and improve education policies, programmes, and practises. As a result, ISKME assists schools, colleges, universities, and the organisations that support them in increasing their capacity to collect and share information, as well as creating open knowledge-driven environments centered on learning and teaching.

Curriki

Curriki is a free community that delivers open educational resources (OER) for K-12, which are contributed by Curriki members from over 193 countries, including educators, parents, and other partners. To ensure that the material is of the highest quality, it is peer-reviewed. It allows teachers to save money by allowing them to use Curriki OER instead of extra products.

Connexions - Openstax CNX

This one contains K-12 and higher education in practically every topic, including math, science, psychology, sociology, and history, and it is a global library of instructional content for learners from all walks of life. There are around 17,000 learning objects or modules in Connexions' repository, as well as over 1000 collections (textbooks, journal articles etc.). For reuse, these resources can be remixed and altered.

Sakshat

The Ministry of Human Resource Development (HRD) introduced it on October 30, 2006, with the goal of supporting and strengthening e-learning. The National Mission on Education through ICT (NME ICT) develops e papers, which are supplied through this same THE COMMUNICATIONS Vol. 25, No. 1 (2017) 85 portal. This e-content development task is done with care.

Conclusion

Rather than above mentioned Resources we can find still more and more open Educational Resources from internet which really benefitting the students, teachers, stakeholders and others., using OERs can provide students to a wider range of digital learning opportunities in the form of open courseware, open texts, open images, and self-assessment tools. 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. It provide Learning resources with cost-saving, quality and flexibility of access, Enhanced opportunities for self-learning at home, Skills development: digital literacy skills for searching, reusing, recreating, disseminating, branding, networking,. OERs to learning community.

External Links

- A-VIEW (Amrita Virtual Interactive E-learning World) <http://aview.amrita.ac.in/>
- e-GyanKosh <http://www.egyankosh.ac.in/>
- FlexiLearn <http://www.ignouflexilearn.ac.in/flexilearn>
- NCERT <http://ncert.nic.in/ncerts/textbook/textbook.htm>
- NIOS-OER <http://www.nios.ac.in/online-course-material.aspx>
- NPTEL <http://nptel.iitm.ac.in/>
- OER4S (Homi Bhabha Centre for Sc Ed.) <http://www.hbcse.tifr.res.in/research-development/projects/open-educational-resources-for-schools-oer4s>
- OSCAR (IIT, Mumbai under Ekalavya Project) <http://oscar.iitb.ac.in/oscarHome.do;jsessionid=71850E51474C038380686931C2F2AB72>
- Shakshat <http://www.sakshat.ac.in/>
- SWAYAM <https://swayam.gov.in>
- **Khan Academy** <https://www.khanacademy.org/>
- **TESS-India** <http://www.tess-india.edu.in>
- **CK-12 Foundation** <https://www.ck12.org/student/>
- **Gooru** <http://gooru.org/welcome/>
- **ISKME - Institute for the Study of Knowledge Management in Education** <http://iskme.org/>
- **UGC-MOOCs - INFLIBNET Centre** <https://ugcmoocs.inflibnet.ac.in>
- **Shodhganga** <https://shodhganga.inflibnet.ac.in>
- **Curriki** <https://www.curriki.org/>
- **ShodhGangotri:**<https://shodhgangotri.inflibnet.ac.in>
- **ShodhShuddhi** <https://pds.inflibnet.ac.in>
- **Connexions - Openstax CNX** <https://cnx.org/>

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