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 **Literature Review of Global Issues in E-Learning**

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Explore why topic is important

What will this paper cover?

List and number the five literature reviews attempt to demonstrate and support the hypotheses

Describe past studies. Describe the reason for the stuff.

Connect ideas for studies. Point out limits that affect studies in their validity.

Explain how studies support or contradict each other.

Pothese

Conclusiom sum up mmain finfings of literature review and give suggestion on what future references should focu on

Indira Gandhi National Open University. (1989). *Open Learning: The Journal of Open and Distance learning,* *4*(1), 53-55. doi:10.1080/0268051890040113

Distance education as an agent for change -- a case study of Indira Gandhi National Open University, India. (1989). *Open Learning: The Journal of Open and Distance learning,* *4*(3), 50-53. doi:10.1080/0268051890040311

Fozdar, B. I., Kumar, L. S., & Kannan, S. (2006). Study of the Factors Responsible for the Dropouts from the BSc Programme of Indira Gandhi National Open University. *The International Review of Research in Open and Distributed Learning,* *7*(3). doi:10.19173/irrodl.v7i3.291

Ghosh, S., & Das, A. K. (2007). Open Access and Institutional Repositories A Developing Country Perspective: A case study of India. *IFLA Journal,* *33*(3),

Awadhiya, A. K., Miglani, A., & Gowthaman, K. (2014). ICT Usage By Distance Learners In India. *Turkish Online Journal of Distance Education,* *15*(3). doi:10.17718/tojde.52135

Regerences APA Style

References

A conceptual framework for eLearning in developing countries acritcal review of research challenges. (n.d.).

Ameen, K. (n.d.). 7.Challenges of LIS Education in South Asia Pakistan, India, Sri Lanka, and Bangladesh. *LIS Education in Developing Countries The Road Ahead*. doi:10.1515/9783110355383.86

An analysis of eLearning impacts and best practices in developing counties. (n.d.).

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Bristol, T. (n.d.). Issues in Implementing Online Education in a Developing Country. *Encyclopedia of Distance learning, Second Edition,* 1287-1290. doi:10.4018/978-1-60566-198-8.ch184

Distance education as an agent for change -- a case study of Indira Gandhi National Open University, India. (1989). *Open Learning: The Journal of Open and Distance learning,* *4*(3), 50-53. doi:10.1080/0268051890040311

Educational Access in India. (n.d.). *Create*.

Electronic media learning materials of ingnou. (n.d.).

Fozdar, B. I., Kumar, L. S., & Kannan, S. (2006). Study of the Factors Responsible for the Dropouts from the BSc Programme of Indira Gandhi National Open University. *The International Review of Research in Open and Distributed Learning,* *7*(3). doi:10.19173/irrodl.v7i3.291

Ghosh, S., & Das, A. K. (2007). Open Access and Institutional Repositories A Developing Country Perspective: A case study of India. *IFLA Journal,* *33*(3), 229-250. doi:10.1177/0340035207083304

Open Educational Practices and Attitudes to Openness across India: Reporting the Findings of the Open Education Research Hub Pan-India Survey. (2016). *Journal of Interactive Media in Education,* *2016*(1). doi:10.5334/jime.416

Growth and development of distance education in india. (n.d.).

Gulati, S. (2008). Technology-Enhanced Learning in Developing Nations: A review. *The International Review of Research in Open and Distributed Learning,* *9*(1). doi:10.19173/irrodl.v9i1.477

ICTs and Access to Knowledge in Rural India. (n.d.). *Access to Knowledge in India*. doi:10.5040/9781849665568.ch-005

Samdup, P., & Nembiakkim, R. (n.d.). India's Indira Gandhi National Open University. *Quality Assurance in Distance Education and E-learning: Challenges and Solutions from Asia,* 169-181. doi:10.4135/9788132114079.n11

Sharma, R. C., & Mishra, S. (n.d.). Applications of E-Tutoring at Indira Gandhi National Open University. *Practices and Applications Cases on Online Tutoring, Mentoring, and Educational Services,* 185-200. doi:10.4018/978-1-60566-876-5.ch015

Singh, B. (1986). A report on the Indira Gandhi National Open University, India. *Distance Education,* *7*(2), 289-294. doi:10.1080/0158791860070210

-----------------------------------------------------------------------------------------------------------

ICTs and Access to Knowledge in Rural India. (n.d.). *Access to Knowledge in India*. doi:10.5040/9781849665568.ch-005

Indira Gandhi National Open University. (1989). *Open Learning: The Journal of Open and Distance learning,* *4*(1), 53-55. doi:10.1080/0268051890040113

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Is India ready for the open access revolution? (2013). *Nature India*. doi:10.1038/nindia.2013.162

Jemni, M. (2017). *Open education: From OERs to MOOCs*. Berlin: Springer-Verlag.

Kim, P. (2015). *Massive open online courses: The MOOC revolution*. New York: Routledge, Taylor & Francis Group.

Kumar, M. V. (2009). Open Educational Resources in India's national development. *Open Learning: The Journal of Open and Distance learning,* *24*(1), 77-84. doi:10.1080/02680510802627860

Lockheed, M. E., & Hanushek, E. A. (1987). *Improving the efficiency of education in developing countries: Review of the evidence*. Place of publication not identified: World Bank.

*OnlineLearning: MOOC madness, an inside look*. (2012). Washington, D.C.: Chronicle of Higher Education.

Open Educational Practices and Attitudes to Openness across India: Reporting the Findings of the Open Education Research Hub Pan-India Survey. (2016). *Journal of Interactive Media in Education,* *2016*(1). doi:10.5334/jime.416

Samdup, P., & Nembiakkim, R. (n.d.). India's Indira Gandhi National Open University. *Quality Assurance in Distance Education and E-learning: Challenges and Solutions from Asia,* 169-181. doi:10.4135/9788132114079.n11

Sharma, R. C., & Mishra, S. (n.d.). Applications of E-Tutoring at Indira Gandhi National Open University. *Practices and Applications Cases on Online Tutoring, Mentoring, and Educational Services,* 185-200. doi:10.4018/978-1-60566-876-5.ch015

Sharma, R. C. (n.d.). Technology-Based Learning in Open Universities in India. *Encyclopedia of Distance learning,* 1815-1824. doi:10.4018/978-1-59140-555-9.ch275

Sharma, R. C. (n.d.). E-learning in India. *Encyclopedia of Distance learning,* 772-778. doi:10.4018/978-1-59140-555-9.ch111

Sharma, R. (2001). Online Delivery of Programmes: A case study of IGNOU. *The International Review of Research in Open and Distributed Learning,* *1*(2). doi:10.19173/irrodl.v1i2.18

Singh, B. (1986). A report on the Indira Gandhi National Open University, India. *Distance Education,* *7*(2), 289-294. doi:10.1080/0158791860070210

The role of eLearning in higher education. (n.d.).

Williams, M. R. (1998). Information Technology resources for education in developing countries. *Capacity Building for IT in Education in Developing Countries,* 251-260. doi:10.1007/978-0-387-35195-7\_27

Z. (2014). With a MOOC MOOC here and a MOOC MOOC there, here a MOOC, there a MOOC, everywhere a MOOC MOOC. *The Journal of General Education,* *63*(4), 237. doi:10.5325/jgeneeduc.63.4.0237

WORLD DECLARATION ON HIGHER EDUCATION FOR THE TWENTY-FIRST CENTURY: VISION AND ACTION. (n.d.).

Zhang, W., & Shin, N. (2002). Imported or Indigenous? A comparative study of three open and distance education models in mainland China, India and Hong Kong. *Open Learning: The Journal of Open, Distance and E-learning,* *17*(2), 167-176. doi:10.1080/02680510220146922

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**TOPIC: E-learning: OnlineLearning / Distance learning**

A Literature Review

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**Abstract**

This literature review examines the issue of the growth and delivery of online education globally and in India. The world is rapidly changing. In response to the mandate to educate the world’s population countries are using various methods to deliver education. E-learning, distance learning, and computer based- training (CBT) programs have become commonplace in education around the world, some government sponsored and some privately offered. This literature review will look at definitions of E-learning and CBT, and the growth in developing countries. The basis in the university system and programs in India will be provided. Motivators to eLearning, supports, and successes in creating open access systems, challenges to delivery and dropouts, and finally recommendations for policy changes for the system to flourish will be offered.

Keywords E-learning, challenges, literature review, conceptual framework, developing countries, Open University Movement, Open Access, eLearning, CBT, distance learning

**Introduction**

In Vision 2030 published by UNESCO the United Nations sustainability goals ensure inclusive and quality education for all and to promote lifelong learning. Given the number of students to be taught globally online Learning and the move towards open educational resources education, it is a means to provide a source of successfully educating students. A literature review of issues surrounding this topic begins with an examination of what ELearning is before moving onto applications of it globally, a more in-depth look at what is an Open University Systems, challenges and opportunities and the necessary recommendations for policies for the programs to flourish into the future. In the 20th century, India established national policies to educate over a billion people. Bonk & Graham 2006 said the challenge was to create a higher education system that meets the diversity of teachers and learners provide individual and seeks flexibility in multiple modes.

**E-Learning**

In reading the articles, it is very clear that web-based education and training has become a worldwide sensation. But what is E-learning? As more and more technological advances are being made at a rapid speed, E-learning is changing the provisioning and support processes of education. Definition of E-learning varied from one researcher to another. (**Romiszowski,2003)** cites that in 100 hundred articles on E-learning the term was defined nearly 50 times and had 20 different definitions .(**Gronlund)** in their Conceptual Framework for ELearning in developing countries cites their review included eLearning, online learning, virtual learning distance learning distance education , and ICT based distance education .According to (**Albidewi & Radi Tulb 2014)**, popularity and the advantages that it has over in-class learning are steering web-based education in a new direction beyond merely offering online content into a new way of peer-to-peer and learner-to-teacher interaction. This direction is often called E-learning 2.0. As per **(Valentina & Abaidoo 2014),** E-learning refers to the use of information and communication technologies to enable the access to onlineLearning and teaching resources. In a narrow sense, it is learning that is empowered by the use of digital technologies. The term eLearning is applied in different perspectives, including distributed learning, online distance learning, as well as hybrid learning **(Valentina & Abaidoo,2014).** OnlineLearning is now beyond class rooms, boundaries, and borders. As per (**Bates, 2008),** Evolution of E-learning can be classified as follows: Figure 1: Different forms of E learning from **OECD, 2015; Bates & Poole 2003)**(p.24) **(*Bates (2008),*** has defined each of the classification is described as below:

Face-to- face: In-Class, Instructor-led lectures physically attended by students.

Classroom Aids: Web pages may be used as illustrations. Students may be asked to do Web searches or use recommended Web sites as part of their studies, either in class, or outside class. Textbooks have started to appear with dedicated Web sites, which provide student activities and tests based on the textbook.

Mixed Mode/Hybrid: Integrating web or Internet-enhanced classroom teaching. Internet-based activities have been incorporated into regular face-to-face classes. Instructors have reduced (but not eliminated) the number of face-to-face classes to allow for more onlineLearning (hybrid, blended, mixed mode and distributed learning are all terms used for this form of teaching).

Distance Education: Distance is learning is not online Learning, but the most predominant use of onlineLearning in distance education is to enhance or supplement other media or technologies, such as print or broadcast television. Hence, it could be defined as a fully OnlineLearning

Based on **(Valentina & Abaidoo 2014**), **(Liu & Wang (2009)** claim that the progression of communications technologies, particularly the internet, did transform distance learning into eLearning. Some researchers have also defined E-learning as any learning that is internet-enabled or web-based.

Hence, it can be said that there is not one definition or a common definition for eLearning. Some say it’s a hybrid, completely online courses or a web infused service for the delivery of education.

With these definitions as a backdrop let’s look at some example of how it is applied globally.

**Global E-learning**

**(Andersson & Gronlund, 2009)**cite huge potentials for governments who have had shortages of teachers as described in **(Unesco Reports (2006).** Providing both access for marginalized groups in rural areas (**Dhanarajan 2001 and Patton 2000 as cited in Anderson & Gronlund ).** Also, noted in **(Anderson & Grondlund 2009)** are the lack of infrastructure, computers and electricity necessary (**Dhanarajan 2001 Heeks 2002 Rajesh 2003).** One key issue is the drop out rate which is higher than in traditional teaching **(Levy, 2007;O’Connor 2003 &** Romiszowski 2004) Foremost in the literature is the Open University (OU) movement which is a public [distance learning](https://en.wikipedia.org/wiki/Distance_education) and research university, and one of the biggest universities in the UK for undergraduate education.

The Open University in the UK is a prime example as the prototype for multinational spin-offs in 25 countries adapting to their own needs and creating regional universities At a distance,using their own experiences of international practice and multinational policy. There is no shortage of articles and research on eLearning distance learning or Open Universities where eLearning is used. A scan of literature from online databases showed 26 studies addressing eLearning in 5 countries: Africa, Brazil, China, the UK, and India. Although the UK is prominently mentioned the first Open University was actually in South Africa in 1946. The UK Open University in 1969 led to the opening of 25 open universities in developing countries (**Perraton 2000**)including the India Indira Gandhi National Open university in 1985. Perraton goes on to note that the University of South Africa was the first single mode distance education program started in 1946. He cites the need for increased literacy and economic power was the genesis for the programs.

**(Gulati, 2008)** review of technology enhanced learning in developing countries discusses national governments who fund educational use of new technologies to reduce the cost of teaching and educating large numbers of students. Open distance and technology-assisted learning in educating deprived populations of the world. Developing nations should invest money, time and effort into eLearning initiatives to address poverty literacy, social and political problems.

The Internet can overcome geographical access and cost barriers to learning. The literature examined developing nations in Latin America, Middle East, Asia and South East Asia and Southern Europe. Infrastructure funds from USAIN, UNESCO, and USAID for primary schooling worldwide in the decolonized countries was provided. 560 million adults 70% of world’s population cannot read. A majority of these are females according to **(Malik Belawati & Baggaley, 2005**). The World Bank in the 1960-1970 provided the economic grounds for this discussion as 900 million illiterate adults (**Perraton (2000).** Rural children and unqualified teacher have little access to information **(Lewins 1991, p6**) Attempts at radio broadcasts were sent out at times that did not fit woman work schedules. Against this backdrop the literature highlights the success story of the UK Open University in 1969. It led to opening of 25 open universities in developing countries **(Perraton, 2000)** University of South Africa 1946 was the first single mode distance education program. Hence, nations started to implement different literacy programs to increase economic and social power.

**Global Learning Applications**

**(Ashok Gaba’s**) works, Growth and Development of Distance Education in India and China study the policy perspectives . He notes large and skilled manpower is needed to sustain economic growth. He examines the delivery of distance education programs in national open universities in India and China . He compares the accreditation policy strategies toward quality control on par with conventional system as being needed. This is born out by recent actions by the High Court in Calcutta.

Issues of these two largest populated countries rising economies faster growth rate Mixed economy private sector 5 to 6 % growth rate service sector growth 22.5 to 29.5 in 2012 higher education India. He examines the skilled education growing demand as correlated with the growth of the ODL industry.

In other areas of the globe, Lack of access, lack of trained teachers led to creation of certification courses for 27,000 uncertified teacher in Brazil. Brazil’s Proforacao distance learning program of 21st century had a low drop out rate 11.5 %$ . Brazil Telesecunariua televises lessons and transmits them on radio and tv, not on the Internet. Problems in Kenya, Botswana where their efforts failed. In Mexico instructional push back was encountered from existing institutions. In the West Indies ODL was seen as add-on not primary method .

The conclusion from the literature is that the Chinese Central radio and TV (CENET) 2007 at the end of cultural revolution in 1976 and Indian State Naid 2005 are the two models aimed at widening access to masses. So what are the issues in India to examine

**E-learning Contents**

Articles by **(Perryman & Seal (2016) , Ghosh & Das (2007)** address these issues.

*Open Access:* Free online access to Medical Journals, Scientific Research Journals etc.

The open access movement has gained rapid interest and growth in developing countries by providing free access to scholarly journals and research repository. In India, IGNOU developed eGyanKosh - a National Digital Repository to store, index, preserve, distribute and share the digital learning resources developed by the Open and Distance learning Institutions in the country. (**Perryman and Seal**) Open Education Research (OER) HUB Pan-India Survey suggests that a government policy be developed for use by all institutions within India.

*Quality:*

**(Sharma, 2015)** points out that standardization is not considered credible. Recent Supreme Court of Calcutta reported the high court felt the Online degree was not on par (**Sharma 2015**) It concluded that the system should be the same as conventional education. (**Sharma 2015**) The cash involved a principal applying for a job that indicated that his traditional (Ph.d) was valid while the IGNOU Phd. Degree was inferior. It raised a lot of issues as to whether there was a lack of print material being used to supplement the online delivery and in the absence of this the degree was not as credible as the traditional degree.

These reviews show the need for policies needs to be adopted with standards domestic and international to satisfy the Court’s observation of failing standards.

Accreditation

IGNOU also operates as an accreditor for open university and distance education systems in India through the [Distance Education Council](https://en.wikipedia.org/wiki/Distance_Education_Council) (DEC). Authority to do so is granted under Clause 16 and Statute 28 of the IGNOU Act 1985, and the literature suggests they have maintained that role.

**IGNOU: Largest Open University in a developing country**

An analytical study was done on one of the largest Mega Open University named Indira Gandhi National Open University (IGNOU) (**Manoj, 2013.)** As per Manoj Roy, IGOU’s goal was to enhance the effectiveness of teaching-learning and for reaching a wider group of learners in remote, rural, tribal and isolated places **(Panda 2006).**

In 1987 IGNOU started with the launch of two academic programs. Audio and Video production began the same year. In his study, (**Manoj (2013)** found out that after 25 years of existence, IGNOU has achieved few milestones and experienced many challenges.

* By 2012, IGNOU increased it’s academic programs to 477.
* IGNOU learner support centers were not current with it’s content.
* IGNOU’s ICTs were not current with it’s content and lacked quality.
* Accessibility should be strengthened as all learners do not have access to eGyanKosh (online knowledge repository).
* With over a 1.3 billion population, India has only 13% internet penetration **(Singh 2013).**

Following up on the latter statistics confirms earlier study done by **(Baggagley & Batpurev 2007)** suggested India showed a lack of accessibility. Unless measures are taken to improve the infrastructure and policies, eLearning will decline as a viable education medium in the developing countries.

A study by (**Panda & Mishra 2007)** examined eLearning in a Mega Open University (IGNOU) for faculty attitude, barriers and motivators. The important motivators included personal interest to use technology, intellectual challenge, and sufficient provision for technology infrastructure. The barriers included poor internet access by students, lack of training in eLearning and lack of Institutional policies for eLearning. A survey by Fozdar, Kumar & Kannan suggests that student drop out rates in ODL (Online Distance Learning) are higher than traditional programs. This is of interest because in some programs drop out rates are considered a refpection of teacher quality **(DEST 2005).** This study was done to improve the student retention rate.

*Reasons for students to drop out IGNOU’s B.Sc program.*

1. Study Center too far from residence (64.70%)
2. Insufficient academic support from study center (58.82%)
3. Programme was too- time consuming to study all the courses (55.88%)
4. Difficulty in attending lab sessions due to distance (52.94%)
5. Absence of interaction with other students (47.06%)
6. Difficulty to study science through distance (47.06%)
7. Difficulty in term-end examination paper (47.06%)
8. Insufficient counseling sessions (47.06%)
9. Lack of responsiveness from study Center (47.06 %)

A takeaway from this study was the need for increased counseling sessions and support to deal with student isolation. Some of these methods are explored in applications of eTutoring, mentoring and educational services at IGNOU.

Another report pointed out that the government of India passed a Right to Education Act to train teachers. As a result of the Right to Educate Act the government realized they would have to train thousands of teachers to implement the act. To achieve this, IGNOU’s is highlighted as the very first institute to successful implement a Teacher Training diploma in distance mode.

Thus far, the literature review indicates that IGNOU in a developing country can only sustain any further if it overcomes the challenges it has in its infrastructure and correct the lack of policies. To address the issue another set of literature was reviewed to set the framework within which policies can be recommended for successful implementation and delivery of eLearning.

**Integration & Infrastructure**

(**Kituyia & Irene Tusbira 2013**) also suggests that developing countries can benefit a lot from eLearning and their efforts to provide basic needs such as Education provided the barriers such as limitations in infrastructure, space, access and qualified educators. Attributes and resources of Internet and Information and Communication Technologies (ICTs) will be the key to success /or failure of E-learning in developing countries. According to (**Geoffrey Kituyia & Irene Tusbira 2013),** E-learning framework design, development, implementation, and evaluation are the key factors. Time is needed to realize the investments that have been made, but at the same time, it is important to ensure that E-learning is sustainable and that E-learning policies include a strong accountability focus **(Brown, Anderson & Murray, 2007).** A review of 150 distance education programs by Unesco as cited in (**Mackintosh, 2005)** showed Internet access had high costs shared per income. Some nations tried to deal with this issue as in India where the goal of eLearning was to become master of their own destiny, strong and become prosperous self-assured nation. **(Sharma,2005)** discussed India’s parliamentary act to launch “Broadband Initiatives 2007”. The government’s aim was to provide equitable extended educational opportunities to disadvantage and poor populations. He cites the drawbacks lack of tech infrastructure, lack of trained teachers, negative attitude toward trained teachers social and cultural restrictions on girls and woman inappropriate funding and political decisions which further the gap between rich and poor, rural and urban areas and between genders. Sharma recommends holistic policies while acknowledging challenges and seeks to contribute to development of global knowledge. India and China are often cited together. China has trained a 105 million workforce since 1968 using TV and radio as modes of dissemination of information.

Below entails the key factors that will lead to successful implementation of eLearning Infrastructure in developing countries.

|  |  |
| --- | --- |
| **Stake Holders** | **Responsibility** |
| ***Institution*** | Implementation Plans: Strategic, Management & Operations.Collaborate with Government bodies & Private Sectors. |
| ***Government*** | Set up infrastructure such as provision of electricity, computerhardware & software that are necessary for integration. |
| ***Private Sector*** | As a public support, introduce new technologies and provide overall technical support that addresses the Institutions.  |
| ***Educator*** | Effectively utilize integrated E-learning systems. Updated content and delivery.Priorities of Staffing needs. |
| ***Students*** | Use the E-learning system i.e. accessing it, downloading courseware and interacting with the lecturer as well as doing and submitting assignments via the E-learning system.Report issues concerning to eLearning system, process or delivery. |

**Policies**

Policies need to be in alignment with the mission statement of the institution to ensure a mature E-learning environment**. (Brown, Anderson & Murray (2007)** have identified a pattern to the development of E-learning policies. Based on their analysis governments need to support to make E-learning possible. Effective integrated online Learning education system must be in place. Identifying stake holders, providing accountability and credible assessment are key. If this framework can be translated into policies that are supported at the highest levels of government E-learning will continue to improve and offer learning opportunities for billions of students in developing countries around the globe.

**Conclusion**

Base on the review of the literature cited E-Learning is an innovation for Developing Countries that has tremendous potential. If Access can be achieved it can be a significant way to train teachers, breakdown the barriers between urban and rural subgroups, train individuals for jobs and advance life long learning.

**References**

Ameen, K. (n.d.). 7.Challenges of LIS Education in South Asia Pakistan, India, Sri Lanka, and Bangladesh. *LIS Education in Developing Countries The Road Ahead*. doi:10.1515/9783110355383.86

Andersson, A., & Gronlund, A. (2009). A conceptual framework for e learning in developing countries acritcal review of research challenges [Abstract]. *The Electronic Journal of Information Systems in Developing Countries,* *38*(8), 1-16.

Awadhiya, A. K., Miglani, A., & Gowthaman, K. (2014). ICT Usage By Distance Learners In India. *Turkish Online Journal of Distance Education,* *15*(3). doi:10.17718/tojde.52135

Bates T., National Strategies for E Learning in post secondary education and training, International Institute for Educational Planning , 2001, UNESCO

Bates, T. (2008). Understanding Web 2.0 and its Implications for E-Learning. *Web 2.0-Based E-Learning*. doi:10.4018/9781605662947.ch002

Belawati, T., & Baggaley, J. (2010). *Policy and practice in Asian distance education*. New Delhi: SAGE.

Bristol, T. (n.d.). Issues in Implementing Online Education in a Developing Country. *Encyclopedia of Distance Learning, Second Edition,* 1287-1290. doi:10.4018/978-1-60566-198-8.ch184

Distance education as an agent for change -- a case study of Indira Gandhi National Open University, India. (1989). *Open Learning: The Journal of Open and Distance Learning,* *4*(3), 50-53. doi:10.1080/0268051890040311

Educational Access in India. (n.d.). *Create*.

Fozdar, B. I., Kumar, L. S., & Kannan, S. (2006). Study of the Factors Responsible for the Dropouts from the BSc Programme of Indira Gandhi National Open University. *The International Review of Research in Open and Distributed Learning,* *7*(3). doi:10.19173/irrodl.v7i3.291

Gaba, A. (2015). Growth and development of distance education in India & China. *Open Praxis,* *7*(No 4).

Ghosh, C., & Manoj, R. (2013, November). Electronic media learning materials; IGNOU. *Turkish Online Journal of Distance Education,* *14*(4).

Ghosh, S., & Das, A. K. (2007). Open Access and Institutional Repositories A Developing Country Perspective: A case study of India. *IFLA Journal,* *33*(3), 229-250. doi:10.1177/0340035207083304

Global Education Monitoring Report. (n.d.). Retrieved November 04, 2016, from http://en.unesco.org/gem-report/

Gulati, S. (2008). Technology-Enhanced Learning in Developing Nations: A review. *The International Review of Research in Open and Distributed Learning,* *9*(1). doi:10.19173/irrodl.v9i1.477

ICTs and Access to Knowledge in Rural India. (n.d.). *Access to Knowledge in India*. doi:10.5040/9781849665568.ch-005

Indira Gandhi National Open University. (1989). *Open Learning: The Journal of Open and Distance Learning,* *4*(1), 53-55. doi:10.1080/0268051890040113

Information and Communication Technology (ICT) in Education in Asia: A comparative analysis of ICT integration and e-readiness in schools across Asia. Information paper; 22. (2014). doi:10.15220/978-92-9189-148-1-en

Kim, P. (2015). *Massive open online courses: The MOOC revolution*. New York: Routledge, Taylor & Francis Group.

Kituyi, G., & Tusubira, I. (2013). A Framework for the integration of e learning in higher education. *International Journal of Education and Development (IJEDICT),* *9*(2), 19-36.

Kumar, M. V. (2009). Open Educational Resources in India's national development. *Open Learning: The Journal of Open and Distance Learning,* *24*(1), 77-84. doi:10.1080/02680510802627860

Lockheed, M. E., & Hanushek, E. A. (1987). *Improving the efficiency of education in developing countries: Review of the evidence*. Place of publication not identified: World Bank.

Olson, J. (2011, January). An analysis of e learning impacts and best practices in developing counties. *Michigan State University Publication*.

*Online learning: MOOC madness, an inside look*. (2012). Washington, D.C.: Chronicle of Higher Education.

Open Educational Practices and Attitudes to Openness across India: Reporting the Findings of the Open Education Research Hub Pan-India Survey. (2016). *Journal of Interactive Media in Education,* *2016*(1). doi:10.5334/jime.416

Perraton, H. (2000). Choosing Technologies for Education. *Journal of Educational Media,* *25*(1), 31-38. doi:10.1080/1358165000250105

Proyadarshini, S. (2013, November 29). Is India ready for the open access revolution? *Nature India*. doi:10.1038/nindia.2013.162

Romiszowski, A. (2003, September). The future of E learning as an educational innovation [Abstract]. *Associacao Brasilera De Educacilo a Distancia,* 1-14.

Samdup, P., & Nembiakkim, R. (n.d.). India's Indira Gandhi National Open University. *Quality Assurance in Distance Education and E-Learning: Challenges and Solutions from Asia,* 169-181. doi:10.4135/9788132114079.n11

Sharma, R. C., & Mishra, S. (n.d.). Applications of E-Tutoring at Indira Gandhi National Open University. *Practices and Applications Cases on Online Tutoring, Mentoring, and Educational Services,* 185-200. doi:10.4018/978-1-60566-876-5.ch015

Sharma, R. C. (n.d.). Technology-Based Learning in Open Universities in India. *Encyclopedia of Distance Learning,* 1815-1824. doi:10.4018/978-1-59140-555-9.ch275

Sharma, R. C. (n.d.). E-Learning in India. *Encyclopedia of Distance Learning,* 772-778. doi:10.4018/978-1-59140-555-9.ch111

Sharma, R. (2001). Online Delivery of Programmes: A case study of IGNOU. *The International Review of Research in Open and Distributed Learning,* *1*(2). doi:10.19173/irrodl.v1i2.18

Singh, B. (1986). A report on the Indira Gandhi National Open University, India. *Distance Education,* *7*(2), 289-294. doi:10.1080/0158791860070210

Singh, B. (1986). A report on the Indira Gandhi National Open University, India. *Distance Education,* *7*(2), 289-294. doi:10.1080/0158791860070210

Singh, B. (1986). A report on the Indira Gandhi National Open University, India. *Distance Education,* *7*(2), 289-294. doi:10.1080/0158791860070210

Singh, B. (1986). A report on the Indira Gandhi National Open University, India. *Distance Education,* *7*(2), 289-294. doi:10.1080/0158791860070210

So, H., & Bonk, C. (2010). Examining the Roles of Blended Learning Approaches in ComputerSupported Collaborative Learning (CSCL) Environments: A Delphi Study. *Educational Technology &amp; Society,* *13*(3), 189-200.

Valentina, A. (2014). The role of elearning, the advantages and disadvatages of its adoption in higher education. *Internationa Journal of Education and Research,* *2*(12), 397-410.

Wang, & Liu. (2009, December 5-6). *2009 International Conference on E-Learning, E-Business, Enterprise Information Systems, and E-Government,* *EEEE*(2009). doi:10.1109/eeee.2009.92

Williams, M. R. (1998). Information Technology resources for education in developing countries. *Capacity Building for IT in Education in Developing Countries,* 251-260. doi:10.1007/978-0-387-35195-7\_27

Z. (2014). With a MOOC MOOC here and a MOOC MOOC there, here a MOOC, there a MOOC, everywhere a MOOC MOOC. *The Journal of General Education,* *63*(4), 237. doi:10.5325/jgeneeduc.63.4.0237

WORLD DECLARATION ON HIGHER EDUCATION FOR THE TWENTY-FIRST CENTURY: VISION AND ACTION. (n.d.).

Zhang, W., & Shin, N. (2002). Imported or Indigenous? A comparative study of three open and distance education models in mainland China, India and Hong Kong. *Open Learning: The Journal of Open, Distance and E-Learning,* *17*(2), 167-176. doi:10.1080/02680510220146922

*APA formatting by BibMe.org.*

**Appendix A – Scan of articles on Global E learning in developing countries**

**Africa**

Czerniewicz, L. (2004). Cape of Storms or Cape of Good Hope? Educational technology in a changing environment. British Journal of Educational Technology, 35(2), 145-158. doi:10.1111/j.0007-1013.2004.00377.x

Evaluation of eLearning usage in south african iniversities a critical review. (n.d.).

University. The International Review of Research in Open and Distributed Learning, 7(3). doi:10.19173/irrodl.v7i3.291

Jordaan, D. (n.d.). Striving towards international academic and E-learning collaboration:

An evaluation of a South African experience. IEEE International Conference on Advanced Learning Technologies, 2004. Proceedings. doi:10.1109/icalt.2004.1357742

Miller, L., Naidoo, M., Belle, J. V., & Chigona, W. (n.d.). School-level ICT Adoption Factors in the Western Cape Schools. Fourth IEEE International Workshop on Technology for Education in Developing Countries (TEDC'06). doi:10.1109/tedc.2006.24

Mogase, R. C., & Kalema, B. M. (2015). E-resources usage in South African higher institutions of learning. 2015 10th International Conference on Computer Science &amp; Education (ICCSE). doi:10.1109/iccse.2015.7250253

The politics of eLearning in South African higher education. (n.d.).

The eLearning Africa report 2012. (n.d.).

The Nika Project in South Africa. (n.d.).

**Brazil**

Higher Education in Brazil Determinent Factors at Distance learning. (n.d.).

Open Educational Resources and Distance learning in Brazil. (n.d.).

Litto, F. M. (2002). The Hybridization of Distance learning in Brazil -- An Approach Imposed by Culture. The International Review of Research in Open and Distributed Learning, 2(2). doi:10.19173/irrodl.v2i2.65

Petry, J. F., Borges, G. D., & Maria Jose Carvalho De Souza Domingues. (2014).

Distance Learning: A Panorama of its Expansion in Northern Brazil. Proceedings of the 11th CONTECSI International Conference on Information Systems and Technology Management. doi:10.5748/9788599693100-contecsi/rf-1022

Higher Education in Brazil Determinent Factors at Distance learning. (n.d.).

Open Educational Resources and Distance learning in Brazil. (n.d.).

Litto, F. M. (2002). The Hybridization of Distance learning in Brazil -- An Approach Imposed by Culture. The International Review of Research in Open and Distributed Learning, 2(2). doi:10.19173/irrodl.v2i2.65

Petry, J. F., Borges, G. D., & Maria Jose Carvalho De Souza Domingues. (2014). DISTANCE LEARNING: A Panorama of its Expansion in Northern Brazil. Proceedings of the 11th CONTECSI International Conference on Information Systems and Technology Management. doi:10.5748/9788599693100-contecsi/rf-1022

**China**

Zhang, W., & Shin, N. (2002). Imported or Indigenous? A comparative study of three open and distance education models in mainland China, India and Hong Kong. Open Learning: The Journal of Open, Distance and E-learning, 17(2), 167-176. doi:10.1080/02680510220146922

Zhang, X., & Hung, S. (2007). Integration of the High-tech and Low-tech in Distance Teacher Training in China: An insight from the case of Jiangsu Radio and Television University. The International Review of Research in Open and Distributed Learning, 8(1). doi:10.19173/irrodl.v8i1.336

Liu, Y. (2016). The Path Choice of the Localization Course of MOOC in Chinese Colleges and Universities in the View of the Disputes behind the MOOC. JSS Open Journal of Social Sciences, 04(08), 54-59. doi:10.4236/jss.2016.48007

Naidu, S. (2016). Selected articles fromDistance Education in China. Distance Education, 37(1), 137-137. doi:10.1080/01587919.2016.1177877 Pan, G., & Bonk, C. J. (2007).

The Emergence of Open-Source Software in China. The International Review of Research in Open and Distributed Learning, 8(1). doi:10.19173/irrodl.v8i1.331

India

**India**

Ameen, K. (n.d.). 7 Challenges of LIS Education in South Asia Pakistan, India, Sri Lanka, and Bangladesh. LIS Education in Developing Countries The Road Ahead. doi:10.1515/9783110355383.86

Fozdar, B. I., Kumar, L. S., & Kannan, S. (2006). Study of the Factors Responsible for the Dropouts from the BSc Programme of Indira Gandhi National Open An analysis of eLearning impacts and best practices in developing counties. (n.d.).

Kumar, M. V. (2009). Open Educational Resources in India's national development. Open Learning: The Journal of Open and Distance learning, 24(1), 77-84. doi:10.1080/02680510802627860

Samdup, P., & Nembiakkim, R. (n.d.). India's Indira Gandhi National Open University. Quality Assurance in Distance Education and E-learning: Challenges and Solutions from Asia, 169-181. doi:10.4135/9788132114079.n11

Sharma, R. C., & Mishra, S. (n.d.). Applications of E-Tutoring at Indira Gandhi National Open University. Practices and Applications Cases on Online Tutoring, Mentoring, and Educational Services, 185-200. doi:10.4018/978-1-60566-876-5.ch015

Sharma, R. C. (n.d.). Technology-Based Learning in Open Universities in India. Encyclopedia of Distance learning, 1815-1824. doi:10.4018/978-1-59140-555-9.ch275

Sharma, R. C. (n.d.). E-learning in India. Encyclopedia of Distance learning, 772-778. doi:10.4018/978-1-59140-555-9.ch111

Singh, B. (1986). A report on the Indira Gandhi National Open University, India. Distance Education, 7(2), 289-294. doi:10.1080/0158791860070210