

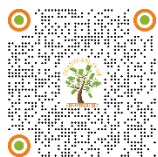


DEVELOPMENT OF E-LEARNING IN DEVELOPING WORLD COUNTRIES WITH SPECIAL REFERENCE IN INDIA AND ITS FUTURE PERSPECTIVE

Swarnendu Chakraborty  

¹ Assistant Professor in History, D.H.M. College, Burdwan, West Bengal, India



Received 19 October 2022
Accepted 20 November 2022
Published 02 December 2022

Corresponding Author

Swarnendu Chakraborty,
swarnenduc@aol.com

DOI [10.29121/granthaalayah.v10.i11.2022.4881](https://doi.org/10.29121/granthaalayah.v10.i11.2022.4881)

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Copyright: © 2022 The Author(s). This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

With the license CC-BY, authors retain the copyright, allowing anyone to download, reuse, re-print, modify, distribute, and/or copy their contribution. The work must be properly attributed to its author.



ABSTRACT

From ancient period India was famous for her universities and culture of different branches of arts-science- polity. Students from different countries visited India with aim for studying famous universities like Takshila, Nalanda, and Bikramshila so on. Not only India but also all over the globe education system was based on concepts of “Guru-Sisya”, “Pir-Murid”, “Master-Apprentice”, “Teacher-Student”. However, during late 20th and early 21st Century, human world witnessed remarkable advancement in information and communication technology sector. According to some scholars, this development can be seen as “3rd industrial revolution”. Education sector has been also affected and changed greatly by these advancements. E- learning/Distance learning is emerging trend of modern academia’s-learning can be defined as “Learning experiences in both synchronous and asynchronous platforms with internet access”. In Western World this E- learning system and facilities are not too new. J.Stor. Pro-Quest, Google scholar, Project Gutenberg, Y- Tube, Slide-Share etc provide open/paid access scholarly journals, books, power point presentations for quite long periods. In India, Indian Govt and semi- Govt. institutions are trying to provide e-learning facilities to their students as per their economic-technical capabilities. It is my aim in this study to analyses development of e-learning system in 3rd world countries with special reference of India and its future perspectives.

Keywords: E-learning, Library-Genesis, Edu-Sat, Nalanda, Google-Meet, IGNU

1. INTRODUCTION

E-learning can be defined as a teaching- learning process operating through electronic technologies, gadgets, AND INTERNET. It can take place within /outside of classroom premises, can be synchronous/asynchronous in nature. Students generally receive comparatively more independence of time, space and study materials in this system rather traditional counterpart [E-learning Meaning. \(2022\)](#). In human history communication with other human race/community/civilization was an essential part of development. This process was economic/socio-cultural/political in nature. Not only in India but also in Europe and rest of globe

different academic institutions used to draw students and teachers from vast varieties of ethno-religious sub sections through ancient-medieval-modern historical eras. Takshila, Nalanda in ancient India, Bologna, and Paris in medieval Europe, Harvard, Massachusetts Institute of Technology in modern America can be cited as examples [Prafula and Jadhav \(2016\)](#). In traditional education system generally, students depended greatly on their teacher's ability, time, and preferences of methods to gain knowledge. In late twentieth and early twenty first century, communication system witnessed boundless progress which could not be imagined by most talented scholars of ancient-medieval civilizations. This development is known as Information and communication technology revolution or third industrial revolution [Ward \(2019\)](#). Each and every sector of human livelihoods had been greatly affected by these unimagined developments. Education sector was not exemption. Now students can acquire knowledge according to their time and preference through internet-based study materials without/with very limited guidance from their mentors/teachers. Besides students, any individual person with personal compute/laptop/mobile and sufficient internet accessibility can cultured any topics related with their day-to-day needs, passions. Evolution of e- learning concept- infrastructure-methods can be classified in to four time periods. A] The multimedia era [1984-93], B] The web-infancy [1994-99], C] Next generation web [2000-05]. D] Mobile learning of today's [Gokhale and Chandra \(2009\)](#). In developed countries this concept is not totally new. During the last few decades, Project Guttenberg, Archive.org, Google book are providing partial/full access to E Books Particularly endangered books scanned from different libraries across the globe. The custodian role of library has been transformed into facilitator and distributing role through this "3rd industrial revolution". This British library and South Asia Archive already taken steps for providing digitally preserved newspaper cuttings and rare manuscripts from their rich collection to millions of learners scattered across the globe [Kawatra et al. \(2006\)](#). Similarly, Jstor, Pro-Quest, Google Scholar have been used tremendously for providing access to numerous scholarly journals covering all most all branches of human knowledge on paid subscription/open access basis. Wikipedia must be mentioned as one of most popular e-encyclopedia of modern time. By using Google image search now any person can access ancient-medieval geo-political maps, different day to day useful tools like Persian wheel. Besides providing almost unlimited information about any stream, libraries are now able to provide anti-plagiarism tools for checking originality of any project work done by both new and experienced scholars. E-Portfolio/web folio/PLE /Virtual Reference Service can be very useful to catalogue individual scholar's publications, power-points presentations thus creating digital unique academic identities [Gokhale and Chandra \(2009\)](#).

2. POST OCCUPANCY EVALUATION (POE)

According to Oxford dictionary, e-learning is a system of distance learning that operate mainly through internet utility. It can provide vocational training to professionals and full fledge academic learning to students leaving in different corners of a country/continent/ globe. India has a rich and century old heritage of formal education system. But after gaining independence from almost two century's colonial masters in 1947, it became clear to all the stake holders that formal/regular education system was not sufficient to meet demand of higher education from millions of students. For this reason, concept of "Distance Learning" had been propagated by both Central and State Govts. With rapid advancement in information and communication technology, e-learning become popular in first world countries.

But in third world countries like India and others, there are much potential and some demerits in mass-e-learning education. Objective of this study is to analyze current status of e-learning in 3rd world countries with special reference in India and to predict its future perspectives. To fulfill these objectives of this study, I will follow blended Analytical and empirical research methodology using both primary and secondary sources. I have collected numerous scholarly articles from different databases.

3. FINDINGS AND DISCUSSION

The term 'E-learning' was coined between 1997-1999 to identify a particular type of distance learning service. Now this term has been used for all kinds of virtual, online, personalized interactive discussion, workshops, professional skill development course and seminar/conference [Jenner \(2015\)](#). In 1947, India inherited a rich heritage of education system with burning difference between male-female, upper-lower caste, solvent-poor economic class, and urban-rural population. Indian Constitution made free education for 6-14 years children a basic right. Some efforts had been made by different Govt. schemes for increasing literacy rate among mass people. Important among them, Sarbha-Sikha Mission can be cited as most prominent. State and Central Govts. Had established primary, secondary, high secondary schools besides numerous colleges and universities. At present India have three hundred universities like institutions, twelve thousand six hundred colleges, eighty lakhs' students and four lakhs' teachers [Gokhale and Chandra \(2009\)](#). However, in rural India literacy rate is fifty six percent only. U.N.D.P. in 1993 pointed out the fact that only 7 percent Indian students usually get enrolled in higher educational institutes. There is huge gap between have and have not in India. Formal academic institutions are not able to meet huge demand of education from numerous Indian masses due to lack of intake capacities, infrastructure, and economic-social-religious deficiency from student's corner [Kawatra et al. \(2006\)](#). Not only in India but also all over world, it is a proven fact that formal education sector has not ability, Manpower, infrastructure to provide light of education to all knowledge seeking persons. For those reasons concept of distance education /College Sponsored Course became popular. This concept was originated in eighteenth century America. By end of Nineteenth century, this system became very popular in European nation-states of Great Britain, Germany, and France. By 1960s-1970s distance learning received new momentum through technological improvements. The Open University of Great Britain was first autonomous institution which offered bachelor level degrees. From 1960s distance learning began to develop in India also. By 1980s, 34 Indian universities offered higher education facilities through distance mode. In 1982, first full-fledged Indian Open University was set up in Andhrapradesh. Indian Govt. set up India Gandhi National Open University (IGNOU) at central level. It was followed by State level counter parts in West Bengal, Bihar, Rajasthan, Maharashtra, Madhya Pradesh, Uttar Pradesh, Gujarat, and Karnataka. To collaborate with these open universities Distance Education Council was set up in 1992. By 1995, more than two lakhs' students had been enrolled into higher educational courses through distance mode thus fulfilling Indian Govt. aim to democratize education. Besides Govt. initiatives, various private institutions also put their steps in this field [Kawatra et al. \(2006\)](#). There is a famous Ottoman Turk proverb if mountain cannot come to visit Mohammad, Mohammad can come forward to visit mountain [If the mountain won't come to Muhammad. \(2022\)](#). In late Nineteenth Century, Swami Vivekananda pointed out the need to provide education to remote geographic-socio-cultural-ethnic sub section of society

who could not come towards academic institutions following this famous proverb [Kundu and Dey \(2018\)](#). His fore vision is now being coming true with development of e-learning technologies.

Digital education has 3 main sub-activities- A] Preparation of Course- content, study-material, B] User friendly technical platforms/distribution mediums, C] set up distribution infrastructure to mass people. At present around seven lakhs' students have been enrolled per year in engineering institutions. Ratio of teachers/instructors is very less in compariasion with students. Besides that, most of advanced higher educational institutions are situated in metropolises. Students from rural or semi- urban localities with economic-religious-physical obstructions usually cannot get chance in these famous academic bodies and learn from its well-known faculties due to lack of communication, financial and family support. These students can fulfill their dream of higher education through proper utilization of e-learning system. It is always less costly to provide higher education towards backward Indian students through online education rather than established new universities in their localities [Aggarwal \(2009\)](#). From 2008, massive open online courses have been initiated by different universities across the globe. Coursera and EdX.org are two main platforms in this field. Teachers-students- teaching assistants in distance education can interact between them through video lectures, quizzes. By these two platforms, Chinese and French universities are designing course structure in Physics, Engineering, Medicine, Biology, providing video lectures in different languages, notes/eBooks/study materials to large ethno- geographical range of students. These two platforms have very user-friendly mobile apps: social media-based help desk system [Agrawal \(2015\)](#). Indian Govt. is active supporter of e-learning. To make it popular among Indian common people and build up infrastructures, different schemes have been initiated from Govt. corner. The Digital India initiative aims to bridge digital divide by providing high quality affordable internet service all over India. To achieve this aim Indian Govt. lunched National optical Fiber Network in 2011. By 2006 Jadabpur University, B.I.T.S. Pilani Virtual University, Visvesvaraya Technological University, Amrita Vishwa Vidyapeetham set up e-learning portals. Madras University became country's first virtual university in collaboration with Calcutta and Bombay universities by 2005. In 2009 Indian Govt. lunched National Mission on Education through Information and Communication Technology with goals to provide low cost and utilizable high quality audio-visual teaching aids to all schools, colleges, universities. It also provides Educational Satellite services free of costs. In 2006 IGNU set up E-Gyankosh using D-Space open-source software to store, index, distribute open and distance learning resources in audio, video, pdf, Radio-television programme format. National Institute of Open Schooling, Ekalavya, and N.P.T.E.L. etc. can be mentioned also. According to a market survey in 2016, Indian online market has the potential to grow up to nineteen percent between 2016-20. India is emerging economic power in Asia, where middle/upper-middle class people are habituated with internet-surfing through mobile or computer. Indian Govt. had invested 17000 cores Rupees during 2017-18 financial year for propagation of e learning concept and building up necessary infrastructures. From 2014, two hundred four schools in Srikakulam District of Andhra Pradesh are utilizing these e-learning facilities Besides Govt. initiatives, Tata IBM and other private organizations are also investing in this sector [Kundu and Dey \(2018\)](#).

Traditionally libraries are storekeeper of knowledge and passing it from older generation to younger generations. With advanced communication technologies, traditional role of libraries also has been evolving. Today's libraries can provide access of their valuable and endangered resources to millions of learners across the

globe. British Library, South Asia Achieve and others are providing digitally preserved newspaper cuttings, rare manuscripts which can be used as vital primary sources in historical research [Kawatra et al. \(2006\)](#). In India, National Digital Library of India, West Bengal State Public Library Network, and others are providing freely downloadable eBooks from their websites. But in comparison with global libraries these initiatives are inadequate. Indian libraries are facing financial, technical-infrastructural lacking from both Central and State Govts. For example, National library of Calcutta is one of the biggest and oldest Indian library. It has rich collection of many rare books, newspapers and so on. However, if any scholar try to access 19th Century Bengali newspaper digital collection, he /she will find that most of microfilms are damaged and very difficult to study. This example can be found in many other renowned libraries of Calcutta and West Bengal. Any imaginative future perspectives are missing for future growth of e-library system [Lihitkar et al. \(2013\)](#).

In second half on December 2019, a new variant of SARS Covid virus infection breaks in Wuhan province of China and within first three months of 2020, it spread through sixty-seven countries across the globe [Alhumaid et al. \(2020\)](#). What first appeared as the minor Symptoms of cough and cold that very soon stopped momentum of twenty first century human civilization. Though arrival of contagious pandemics are not new in human history. What is naïve is the surprising quick spread of it Not only under-developed countries like India, Pakistan, Bangladesh, Colombia, but developed countries like United Kingdom of Great Britain United States of America, Germany, Australia, Belgium, France and other could not avoid surges of Covid-19 [Agolli and Köleoğlu \(2021\)](#). The repeated cycles of lockdown and unlock, lack of hospital beds and oxygen unavailability, economic depression of most of giants in world economy, waves after waves of newer versions covid, increasing rate of unemployment etc. become new normal of 21st century human civilization. Since the outbreak of Covid different strategies have been applied by different nation states. Discovery of vaccines is one of them. Among others maintaining social distance, use of face mask-/shield, hand sanitizer can be mentioned as examples. All medical and public health organizations and research groups have focused more on social distance, prohibition of mass gathering in markets, festivals, socio-religious ceremonies and public –corporate sector institutions excluding emergency sectors. It is proved from past contagious disease breakout this social distance theory and its appropriate applicability can prevent spread of infections in greater scale [Sruthi et al. \(2022\)](#).

Both in developed and undeveloped countries had been forced to transform off-line classroom centric traditional teaching learning process into online mode by sudden strike of Covid. However, there are some basic differences between e-learning development of 1st and 3rd world countries. In developed countries its aim is improvement of continuous education. In developing countries, it is to mitigate their educational model with knowledge economy. Cultural, economic, social differences between these 2 different dimensions surely influence effectiveness of e-learning [Valencia et al. \(2019\)](#) In India, When Central and State Govts. Closed academic institutions, Madhyamik and Higher secondary, College-university entrance exams had been stalked midway. Though online education system had been prescribed by Govts authorities, most of Govts and semi Govts institutions in India do not have enough economic and infrastructural facilities to successfully imply it. Only very Percentage of private schools in metropolitan cities could manage this situation in proper way. Besides that, in India primary and secondary schools are not only academic institutions. As below poverty level student are in huge quantities in our country, Mid-day meal system play an essential part to continuation of these student's study. Online education cannot replace these

facilities by any means. According to U.N.E.S.C.O. report, around fourteen corers primary and thirteen corers Secondary Indian students have been affected by this sudden lockdown [Mathivanan et al. \(2021\)](#).

In rural India, internet connection is improving with rapid development of tale-communication industries. A survey in rural villages showed that to make village school students accustomed with e-learning, appropriate mobile games, apps can be developed [Kam et al. \(2008\)](#).

With lockdown and spread of e –learning concept many commercial enterprionerships are actively participating in this field. Important among them are Bijou, UNAcademy, Vedantu, Topper etc. During lockdown they gained large profit. However, in India digital divide is far greater than any developed economy. Below poverty level families cannot bear smart devices by their own economic base. Without strict Govt. regulations, only upper middle class and upper-class family students can pay huge costs for commercial e-learning institutions. There are several incidents of students committing suicide across India in depression of not abaling to join online classes due to lack of smart gadgets from beginning of lockdown and Covid [PTI. \(2022\)](#).

Central Cabinet approved New Education policy on 29.7.2020, to replace education policy of 1986. Among other changes, it focused on blended mode of teaching –learning with stressing more on online classrooms rather than traditional counterpart [Development \(2020\)](#). Already UGC HRDC centers are providing online orientation and refreshers programme facilities to university and college teachers. Blended mode national-international-state seminars have been conducting through various research organanisations.

4. OBSERVATIONS

At the time started writing this study, my aim was to analyse rapid growth of e-learning system in developing countries with main focus on Indian academic scenario. It is my point of view that advancement in technology is an integral part of human society/civilization through time immemorial. We cannot turn the clock back forward permanently. So, in spite of some difficulties particularly in developing countries like India, Pakistan and others, e-learning should be mode of educational brilliance with proper technical-economic and psychological ground works. In this article, I have tried to analyse background, positive and negative characteristics of e-learning in a developing Country like India. Teachers, students, technological infrastructure, and teaching-learning practice are four main factors in successfully/unsuccesfully application of e-learning in developing countries. Perception of self-efficiency, student – friendly study material, curriculum, Teacher's easy access to internet facility and audio-visual T.L.M, attitude of teachers-students-and guardians to online learning are dominating players in this field. According to surveys carried out in Pakistan, Colombia, Srilanka and other developing countries, students need special technical skills in successfully perform in online classes rather than offline one. Rate of student drop out is higher in this sector [Alhumaid et al. \(2020\)](#). Besides that, in India, most of students belong to vernacular language background. Though online line is becoming popular, but vernacular, study materials, teaching videos are very rare in comparison with demand. It is my point of view that technological advancements and human civilizations growth are symontenously connected with each other from time immemorial. Though some drawbacks have arisen with introduction of e-learning in India and other developing countries, with proper Govts and private initiatives

these can be fixed. Public media both offline and online should be properly used to create mass awareness about positive sides of e- learning in India.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

REFERENCES

- Aggarwal, D. (2009). Role of e-Learning in A Developing Country Like India. Proceedings of the 3rd National Conference.
- Agolli, L., and Köleoğlu, N. (2021). Socio-Economic Impacts and Challenges of Covid-19.
- Agrawal, P. (2015). Massive Open Online Courses : EdX. Org, Coursera. Com and NPTEL, A Comparative Study Based on Usage Statistics and Features with Special Reference to India. 10th International CABLIBER, 2009, 390-402.
- Alhumaid, K., Ali, S., Waheed, A., Zahid, E., Habes, M., and Info, A. (2020). COVID-19 and Elearning: Perceptions and Attitudes of Teachers towards E-Learning Acceptance in the Developing Countries. Multicultural Education, 6(2), 100-115. <https://doi.org/10.5281/zenodo.4060121>
- Development, R. (2020). National education policy 2020. Economic and Political Weekly, 55(31), 4L.
- E-learning Meaning. (2022). What is E-learning ? Definition of E-learning, E-learning Meaning (2022). The Economic Times.
- Gokhale, P. A., and Chandra, C. (2009). Web 2.0 and E-Learning : The Indian Perspective. DESIDOC Journal of Library and Information Technology, 29(1), 5-13.
- INDIACom (2009). Computing For Nation Development, 3-6.
- If the mountain won't come to Muhammad. (2022). In Wiktionary.
- Jenner, M. (2015). Etymology Of The E- In E-Learning ? Get Out. UCL Digital Education Team Blog.
- Kam, M., Agarwal, A., Kumar, A., Lal, S., Mathur, A., Tewari, A., and Canny, J. (2008). Designing E-Learning Games for Rural Children in India. 58-67. <https://doi.org/10.1145/1394445.1394452>.
- Kawatra, A., Kumar, N., Kawatra, P. S., and Kumar Singh, N. (2006). E- Learning in LIS education in India. Proceedings of the Asia-Pacific Conference on Library and Information Education and Practice 2006 (A- LIEP 2006), Singapore : School of Communication and Information, Nanyang Technological University. 605-611.
- Kundu, A., and Dey, K. N. (2018). A Contemporary Study on the Flourishing E-learning Scenarios in India. International Journal of Creative Research Thoughts, 6(2), 384-390. <https://doi.org/10.13140/RG.2.2.14695.98725>
- Lihitkar, S. R., Naidu, S. A., and Lihitkar, R. S. (2013). E-Learning Programmes in Library and Information Science : Worldwide Initiatives and Challenges for India. Library Hi Tech News, 30(9), 12-20. <https://doi.org/10.1108/LHTN-04-2013-0018>.
- Mathivanan, S. K., Jayagopal, P., Ahmed, S., Manivannan, S. S., Kumar, P. J., Raja, K. T., Dharinya, S. S., and Prasad, R. G. (2021). Adoption of E-Learning During

- Lockdown in India. *International Journal of Systems Assurance Engineering and Management*. <https://doi.org/10.1007/s13198-021-01072-4>
- PTI. (2022). Maha : Teen Girl Commits Suicide Over Lack of Phone for Online Studies in Nashik. The Print.
- Prafula, S.R. and Jadhav, R.K. (2016). Migration and Immigration of Students in Karnataka. *International Journal of Advanced Research In Management and Social Sciences*, 5(11), 61-74.
- Sruthi, S., Crispin, J. Fernandez, Karajgi, S., Kumar, M., R. G., and Ashraf, M. S., and Jisna Johnson, P. M. (Eds.). (2022). *Research Approaches In Multidisciplinary Subjects Vol.2* (1st Ed.). Red'shine Publication Pvt. Ltd.
- Valencia-Arias, A., Chalela-Naffah, S., and Bermudez Hernandez, J. (2019). A Proposed Model of E-Learning Tools Acceptance Among University Students in Developing Countries. *Education and Information Technologies*, 24(2), 1057-1071. <https://doi.org/10.1007/s10639-018-9815-2>.
- Ward, K. (2019). Timeline of Revolutions, Mds Events Newsroom. In MDS Events.