International Journal of Future Generation Communication and Networking
Vol. 14, No. 1, (2021), pp. 1088–1093

Significance of OERs for undisrupted learning amid COVID – 19: Indian Scenario – Challenges and Opportunities

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Abstract

Most of the countries across the globe witnessed the largest disruption in educational systems during this COVID-19 pandemic which affected nearly1.6 billion learners worldwide. This disruption in education have considerably widened the pre – existing educational disparities and has erased decades of progress. This phenomenon can lead to a generational catastrophe in the educational field.

Due to the closure of all educational institutions during Covid – 19 lockdown, the govt and the educational institutes came up with some pre-established distance learning modalities. These modalities were often a combination of educational programmes on radio and television channels and the use of printed texts and materials. To ensure undisrupted learning, a gradual metamorphosis of the existing educational system is needed. In this context usage of Open Educational Resources (OER) are gaining momentum. The OER platform aims to make the quality content available for free use by anyone so as to enhance the learning opportunities for the unreached sections of the society. This paper studies the emergence, analyses the practical applications and the challenges associated with the development and in the integration of OERs with online educations in a developing country like India. Finally this paper also recommends some practises to be adopted so as to facilitate collaborative learning and encourage personalised learning experiences through OERs.

Keywords: Open Educational Resources (OER), Gross Enrolment Ratio (GER), Pandemic, Copyright, Licensing.

Introduction

The COVID-19 pandemic had a tremendous impact on learners and teachers all across the world, ranging from nursery to higher - secondary schools and various vocational, technical and training colleges and institutions. Closures of educational institutions and other learning activity centres impacted nearly 93 per cent of the world's teaching learning population. Due to this 22 million children and youth ranging from pre-primary to tertiary and higher, may be forced to drop out from schools due to the pandemic's economic impact.

Educational disparities has been widened among students particularly belonging from impovershed backgrounds. These gaps has wiped off decades of progress and the learning losses may extend beyond this generation.

In the areas of Technical, Vocational, Higher education and Training colleges there are considerable shortcomings which includes poor levels of digitalization and age old infra- structural incompatibility. During this Covid pandemic online learning has generally taken place in the higher education sub-sector through pre- recorded lectures and online platforms. But many of the lower and mid level educational institutions were crippled with lack of proper Information technology (IT) infrastructure, poor digital skills and data connectivity. At this juncture we must grab the opportunity and with collaborated efforts must try to come up with solutions so as to compensate the learning losses.

ISSN: 2233-7857IJFGCN

Indian Education Scenario amid Covid – 19 – Challenges

India is no exception to the many global educational challenges posed by lockdowns amid COVID-19 pandemic. Learning losses due to prolonged closures of school and colleges mean that the educational outcomes are at risk. Students community particularly those from marginalised sections of the society were greatly affected by the COVID-19 pandemic. Rural India, already faces the challenges of low learning outcomes and high drop-out rates is more prone to this devastating disruptions in educational arena.

Long before, Indias' diversified and multicultured society had laid the foundation for a holistic vision to achieve universalisation of education. It has always focussed to establish an unbiased universal free education policy. However, this concept didn't receive serious thought from policy-makers. Due to this India's learning crisis remains grave. The reports of the National Sample Survey reveals that approximately 6.5 million children are still

out of school. This Covid 19 pandemic has made this situation even worse. Recently the Indian govt came up with a notion of one nation, one channel or one digital framework. This concept needs to be enforced immediately so to ensure equity and quality in education. This digital India concept relies on technology upgradation. Too much emphasis on ICT in education in Indian scenario is a time taking process. This delay may affect many rural children in pursuing their education. Urgent action from all is required to overcome this learning crisis from becoming a generational catastrophe.

In this context of digitalising the educational institutions, some draw backs and shortcomings in the educational system were exposed. These shortcomings can be treated as challenges or obstacles to the teaching learning atmosphere amid Covid -19 pandemic

The following were some of the challenges identified :

- The COVID-19 crisis has highlighted that teacher education colleges and Institutions are to be reformed so that teachers can be trained for new methods of imparting education .
- Teachers need sufficient guidance, training and resources to adapt themselves to digital teaching methodologies.
- Rural students without access to reliable internet struggle to participate in digital learning.
- On the online platform there is a significant gap between the learners capabilities coming from privileged and disadvantaged backgrounds of the society.
- Low-tech and no-tech students have limited access to technology.
- No clear cut policies regarding Open Licensing and Copy rights
- Ambiguous and Unauthenticated data in search engines.

While building resilient educational systems, we need to take care that educational systems be more inclusive, equitable and flexible. Qualitative education be provided through content which is flexible and individualized within the pedagogical limits. Hybrid learning for learners requires a judicious mix of approaches and pedagogies. Appropriate content, effective teaching - learning practices, and a conducive learning atmosphere are the solutions to the success of digital education system. In this context there is a need for open and free materials for both teacher and the taught .

ISSN: 2233-7857IJFGCN

Emergence of Open Educational Resources (OER)

The concept of open educational resources runs on the principle that education ought to be free with no legal constraints on collective sharing of knowledge. Usage of OERs in educational institutions will improve accessability, enhance pedagogy, and increase of knowledge sharing between learners and educators. The 5 Rs of OERs are -- Reuse, Retain, Revise, Remix and Redistribute.

High prices of textbooks, inaccessability of high-quality materials and rigid curriculae are some of the issues faced the educational systems in developing countries. Additionally, top few publishers control the educational market monololy.

In this context, Open Educational Resources (OER) may be able to solve these challenges. Open educational materials can empower faculty, enhances students access to higher education, and cut cost burdens on learners. It can even engage students and teachers in meaningful learning experience with vital resources and can help to educate children in the developing world. Open materials can empower faculty with more academic freedom to. Professors with dearth of resources can utilize open textbooks and tailor their courses according to the academic needs of the students. Eventually new and modified resources from existing resources are created. This activity also promotes creativity and flexibility in designing new course content.

CONCEPT OF OERs

Emergence of Open Educational Resources (OER) is very crucial in educating the masses. The term ‘ OER ’ was first used at the UNESCO forum on the potential of open course ware for higher education in developing countries in the year 2002. The William and Flora Hewlett Foundation, defines OER as ― high quality teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their freeuse and re-purposing by others. Open educational resources includes course materials, software, modules, videos, books, tests or any other materials that supports to access knowledge. The OERs provide quality content available for free use for enhancing educational opportunities for hitherto unreached sections of the society thus leading to equalizing of access.

The OER movement commenced with the Massachuetts Institute of Technology’s Open Course Ware initiative which made the content from MIT’s courses freely available on the web. This was followed by similar initiatives by Stanford, University ofPennsylvania, University of Michigan, Utah State University, and so on. OER presents an exciting opportunity for enhancing educational access, sharing of knowledge, encouraging instructional innovation, and supporting personalized learning. The usage of OERs has great potential to enhance the accessability to and the overall quality of education for the developed as well as the developing countries.

OERs IN INDIA: PRESENT SCENARIO:

Earlier, about 80 per cent of the course work in Open and distance learning were available through material delivered by post and the remaining through traditional lectures delivered at authorised centres of the university. Apart from the ‘Indira Gandhi National Open University’ (IGNOU), all other open universities had to function within the legal boundaries of the states. Gradually, with the strengthening of the information technology (IT) infrastructure, the distance mode of learning is being replaced by online learning. All subjects that do not require hands-on skills must go the online way. Courses that require hands on competency-based skills must opt for a blended courses.

ISSN: 2233-7857IJFGCN

In India, the gross enrolment ratio (GER) in higher education is quite dismal at 14% for post graduate level. Distance education system in the country constitutes 12.5% of the overall enrolment in higher education (MHRD, 2013). Presently India has 35 million students enrolled in higher education which contributes to a small gross enrolment ratio (GER) of 26 per cent when compared with China that has a much higher Gross Eenrolment Ratio of 51.6 per cent. If we are to achieve the target of 50 per cent GER by 2035 as envisaged by the new National Education Policy (NEP) 2020, we have to give utmost importance to learning based on OER platforms.

Challenges in the use of OER

Despite its tremendous rapid growth and enormous benefits to educators, institutions and learners, a number of issues need to be resolved for popularising the use of OER . The development and proper usage of OERs itself faces significant challenges Certain challenges were encounterd during the usage of OER with respect to Indian scenario. Some of them are:

- Technical reliability, poor connectivity, poor Internet speed, broadband , data cost are major challenges in rural areas.
- Lack of digital literacy skills by users to create and use OER materials
- Inadequate funds to invest in the procurement or development of hardware and software.
- Lack of the appropriate technical skills to create and publish OER.
- Lack of clear cut policy such as copyright, licensing by authorities regarding the legal usage of online resources.
- Stereotyped peer assessment and reflective practices.
- Unable to evaluate high quality OER among thousands of avaiable resources
- Many times the users of OER are overloaded with abundant information and tools to choose from.

With support from government and external mentor agencies, India embraced OER by the year 2008 and has been playing a dominant role in providing impetus to the growth of OER movement in the country. Due to this initiative by the government, a number of national policy making bodies such as National Knowledge Commission (NKC), University Grants Commission (UGC) and other advisory bodies are striving to improve accessability to quality education. India is actively contributing to the Open Access movement with a large number of repositories, open access courses, digital lectures, e- journals, and open source repositories.

Some of the open access OERs in India are given below:-

a) **The National Repository of Open Educational Resources (NROER)** https://nroer.gov.in :It hosts a large number educational resources in various subjects including Primary. Secondary and Senior Secondary classes. All NCERT books are available in this platform.

b) **NPTEL https://nptel.ac.in/ :** IIT Madras came up with this initiative to improve quality of higher education. Later all IITs, along with IISc Bangalore joined to contribute series of video lectures based on all streams of engineering.

c) **Khan Academu https: //www.khanacademy.org/ :** This organisation makes short video lessons to educate students. This website also includes practise exercises and materials.

d) **TESS India** https://www.tess-india.edu.in : This project is funded by UK and is led by The Open University and Save The Children India. It supports the National Education Policy of India and

ISSN: 2233-7857IJFGCN

focuses on enhancing pedagogic practicces.

e) **CK-12 Foundation** https://www.ck12.org/student/ :It was established to Vinod and Neeru Khosla and aims to provide free and fully custamised K-12 education.

f) ***Digital Library of India*** (http://http://www.dli.ernet.in//) hosted by IISc (Indian Institute of Science), Bangalore. It is a collaborative project of over 21 institutions in India and it is also a partner to the Million Book project led by Carnegie Mellon University.

g) ***SWAYAM :*** Swayam is an initiative by MHRD, to provide free Massive Open On- line Courses (MOOCs) in native Indian languages. Microsoft is the technical partner for this project.

h) **National Digital Library *(NDL)*** (http://www.ndl.iitkgp.ac.in//) is an initiative of IIT Kharagpur and provides access to digitized educational content.

i) ***Shodhganga*** (http://shodhganga.inflibnet.ac.in) Established in 2010 by Information and Library Network Centres. All the theses and dissertations awarded by Indian Universities are uploaded in this digital repository .

j) ***National Knowledge Network (NKN)*** (http://nkn.gov.in) Started in 2010, By virtue of the available data it tries to connect all educational institutions, universities, research institutions, healthcare and agricultural institutions across the country.

k) ***National Mission on Education using Information and Communication(NMEICT)*** (http://www.sakshat.ac.in/): NMEICT was an initiative by the Ministry of Human Resource and Development (MHRD) in 2009. Its portal provides one-stop access to e- content, e-journals and e-books.

l) ***National Council of Educational Research and Training (NCERT)*** (http://www.ncert.nic.in /): NCERT provides school textbooks and reference books available online through its website for easy and free access for teachers and learners.

j) National Institute of Open Schooling (NIOS) (http://oer.nios.ac.in).This OER project provides access to educational materials for students of Vocational programmes in High school and Secondary levels.

CONCLUSIONS

The way information is used and disseminated is revolutionised by the OER phenomenon. This has led to an emergence of creative and collaborative participation in the development of digital content in the entire education sector. Keeping in view the vast demographic profile of India many Universities and distance learning institutions have taken up innovative initiatives so as to provide easy access to educational resources. The OER framework is providing a vast network of opportunities in the domain of educational pedagogy and practices. Due to this, new collaborative learning practices are emerging. The free availability and accessability of top grade OER materials will facilitate developing of new pedagogical models.

Through the OER revolution the Indian education system along with the support of the government and mentor institutes will witness a rise in the gross enrolment ratio, democratization of higher education, increase in opportunities for up-gradation of skills and qualifications and meet the demands of life long learning. Though the scope for OER framework is broad, its research intensity is comparatively low. Further research efforts are needed to study the various impacts of OERs on teaching - learning effectiveness.

Recommendations

- The heart of OER is open licensing. The Governments must persuade international funders to openly license their OERs so as to reach the most disadvantaged students.

ISSN: 2233-7857IJFGCN

- The digital literacy should be encouraged for OERs growth and accessibility.
- The OERs must be included in number of search engines so that materials are easily accessible for users.
- OERs must be easily compatible with a variety of digital and social media platforms.

Finally, all policies and interventions with regard to creation of OER and other repositories for education should strive to be inclusive. Good vision, sincere efforts and time will witness the success of OERs in India.

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ISSN: 2233-7857IJFGCN