UNIVERSITY NEWS

A Weekly Journal of Higher Education

Association of Indian Universities

Pradeep Kumar Misra
National Professional Standards for Teachers:
Retrospect and Roadmap

Gouri Srivastava and Bhawna Paliwal
Buniyadi Shiksha and Its Relevance in Contemporary Times

Pratibha Bundela Gupta and B L Gupta
Successful Mentoring of Students in Higher Education
Institutions: Assess Pre and Post Mentoring Skills

Gagan Singh and Gopal Datt
Open Educational Resources: A Complementary Tool for
Teaching and Learning during COVID-19 Lockdown

Nirmala Sitharaman
Purpose of Education is to Find the Beauty of Life
- Convocation

#Let'sBeatCoronaTogether

Open Educational Resources: A Complementary Tool for Teaching and Learning during COVID-19 Lockdown

Gagan Singh* and Gopal Datt**

Information and Communication Technology (ICT) empowered the way for dissemination of knowledge over a wide spectrum. This makes it very useful for improving access and equity in the entire education sector. ICTs can be leveraged to complement the formal education system as well as the distance education system at all levels. The use of OERs holds great promise of improving the access to and the overall quality of education for the developed as well as the developing countries. The educators are creating and using digital content for teaching and learning. The access to quality content is possible only for those who attend higher education institutions or those who can afford to purchase the instructional material. The OER movement aims to make this content available for free use for enhancing educational opportunities for hitherto unreached sections of the society thus leading to equalizing of access. In India also a number of meaningful initiatives are being taken up to embed the OERs into the educational environments of today by Indian universities. The Indian Government has played a proactive role by providing impetus to the growth of OER movement in the country through various national policy initiatives. A large number of national policymaking bodies such as National Knowledge Commission (NKC), University Grants Commission (UGC) and other advisory bodies are providing the support to the movement in the country for improving access to quality education.

Ancient and Modern Scenario of Teaching and Learning

In ancient Indian education system education was-free and accessible to all and the system of education was intimately connected with the social structure. Teachers were a highly honoured class and the learned men were respected everywhere. The aim of ancient Indian education was to develop both the body and the mind. It intended to develop sound mind in sound body. Education was all-round, i.e., complete or total development of personality—intellectual, physical, moral and social. The ultimate aim of education was the complete realization of the self and this system of education was individualised and not institutionalised. The basic feature of this system is that it had both catholicity and elasticity in outlook and as such it had the power of adaptability. It was not rigid but flexible. So it continued for centuries. The same is required and essential in the present education system of India.

Teachers play the most important role in schools, colleges and universities. Hence, they should be given the best of class training to cope up with the new aids of teaching and learning. In the renaissance of technology, technology and education system cannot be kept apart. Therefore, technology must be taught right from the early years of the education to make the students familiar with the advancement of ICT well in advance. Hence, technology and education must be embraced with open heart by all the higher educational institutes and it must be propagated to the students also. But it is the need of the hour that students must also be taught in-depth about the morals of life and inculcated with humanistic values.

Presently, Indian higher education system constitutes of total 993 universities, 39931 colleges and 10725 stand-alone institutions; including 1Central Open University (IGNOU), with 14 State Open Universities and 1 State Private Open University. There are 110 dual mode universities, which offer education through distance mode as well as traditional mode too. As per the AISHE survey 2018-19 the total number of the students enrolled in all the higher education institutions is 3.73 crore and number of teachers is 14.16 lakhs.

Role of OERs in Teaching-learning

The Open Educational Resources (OERs) are the learning material offered freely to anyone which

---
* Assistant Professor, Department of Commerce, Uttarakhand Open University, Haldwani, Nainital- 263139 (Uttarakhand). E-mail: gsingh@uou.ac.in

** Assistant Professor, Department of Vocational Studies Uttarakhand Open University, Haldwani Nainital-263139 Uttarakhand

can be adapted by educators or scholars. OER allows us flexible learning in terms of anyone, anywhere and anytime with simultaneously it enables ICT based education in the country. Today, as internet users are increasing massively the OERs can perform the special role to engage internet users towards learning. The OERs movement was started early but got momentum by MIT initiatives in year 2001, when they decided to offer their learning material free to use for the world. After that too many educational institutions came forward for this movement. Thus that OER moment got popular among the world of education. It also addresses several challenges faced by higher education such as—freely availability of educational material, quality learning material, reusability, sharing of resources, etc. In this consequence the Government of India initiated several mission-mode projects for the support of OER and ICT enabled education in the country, e.g. NPTEL, SWAYAM, NROER, Digital Library Inflibnet, *Swayam Prabha*, eGyanKosh, E-PG Pathshala, etc.

The open educational resources are considered to widen access, reduce the costs, and improve the quality of education among the community. The rapid development and the increasing use of OERs in higher educational institutions is a good signal for futuristic education. (Mtebe Joel S., Raisamo Roope, 2014). These resources can be very useful during pandemic like coronavirus and they can be used as a complementary tool for the dissemination of the knowledge amongst the learners across the world.

OERs believes sharing of knowledge and re-use of educational material either in digital or any other form for the better shaping of educational world. These OERs can facilitate the teaching and learning process when face to face teaching is not possible between the teacher and learners. OER plays a significant role to improve open and distance learning education in the country, in terms of quality, accessibility, reachability and competitiveness with traditional education. Some popular OER repositories across the globe are- OER Commons, Khan Academy, MIT BLOSSOMS, COL Virtual Learning, Directory of OER, COL's Institutional Repository, Virtual University of Pakistan, LabXchange, MIT Open Course Ware, Lumen Courses, MERLOT, eCampus, Skills Commons, NPTEL, SWAYAM, NROER, Saylor Academy and etc. The OERs have provided new direction for changing teaching-learning practices. New collaborative learning practices are emerging. The easy and free availability of quality materials facilitate the educators towards developing and learning new pedagogical models. The use of Open Educational Resources (OERs) facilitates the sharing of knowledge and helps in preserving and disseminating indigenous knowledge.

Challenges and Barriers of OERs in Indian Perspective

In developing countries like India, OERs has a great potential for providing quality education for all aspirants as well as filling the gap of deficit of good teachers. Adoption of OERs can become the medium of reaching the unreached and also can overcome the severe challenge of accessing quality education across the country. In the era of ICT, the role of OERs is more prominent for changing landscape of education, better learning opportunities, faculty development, remote accessibility of educational resources and finally empowering education. Now the educators in India are focusing to develop and design e-contents for the teaching-learning purposes with open license. OERs movement in the country aims to access free and quality e-content till the remotest corner of the country. The OERs open the doors of new models of teaching-learning through blended and collaborative learning. Despite its benefits to learners, educators and educational institutions, there are urgent issues that need to be resolved for OER to flourish. As far as Indian scenario is concerned, inadequate resources to invest in the required hardware and software lack of broadband access, lack of the skills needed to use technology, lack of clear policy in institutions regarding OER and issue of language etc. are the certain impediments which hinder the growth of OERs in India.

With the world wide popularity and proven usefulness of OERs, still it faces some significant challenges specially in Indian perspective, e.g. infrastructural barriers, language barriers, technical knowledge barriers, availability of Internet connectivity and speed, etc.

COVID-19 and Open Educational Resources (OERs)

The current global pandemic corona virus disease (COVID-19) outbreak has posed a very serious challenge to the entire world, including

India. With the massive and abrupt move to remote teaching and learning, higher education institutions need to address a system which will be able to make education available to everyone in the country. It is the need of the hour that there should be free access to online content. Initiatives like this will assist the many educational institutions forced to move to remote learning. In this time of crises, many countries offered online learning as an alternative. It is believed that open & distance learning and online learning can have the same outcomes as campus education without requiring teachers and learners to be in the same place at the same time, if these approaches are well prepared and designed as per the need and requirements of the local aspirants. Many international and national organizations like Commonwealth of Learning are ready to share their expertise, knowledge and resources to enable stakeholders to keep the doors of learning open for all. During pandemic like corona virus, it becomes necessary to explore novel ways to enable interaction between learners and other learners, learners and teachers and to use appropriate technologies and also a renewed commitment to sharing and re-using open educational resources (OER); so that no one is left behind. Therefore, all the educationals institutions should take policy decisions to adopt alternative ways of teaching, including online learning and to ensure that learning is delivered using ICT tools such as radio, TV, mobile devices so that no learner is disadvantaged. Developing countries like India firstly identify the existing open educational resources (OERs) to provide quality learning and also encourage all the educational institutions including teachers to use free resources to conduct online classes. By using these innovative approaches, a nation can open the doors of learning not just for formal education but non-formal and informal learning that is accessible, affordable and available to the last person in the queue (COL, March, 2020).

Keeping all these in view, a study has been carried out to examine the usage and barriers of Open Educational Resources (OERs) in Indian higher education during pandemic. In this paper the role of Open Educational Resources (OERs) in ensuring the quality teaching and learning process in higher education during pandemic like COVID-19 and how the barriers which hinder the progress of OERs can be overcome has been studied. Objectives of the study are:

- To analyze the usage of Open Educational Resources (OERs) in teaching and learning process in higher education.

- To identify the barriers to Open Educational Resources (OERs) and recommend suggestions for overcoming the barriers which hinder their progress in India.

It is a descriptive research. It has been carried out to examine the acceptance and barriers of Open Educational Resources (OERs) in perspective of

Table 1: Components of Virtual Learning

OERs	The teaching- learning materials those are available in public domain under open license with no cost.
MOOCs	MOOC is an online course aiming larger audience/participation across the world and open access using web-based platforms. It typically includes, video lectures, online readings, problem sets, quizzes, and discussion forums.
LMS	LMS is a software application that is used for online courses which facilitates course administration, tracking, reporting and delivery. Example of LMS is- Moodle, Open edX, Blackboard Learn and etc.
Open Course Ware (OCW)	An OCW is a free, openly licensed, course work accessible to anyone-anytime using Internet. OCW are organized courses with high quality digital course material, course planning and evaluation tools as well as thematic content.
Online Learning	Online learning or e-learning education that takes place over the Internet. It is a form of Virtual Learning.
Open Education	Open education broadens access to the learning and training typically using online without academic admission requirements.

Source: Compiled by Authors.

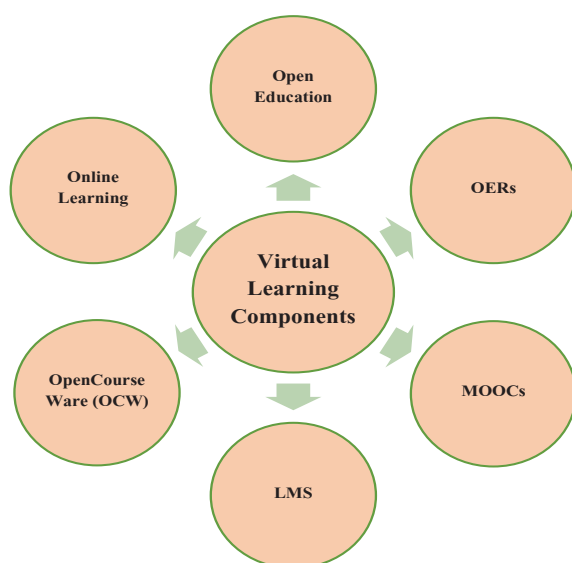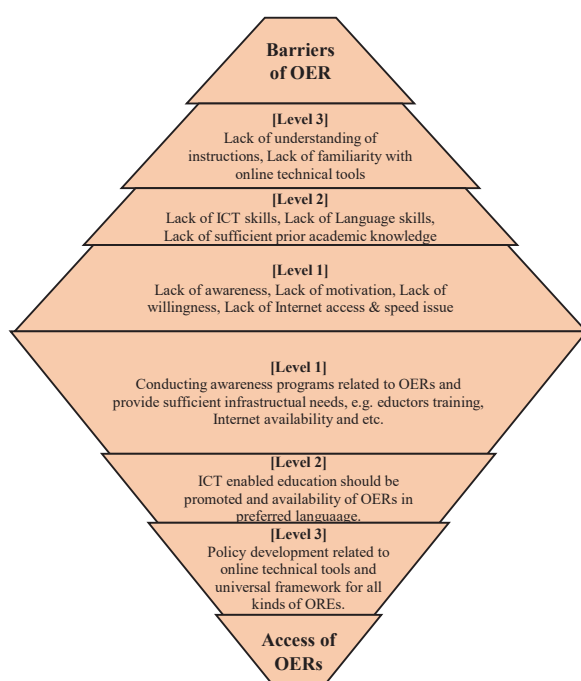**Figure 1: Virtual Learning Components**

Figure 2: Access and Barriers of OERs in India

Indian higher education. The data required for the study was collected from secondary sources. In the light of the objectives of the study, the information has been collected from various published reports and notifications of Open Universities and Distance Education Institutes operating in India, University Grants Commission, Ministry of Human Resource Development, etc.

Findings and Conclusion

The Open Education Resources (OERs) have emerged as a useful means for providing high quality education to the masses across the world. The various developments in digital technologies have played a catalytic role in the open education movement in developing countries like India. In distance education scenario of today, there is a paradigm shift towards more personalized and collaborative learning. Open licensing, a distinguishing feature of OERs, sets it apart from other resources and enables the user to use and reuse content according to individual needs. Earlier it was not possible because there are many legal constraints on collective use of knowledge developed by the world leading educational institutes. The use of OERs holds great promise of improving the access to and the overall quality of education for the developed as well as the developing countries. The OER has led to an emergence of creative participation in the development of digital content in the entire education sector. A number of innovative initiatives aimed at providing easy access to educational resources have been taken up. However, OER practices in India are currently in an initial stage of development and a number of issues need to be considered. But the potential for growth of the OER phenomenon in India cannot be denied and more such initiatives should be encouraged in the open and distance learning systems in India.

In developing countries like India, there are many economically   disadvantaged students who do not have access to broadbands and laptops. In situation like this digital learning might not be the ideal solution or it cannot be a substitute tool for teaching and learning. In India, majority of the learners are not tech-savvy or they don't have the access to the high-speed internet. Therefore, the teaching and learning process will definitely suffer. The inability to bear the cost can also be one of the hindrances in the way of OERs. Unless India makes internet available to all, there are chances that the gap in education quality may widen. In order to overcome hindrances caused in the way of Open Educational Resources (OERs) in Indian Higher Education, following measures can be taken into account:

- To match the teaching learning environment, new and appropriate technology should be adopted by the policy makers.

- To increase the awareness among the teachers, researchers and learners about the availability and benefits of OERs in facilitating quality teaching learning process, Government, university authorities and head of the educational institutions should initiate necessary steps.

- There is a need to develop skills among the teachers to use or share the resources developed by other teachers or institutions.

- In order to create, federate, and find the best OER resources available worldwide, proper infrastructure needs to be developed.

- It is also suggested that appropriate e-infrastructure or cyber infrastructure needs to be generated in the country.

If the Indian education system starts taking these points into serious consideration, we can attain the level of the best education system in the world.

References

1. Jeelani, S, Murthy, M.V. Ramana, and Sbeih, Mais Ali (2015). The Open Educational Resources (OERs): Challenges and Opportunities in Higher education", *International Journal of Science, Technology and Management* Vol VIII, Jun- 2015, -10-16

2. Chakraborty, Susmita and Ghosh, S. B. (2011). Open Resources for Higher Education: The Indian Scenario, Purdue University, Purdue e-Pubs, Proceedings of the IATUL Conferences. Paper 32. *http://docs.lib.purdue.edu/iatul/2011/papers/32.*

3. Bansal, Tulika, Chabra, Sonal, and Joshi, Dhananjay (2013). Current Initiatives and Challenges to OERs in Indian Higher Education, *Asian Journal of Distance Education*, ISSN 1347-9008 Asian J D E 2013 vol. 11, no 1, pp 4 – 18, *http://www.AsianJDE.org,* The Asian Society of Open and Distance Education.

4. Dutta, Indrajeet (2016). Open Educational Resources (OER): Opportunities and Challenges for Indian Higher Education. *Turkish Online Journal of Distance Education*, Vol. 17(2), pp. 110-121, ISSN 1302-6488.

5. Singh J. and Panigrahi P. K. (2018). Acceptance of Open Learning Resources: Perspectives of Higher Education Students in India. *The Electronic Journal of Information Systems Evaluation*. Vol. 21(2), pp. 80-93, ISSN 1566-6379.

6. Kurelovic, E. K. (2016). Advantages and Limitations of Usage of Open Educational Resources in Small Countries. *International Journal of Research in Education and Science,* Vol. 2(1), pp. 136-142, ISSN 2148-9955

7. Thakran, A. and Sharma, R.C. (2016). Meeting the Challenges of Higher Education in India through Open Educational Resources: Policies, Practices, and Implications. *Education Policy Analysis Archives*, Vol. 24(37). *http://dx.doi.org/10.14507/ epaa.24.1816*. This article is part of EPAA/AAPE's Special Issue on Models of Open Education in Higher Education Guest Co-Edited by Dr. Lisa Petrides and Dr. Cynthia Jimes.

8. Mtebe, Joel S. and Raisamo, Roope (2014). Investigating Perceived Barriers to the Use of Open Educational Resources in Higher Education in Tanzania. *The International Review of Research in Open and Distance Learning.* Vol. 15(2) pp. 43-66.

9. *https://www.col.org.* accessed as on 1/5/2020.

❑