

IMPLEMENTATION OF MOOCs: APPROACHING CHALLENGES AND PROSPECTS OF INDIAN HIGHER EDUCATION

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ABSTRACT:

Learning must be considered a milestone to generate a knowledgeable and progressive society. The continuous up-gradation of knowledge and acquiring relevant skills to get livelihood opportunities can only be possible through learning. To ensure a sustainable and advanced civilisation in the 21st century industrial and digital setup, people are earnestly and ardently, owing to their belief in 'earning while learning,' looking for a global form of learning. In this context, different types of online courses, particularly MOOCs and OERs (Open Educational Resources), provide people with innumerable opportunities by introducing them to a global form of learning.

Keywords: Digital knowledge, e-learning, MOOCs, OERs, Skills, India.

Introduction:

Previously considered a bastion of tradition, education has, of late, through the incorporation of digital technology, experienced dramatic changes. Higher educational institutions, as we know, provide an individual with knowledge and skills and also promote the concept that learning is a life-long process. The rapid development of ICTs has greatly influenced higher educational institutions. To introduce the skills of learning observed in modern scientific research, ICT has contributed to creating new technological tools like MOOCs so that learners can gain a foothold in the competitive world. MOOC's (massive, open, online courses) introduction is one of those changes that strives to offer a comprehensive educational format. Dave Cormier coined the term MOOC in 2008 from the University of Manitoba. Several organisations, such as Coursera, Udacity, and edX (Pappano, 2012), introduced significant developing trends in education offered by MOOCs.

A MOOC, defined by McAuley et al., is "an online course with the option of free and open registration, a publicly shared curriculum, and open-ended outcomes. MOOCs integrate social networking, accessible online resources, and are facilitated by leading practitioners in the field of study" (McAuley et al., 2010, p. 10). Also, this new openness movement in education is a real game-changer that can widen access to lifelong learning, address key gaps in skill development and finally enhance the quality of life for millions (Daniel, 2012, p. 18). MOOCs are nothing but online courses open to be accessed from anywhere, at any time, with unrestricted participation from across the planet. Students, through MOOCs, are benefitted in terms of learning and communication. Bridging the gap for off-site learners, MOOCs also play the role of a catalyst between institutions, educators and learners. With the help of MOOCs, educators can plan, build, and implement online courses and design curricula that match international standards. MOOCs also provide a platform for faculty members for their professional development and academic growth.

The average Gross Enrolment Ratio (GER) for higher education across Asia is 30%. However, Asian countries differ in their performance. For example, in tertiary education, China shows more than 39% GER, India has 23%, while Bangladesh amounts only to 13%. A country like Korea has more than 95% GER, while Afghanistan, a low-middle-income country, shows only 9% GER (UNDP, India, 2016). In addition, more than 70% of uncounted and unrecognised women working for their daily living in some developing Asian countries are engaged in unorganised sectors (Ministry of Finance, Govt. of India, 2016). For Asian countries, this poses a big challenge, requiring an urgent need to mitigate the situation. For the future growth of their national income, the developing countries in Asia can transform themselves into major economies with an abundance of knowledgeable, skilled and trained human resources.

MOOCs, with the majority of Indian students enrolling in foreign universities, are witnessing a considerable demand among learners. One can hardly resist the offer of getting courses free of cost by some elite colleges. Coursera, for example, can be said to be a major player in the field, getting the second-highest enrolments from India. MOOC's growth can address the issues regarding increasing demand for higher education, and that too in developing countries where the building of enough traditional institutions to cope with the number of prospective students is almost impossible. However, MOOCs in India have the potential to fill the growing inequality gap in literacy and reduce unemployment among youths. Indian national institutes like IIMs and IITs also have begun

MOOCs. The Government of India, through SWAYAM, has also introduced 250 online courses (Ministry of Finance, Govt. of India, 2017-18). To validate and recognise the online courses' accomplishments from Coursera, edX, SWAYAM, UGC and other online educational institutions, the creation of a solid systematic structure by establishing a cooperative network among several institutions is the need of the hour.

The objective of the Study:

Considering the present age of industry and technology, the study tries to understand the needs and importance of MOOCs' introduction and implementation as an alternative platform in India to achieve the goal of a cost-effective Higher Education mobilisation. Going through the historical background of Indian MOOCs, it tries to analyse the current status, identify the challenges, and highlight the prospects of introducing MOOCs in the Indian higher education system.

Scope of the Study:

The main focus of the study revolves around providing genuine and authentic information to learners, parents, educators, and policymakers to reflect upon different factors to help MOOCs become a successful tool to educate millions. Through this study, educators can further explore the possibility and viability of introducing the factors in their institutions to enhance learners' educational outcomes.

Methodology:

Through a descriptive research methodology, the paper explores the extent to which MOOCs can provide and promote online learning in a vast and diverse country like India. The paper has touched upon some of the government sources, such as the Report of Census 2011, Human Development Report 2016, 2018, and Economic Survey 2016, and also analysed the data taken from three National Coordinators, namely the Consortium of Educational Communication (CEC), University Grants Commission (UGC) and Indira Gandhi National Open University (IGNOU) under SWAYAM and also from several secondary sources of information relevant to the study.

Literature Review:

Digital inter-connectedness offers a new face of learning that reminds the tectonic shifts in society where data is no longer an indoor, individualistic activity. However, after the utilisation of new tools, an individual's work and performance get altered. The education sector, acknowledging the impact of the latest learning tools, needs to be faster; therefore, it needs to find out the environmental changes it suggests. Siemens is right when he says that connectivism provides perceptiveness to learning skills and tasks required for the learner to flourish during a digital era (Siemens, 2014). The success of digital connectivity and the knowledge that came out of it finally led to an explosive launch of MOOCs to the extent that several universities, companies, and not-for-profit organisations, along with other e-learning platforms, have come forward. Moreover, over the past so many years, different universities across the globe, in their endeavour to make these courses available to their students and the general public, have engaged in an agreed effort to introduce and expand the use of MOOCs.

In 2011, Sebastian Thrun and other colleagues at Stanford University introduced a free academic course on the subject to offer an educational platform for interested candidates in studying artificial intelligence. The course enjoyed an overwhelming response, with one hundred sixty thousand participants from 190 countries enrolled. Not only this, but a similar level of interest also followed in the subsequent development of MOOCs by several universities and other educational institutions. In less than two years, says Waldrop, 62 educational institutions launched 328 open e-learning courses and enrolled almost 2.9 million students from 220 countries (Waldrop, 2013, pp. 160-163). These figures themselves strongly acknowledge that learning can, without any restrictions, be accessible to all looking for it.

Bonk and Reynolds suggest creating new challenges through online learning activities so that online learners can link new information with the old ones they already know. Moreover, online learners may acquire more knowledge by developing meanings and using their knowledge-acquisition abilities (Bonk & Reynolds, 1997, pp. 167-178). Furthermore, it is for this reason that Kozma, to affect the quality of learning, focuses on using a strategy related to education technology (Kozma, 2001, pp. 266-275). McGhee and Kozma, in their paper, point out the specific features of a computer that can simulate real-life learners (McGhee & Kozma, 2003). However, it is a fact that it is not the machine but rather the design of simulated features based on real-life situations that can enable the learners to interact successfully with those models. A computer, Clark rightly says, should be considered more as a means of motivating students (Clark, 1983, pp. 445-459). The concept of working behind open-source courses encourages collaborative writing where a large number of learners can produce and share their knowledge. Mackness and Mak, while defining collaborative writing, rightly consider it to be a creation of projects and other works collaboratively written by many people, not individually, and that the design of these projects needs no supervision (Mackness & Mak, 2010).

Findings and Discussion:

The Historical Background of MOOCs:

With a history of almost 20 years, MOOCs are still in the process of transformation and settlement; therefore, nobody can categorically describe a MOOC. However, founded by the Massachusetts Institute of Technology (MIT) in 2001 (Goldberg, 2001), MOOCs are the natural evolution of Open Courses Ware. Unsurprisingly, MIT also leads the development of MOOCs, first with MITx and then with edX. Initially designed for a group of twenty-five enrolled, fee-paying students to study for credit, MOOC also opened up to register only learners across the globe. Consequently, more than 2,300 people participated in the course without paying fees or gaining credit (Haenlein & Kaplan, 2016, pp. 441-450). Since then, MOOCs have become a label for many recent online course initiatives launched by several institutions, individuals and commercial organisations.

The Indian government, too, through different initiatives, is providing and supporting the concept of open education. In the beginning, the government aimed to offer open resources in terms of repositories, libraries, educational media files, e-books, etc., to be accessed by everybody. National Digital Repository of IGNOU, Sakshat providing e-content, Sishya for XI-XII students by CBSE, and Vidya Vahini integrating IT into rural schools' curriculum by giving interactive training and developmental communication are some of the major efforts taken in this direction. Some of the common names among these initiatives, which started with the intention of establishing dedicated departments to make education reachable to maximum learners, are Education and Research Network (ERNET) that, by providing network connectivity, connects different colleges and schools; EDUSAT, a satellite launched for education; Consortium for Educational Communication (CEC), a means of educational knowledge dissemination; and Information and Library Network Centre (INFLIBNET), an autonomous Inter-University Centre that connects university libraries. All these initiatives equipped with IT help those who are still out of the reach of MOOCs. The Indian institutes, having organisational capabilities with governing authorities by regularly offering MOOCs, are striving to meet the growing educational needs of the learners. Topmost institutes like IITs, IIMs, and IISc and authorities like UGC, AICTE, and MHRD have always been trying to provide Indian learners with quality education, both traditional as well as online. NPTEL, mooKIT offered by IIT Kanpur, IIT Madras and IITBX of IIT Bombay are some of the projects currently providing online education. SWAYAM is the most recent initiative started by the government aiming to serve learners on a large scale, coping with their increased needs (Thomas, 2017, pp. 17-26).

MOOCs under SWAYAM – a paradigm shift in Indian Higher Education:

India, with a rich demographic dividend, has 54% of its total population under the age of 25, whereas 66% is under 35 (Ministry of Home Affairs, Govt. of India, 2011). However, the adult literacy rate at all Indian levels is 69.3%. Considering the percentage of the population above the age of 25 and older having access to secondary education, we can find a huge gender gap, with females constituting 39% and males 63.5%. Besides, as far as the Labour Force Participation Rate is concerned, males amount to 78.8% and females 27.2% (UNDP, India, 2018). These data clearly indicate the need for more adequate skills among the learners, primarily adults, to secure livelihood opportunities. On the contrary, the prerequisites for getting jobs and securing a livelihood in a digital economy require every person to be well-equipped with digital skills. Here, different types of online learning, including MOOCs, can help the learners acquire relevant and required digital skills and knowledge of a subject.

The emergence of SWAYAM can best be viewed as an Indian response to the prevalence of the online learning culture in the 21st century. The MHRD, Govt. of India, having considered the potential of MOOCs in transforming society, introduced SWAYAM in 2016 to make the people of India avail of online courses offered by teachers from national institutions such as IITs, IIMs and Central Universities. Seven national coordinators like NPTEL for engineering, UGC for postgraduate education, CEC for undergraduate education, NCERT and NIOS for school education, IGNOU for out-of-school learners and IIMB for management studies were given the charge of ensuring the quality of course contents produced and delivered through SWAYAM. The UGC, owing to the credit framework for online courses out of the total number of courses through SWAYAM Regulation 2016, mentioned the fast mobilisation and dissemination of knowledge and information among the prospective learners, a release of at least 20% of materials by an Indian university.

The UGC then, to make the learners able to choose from among the prescribed courses referred to as the core, elective or minor, or soft skill courses, came up with the Choice Based Credit System (CBCS) and asked learners to study at their own pace and that they would be awarded a grade, based on a credit system (University Grant Commission, India, 2018). The government, through the UGC, is promoting academic excellence in the area of choice, providing adequate flexibility while choosing the subjects and developing a student-centred curriculum. The UGC has also recommended that all universities develop, besides releasing their OER materials as MOOCs in the SWAYAM platform, an LMS (Learning Management System) to make education more vibrant and sustainable. The emergence of MOOCs under various educational institutions in several relevant areas of

knowledge, against this very backdrop, is a welcome move to make thousands of learners benefit from a range of required MOOCs with almost no restrictions.

Nisha and Senthil, explaining the state of MOOCs in India, have presented an interesting summary of the role technology has played in changing the face of distance education over the years and the relevance and benefits of these courses for distance learners. They find India to be the only economy experiencing such a rapid change with the futuristic idea of the education provided through MOOCs. However, they also find it one of the biggest challenges to make education available to the common masses in remote villages spread across the country, and they also find MOOCs as a solution. The authors have referenced several free-of-cost MOOC platforms such as The Open University, Iversity, ALISON, Open Learning, Coursera, Udacity, edX, and Educate to meet this challenge. While discussing MOOC availability, they have referred to the Birla Institute of Technology and Sciences (BITS), Pilani's collaboration with MIT and edX to offer MOOCs, apart from their own students, to outside learners, too. They have further also referred to the Indian IITs joining their hands under the NPTEL programme funded by the MHRD, Govt of India, to deliver MOOCs. Despite their finding that offering timely support and assessment of learners is the most challenging task regarding MOOCs, they strongly believe in the huge potential of MOOCs and online education in the Indian context in ensuring and accelerating social cohesion and sustainable growth (Nisha & Senthil, 2015, pp. 82-89).

Singh and Chauhan, in their pertinent study about the awareness of MOOCs in India, think of MOOCs as the most effective means for pre-service and in-service teachers' training programmes to develop them professionally. The authors selected 156 teacher educators to assess their level of awareness from Elementary and Bachelor of Education institutes; the authors found that most of the teacher educators have ideas about MOOCs, their strengths, their mode of offering the courses and their benefits. However, they also found that most educators need to improve their understanding of the role of MOOCs in teachers' training and initiatives of MOOCs under SWAYAM. The study findings include that 34.52% of educators need to be aware of what SWAYAM stands for, and only 38.9% know about its launch date and year. The response of the educators, having been asked about the nature of courses offered by SWAYAM, was quite scattered. Around 70% of the educators were knowledgeable about the diploma and certificate courses, around 53% knew about degree-level courses, and around 32% knew about courses at the senior secondary level. The authors finally conclude by emphasising an emergent need to develop teacher educators' understanding of MOOCs and offering them the facilities so that they can integrate MOOCs into their regular classroom practices (Singh & Chauhan, 2017, pp. 81-88).

Bandalaria, in a broader perspective, has made some important observations about MOOCs' significant role in transforming and empowering Asian higher education. Mentioning the creation of MOOC platforms and its country-wise national providers' presence since 2013, she finds these initiatives witnessing the development of MOOC platforms by some countries to offer online courses by the respective universities, whereas some other countries still providing MOOCs through major players like Coursera, edX and Open Learn. She also finds some other national MOOCs providing platforms, like SWAYAM in India, K-MOOC in Korea, J-MOOC in Japan, Thai-MOOC in Thailand, OpenLearning.com in Malaysia, University Joint Alliance Platform in China, and the MODEL for the Philippines getting emerged on educational horizons. The MOOC initiatives, taken country-wise, have been helpful in providing important avenues to the universities and collaborative agencies, monitoring the open learning mechanism's quality, and formalising national policies to recognise the learning taken by completing these online courses. She finds these MOOC platforms enable credit transfer across the disciplines at both undergraduate and postgraduate levels and offer learning opportunities so that the masses' productivity level can develop (Bandalaria, 2018, pp. 116-132).

UNESCO, too, as a part of its endeavour to build inclusive knowledge societies through ICTs, one of the key objectives of UNESCO's Medium-Term Strategy, developed a total of nine modules, five for researchers and four for the Library Schools, on Open Access (UNESCO, 2015). The member states of UNESCO, adopting this goal, recognised knowledge's role in economic growth, social development, cultural enrichment and people's democratic empowerment. Hence, to bridge knowledge pools on Open access across the globe, UNESCO issued a mandate to work on the Open Access policy. Moreover, the Indian universities, by consulting those modules as models, can also develop and design a MOOC on research and library in the SWAYAM platform.

It is imperative to note the extent and the ways the MOOCs, under SWAYAM in India, are becoming able to create the much-needed knowledge movement. A severe inquiry needs to be initiated to determine the extent of these courses' ability, offered through different coordinating agencies under SWAYAM, to suit people's learning needs and also to bridge the digital gap among the learners who might have hitherto remained deprived of the digital revolution. In addition to an unprecedented contribution to the knowledge movement, different MOOCs under SWAYAM can also go for CBCS as dictated by the UGC Regulation 2016 (MHRD, Govt. of India, 2016). The government intends to make the Indian education system internationalised and standardised across the country

from the eighth standard to a higher level. The transfer of credit, through the MOOCs under SWAYAM, among the students from different universities needs to be initiated to make the students, irrespective of sex, age, and place, able to avail learning opportunities. However, further study is required to determine the actual contribution of current MOOCs in credit transfer in both traditional and Open and Distance Learning Universities in India.

Comparative Study:

A number of studies of significance in different parts of the globe have discussed the purpose and usefulness of MOOCs in offering learning opportunities. Here are some of those studies that show the potentiality of online learning in general and MOOCs in particular in addressing the requirements of the changing profiles of the learners:

- I. Grade change, tracking online education in the USA: The 11th Annual report on tracking online education in the USA shows that Allen and Seaman have, while exploring the nature and extent of online education, analysed a comprehensive sample of active, degree-granting higher education institutions in the USA. The report finds an increase in the percentage, from 2.6% to 5% over the past years, of the higher educational institutions currently running a MOOC. The majority of the institutions (53%) showed their undecidedness about MOOCs, while more than 33% of them responded that they had no plans for a MOOC. Only 23% of the academic leaders, i.e. 5% less than in 2012, have shown their belief that MOOCs represent a sustainable method for providing digital courses. However, many higher education leaders have shown their uncertainty regarding the students or institutions benefiting from MOOCs. They have also expressed their doubts about MOOCs having a real impact on cost-effective higher education (Allen & Seaman, 2014).
- II. Opportunities and challenges of MOOCs: Perspectives from Asia:- J.C. Chen, the author of the paper, finds in the study that a person accessing vast quantities of information daily in the modern age requires a reasonable acquaintance of oneself with a learning opportunity. Chen, for this purpose, finds a library to be a social institution and powerhouse. Libraries, for traditional distance learning, are required to serve as a focus of academic support. Referring to Sebastian Thrun, the co-founder of Udacity, for his realisation of the dream of learning through blended and online learning, his efforts to bring education at the doorsteps to the unreached and providing opportunities to the non-traditional learners in need of pursuing learning, Chen further explains the importance of accessing online learning opportunities so that the people can be trained and made competent with information literacy through academic libraries, the providers of pedagogical support. MOOCs make sense with digital libraries, significantly blending the MOOC-specific platform and learning resources in supporting learning. C-MOOCs, for example, can also be helpful for areas lacking adequate online infrastructure and resources. Chen mentions Khan Academy of India for providing resources freely to everyone to foster the openness movement and aggregate and remix the resources to tailor them to learners' requirements. Most importantly, Chen wants to suggest sharing such platforms across Asia and the world even more widely (Chen, 2013).

The review of some successful cases of MOOC implementation suggests the cherishing of equality, quality, and inclusive education through a welcome move by the government of India to start offering online courses under an indigenous national platform, SWAYAM, in 2016. However, examining the actual implementation of the courses under SWAYAM needs equal importance so that a true picture of the state of online courses in India can be made visible. The studies above are also helpful in pondering the actual ability of the courses under SWAYAM to offer learning opportunities and the possibility of credit transfer through the existing MOOCs.

Current Status of MOOCs in India:

To make education accessible to all and reap the advantages of world-class education, India requires a nondiscriminatory and inclusive pedagogy. The Government of India intended to promote an internationalised education system through SWAYAM in 2016. A report, in this regard, presented by the Ministry of HRD in the Lok Sabha says that "Till 2018, more than 39 Lakhs learners have been enrolled in more than 1,600 MOOCs that have been run through SWAYAM, and 60,000 persons have completed the courses. A credit transfer facility of up to 20% has been enabled through the notification – Credit Framework for Online Learning Courses through SWAYAM Regulation 2016 – issued by UGC/AICTE. It is the endeavour of MHRD to align the courses on the SWAYAM portal with the curriculum of Universities" (PIB, 2018). Again, having a comprehensive view of the courses offered through three prominent National Coordinators of SWAYAM, such as CEC for undergraduate, UGC for postgraduate and IGNOU for out-of-school learners, one can find a low percentage of the enrollment trend, the number of courses and certification under UGC and IGNOU compared to CEC. The figures in Table 1 depict the current status of MOOCs offered by these three National Coordinators:

The data analysis in the above table shows the important details of the present mode and popularity of digital education in India. However, the different educational institutes across the country may adopt and produce some need-based MOOCs under SWAYAM so that some learning opportunities, in the true sense of the term, can be introduced. The courses run through SWAYAM, and in this way, they can help achieve the three cardinal

principles – access, equity, and equality – of Indian education policy. The UGC has notified the Indian universities of the identification of the courses suitable for transferring the credit on the basis of the student's academic records for the courses done through SWAYAM. The UGC, by this notification, seems to be assuming that credit transfer can be helpful in bringing flexibility into higher education, allow continuous global mobility to learners and make them able to pursue subjects/courses of their choice from interdisciplinary, intradisciplinary and skill-based courses. Thus, it can lead our education system to match the available systems and patterns of international education.

Challenges of MOOCs in India:

In the age of industry and technology, MOOCs have become one of the most potent tools to offer quality learning opportunities worldwide. Country-wise, different national digital platforms in both developed and developing countries have evolved, resulting from the explosion of knowledge and technology. In India, policymakers and education providers are focusing more on implementing several online courses in a virtual learning mode. However, because of variations in the availability of adequate resources in different parts of the country, the outcome or success rate of these courses, in a real sense, is yet to be fully assessed. The following challenges seem to be standing before the implementation of MOOCs in India:

- a) The introduction of a common framework for the MOOCs-based education system by the UGC is practically difficult in a diverse country like India.
- b) Owing to the non-viability of quantification of units and counselling hours in curriculum transactions, designing a curriculum based on experiential learning pedagogy is not so easy.
- c) The teachers' and administrators' lack of knowledge and training to use ICT-based technologies in both schools and higher educational institutions remains an issue to be taken utmost care of.
- d) The teachers need more motivation to shift their teaching methods from chalk-talk to techno-pedagogy in India is also a matter of great concern. Besides, the education providers or academic institutions using MOOCs are also lacking in awareness of the existing techno-pedagogical skills.
- e) To offer ICT-based learning opportunities, the prerequisite is proper infrastructure. It needs effective materials, human resources and media culture. However, India, having access to Internet connectivity and other necessary facilities for a smooth running of course, hugely requires digital equality.
- f) The usefulness of MOOCs to promote the CBCS, facilitate credit transfer ideas at both UG and PG levels, or increase the completion rate of these courses by Indian learners also lacks proper research.
- g) Questionable course quality, high dropout rate, unavailable course credits, ineffective assessments, complex copyright and limited hardware, are other notable reasons that cause MOOCs to lose popularity. The data, shown in the above Table 1, second it.
- h) Offering MOOCs for learning through SWAYAM also needs more adequate research that, consequently, causes difficulty ascertaining the existing MOOCs' success rate. Hence, a detailed analysis of the various existing MOOCs and their utility offered by the National Coordinators through SWAYAM is required.

Prospects of MOOCs in India:

Instead of talking of some divided opinions on their role, MOOCs enjoy a widespread agreement for continuity in the growth of their importance. The true value of MOOCs, for the most part, lies in their opening up the accessibility to knowledge, previously reserved for a small elite, to the common masses. MOOCs offer an incredible and unique opportunity to learners that most Indians were unaware of just six years before. MOOCs have unsurprisingly garnered a lot of attention and users, too. Now, learners can, by taking free MOOCs offered by several institutions, get an opportunity to have a taste of education at some of the world's top universities without spending a penny and leaving their homes.

MOOCs, especially x-MOOCs, can deliver high-quality content, taken from some of the best universities in the world, for free to learners with a computer and an Internet facility. Learners, particularly in developing countries like India, can use MOOCs for successfully open access to high-class content, but it requires a good deal of adaptation and substantial investment in local support and partnerships by the providers of MOOCs. The traditional and particularly elite institutions, forced by MOOCs to reformulate their strategies towards open online learning, have now been able to extend their brand and status by making their expertise and excelling in certain academic fields public. The main value proposal of MOOCs aims to eliminate, through computer automation and peer-to-peer communication, the very high variable costs in higher education in India. The lectures, assessments, and activities for an online course, as well as the professors' expertise behind the content, are costly.

In most cases, these are unique to a particular university. MOOCs, built on the efficiency of scale, can allow the professor to teach more than just a few dozen students at a time, thus throwing open the door of his/her classroom.

Unlike traditional university credentialing, MOOCs can be offered with or without a certificate or 'badge' indicating the completion of the course by a student.

The unique features of MOOCs, such as scaling, learning communities, scheduling and credentialing flexibility, suggest that MOOCs can solve certain problems in higher education. They are the future of higher education in India.

Conclusion:

A new type of social transformation, with an encouragement for more and more digital intervention in education, is presently being floated across the planet. Several global analyses have been done related to implementing online courses, particularly in developing countries where 70% of education is provided online. However, MOOCs in India are less popular with a large portion of society. The UGC, too, had to promote CBCS and credit transfer in Indian higher education, making 20% of course delivery mandatory through MOOCs. The CBCS, for the time being, has yet to yield the required result as it suffers from several loopholes, such as being introduced without sufficient groundwork and a majority of the people needing to be fully aware of its implementation processes. The UGC is mandating credit transfer through MOOCs aimed at introducing an educational system to establish equality between Indian higher education and Western or European ones. However, this also requires a detailed study based on a survey of the common problems that need to be resolved first, responsible for MOOC differentiation in India and an analysis of the situation, which is essential to meet the challenges faced by Indian learners.

MOOCs, however, as already proved by various researchers in the present era, are the future of online study. They have, across the world, not only made education accessible to everyone, everywhere, every time, but also given a new direction to avail the quality educational opportunities offered by several public and private players. Providing quality education as well as sustainable education requires offering courses through the blended model, which is suitable for the present Indian context. The Indian universities, as think tanks, are required to play leaders in educating learners and the common masses about MOOC interventions under the SWAYAM platform. Besides, the technical utility of MOOCs, considering some empirical studies done on the existing MOOCs by several leading universities across the country, requires further addressing. The new social constructivism of learning through MOOCs, thus, needs serious scrutiny in days to come.

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References

- Allen, E. and Seaman, J. (2014). *Grade Change: Tracking Online Education in the United States*. Babson Survey Research Group.
- Bandalaria, M. D. P. (2018). "Open and Distance e-Learning in Asia: Country Initiatives and Institutional Cooperation for the Transformation of Higher Education in the Region." *Journal of Learning for Development*, 5(2), 116-132. <https://jl4d.org/index.php/ej4d/article/view/301/328>
- Bonk, C.J. & Reynolds, T.H. (1997). "Learner-centred web instruction for higher-order thinking, teamwork, and apprenticeship." In Khan, B.H. (ed.). *Web-Based Instruction*. Educational Technology Publications. pp. 167-178.
- Chen, J. C. (2013). "Opportunities and Challenges of MOOCs: Perspective from Asia." *IFLA World Library and Information Conference, Singapore*. <http://library.ifla.org/157/1/098-chen-en.pdf>
- Clark, R.E. (1983). "Reconsidering research on learning from media." *Review of Educational Research*, 53 (4), 445-459.
- Daniel, J. (2012). "Making Sense of MOOCs: Musings in a Maze of Myth, Paradox and Possibility." *Journal of Interactive Media in Education*, (3), 18. DOI:10.5334/2012-18
- Goldberg, C. (2001). "Auditing classes at MIT, on the web for free." *The New York Times*. <https://www.nytimes.com/2001/04/04/us/auditing-classes-at-mit-on-the-web-and-free.html>
- Haeniein, M. and Kaplan, A. M. (2016). "Higher education and the digital revolution: About MOOCs, SPOCs, social media and Cookie Monster." *Business Horizons*, 59(4), 441-450.
- Kozma, R.B. (2001). "Counterpoint theory of learning with media." In Clark, R.E. (ed.). *Learning From Media: Arguments, Analysis, and Evidence*. Information Age Publishing Inc, pp. 137-178.
- Mackness, S. & Mak, R. W. (2010). "The ideals and reality of participating in a MOOC." *Proceedings of the 7th International Conference on Networked Learning*, University of Lancaster, pp. 266-275.
- McAuley, A., Stewart, B., Siemens, G., & Cormier, D. (2010). *The MOOC Model for Digital Practice: Massive Open Online Courses: Digital Ways of Knowing and Learning*. University of Prince Edward Island. p. 10.
- McGhee, R. and Kozma, R.B. (2003). *New teacher and student roles in the technology-supported classroom*. April. Seattle, WA: Paper presented at the American Educational Research Association annual meeting.

- MHRD, Govt. of India. (2016). UGC (Credit Framework for Online Learning Courses through SWAYAM) Regulation 2016. [https://www.ugc.ac.in/pdfnews/4064990_UGC-\(Credit-Framework-for-Online-Learning-Courses-through-SWAYAM\)-Regulation,-2016.pdf](https://www.ugc.ac.in/pdfnews/4064990_UGC-(Credit-Framework-for-Online-Learning-Courses-through-SWAYAM)-Regulation,-2016.pdf)
- Ministry of Finance, Govt. of India. (2016). Economic Survey 2016-17 Statistical Appendix. New Delhi. <https://www.indiabudget.gov.in/budget2017-2018/es2016-17/estatvol2.pdf>
- Ministry of Finance, Government of India. (2017). Union Budget. New Delhi. <https://www.financialexpress.com/budget/union-budget-2017-government-to-launch-swayam-platform-with-350-online-courses/532868/>
- Ministry of Home Affairs, Govt. of India. (2011). Census of India, vol-series-19. <http://censusindia.gov.in/2011Census/pes/Pesreport.pdf>
- Nisha, F. and Senthil, V. (2015). "MOOCs: Changing Trend Towards Open Distance Learning with Special Reference to India." *DESIDOC Journal of Library and Information Technology*, 35(2), 82-89. DOI:10.14429/djlit.35.2.8191
- Pappano, Laura (2 November 2012). "The Year of the MOOC". *The New York Times*. <https://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html>
- Press Information Bureau, Govt. of India. (2018). "More than 1600 plus courses available on SWAYAM platform, 92 Universities have come forward in accepting credit transfer for courses done through SWAYAM platform." <https://pib.gov.in/PressReleaseframePage.aspx?PRID=1557978>
- Siemens, G. (2014). "Connectivism: A learning theory for the digital age." *Elearnspace*. <http://www.elearnspace.org/Articles/connectivism.htm>
- Singh, G. and Chauhan, R. (2017). "Awareness Towards Massive Open Online Courses (MOOCs) and Their Uses for Teacher Education in India." *Asian Journal of Distance Education*, 12(2), 81-88.
- Thomas, R. (2017). "Use of Open Educational Resources: Indian Scenario." *International Journal of Library & Information Science (IJLIS)*, 6 (5), 17-26.
- UNDP, I. (2016). *Human Development Report*. Oxford University Press.
- UNDP, I. (2018). *Human Development Report*. Oxford University Press.
- UNESCO, P. (2015). "Open access curricula for researchers and librarians." <https://en.unesco.org/news/unesco-launches-openaccess-curricula-researchers-and-librarians>
- University Grants Commission. (2018). "UGC Guidelines on Adoption of Choice Based Credit System." http://du.ac.in/du/uploads/Guidelines/UGC_credit_Guidelines.pdf
- Waldrop, M. M. (2013). Online learning: Campus 2.0. *Nature*, 495, 160-163. <https://doi.org/10.1038/495160a>