

# **Building a Diverse Culture of Knowledge Delivery, Open Education and e-Learning: Opportunities and Challenges through Learner's Perspectives**

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## **ABSTRACT**

*The opportunities for understanding the significance of open education, and knowledge delivery can be extended in the societies and a large section of learners can be beneficiaries through awareness and application of information proliferation, open education and resources, thus approaching equity in all contexts; access to education and livelihood. Based on literature review, the developments in various aspects of knowledge delivery and open education have been analyzed in context of technological platforms, initiatives and recent developments. The large chunk of population in developing countries is rural, and in India, they are multilingual. The article provides an overview and viewpoint of the impacts and problems associated with the knowledge delivery, open education and learners; instructor-learner interactions and experiences, related issues and potential solutions.*

**KEYWORDS:** Open Education, Knowledge Delivery, Open Learner, and Students' Engagement, Higher Education.

## **INTRODUCTION**

The development of critical approaches towards knowledge delivery through open resources and open education is related with recognitions and understandings attached with the concept and practices. Long ago, the World Bank

Sector Strategy for Education 2020 approached towards the education sector by focusing on key challenges related with the big number of matriculating students' secondary and tertiary education in developing nations. The ambivalent connection and reference to ICT in the education sector have been relating to ICT-based education system for the masses in future. In the beginning of this decade, McGrath (2013) observed the potential of open e-learning movement and found the interrelated components such as open educational resources, and open pedagogy to combine together to yield the results in the developing world [1]. The 'open' concept is manifested in the areas related to open knowledge, open government, open access, open data, open source, to augment and enrich open culture. In terms of open education, 'open' refers to the open content with the framework of 5 R<sup>s</sup> i.e., Reuse, Revise, Remix, Redistribute and Retain. Wiley (2006) quoted, "a door can be wide open, cracked, slightly open, or completely closed. So can your eyes, so can a window, etc." The increased traction by open education has become an outcome of various OER revolutions [2]; thus creating the popularity of massive open online courses (MOOCs) widespread in the education sector.

### **THE INDIAN CONTEXT AND LEARNING ENDEAVORS**

In the knowledge world, usages of OER are not restricted to the country of origin but also used in different parts of the globe, for example the resources of India's Pratham Books and Siyavula have been widely utilized in neighboring states as discussed [3] by Natarajan (2011). Open education is more of "freedom of things", instead of freedom of people in the words of Winn (2012) leading to value-form and increased collaboration among various components of society and systems which include various stakeholders such as academicians, developers and academic institutions [4]. In India, the key digital initiatives in knowledge delivery through education have been taken under NME-ICT (National Mission on Education through Information Communication Technology) by the department of higher education, MHRD, Government of India in July, 2017 with the objective to provide access to the best quality education to all. It paved the way for life-long learning instead of the concept of 'learn, earn and retire'. SWAYAM ('Study Webs of Active Learning for Young Aspiring Minds') was started as the first robust Indian MOOC platform in July, 2017 to provide high quality learning experience for anyone, anywhere, anytime learning. It has several advantages to offer to the academicians and learners by changing the role of a teacher to a facilitator and by transforming the traditional classrooms to flipped classrooms, thus, providing a way to blended learning and making a paradigm shift in the process of teaching-learning.

The irony is that the materials available on various OE platforms are mostly in English. Therefore, students who are not from English background struggle a lot with the content. Hence, the stakeholder should find a standard solution for the students who know only regional languages. In India, open education in the form of online courses is still in the infancy stage growing with a slow momentum. Though India has witnessed a spurt in terms of enrolment to MOOCs in recent years, which has emerged to be the most potential educational tool in bringing significant reforms to the Indian education system, but the full benefits of this powerful technology are still to be harvested. Major obstacles identified, so far, to realize the objective of ubiquitous learning has been lack of less completion rate of the course and established assessment criteria, mismatch between curriculum and employment market and lack of awareness and competency among the faculty and students.

## **KNOWLEDGE DELIVERY TOWARDS LEARNERS**

The advent and permeation of open education in the routine academic infrastructure has not been an easy transformation. The students' adoption of online education system in higher education has required understanding and investigation. The students' perceptions of various advantages and related attributes of open education paradigm as an innovation could become the motivating factors. In this context, "internal and external attributes that directly enhance the rate of adoption of the open access online education service" [5] are driving forces among the students and education. MOOCs have created developments in knowledge delivery and mapping the current scenario. The new format of teaching and learning in the shape of open online courses has the potential of transforming higher education in India and the other developing countries, in particular, by bringing it into the digital age. To be precise, for achieving educational equity it is fundamental to keep aside the quantitative perspective and target on qualitative aspect, for example innovation, remodeling and quality commitment [6]. The actual learning experiences are eye-opening and provide a visual of difference in assumed and actual scenario of open education and learning [7] as suggested by Selwyn (2010). The user experience poses challenges for the designers, instructors, platform administrators, program and learning developers. In India, for example, Indian Institute of Management Bangalore (IIMB) initiated offering (MOOCs) in 2014 with the support of own digital learning platform "IIMBx", this initiation [8] took place in partnership with edX. In addition to this effort, IIMB, the massive open online learning is being provided on IIMBx, as well as SWAYAM platform, too.

## **INITIAL KNOWLEDGE DELIVERY PACES AND PLATFORMS FOR MOOCS**

To understand MOOCs are understood as "online courses with no formal entry requirement, no participation limit, and free of charge". Another definition includes the expression on MOOC as "a course of study made available over the Internet without charge to a very large number of people", by Oxford online dictionary [9]. It offers a different educational space with a structured course content providing open access via the web to unlimited participants. Various types of MOOCs include the diversity based upon the technological features and mechanisms involved in the context of "connectivism and instructivism". These are broadly categorized as "Network-based, Task-based, and Content-based MOOCs". The major initial names and platforms are: Udacity's "Introduction to Computer Science", edX's "Circuits and Electronics", MiríadaX, Open2Study, FutureLearn, Coursera, etc. Minghua (2013) focused on MOOCs in context with the universities and creation of "course markets", in relation with MOOCs-Inside Courses (MICS) [10]. The potential of growth, posing challenges for the mainstream education, accreditation systems, are the current and diverse areas of concern creating a "vibrant disturbance". The assertion "as the biggest revolution in higher education since Plato opened his academy" by Bandalaria and Alfonso (2015) in context with the University of the Philippines Open University (UPOU) has been advocating the delivery of instructional content [11] in the developing countries.

## **OPEN LEARNER ENGAGEMENT AND CHALLENGING ISSUES**

The reasons for individual's intention and dropouts are significant to draw attention. The open education can sustain and grow rapidly with decreasing the gaps in registered and drop out students. In a study, the efforts were made to find out the factors behind early drop out problem in MOOCs. To maintain the curiosity of learners and quality of MOOCs, the variety of platforms, media and forums are engaged. To suffice the needs for learning new topic, it is a hard-labored task to provide enough sustainability to learners to avoid the dropout rate [12], which are very high;

Foon *et. al.*, (2015) informed that “only 10–20% of students complete the courses” and factors are identified as “a sense of intrigue, altruism, or egoistic motives” and brought out “a novel multi-view semi-supervised learning model based on behavior features for the dropout prediction task” by observing and deriving characteristics [13] from various “learning behavior to form multi-view behavior features”. It is still difficult to understand the sole reason for such habits and behavior of learners in open education.

### **(i) Participation and Perspectives**

The learners’ perceptions are significant for the current as well as potential users of open education. Xing *et. al.*, (2016) assessed the accurate identification of risks of dropping out [14] by systematic insight for instructors, thus imbibing predictable attributes in the instructing medium. The participating universities, academic institutions and MOOC delivery have been sharing a complex relationship. Different curriculum, the learners’ participation, their processes and assessment designs have been continuously intriguing the designers and developers. Yang *et. al.*, (2017) found out that involving “student-lecture video-watching clickstreams-into the machine learning feature set, and using that to train a time series neural network that learns from both prior performance and clickstream data” has been fruitful [15] while understanding the learners’ behavior, struggles and performance.

### **(ii) Technological advances**

To discern closely, temporal modeling and stacking generalization method, have been implied to predict the students' dropout behavior. The example of “online-merge-offline (OMO) classroom” can be effective [16] for open education in a study by Xiao *et. al.*, (2019). The pragmatic problems and issues are related with designing and developing such platforms and facilities. The development of OMO classroom framework is possible with the support of wireless devices, providing cloud-based services with the ergonomics approaches including data analysis processes. The data visualization techniques help in understanding the flexible instruction processes, monitoring the facilities and learners’ behavior. Creation of a framework for innovative open education platforms involves interactive environment including pedagogical aspects of instructors and learners, objectives-driven approaches and evidence-based practices.

## **PROLIFERATION AND PROJECTIONS IN OPEN EDUCATION**

Almost 17 years have passed since its noticeable appearance in 2002 (MIT’s OCW initiative) [17], and good quality OER that are freely distributed, even then open education has not remarkably disrupted the traditional method of face-to-face teaching and learning in many institutions. In contrast to traditional learning, open education is not the preferred choice among the learners particularly in developing countries like India. It is believed that those who due to any reason cannot access traditional institutions choose open education [18]. However, this is not completely true in this changing digital world, and the OE has emerged as an alternative platform of learning to the working professionals. Atiaja and Proenza (2017) found few factors such as “acceptance, credibility, quality, methods of assessment, learning outcomes and more” related [19] with MOOCs, “to contextualize research on games for learning by describing the current drivers of innovation” in the open education arena [20]. The innovation in education scenario has driven the key components in multi-directions, such as designing and developments issues, engagement problems and completions aspects.

## ***Building a Diverse Culture of Knowledge Delivery, Open Education and e-Learning: Opportunities and Challenges through Learner's Perspectives***

The human resource development in multi-directions is an enabler to enhance socio-economic mobility by providing need-based higher education. To provide equity-based education and maximum learning, "Open and Distance Learning (ODL) system is one of the most viable ways for transforming a country like India" [21]. The rapid developments and inclusion of technologies in the education sector have been the reasons for educational transformations and collaborations. The engagement of students in open learning is possible with the application and implementation of support mechanisms as emphasized [22] in Zuhairi et. al., (2019); the designing of such systems [23] is inevitable to increase the interaction and support among the online open learners.

### **CONCLUSION**

Knowledge delivery, learning and education has always been considered to be the most potent weapon in combating evils of the society and to inform and transform every human being in a manner appropriate to his or her own wellness in all spheres and walks of life. Technology has immensely helped us being intricately woven into the fabrics of education to realize the objectives of education faster and in more significant ways. The current educational sector all over the world is leveraging upon the potentials of online learning to cut across the different barriers into the way of conception of a globalized world by interacting, sharing and collaborating and considering knowledge to be a social construct. OE can bring radical change in the entire educational scenario if executed in association with industry, institutions and government. Open learning and education are few such buzzwords causing a revolution especially in the field of higher education all over the world. Open education is seeing success in meeting the objectives of life-long learning and promoting inclusiveness. Learning supported by information services has several advantages to offer to the current education system without any threat of extinction to the prevailing system of education. A blend of both is suggested to harness the most empowering force of education. As with other technologies, MOOCs has come to us with several impeding factors in way of achieving the objective of 'anyone, anywhere, anytime learning'. As is often said 'technology mutates faster than a virus', our educational institutions must strive to embrace the cutting-edge technologies rapidly and adapt to the challenges offered by them in order to reap the benefits of integrating them into the education sector. This demands a clear perception and understanding of problems in its implementation and the opportunities provided thereafter to the academic fraternity.

### **REFERENCES**

- [1] McGrath, O.G., "ICT, the Education Sector, and Open E-Learning: A Unique Opportunity for the Decade Ahead", Collins, C.S. and Wiseman, A.W. (Ed.s.) Education Strategy in the Developing World: Revising the World Bank's Education Policy (International Perspectives on Education and Society, Vol. 16, Emerald Group Publishing Limited, Bingley, pp. 275-297, 2012. [https://doi.org/10.1108/S1479-3679\(2012\)0000016017](https://doi.org/10.1108/S1479-3679(2012)0000016017)
- [2] Wiley, David, "Open Source, Openness, and Higher Education", *Innovate Journal of Online Education*, Vol. 3(1), 2006. <http://contentdm.lib.byu.edu/cdm/ref/collection/IR/id/164>.
- [3] Natarajan, M., "Exploring the e-resources for educational use", *International Journal of Information Dissemination and Technology*, Vol. 1(4), pp. 193, 2011. <https://pdfs.semanticscholar.org/0db4/32db0a8271b40cc839c6f17026eb7dc789af.pdf>

- [4] Winn, Joss, "Open Education: From the Freedom of Things to the Freedom of People." In *Towards Teaching in Public: Reshaping the Modern University*, edited by Michael Neary, Howard Stevenson, and Les Bell, pp. 133–147, 2012. London: Continuum.
- [5] Mourad, Maha (2010), "Students' adoption of an open access online education service: An exploratory study in an emerging higher education (HE) market", *Online Information Review*, Vol. 34(4). <https://doi.org/10.1108/14684521011073007>
- [6] Willems, Julie and Bossu, Carina, "Equity considerations for open educational resources in the glocalization of education", *Distance Education*, Vol. 33(2), pp. 185-199, 2012. DOI: [10.1080/01587919.2012.692051](https://doi.org/10.1080/01587919.2012.692051)
- [7] Selwyn, N. (2010), "Looking beyond learning: notes towards the critical study of educational technology", *Journal of Computer Assisted Learning*, Vol. 26 No. 1, pp. 65-73.
- [8] IIMB. "Open Knowledge Now", 2014. Available at <https://www.iimb.ac.in/iimbx> and <https://www.iimbx.edu.in/> (accessed on 15 April 2020).
- [9] Parr, C., "MOOC makes Oxford online dictionary", *Times Higher Education*, 2013, available at: <http://goo.gl/i8SrQj> (accessed 12 March 2020)
- [10] Minghua, LI, "MOOCs Revolution: The Emergence of Independent Course Markets and the New World Higher Education Market Structures", *Open Education Research*, 2013-03, 2013.
- [11] Bandalaria, Melinda dela Pena, Alfonso, Grace Javier, "Situating MOOCs in the Developing World Context: The Philippines Case Study", *In MOOCs and open education around the world*, Curtis J. Bonk, Mimi M. Lee, Thomas C. Reeves, and Thomas H. Reynolds (Eds.). New York, NY: Routledge, Taylor & Francis Group, 2015.
- [12] Li, Wentao, Gao, Min, Li, Hua, Xiong, Qingyu, Wen, Junhao, Wu, Zhongfu, "Dropout prediction in MOOCs using behavior features and multi-view semi-supervised learning", 2016. Available at: 3130-3137. 10.1109/IJCNN.2016.7727598. (accessed 23 April 2020)
- [13] Foon, Khe, Wing, Hewa Cheungb, Sum, "Students' and instructors' use of massive open online courses (MOOCs): Motivations and challenges", *Educational Research Review*, Vol. 12, June 2014, pp. 45-58, 2015.
- [14] Xing, Wanli, Chen, Xin Stein, Jared, Marcinkowski, Michael, "Temporal predication of dropouts in MOOCs: Reaching the low hanging fruit through stacking generalization", *Computers in Human Behavior*, Vol. 58, May 2016, pp. 119-129, 2016.
- [15] Yang, Tsung-Yen, Brinton, Christopher G., Joe-Wong, Carlee, Chiang, Mung, "Behavior-Based Grade Prediction for MOOCs Via Time Series Neural Networks", *IEEE Journal of Selected Topics in Signal Processing*, Vol. 11(5), Aug. 2017.
- [16] Xiao, Jun, Sun-Lin, Hong-Zheng and Cheng, Hsu-Chen, "A framework of online-merge-offline (OMO) classroom for open education: A preliminary study", *Asian Association of Open Universities Journal*, Vol. 14(2), 2019. DOI: <https://doi.org/10.1108/AAOUJ-08-2019-0033>
- [17] MIT OCW initiative, available at: <https://ocw.mit.edu/about/our-history/> (accessed 22 April 2020)



***Building a Diverse Culture of Knowledge Delivery, Open Education and e-Learning: Opportunities and Challenges through Learner's Perspectives***

[18] Swaraj, Basu, "Open and Distance Learning: Challenges and Opportunities", 2012. available at: <http://aview.in/allevnts/open-and-distance-learning-challenges-and-opportunities.php> (accessed 27 April 2020)

[19] Atiaja, L. and Proenza, R., "The MOOCs: origin, characterization, principal problems and challenges in Higher Education", *Journal of e-Learning and Knowledge Society*, Vol. 12(1), 2016. Italian e-Learning Association, available at: <https://www.learntechlib.org/p/171428/>. (accessed on 15 April 2020)

[20] Squire, Kurt, "Innovation in times of uncertainty", *On the Horizon*, Vol. 25(4), pp. 293-308, 2017. <https://doi.org/10.1108/OTH-07-2017-0051>

[21] Bordoloi, R., "Transforming and empowering empowering higher education through Open and Distance Learning in India", *Asian Association of Open Universities Journal*, Vol. 13(1), pp. 24-36, 2018. <https://doi.org/10.1108/AAOUJ-11-2017-0037>

[22] Zuhairi, A., Karthikeyan, N. and Priyadarshana, S.T., "Supporting students to succeed in open and distance learning in the Open University of Sri Lanka and Universitas Terbuka Indonesia", *Asian Association of Open Universities Journal*, 2019. <https://doi.org/10.1108/AAOUJ-09-2019-0038>

[23] Weller, M., Jordan, K., DeVries, I. and Rolfe, V., "Mapping the open education landscape: citation network analysis of historical open and distance education research", *Open Praxis*, Vol. 10(2), pp. 109-126, 2018. International Council for Open and Distance Education, available at: <https://www.learntechlib.org/p/183582/>. (accessed on 14 May 2020)