OPEN EDUCATIONAL RESOURCES (OER): OPPORTUNITIES AND CHALLENGES FOR INDIAN HIGHER EDUCATION

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ABSTRACT

Creation of knowledge workers holds key for success of a country. Unfortunately, many of the countries though having chain of human resources yet are unable to transform human resources to their advantage as they face multiple challenges like poverty, poor economy, poor infrastructure, limited access to education and inadequate technological growth. Fortunately, India is one of among such countries in the recent past which has improved its position in the world forum and has taken a big stride by transforming human resource into knowledge workers. The entire credit goes to government of India, their schemes and most importantly the people working tirelessly in the higher education institutions. But, the percentage is very low.The reason is higher education of India is plagued with several challenges like poor quality of teachers, poor infrastructure, poor libraries and poor educational resources. Unless high quality of education both in terms of infrastructure and academic is not provided and sustained in all higher education institutes, it will be difficult to match with global world. One way it could be done at least in academic front is developing and disseminating quality educational material among the institutes of higher education. National Knowledge Commission has recommended that problems of educational material to a large extent can be reduced by Open Educational Resources (OER) and Open Access (OA). The easy and widespread availability of high quality educational material will change the paradigm of teaching and learning and thus improve the quality of education. Government of India has started several innovative programs and schemes like SHAKSHAT, NMEICT, NPTEL, OSCAR, E-grid etc. related to developing and disseminating educational resources. The national and global level are tremendous but it comes with many challenges specifically in a country like India which has a diversified population.The present paper will try to focus on the opportunities and challenges with respect to OER in Indian higher education.

Key Words: OER, higher education, challenges, opportunities.

INTRODUCTION

> *"Open Educational Resources (OERs) are any type of educational materials that are in the public domain or introduced with an open license. The nature of these open materials means that anyone can legally and freely copy, use, adapt and re-share them. OERs range from textbooks to curricula, syllabi, lecture notes, assignments, tests, projects, audio, video and animation."*
> - UNESCO, Home Page dated 2nd October2013

Over the past two decades the electronic revolution has changed the world scene. Never in the history, has technology influenced education so much as it is doing today. In recent years, the rate of technological change happened in electronic medium has never been so fast, what is used to be two decades ago. Technology has changed our world in ways previously unimaginable. No one has ever imagined that with a click of mouse the money can be transferred one place to other place, one can talk live face to face via mobile(3G)across the country, one can attend conferences, workshop almost virtually.

Educators' tryst with technology has a long history. The influence of technology in the learning process starts right from the time of Thomas Edison in 1922 where he predicted that "that the motion picture is destined to revolutionize our educational system and that in a few years it will supplant largely, if not entirely, the use of textbooks". With the passage of time, use of technology has dominated educational discourse especially in the 21st century. The advent of internet has brought revolution not only in the field of trade and commerce, technology, but also in the field of education. Many people would tend to think education as perpetually lagging behind technology; but there are numerous instances in history where education has provoked technical innovation. The present society is often called "information society" or "knowledge Society" as, the development in technology has led to the widespread diffusion of information that give rise to new opportunities for learning. At the same time, the challenge of established views and practices regarding how teaching and learning should be organised and carried out. Higher educational institutions have been using the Internet and other digital technologies to develop and distribute education for several years. Yet, until recently, much of the learning materials were locked up behind passwords within proprietary systems, unreachable for outsiders. The open educational resource (OER) movement break down the barriers and thus encourage to use or share content. According to the Hewlett Foundation:

> *"Open Educational Resources are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others.*

Open Educational Resources (OER) is one of the ways of sharing the resources specifically the faculty and the content by keeping it in public domain. The vision behind creating OER is to lower the cost of educational materials, develop innovations and improve the quality of content and thus it can be accessed anytime, anywhere and anyplace by anyone. The easy and widespread availability of high quality educational resources will change the paradigm of teaching and improve the quality of education for all students. In addition, students will have access to inaccessible information as well as the knowledge on how to access global educational resources. UNESCO believes that universal access to high quality education is key to the building of peace, sustainable social and economic development, and intercultural dialogue. Open Educational Resources (OER) provide a strategic opportunity to improve the quality of education as well as facilitate policy dialogue, knowledge sharing and capacity building. OER started its journey in 2001, when Massachusetts Institute of Technology (MIT), in an unprecedented move, announced the release of nearly all its courses on the internet for free access. The term Open Educational Resources (OER) was coined at UNESCO's 2002 Forum on Open Courseware and designates "teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions. Open licensing is built within the existing framework of intellectual property rights as defined by relevant international conventions and respects the authorship of the work". Thereafter, the number of institutions offering free or open courseware increased. With the support of the Hewlett Foundation, UNESCO created a global OER Community wiki in 2005 to share information and work collaboratively on issues surrounding the production and use of Open Educational Resources. Open Educational Resources (OERs) have become significantly important in education systems across the world. They represent the efforts of a worldwide community, empowered by the internet, to help equalize the access to knowledge and educational opportunities. These are teaching, learning and research resources that reside in public domain that permits their free use or customization by others (Bissell, 2007). According to Smith and Casserly (2006), OERs are sharable assets. Between 2005 and 2007, a large community of interest of more than 600 members from more than half of the 192 members states of UNESCO took part in online discussions on OERs.The National Knowledge Commission (NKC) recommended the increase the amount of Open Educational Resources (OER) and

Open Access (OA).On its recommendation, Indian government has started several innovative programmes like SHAKSHAT-(an academic portal), National Mission on Education through Information and Communication Technology (NMECIT), National Programme on Technology enhanced Learning (NPTEL), OSCAR(Open Source Courseware Animations Repository), E-grid(E-Grid an educational portal is a project which is supported by MHRD at IIIT, Kerala) etc. In India, OER movement is picking up and government has realized its strength and that's why it is investing huge amount of money to develop quality OER in different disciplines and in different languages. It has entrusted various elite institutions like Indian Institute of Technology (IITs), Indian Institute of Management (IIMs), Indian Institute of Science(IIS), Indian Institute of Information Technology(IIIT), National Institute of Open Schooling (NIOS), Indira Gandhi National Open University (IGNOU), National Council of Educational Research and Training(NCERT) and many other private organizations to create and develop teaching, learning and research materials for students, research scholars and teachers for various levels of education. Networking of libraries of universities is one such step in this direction. Various foreign institutions and international organizations are also spending huge amount of money to develop and store OER in the repository for educational use.

MAJOR INNOVATIVE INITIATIVES ON OER BY INDIAN GOVERNMENT

NMECIT
National Mission on Education through Information and Communication Technology is a centrally sponsored scheme to leverage the potential of ICT, in providing high quality personalized and interactive knowledge modules over the internet/intranet for all kind of learners in higher education in anytime, anywhere mode. This scheme has two major components one content generation and other connectivity along with provision for access devices for institutions and learners. In this project requires all the universities and the colleges of the country are to be connected. The universities are to be connected with National Knowledge Network (NKN) and the colleges are to be connected with broadband connectivity. This scheme was launched on February 3, 2009 by government of India through its Union Ministry of Human Resource development. The objectives of the mission are:

➢ Empowering and enabling students by ensuring equity and access to education through the use of ICT;
➢ Connecting over 400 Universities and 22,000 Colleges all over India through high-speed data networks;
➢ Improving faculty quality by using a unique synchronous training methodology;
➢ Ensuring equity by providing access to expensive equipment to students even in remote corners through innovative use of ICT; and
➢ Making available e-content and educational videos created by the best teachers across all disciplines for UG and PG classes.

The Mission provides an opportunity for all the teachers and experts in the country to pool their collective wisdom for the benefit of every Indian learner and, thereby, reducing the digital divide and reaching out hitherto deprived sections of the society in rural/ under-developed areas of the country. Under this Mission, a proper balance between content generations, research in critical areas relating to imparting of education and connectivity for integrating our knowledge with the advancements in other countries is being attempted. It is an endeavour through which MHRD is synergising the efforts taken by the educational institutions vis. IITs, UGC, NITs, CEC, IGNOU and other higher education institutions in the country to develop world class content and educational applications. Senior faculty members from different universities, research institutes and institutions of higher learning are contributing to the development of e-learning resources, virtual labs, open source applications etc. The Mission aims to extend computer infrastructure and connectivity to over 26000+ colleges and 2000 polytechnics in the country including each of the department of 419 universities/deemed universities and institutions of national importance as a part of its motto to provide connectivity up to the last mile. Connectivity to universities and colleges is in progress and as on date, 400

universities and nearly 26000 colleges in the country have been connected (MHRD Report, 2014). Under NMEICT till date almost 368 universities are connected through National Knowledge Network.

NKN

This project is running under NMEICT. The NKN is a state-of-the-art multi-gigabit pan-India network for providing a unified high speed network backbone for all knowledge related institutions in the country. The purpose of such a knowledge network goes to the very core of the country's quest for building quality institutions with requisite research facilities and creating a pool of highly trained professionals. The NKN will enable scientists, researchers and students from different backgrounds and diverse geographies to work closely for advancing human development in critical and emerging areas. The target users for the NKN are all institutions engaged in the generation and dissemination of knowledge in various areas, such as research laboratories, universities and other institutions of higher learning, including professional institutions. NKN has already connected 1038 institutions and aims to connect over 1500 Institutions/Organizations/Laboratories under various categories throughout the country (Home page of NKN, 2015).

SHAKSHAT

It is a landmark initiative of the Ministry of Human Resource Development (MHRD) to develop a One Stop Education Portal for addressing all the education and learning related needs of students, scholars, teachers and lifelong learners. It is a free portal launched by the Hon'ble President of India on 30th October 2006. It contains many e-repositories for school and higher education. The portal is expected to be the main delivery platform for the contents developed under the National Mission on Education through ICT (NMEICT). For Mission related information and to facilitate public scrutiny, feedback and transparency for the projects undertaken by the Mission a new website has been created. There are more than hundred projects ongoing under the NMEICT ranging from e-content development, access to e-resources, development of software tools etc. In its home page there are four navigation as SAKSHAT repository, picture gallery, SAKSHAT SAARC and what's new. Within Sakshat repository various links are provided wherein stakeholders can access course wise e-content being developed for under graduate, post graduate, engineering education programme are available prepared by eminent teachers in the form of videos, animation, recorded lectures etc. For UG courses, Consortium of Educational Communication (CEC) has been tasked for e-content generation. In phase-I, e-content for 19 UG subjects and in phase-II e-content for 68 subjects are being generated by the CEC in collaboration with its media centres. For 77 PG subjects, e-content generation activity has been assigned to University Grants Commission (UGC). The process of content creation has been initiated for 72 subjects. Under NPTEL, free online courses for engineering education are available. Apart from it spoken tutorial, talk to teacher and Amrita Virtual interactive E-learning World (A-VIEW) virtual classrooms are also operating.

NPTEL

NPTEL is a joint initiative of IITs and IISc funded by this Mission provides e-learning through online Web and Video based courses in engineering, science and humanities streams. The Mission of NPTEL is to enhance the quality of engineering education in the country by providing free online courseware. Over 329 courses are complete and made available in NPTEL website. More than 990 courses in various disciplines in engineering and science are getting generated in phase-II of NPTEL A set of 5 separate DVDs containing ready NPTEL course material--one each in the areas of Electrical, Civil, Computer Science, Electronics and Mechanical Engineering were distributed to the AICTE approved Engineering Colleges during the dissemination workshop for engineering colleges of NCR Region held on 8th Oct 2013.

EKLAVYA

Eklavya project launched jointly by IIT, Bombay and IGNOU on 26th January, 2003 aims at a free exchange of knowledge and ideas, by placing all the relevant academic material in the Open Source. The project has developed an Open Source Educational Resources Animation Repository (OSCAR) to create a repository of web-based, interactive animations for teaching various concepts and technologies. Its e-GURU programme provides the students with a list of relevant and challenging projects, which encourage them to think of innovative technical solutions to various real life problems and its e-OUTREACH programme produces high quality digital text, audio, video and HTML contents of educational value for wider dissemination. The e-CONTENT programme of the project creates open source digital contents in Indian languages through translation and new writing on topics of relevance to education for all levels (Gani, 2010).

OSCAR

OSCAR (Open Source Courseware Animations Repository) is an initiative of IIT Bombay to build a large repository of web based interactive animations for teaching and learning of science and technology based concepts.

E-Grid

Launched by IIIT, Kerala and supported by the MHRD, E-Grid portal has been designed to increase and facilitate access to education resources by the educational community and to facilitate collaboration, sharing of knowledge and best practices to improve the quality of education and learning. The Digital Library of India project, being coordinated by the IIS, Bangalore, along with Carnegie Mellon University, aims at digitising the books in India. More than 450,000 books, including those in Indian languages, have already been digitized under this initiative out of which about 220,000 are already available free on the So far 21 centres spanning academic institutions, social organisations, and government agencies have partnered in creating this repository of knowledge (Gani, 2010).

OPPORTUNITIES FOR INDIAN HIGHER EDUCATION

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. In the last two decade, India 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) there is a phenomenal growth not only in number of institutes of higher education, but also in numbers of students enrolled in higher education. 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). Though, this number is well short of what is required as per the report of the National Knowledge Commission (2006). It is an estimate this percentage will touch to almost 30% by the end of 2020. 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. Several important bills related to higher education has been pending in the parliament like Foreign Education Institution Bill, National Accreditation Regulatory Authority for Higher Educational Institutions, Education Tribunals Bill, Higher education and Research Bill 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. 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.

Unlimited Opportunities for Creating Open Education Resources

In the recent years there is rapid technological advancement both in hardware as well as in software. We have move beyond classrooms, textbooks and face to face teaching. Today, we have classrooms which is almost virtual and education is available in the form of e-material i.e. education is deeply influenced by technology. Today's learner is access to devices like I-Pad, smart phones, tablets coupled with 3G and 4G technologies.Learning is highly individualized and self-paced.Furthermore, the growing capabilities of the internet (site engines) has made knowledge explosion. But unfortunately, all this technological development has reached tofew whereas majority of the population has been deprived of it. This has been the case with Indian higher education also. Majority of the students who are studying in higher education are in colleges or in state universities. These colleges and universities face severe crunch of good teachers and good educational materials. Due to absence of both these factors students are the worst sufferers. Teachers and technological experts (both hardware and software professional) have unprecedented opportunitiesfor creation of the OER material. Apart from it there is whole lot of opportunities for other professionals' right from techno-pedagogic specialist, editor, e-content developer to web developer. Recently in the report of Evaluation Committee on NMEICT it has been reported that NPTEL programme was launched in 2003 for creation of e-content for engineering, science and management studies. Initially it was envisage to create 990+ web and video courses for both undergraduate and post graduate courses but till date it was only 600 web courses were created and rest is in progress. Moreover, report also indicated that creation of e-content in other subjects and languages is most warranted. Therefore, in these areas too lot of scope and opportunities is there to design e-content.

Massive Teacher Empowerment

In the institutes of higher education there is growing usage of technology enabled teaching-learning.Learners are more familiar in usage of ICT in their learning process in comparison to teachers. Thisincreasing usage of ICT is changing the learning landscape rapidly. In this changing paradigm, there is growing need to bridge the gap between learners and teachers. Hence, there is a massive opportunity for the teachers to empower themselves in terms in order to get the full benefit of ICT based education scenario.

Breaking Language Barriers

India being a country with rich-multilingual diversity, it is commonly observed that a large percentage of population is more comfortable with their regional languages rather than English.Presently most of the educational material which has been developed in the English language.If we are developing the educational material only in one language it means we are depriving majority of our students from rich educational material. Therefore, it is important that the content in English language is also made available in regional languages either through translation or through creation in original language so

as to have wider impact. This provides immense opportunity for content developers to not only develop the content in other regional languages.

Equalization of Opportunities through Outreach Programmes

Indian higher education is suffering from inequality of learning opportunities. One hand we have group of learners who are aware of these resources and have access to all kind of technological facilities to access these educational resources. On other hand, there is large group of learners who neither have the awareness on the availability of free educational resources nor access to technological devices through which they access it. Therefore, it is indeed important through mission such as NMECIT and NKN one can reached to the unreached and publicise the importance of OER and orient the learnershow to utilize it for their benefits. This will help the in bridging of gaps between learners of "have" and "have not" and hence bring both the groups at par.

Private-Initiative

In last one decade there is an appreciable increase in the participation of private enterprises in education sector. Big corporate houses are investing huge amount of money in education. Many corporate houses like Wipro, HCL have set up their own universities. These corporate houses are also the leading IT sector companies of India which have global impact. Therefore, these companies can use their resources to create such educational materials which could be help to government institutions also.

CHALLENGES FOR HIGHER EDUCATION

This vertical expansion requires consolidation at horizontal level. But, presently higher education is facing several challenges like quality of higher education, faculty shortage; quality teachers, unable to keep pace with market demands, poor quality of curriculum, poor quality of research, poor quality of teaching etc. in majority of tertiary institutes. Recently, in a survey it was reported that many of our top institutes like IITs, IIMs not been in the top 200 list of universities in the world ranking. The reason is the teaching and researches in Indian universities are far below the standard of European or American and even among some of the Asian countries. If we compare it within our countries we will find wide disparities in terms of quality of teaching, quality of research etc. India has only fewer numbers of creditable institutes of higher education and it benefits fewer numbers of students. Since large force of human resource (youths) are studying in substandard institutions, transforming them into human capital is a challenge for Indian education system. Unfortunately, that advantage cannot be sustained unless we upgrade our education system. One area that is in desperate need of change is our higher education network. Networking of higher education institutes will help these institutes in more than one way. First, quality educational resources which is being created or stored in their repository is available free of cost. Secondly, it will improve the teaching learning standard in the universities or colleges which are suffering from poor quality of educational resources. Thirdly, it will also meet the paucity of teachers. Fourthly, it will enhance the capacity of students as well as teachers. Finally, it will enable students to compete globally.

Transforming Higher Education Institutes into E-Hub Resources

India has one of the biggest higher education systems in the world. But sorry state of affairs is that it has only a handful of quality institutes of higher education. Most of these are engineering, science or management institutes. The entire responsibility of creating these OER for other institute lies in the hand of these institutes. Among these are mostly IITs, IISc and few regional engineering colleges. One of the greatest challengeis to equip the faculty of the higher education and other human resources involved in it with necessary skills so that they are able to create e-resources within their institutes across the different courses and thus in the way make each institutes a hub of OER material.

Sustainability

The development cost of open educational resources materials is high, but the much higher translatable, measurable rewards resulting from an expansion of the OER universe makes it a clear case for the government to ensure its sustainability. Initially, the government can create a grant for the generation and distribution of OER material to students and teachers from all over the country. Private industry should be the second major source of funding for developing OER on an ongoing basis since the industry stands to benefit immensely from the improved quality of education. Private industry should be offered tax credits in return for funding and developing OER content. These partnerships with private industry will help defray the costs of development of OER material.

High Capital

One of the biggest challenges related to OER is the infrastructural development which Indian higher education system is facing. In last one a decade huge amount of money is invested in higher education almost. Though, government of India is already sanctioned 4612crores in XI five year plans for the project NMEICT for development of e-learning material, installation of infrastructure, usage of space satellites, broadband connectivity etc to connect linkages institutions of higher education, development of repository resources like Shodhganga-an open repository of doctoral theses submitted by students in various universities in various disciplines, and INFLIBNET-Information and Library Network Centre, an autonomous Inter-University Centre of the University Grants Commission (UGC) of India. It is a major National Programme initiated by the UGC in March 1991 with its Head Quarters at Gujarat University Campus, Ahmadabad. Initially started as a project under the IUCAA, it became an independent Inter-University Centre in June 1996. INFLIBNET is involved in modernizing university libraries in India and connecting them as well as information centres in the country through a nation-wide high speed data network using the state-of-art technologies for the optimum utilization of information. It is set out to be a major player in promoting scholarly communication among academicians and researchers in India etc (Inflibnet, Home page, 2015). Beyond robust connectivity for access, infrastructure considerations for sustainable educational impact through OER must support a variety of requirements – for development and delivery of customized materials, providing tailored learning experiences, interoperable applications as well as evaluation and governance. Design and technology considerations often limit the productive use and adoption of OER, rendering tools incompatible with infrastructure, content to be trapped in repositories, and ultimately limiting adaptation and adoption as well as sustainability. This all require huge sums of money which in itself is challenged where the spending on higher education is on reducing trend.

Developing Network-enabled Delivery Infrastructure

A national backbone that provides high-bandwidth connections and advanced networking capabilities is critical for reliable access and quality. Connectivity with globalnetworks like Internet2 in the United States is also essential for the kind of collaborationand sharing that is recommended as an important element of the educational strategy.It is important to recognize that while the Internet and high-performance networks arelargely seen as relevant only in the context of advanced research, they are critical infrastructurefor educational quality and access. The government's lead in developing thisinfrastructure, complemented by partnerships in the private sector to provide local andinstitutional infrastructure, will be an important determinant of progress. In recognitionof the urgency to develop an Indian Research and Education Network/Knowledge Network, the NKC has developed detailed recommendations whereby each connected institution will have at least of 1Gbps connectivity. This level of connectivitywill advance open education activities nationally, and ensure global connectivity as well.

Open Access and Issue of Intellectual Property Rights

Open Access is a term used to describe published academic papers, books, reports, and other periodicals that are electronically available to readers without financial or technological barriers. But, only a small proportion of the information generated

throughout the world is in the open access domain. Recent studies have shown that Open Access articles are cited 25-50% more than non-Open Access articles from the same journal and year. The researchers are benefited due to the Open Access policies as their research work gets widely disseminated and can be read by anyone with Internet access without any restriction. Similarly books, articles, and art forms will enjoy worldwide patronage when available in open access domain. In India, there are a large number of educational materials like books, journals etc are in electronic form but they are held in a few libraries scattered across the country and their content is not widely available to the scholars and students of our country. Open Access will drastically change the availability of these books and the knowledge contained in these texts. This will reduce the skewed nature of libraries in India. Open Access also help by allowing socially and economically disadvantaged individuals to access all the information if there is a free internet connection. But open access of the educational material also brings in the concept of intellectual property right. Normally it has been perceived, once the educational resources developed by the author and puts it into public domain in the form of OER, it means the author losses the ownership of the material. This fear resulted that many of the authors do not put their materials into OER. This is actually not so.The author retains the ownership of the material. In fact, OER is exploring new ways of creating, distributing and sharing educational materials. It is not become anti-copyright. Instead, itbuilds on different kinds of open licenses. The vision behind the creation of open licenses is a space in the internet world, a creative commons, where people can share and reuse copyright material without fear of being sued. This requires copyright owners to agree or give permission for their material to be shared through a generic license that gives permission in advance. Thus; it is no way an infringement into the intellectual property rights.

Globalization

The globalization of the world's economies is leading to increased permeability of national educational boundaries as well as greater emphasis on the internationalization of curricula. The internationalization of higher education seems to be a double-edged phenomenon, inducing growingcollaboration and growing competition among countries and among institutional providers. The OECD's Education Policy Analysis (2006a) reports that cross-border higher education has grown significantly over the past decades and this is expected to continue. This growth has been driven by several interlinked forces: greater mobility of skilled workers in an increasingly knowledge-based economy; the drive to develop export industries and expand international collaboration in higher education; the need to build a more educated workforce in sending countries, where study options may be limited; the desire of students andacademics to have international experience and promote mutual understanding; and the decline in the cost of transport and communications. According to Education Policy Analysis, this growth has, in turn, fuelledgreater competition for students and academics between countries and higher education institutions. At the same time, domestic higher education systems increasingly face international pressures and competition, under voluntary harmonization agendas under the pressures of international comparison, manifested byquality labels, ranking efforts and consumer choice; or owing to theincreasing frequency of partnerships and recognition agreements. Like theolder established research universities, higher education institutions of alltypes increasingly see themselves not simply in terms of their domestic roleor agenda but as actors in a global market.Through greater collaboration between higher educational institutionsaround the world and enhanced reuse of learning materials, both in theiroriginal form or translated or otherwise adapted, the phenomenon of OERcontributes to the globalization of higher education. At the same time itincreases competition between institutions by making teaching content and processes within individual institutions visible to a potentially worldwide audience. Prospective students

can be better informed not only by studyingthe general offer from institutions but also by viewing the curriculum andlearning materials, and sometimes videotaped lectures, of individualdepartments.

Demography

India has one of the largest populations in the age group of 18-25 years andincreasingly concerned about the impact of demographic factors on higher education. With the increasing participations of this age group in higher education, the demand for variety of courses, more flexible delivery and tailor-made programmes are required. Moreover, longer working lives with more career changes, and the possible growing enrolment of learners beyond the age group of 25 years in higher education, might indeed be a transformative force in the medium run. Most countries need to increase participation in higher education, but higher education institutions generally have not so far been able to meet this challenge. OER initiatives might serve higher educational institutions as vehicles for outreach to non-traditional groups of students, widening participation in higher education, and provide learning opportunities for those unable to use more traditional offerings or who are not parts of the traditional groups of higher education entrants. Such initiatives can bridge the gap between non-formal, informal and formal learning. At the same time OER can be used by professionals for in-service training and home study by older people, opening new lifelong learning strategies as a means of tackling the challenges of aging societies.

CONCLUSION

OER movement is just started in India. The creation of open education materials in various disciplines by the experts from the institutions of repute will help the teachers to access these materials at the click of the mouse which will help them in classroom teaching. Moreover, it is more beneficial for the students as they will get the opportunity to hear the lectures from the teachers of international repute. Open educational resources which are generally made web based are interactive in nature therefore it helps the learner to interact didactically with the teachers and thus clarify the doubts instantaneously. Moreover, it could be accessed from any remote area as it requires internet connectivity. The additional benefit is that one can register oneself in these open education resources portals for the different online courses (subject to availability of course) and thus get additional certificates. It will be boon to those educational institutions which lacks good library resources. Through NMEICT and NKN colleges and universities can connect themselves and avail the facilities for their students and teachers. The effort and support from government side is visible by launching NMEICT and NKN along with allocating a substantial budget for it. Initiative from private enterprises and corporate houses is what needed by the government to support and sustained its efforts of making India hub of open educational resources. The biggest challenge for the academic fraternity is to create open educational material for diverse demographical population in diverse vernacular languages as majority of our students belong to different vernacular medium. Another challenge is to make different stakeholders aware of the different open educational resources available to them free of cost. Last the learners and teachers need to utilize it to the optimum level. Since, globalization has transform the education and its system therefore, it is indeed necessary that we teachers collaborate, adapt and adopt, translate the educational resources with the external world as it is very difficult to create all kind of materials. In all, one can say success of OER movement means success for higher education.

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