

IMPORTANCE OF OER IN IMPROVING HIGHER EDUCATION.

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Abstract.

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. In Indian economy, from the last two decades, it has achieved much more than what the world has expected. The quality of life has improved both in rural and urban set up. The reason of this high achievement is due to good policies and programmes started by government. Another reason being, common man has the access to education specifically at school level. But, the task of converting large huge human resource (16-24 years) into knowledge workers' rests on the kind and quality of tertiary education being provided to the common man. If we look at the past decade (2001-2011). As per the latest figure given almost 19% of total population in the age group of 18-23 are studying in higher education in almost 712 universities, 36,671 colleges and 11,445 stand-alone educational institutions in management, technical, medical and other professional institutes (Educational Statics at a Glance, MHRD, 2014). With such a huge expansion what is required is the quantitative and qualitative expansion of resources-infrastructural, educational, technological human and more so economical. Government has opened the private sector and thinking on the lines of Foreign Direct Investment (FDI) in education sector. Higher education and Research which will pave new way to the higher education sector. Since equity, access and quality in higher education is the prime concern of the government, therefore government has realized that Information and Communication Technology (ICT) sector will play a crucial role in expanding higher education and that's why it has launched nationwide centrally sponsored mission called National Mission on Education through Information and Communication Technology (NMEICT) and National Knowledge Network (NKN) through which universities are as well as colleges of higher education will be connected. National Knowledge Network will connect all the universities whereas along with other projects related to education like National Programme on Technology enhanced Learning (NPTEL), Eklavya (An open educational portal of Indian Institute of Bombay), National Repository of Open Educational Resource (NROER), etc has been launched to not only to connect the higher education institutes but also help the stakeholders to access the good quality educational resources material. This paper examines the innovative and resourceful open education resources and the importance of open education resources in education. Therefore, OER present a range of opportunities to institutions of higher education, teachers and learners of higher education as well as administrators of higher education.

Keywords: Higher Education, Innovative, Resources, Teachers and learners,

Introduction.

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 and include learning objects such as lecture material, references and readings, simulations, experiments and demonstrations, as well as syllabi, curricula and teachers' guides. (UNESCO 2002). More recently the trend is to include teaching 'practices' as part of OER (Geser et al. 2007), as highlighted in the Cape Town Open Education Declaration. However, open education is not limited to just open educational resources. It also draws upon open technologies that facilitate collaborative, flexible learning and the open sharing of teaching practices that empower educators to benefit from the best ideas of their colleagues. The term 'open educational resources' is used synonymously with 'open courseware',¹ 'open eLearning content' (Geser et al. 2007), 'open digital educational content' (Córcoles et al. 2007), 'open educational content'² or even 'open content' (McAndrew 2006). In an attempt to standardise a term to connote this specific concept, the term 'open educational resources' was coined at a UNESCO meeting in 2002 (UNESCO 2002), and while this definition has been widely used to frame the concept of OER, it focuses quite strongly on the 'products' in the teaching and learning enterprise:

Today society is knowledge based and it is driven by knowledge workers. It has been said that the society which can produce or create knowledge workers in coming decades will govern the universe. Due to large force of young human resource, world has recognised India as the potential knowledge superpower house. We have one of the fastest and the robust economies of the world (average growth rate is 7%). Various social indicators like health and care, employment, infrastructure, etc. are improving at a phenomenal rate. The William and Flora Hewlett

Foundation has stated that open education “is the simple and powerful idea that the world’s knowledge is a public good and that technology in general and the World Wide Web in particular provide an extraordinary opportunity for everyone to share, use, and reuse knowledge.”⁸ OER play a significant role in bringing this idea to life.

Review of Literature.

Hodgkinson-Williams, Cheryl -Open Educational Resources (OER) (2010) URI <http://hdl.handle.net/11599/3042>. Paper commissioned by the Commonwealth of Learning for workshop discussions at the Open Educational Resources (OER) Workshop for Heads of Commonwealth Universities, Cape Town, South Africa, 28 April 2010, and workshop discussions at the Open Educational Resources (OER) Workshop for Quality Assurance Agencies, Windhoek, Namibia, 3 May 2010.

Samuel Nikoi & Alejandro Armellini Pages 165-184 | (Jan 2012) Published online: 24 Jul 2012. The OER mix in higher education: purpose, process, product, and policy. They introduce the OER mix framework: purpose, processes, product, and policy. We argue that different mixes of the four Ps can generate different approaches to OER. We discuss the relevance of the framework and its importance for social inclusion and widening access to higher education. We also discuss the implications of the OER mix for the openness agenda. Institutions may find value in adapting and applying the framework. We invite colleagues to critique it and report back.

P Cannell, R Macintyre, L Hewitt - (2015) - ingentaconnect.com definition that encompasses all activities that open up access to educational opportunity in a OER model then opens up interesting, and relatively low cost opportunities for innovation Thus widening participation requires universities and partners to work with individuals whose.

David Annand and Tilly Jensen Online publication:(Nov. 26, 2019)URI <https://id.erudit.org/iderudit/1065987ar> Substituting open educational resources (OER) for commercially-produced textbooks results in demonstrable cost savings for students in most higher education institutions. Yet OER are still not widely used, and progress toward large-scale adoption in most colleges and universities has been slow. This article reviews the literature informing financial and other issues that affect OER adoption. It describes the outcome of an ongoing, financially self-sustaining project at Athabasca University that has produced significant cost savings for the institution, maintained equivalent student learning outcomes and persistence rates, and enhanced aspects of the student learning experience. Based on the success of the project to date, broadly-applicable recommendations are suggested to reduce organizational impediments to the adoption of OER in higher education institutions.

Objectives.

1. To know the Innovative and resourceful Open Education Resources.
2. To understand the importance of open educational resources.

Methodology.

For this paper the secondary data has been collected from Department of School Education and Literacy, Ministry of Human Resource Development, Government of India, VigyanPrasar, various periodicals, articles, reports, books, journals and literatures, etc.

Innovative and resourceful Open Education Resources used in Higher Education.

UNESCO member states unanimously approved the declaration, which highlights the importance of open educational resources and gives recommendations to governments and institutions around the globe. The important open educational resources are many in number some of the sources are explained below.

National Repository of Open Educational Resources (NROER)

The National Repository of Open Educational Resources (NROER). NROER is developed by CIET, NCERT. It was launched during the National Conference on ICT (Information and Communication Technology) for School Education. NROER was launched on 13 August 2013 in New Delhi in collaboration with the Department of School Education and Literacy, Ministry of Human Resource Development, Government of India. Metastudio, the platform hosting the repository is an initiative of Knowledge Labs, HomiBhabha Centre for Science Education, Mumbai. NROER hosts a large number of educational resources in many subjects and in different Indian languages for Primary, Secondary and Senior Secondary classes. Resources are available in different formats like Video, Image, Audio, Document and Interactive. Apart from this, all NCERT books are available in Flipbook format. NROER is a collaborative platform, intended to reach the un-reached and institutions like SCERT, SIERT, SIE, VigyanPrasar, CCERT, Gujarat Institute of Educational Technology (GIET), SIET and other stakeholders have a share in the educational content.

NPTEL

To improve the quality of higher education in India, IIT Madras came up with an initiative called NPTEL (National Programme on Technology Enhanced Learning) in the year 1999. As per this initiative, all the IITs, along with the IISc Bangalore would come up with a series of video lecture-based courses across all the streams of engineering. This initiative has gained wide popularity in India and the lectures are being used by several engineering students from across India.

Khan Academy

Khan Academy is a non-profit educational organisation created in 2005 by Salman Khan with the goal of creating a set of online tools that help educate students. The organisation produces short lessons in the form of YouTube videos. Its website also includes supplementary practice exercises and materials for educators.

TESS-India

It is led by The Open University and Save The Children India, funded by UK Aid. It is a multilingual teacher professional development programme that aims at supporting India's national education policy through the use of freely available and adaptable OER. A collaboration between the educational experts and policymakers of India and UK, the OER focuses on the enhancement of pedagogic practices parallel to Language, Literary, Science, Mathematics, and English. It aims at supporting learner-centers, inclusive, participatory, engaging and effective classroom pedagogy to influence the progress and achievements of students through quality schooling.

CK-12 Foundation

The CK-12 Foundation is a California-based non-profit organisation whose stated mission is to reduce the cost of and increase access to, K-12 education in the United States and worldwide. CK-12 provides free and fully customisable K-12 open educational resources aligned to state curriculum standards and tailored to meet student and teacher needs. The foundation's tools are used by 38,000 schools in the US, and additional international schools.

CK-12 was established in 2007 by Neeru Khosla and Murugan Pal to support K-12 Science, Technology, Engineering, and Math (STEM) education. The organisation first generated and distributed educational content via a web-based platform called the "FlexBook." CK-12 has updated its FlexBook platform and has begun to focus on concept-based, multi-modality learning. CK-12 is being funded by the Amar Foundation and by Vinod and Neeru Khosla.

Gooru

Teachers have millions of free online multimedia resources and quiz questions at their fingertips, often making it difficult and time-consuming to create a learning experience geared expressly for their students. Gooru is a free personalised learning solution that helps teachers to find, remix, and share collections of web resources on any K-12 topic.

Gooru organises all online learning content. It connects a community of educators and learners. It supports many different instructional uses and types of learners to improve all students' learning outcomes. Its online quiz environment gives students instant feedback on their progress and provides teachers with assessment results and learning resource suggestions.

ISKME - Institute for the Study of Knowledge Management in Education

An independent and education nonprofit platform, it aims at improving the practice of continuous learning, collaboration, and change in the education sector. Established in 2002, ISKME conducts social science research, develops research-based innovations, and facilitates innovation that improves knowledge sharing in education. ISKME supports innovative teaching and learning practices throughout the globe and is well known for its pioneering open education initiatives. ISKME also assists policymakers, foundations, and educational institutions in designing, assessing, and bringing continuous improvement to education policies, programs, and practice. As such, ISKME helps schools, colleges, universities, and the organisations that support them expand their capacity to collect and share information and create open knowledge-driven environments focused on learning and success.

Connexions - Openstax CNX

A global repository of educational content for learners from all walks of life, it includes K-12 and higher education in nearly every discipline, including math, science, psychology, sociology, history etc. Connexions' repository consists of more than 17,000 learning objects or modules and over 1000 collections (textbooks, journal articles etc.). These resources can be remixed and edited for reuse and can be easily downloaded free of cost on any mobile device. The platform is provided and maintained by Rice University.

Curriki

It is a free community that provides OER for K-12, which are contributed by members of the Curriki community including educators, parents, and other partners from over 193 countries. All the material is peer-reviewed to

maintain the quality. It helps in cost savings to teachers, since the teachers can use Curriki OER, instead of using supplemental materials.

The importance of open educational resources in improving higher education.

Open Educational Resources (OER) are the right way which enables free and accessible education to everyone and access to knowledge as public good. OER cherish the culture of participation, collaboration and sharing and with an open access to scientific information it brings a notable contribution in knowledge society development. Open Education Resources (OER) are important for many reasons. One reason, as the above chart illustrates, is the cost of textbooks, which is rising at a rate higher than most other consumer goods. Given the rising cost of tuition at many institutions, many students simply cannot afford to buy textbooks. OER is a way to make sure every student has access to course materials, with cost taken out of the equation.

OER also allows faculty to create material that is customized for their classes. Where most textbooks will have their strengths and weaknesses, OER material allows a faculty member to pull only strong material into their class. OER also represents an opportunity to have one's own materials enhanced. By allowing material to be modified by other faculty around the world, an OER creator has the chance to see material used in ways never imagined. New sections and chapters can be added and enhanced creating a work stronger than the original. That type of exposure and collaboration is simply not possible with material that lives on a local computer or only in print.

Finally, OER gives faculty a wide variety of material to draw upon for their own classes. Imagine being given a last-minute assignment for an unfamiliar class -- a textbook might help get you up to speed but what about the syllabus? The assignments? The exams? OER gives a wide variety of materials from which to build a class without having to start from scratch. OER is important because it provides affordable material to students, allows faculty to enhance their own work, and provides faculty with content for classes.

One of the main teaching benefits is that, since open materials are fully revisable and remixable, they can be customized to fit the way an instructor wants to teach a course. When using static traditional resources that cannot be easily edited or combined due to copyright restrictions, instructors may be forced to teach their courses in a way that conforms to available resources, rather than teach the course in their ideal way. Using OER allows the freedom to revise material by removing irrelevant content or adding one's own content, as well as the flexibility to combine parts of resources together, thereby ensuring materials are contextualized to a specific course. Because anyone, including students, can be involved in the creation, revision, and distribution of OER, instructors can also use these resources to engage in "open pedagogy," assignments that leverage OER to create more meaningful learning experiences. Traditionally, students work hard on assignments that will be handed in to their instructor, graded, and then never seen again. Instead, instructors might, for example, ask students to edit OER for redistribution, or have students openly license their own work for use by future students, thereby allowing their work to be shared with a more meaningful audience. This positions students as active participants in scholarly knowledge-sharing.

Conclusion.

The initiative of open access to educational resources indicates the direction the changes in the educational system are following. With this, the traditional systems of teaching and learning will be enriched with open education materials and online tools which can be used without limitations both in online or in standard teaching, through collaborative and constructivist learning, critical consideration and through creation of online communities aimed at the exchange of ideas, opinions, experience and creation of new knowledge. Following the records from the OER repositories it is obvious that the largest number of those resources is written in English language. Their usage requires adaptation to local languages, cultures and educational context, which, furthermore, requires certain digital skills, ICT resources, time and organizational resources. Teachers who altruistically share their teaching material usually don't use any license for that.

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