

## Factors Affecting the Effective Implementation of MOOCs in India

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### ABSTRACT

**Purpose:** India is the country with second largest population in the world (approximately 1.38 billion) with the population density of 460 per kilometer square. It is considered as the youngest nation as 93% of population is between the age of 18 years and 39 years. There exists a scarcity of limited educational resources like infrastructure (number of institution), number of teachers, and quality of education to satisfy such a huge population. Massive Open Online Courses (MOOC) provides the answers to many of the challenges present due to limited economic resources. As India has the second largest internet users after USA, it is quite possible to stretch and enhance its possibilities in the direction of MOOC to get the maximum gain from the latest way of learning. The purpose of the present study is to get the insight about the factors affecting the effective implementation of MOOC and online education in India.

**Design/Methodology/Approach:** The factors that affect the effective implementation of MOOC were identified and then a model on the basis of identified factors for the effective implementation of MOOC was built. The conceptual framework is tested and modeled using the structure equation modeling.

**Findings:** The trend on MOOC is eminent, as per KPMG report (2018) it will become 1.96 million dollar industry in India within next two years. The government initiative on the MOOC has been implemented with two of the biggest initiated platforms, NPTEL and SWAYAM but the factors that lead to their effectiveness are yet to be identified. The statistical model is built for effective implementation of MOOC in India.

**Originality Value:** The present model provides the three dimensions that are required for the effective implementation of such courses.

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## Introduction

India being a country of 1 billion young people creates an opportunity as well as threat. The opportunity is to create the world biggest work force that will result in sustainable development in India and cater the demand to the countries which are struggling to get skilled workers at reasonable cost. It also provides the opportunity to improve the literacy rate from 69% in more meaningful manner as the unemployment rate of the country is now 6.1%, which is the highest in past 45 years. Industrial growth rate is still a question to be explored in Indian economy as it is fluctuating and still not showing the positive trend. Is this because of education system which is not able to generate sufficient amount of technology that cater the mass and create mass production? The present study explores solution of such questions by making changes in education system and moving towards the effective implementation of Massive Open Online Courses (MOOC) keeping the economic constraint in mind.

The threat lies in the challenges that exist to build and implement such a system successfully which process and deliver such a huge education system. During 1960s, there was the sudden change in US education system in order to have skilled workers which resulted in a boom for the US economy. Such type of a change is awaited at present in the education sector of India which is the matter to probe and address as it is the need of the hour. This massive young population in India once channelized in right direction will surely lead to the betterment of Indian economy and in large the Indian society.

All sort of online learning like primary and secondary learning, skill enhancement, test preparation for professional courses, higher education and language & casual learning showing a massive growth rate of more than 40% in each case (KPMG 2018). The reason behind this is the volume of internet users in India as per KPMG, 2018 (around 650 million users) and it is forecasted that the number will rapidly increase to 850 million users in next two years. The bandwidth speed of internet is increasing consistently and expenses for internet is at all time low in India. This creates the foundation for MOOC as the infrastructure is available in India. Current number of smart phone users is 380 million and figure will reach to over 830 million users in next three years according to CISCO 'visual networking index (VNI)' report. According to Boston Consulting Group report, the next biggest thing in India will be the usage of internet by rural population of India and by next year half of the internet users will belong to rural India as the growth of 35% is estimated within the year. In rural India, education infrastructure is not available but internet makes the educational resources available without constraints of distance and time. Aser Center did a survey (citation) on education level in India for 30,000 youths and results are quiet shocking as 40% of people in the age group of 14-18 years are not able to compute 10% of a given

number and read the simple sentence of English like "what is the time?" Is this because of infrastructure unavailable? The answer lies in the development of infrastructure for MOOC which is less expensive as compared to conventional setting. The performances of rural private schools are not better than the rural public school in terms of learning outcomes. Since there exists broken governance system, and education system too needs to be improvised, then why not to do such revamping which is comparable to the existing best practices of the world. The Indian economy is booming and it is right time to invest in the right direction. MOOC provides the win-win situation for both investors, who want to create infrastructure for education as it is cheap in comparison of building schools or colleges, and learners because they can learn at their own pace, time and almost at negligible cost. The present study deals with the factors required for the effective implementation of MOOC in India. The purpose of the study is to first identify the factors that affect the effective implementation of MOOC and then built a model on the basis of identified factors for the effective implementation of MOOC.

## Literature Review

A lot of previous studies have reported the tremendous success and growth of MOOC. Bliss & Smith (2017) traced the open's adolescence' history, extraordinary growth, and place in education from 2004 to 2010. Zancanaro & Domingues (2017) reviewed 294 selected papers, out of which 140 were indexed articles in scientific journals and 154 were publications in conference proceedings and concluded that MOOCs have aroused great interest in the academic community for bringing innovation into the education system as well as enabling new business models. Dringus & Seagull (2015) and Bloemer & Swan (2015) rightly pointed out the need for continued and in-depth research on instructional models and support needed to maximize achievement and success under the new form of higher education also called blended learning. Greene et al. (2015) addressed the predictors of retention and achievement in MOOC and found that learners' expected investment, including level of commitment, expected number of hours devoted to the MOOC, and intention to obtain a certificate, related to retention likelihood, is in proportion to the outcomes attained. Prior level of schooling and expected hours devoted to the MOOC predicted achievement. Another dimension of MOOC, which is the student performance, was studied by Kotsiantis (2004) wherein an algorithm could predict the performance of new students, thus becoming a useful tool for identifying predicted poor performers.

Various Indian studies have reported MOOC in limiting ways. Mohapatra & Mohanty (2016) found the parameters that influence the adoption of MOOCs by Indian learners. The study establishes that the learner's skills, usability, availability, and affordability are the prime influencers on the learner's perception. The study also emphasized the



importance of reputation of educators associated with the offering and acknowledgment by stakeholders together with important implications of information systems and technology in the field of education. Models for overcoming challenges while adopting technology for higher education were developed by Devgun (2013) and later by Sarkar et al. (2016). Apoorvanand (2015) talked about various challenges in the MOOC like awareness of the youth, the dilemma faced to choose the course, quality of education not suited to one and all, the expertise of teachers, etc.

The effectiveness of MOOC depends upon the its quality, low cost and high scale education (Saadatdoost et al., 2015; St Clair et al., 2015), flexibility (Kady & Vadeboncoeur, 2013), focus on learning rather than teaching (Walker & Loch, 2014), targeting self-motivated learners (Anderson, 2016), enhance the learning goal (Downes, 2016) and creates a brand value to the provider (Walker & Loch, 2014).

The effectiveness of MOOC is dependent upon technology factors (Yang et al., 2017). The availability of system is the basic requirement for the implementation of MOOC. The technological aspects that affect the effective implementation of MOOC also includes the functionality and readability (Rooij & Zirkle, 2016), knowledge to use the system (Gamage et al., 2015), the ease of usage or user friendliness and the storage for future reference (Yepes-Baldó et al., 2016).

Another factor on which effectiveness of MOOC is analyzed is related to the teaching. Teaching in MOOC explains wide range of phenomenon (Yepes-Baldó et al. (2016). The teaching in MOOC is very different from the traditional teaching and hence creates a scope of implementation of new ideas to increase the effectiveness of MOOC (Alraimi et al., 2015). This results in an increased role of teacher because he/she needs to be innovative, creative, accumulate, and asses the course (Kennedy, 2014). Due to this, it creates more appreciation for the teacher. The drop rate of MOOCs is very high and since MOOCs are designed for niche learning, the effectiveness of MOOC can't be based on completion rate (Rosewell & Jansen, 2014). The effectiveness of MOOC depends upon the interaction taking place not only between the student and the instructor but also among the students themselves on some common platform (Rooij & Zirkle, 2016).

The curriculum of MOOC is more structured rather than the traditional university system. These are latest and according to the specific requirements (Admiraal et al., 2015). The availability and access of MOOC across the borders of countries allow more diversity in terms of language and content (Liyanagunawardena et al., 2013). It is considered as a strategic form of education (DeBoer et al., 2014), which targets the large diversified geographical audience (Creelman et al., 2014).

## Status of MOOC in India

Availability of quality education is always an issue with Indian education system, only 17 universities among top 1000 in world belongs to India with highest ranking lying at 420<sup>th</sup> place of IISC Bangalore. Globalization in education sector can bridge the gap and such universities which are having best education are providing the MOOC. The top three universities belong to USA. The companies in USA are hiring Indians because of their abilities, for example 20% of Google workforce and 34% of Microsoft and one in every three engineers in Apple is an Indian. In USA, 36% of NASA scientists and 38% of doctors are Indians. So there exist a huge untapped potential that can be utilized not only by India for its economic growth but for the rest of the world also. MOOC is the way by which poor Indian people are getting quality of education at cheap rates as per the convenience of time.

Coursera, one of the biggest platforms of MOOC announces that Indian students are the second largest in number after US and enrollment is increasing at the rate of 60,000 per month. More than 25 million users exist on Coursera itself with the world MOOC learners data is about 85 million. 12% of edX users are Indian with 3.2 million in number. In an interview, chief of edX, Anant Aggarwal who is also a professor at MIT says that,

*"I believe India ultimately will become much bigger market than the US. Indian students have craving for advance knowledge that open the door of prosperous life. If you've been trampled all your life, now you find you can stand shoulder to shoulder with the best."*

To keep this thing in mind government of India also initiated the MOOC system platforms for the students belonging to diverse disciplines. The first platform is for technical education provided by the best in country and it is the combined juncture of IIT's and IISc and is named as NPTEL (National Program on Technology Enhanced Learning) and Swayam (Study Webs of Active Learning for Young Aspiring Minds) where central and state universities are available to cater the quality education need of mass students at nearly no cost.

## Trend in MOOC in India

In his report, Brown (2018) depicted three waves of MOOC. The first wave in 2014 is mainly due to marketing in which institutes are doing MOOC to distinguish themselves from other institutions, increase the visibility and to drive student recruitment (Seaman & Allen, 2014). It was all about building brand and fear of missing out, that compelled the institution for adopting the courses/programs of MOOC. Second wave belongs to Europe where the reaction towards MOOC was slower as compared to US but increased gradually, once FutureLearn was launched. The European

countries like France, Italy, Spain, UK, Poland, etc. work on English publication. This was also a time in which Australia's Open2study platform was launched and over a million learners got enrolled. This was the time where edX was serving the needs of Middle East and mass population of India and China. This wave was termed as life-long learning wave and duration was from 2014 to 2017. Third wave was investment and business point where the various established MOOC platforms did the collaboration with the various institutions and provided the degrees via MOOC. The termed uses for such degrees or certificates are nano degree and micro degrees.

The trend in India is all together a different story. Although Indian students were the major force behind the second and third wave but still the resources, content, quality and availability were questionable with respect to India. Since the Indian platform available, may not be comparable to best available in the world but yet they are providing better cost benefit options in terms of learning outcome.

Now it is a strategic decision of government (which seems more focused now than ever before), institutions and policy makers to cater the need of MOOC as we are still in third wave and may be heading very rapidly towards the next one, which will be the wave of paradigm shift of entire education system in developing Asian countries and Africa. Now since in Indian scenario where the face to face learning is not as effective as it seems or perceived by traditional educationist, nor it is available and accessible to all of India, can the policy makers play a major role in decision making to build and implement the system which provides the mid path of online and offline learning. The new pathways for the education system in India need to be decided to cater the mass need and heading towards the better society.

### Conceptual Model for Implementation of MOOC in India

To build an infrastructure for the MOOC, this concept must be extended from higher & technical education to the senior secondary education and must cover the various regional & cultural aspects such as languages. This model is very complex in nature because of unavailability of investors and vast geographical area and different cultures. Such a complex model is affected by a large number of variables which are identified and explored during the study in Indian context.

1. **Learning analytics:** Outcome of learning must be stored, measured, collected and analyzed so that the scope of improvement becomes continuous process.
2. **Activation:** User Id password for secure examination system. Mass data storage and servers that can deal with such a huge calculation is required.

3. **Application:** Real-life applicability of study, which is required for industry that increases the industrial output of the country.
4. **Integration:** Combination with traditional system (university and school system), implementation of MOOC at schooling may be blended with existing system to make it more robust and implementable.
5. **Feedback:** Scope for improvement for courses and interface. Continuous feedback and control.
6. **Collaborations:** University and investors combine to form infrastructure which is able to satisfy mass customers.
7. **Retention:** Content can be retained for longer period of time using IT technologies. Million hours of audio video content is available only for higher education. Addition of more courses requires huge amount of data to be retained.
8. **Reuse:** Repeatability to satisfy mass number at same quality level with exhaustive content. Engineering problem can be used in different languages with video reusability.
9. **Revise:** Update according to the need and demand of industry as well as individual. Personalized learning is all together a new beginning in online education industry.
10. **Redistribute:** Distribute without the copyright or patent, shareable, so that it solves its purpose at mass level. Ultimate aim is the learning via a robust system.
11. **High quality:** Best teachers working with best of universities doing best of practices are already associated with MOOC. Quality must be assured and experts must play a role in quality enhancement policies implementation.
12. **Infrastructure:** Accessible through worldwide irrespective of language and culture, minimum expense as compared to traditional infrastructure of school and universities. High speed servers with good computation power are required to implement.
13. **Learner's skills:** Skills to adapt and recall using information technology. MOOC is considered as better than traditional method in terms of recalling and persistence.
14. **Usage:** According to the need of learner and as per convenience of time and content.
15. **Specialization:** No content of learner's disinterest, choose your own course according to own willingness. Generally, traditional degree comes up with the subject that a particular student is not willing to learn.
16. **Affordability:** Economical in comparison to traditional contact sessions.



- 17. **Access rate:** High access rate, sometimes in millions.
- 18. **Success rate:** Dropout rate of students is more because of no compulsion, AICTE (All India Council of Technical Education) and UGC (University Grant Commission) are playing a role in this to have a better success rate.
- 19. **Learning management system:** Entire system of input, process and output is available using information technology.
- 20. **Large number of students:** Mass students can enroll and access the content.
- 21. **Time:** According to the suitability of learner.
- 22. **Flexibility:** Flexibility for learner in terms of content, place and time.
- 23. **Learning ability:** Learn at their own pace, good for slow learners.
- 24. **No prerequisites:** It is found that prerequisite education is not required for the enrollment in MOOC (in most of the cases).
- 25. **Cheaper and better bandwidth:** Infrastructure is a base for the system, cheaper and better bandwidth is the backbone for the MOOC system implementation.
- 26. **Inexpensive:** In Indian context as price of internet access as well as devices is decreasing day by day

- making it really inexpensive and approachable for large population.
- 27. **Personalized:** Learning is important; choose your own content in case of higher education.
- 28. **Adaptability:** Can be more easily incorporated in the system. Various modes like desktop, laptop, tab and mobile options are available to adapt the course.
- 29. **Availability:** Ease of use.
- 30. **Globalization:** Best of content is available, without boundary and barriers.
- 31. **Synchronized:** Learning with feedback and two-way communications between student and instructor.
- 32. **Demonstration:** Audio-video two-way communications, just like live class interaction and sometimes better in case of complex demonstrations.
- 33. **Problem centered:** Specific course of choice.
- 34. **Authentic learning:** Certification from the best in world institution, universities.
- 35. **Enhance:** Another learning technique like gaming can be incorporated to make the process of learning more enhanced and innovative.

The conceptual framework for the implementation of MOOC is shown in Fig. 1.

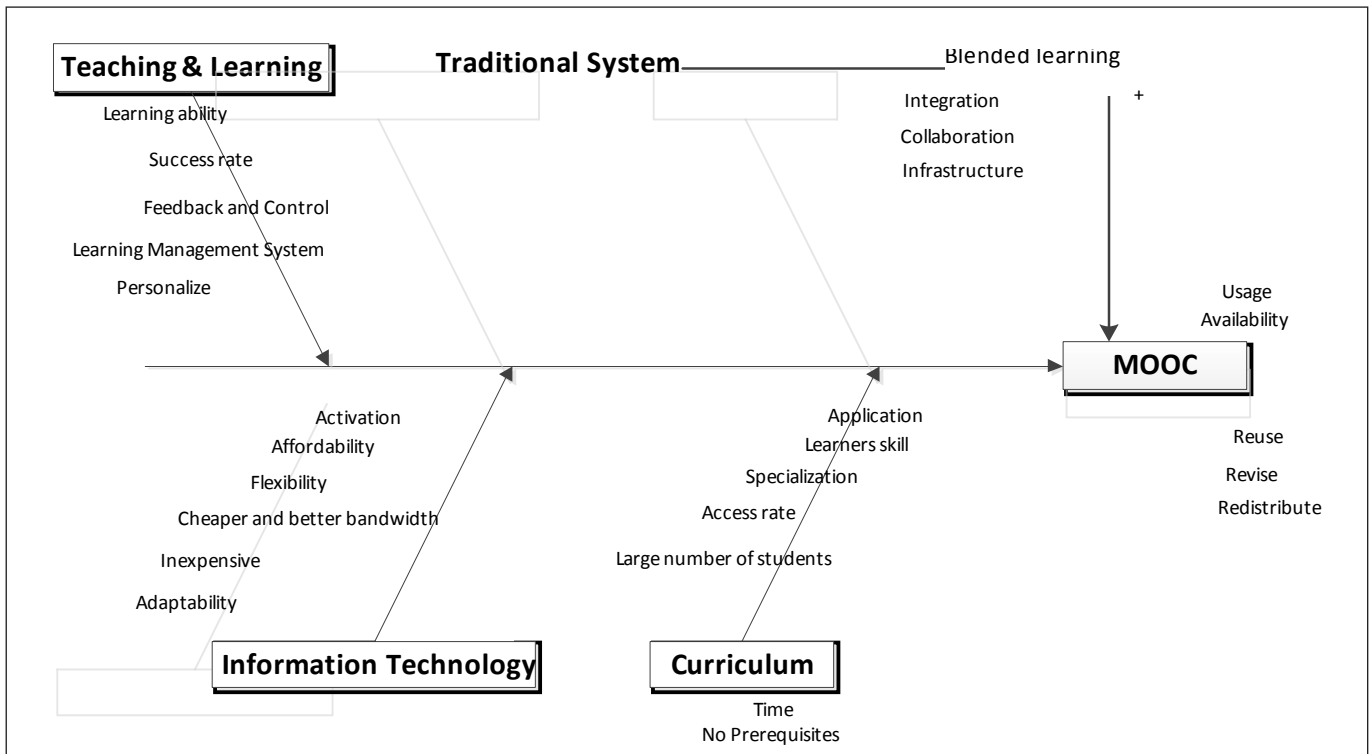


Fig. 1: The conceptual framework for the implementation of MOOC.

## Research Methodology

The conceptual framework is tested and modeled using the structure equation modeling. The steps to carry out the research are as follows.

**Identification of statements:** Extensive literature review is carried out and the variables that affect the effectiveness of implementation of MOOC are analyzed. The expert opinion regarding the MOOC is taken from three prominent professors dealing with open education management courses belonging to Indira Gandhi National Open University, India. After three rounds of deliberations, some of the variables are added, statements are modified and final count of variables is found to be 35. Such convergence process ensures the content and face validity of statements.

**Pilot study and finalization of questionnaire:** The identified 35 statements are tested using the pilot study. The opinion of 56 students who have experience in online education course and have studied via MOOC is taken for pilot study. The statements are measured using the 5-point Likert scale. After applying the factor analysis, 11 statements are dropped from the questionnaire and final questionnaire consists of 24 statements.

**Conceptual model revisited:** The conceptual model is revisited in accordance with the results of factor analysis. The four constructs are identified as Teaching, Curriculum, Technology and Effectiveness. The model assumes that the constructs of teaching, curriculum and technology lead to effectiveness of MOOC as shown in Fig. 2.

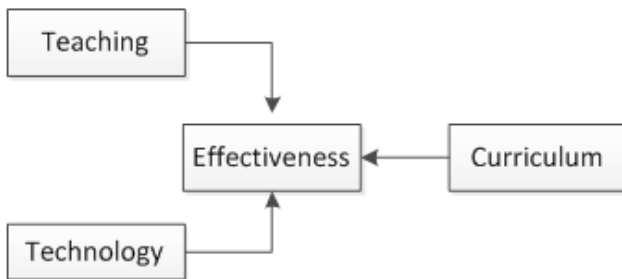


Fig. 2: The conceptual model for effective implementation of MOOC.

**Sample selection and size:** The data is collected from the students who have participated in various online education or MOOC courses related to Management and Information technology. Eight online courses/MOOCs are structured for the students during the pandemic COVID 19 in Delhi, India on topics named research methods, mental health, machine learning, artificial intelligence, HR analytics, Blockchain,

multivariate data analysis and financial analytics. We took the course in multivariate data analysis. After completion of course, the observations from 310 students who completed any of the courses are recorded as the integral part of exit survey for the course. 17 observations are found to be biased in nature as the standard deviation of them is quite low and hence dropped from the study and remaining 297 observations are analyzed. Such a sample size is sufficient to conclude 24 statements.

**Structural equation modeling:** The conceptual structural model is tested using the STATA version 15. The model is found to be fit. All constructs teaching, technology and curriculum positively impact the effectiveness.

## Results and Discussion

In teaching construct, the variable named MOOC creates new idea is found as the most significant. Second most significant variable in teaching is found as the interaction among the students and student with teacher during the MOOC. The appreciation of the teacher and teaching role is increased in MOOC and also found to be significant at 1% level of significance. The most significant part of curriculum construct is the latest aspect of MOOC which makes it effective. The diverse nature of curriculum is also found to be second most importance aspect of curriculum. Strategic nature of MOOC as well as targeting large audience is also found to be significant aspect of curriculum. For technology, the results are measured with respect to system quality. Functionality and ease of usage of technology are required for the effective implementation of MOOC. Knowledge to use to the system and storage for future use are also loaded significantly in technology construct.

The MOOC enhanced learning goal and the self-learning motivation are two reasons that make MOOC effective in nature. Learning, high-scale education and the quality of education are the significant aspects of the effective implementation of MOOC. Flexibility and creating the brand value for the provider are also required for effective implementation of MOOC.

In a structural model, teaching is found to be the most important aspect for effective implementation of MOOC. The second aspect which makes MOOC more effective is curriculum. Both teaching and the curriculum are found to be significant at 1% level of significance whereas technology is found to be significant at 10% level of significance. All the structural models with the coefficients are shown in Fig. 3.

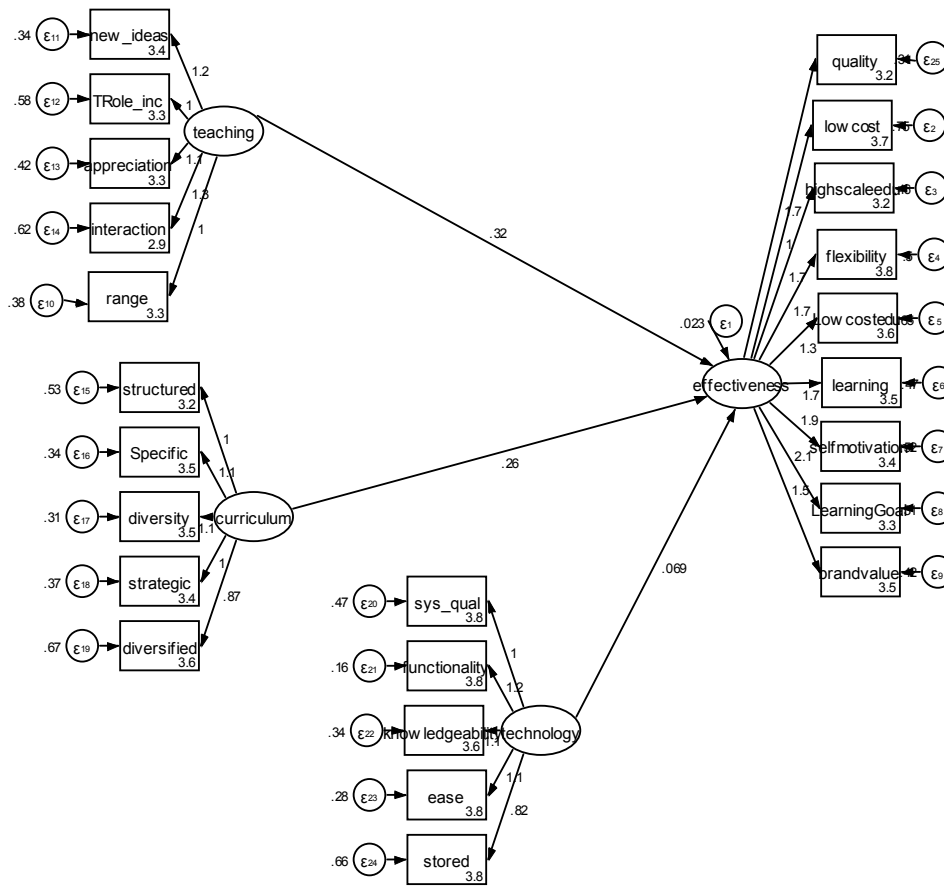


Fig. 3: The structural model for the effective implementation of MOOC.

The constructs of teaching, curriculum and technology each consists of five items and the effectiveness consists

of nine items as shown in Table 1. Each item is loaded significantly in the respective construct.

Table 1: Results of Structural and Measurement Model.

		Coef.	Std. Err.	z	P>  z
Effectiveness	Structural				
	Teaching	0.319	0.07172	4.22	0.000
	Curriculum	0.269	0.06281	4.01	0.000
	Technology	0.068977	0.038958	1.082	0.069
Effectiveness	Measurement				
	Lowcost	1 (Constrained)			
	Highscaleedu	1.719	0.327	5.25	0.000
	Flexibility	1.664	0.32	5.2	0.000
	Lowcostedu	1.344449	0.2812	4.78	0.000
	Learning	1.74	0.3315	5.27	0.000
	Selfmotivation	1.93	0.364	5.31	0.000
	Enhancelearninggoal	2.05	0.378	5.44	0.000
	Brandvalueprovider	1.51	0.2941	5.16	0.000
Quality	1.6655	0.3077	5.41	0.000	

<b>Teaching</b>	Range_phenomenon	1 (constrained)			
	Createsnew_ideas	1.22	0.312	9.23	0.000
	Teachingroleisincreased	0.998	0.145	6.84	0.000
	Appreciation	1.068	0.1406	7.6	0.000
	Maintaininteraction	1.283	0.1636	7.84	0.000

<b>Curriculum</b>	Isstructured	1 (constrained)			
	Islatest	1.146	0.117	9.73	0.000
	Allowsdiversity	1.123	0.115	9.76	0.000
	Isstrategic	1.045	0.111	9.41	0.000
	Isalargediversifie	0.865	0.1196	7.23	0.000

<b>Technology</b>	Systemquality	1 (constrained)			
	Functionality	1.207	0.117	10.3	0.000
	Knowledgeabilit	1.0853	0.1226	8.85	0.000
	Easeofusage	1.133	0.1204	9.4	0.000
	Canbestoredandused	0.8192	0.125	6.54	0.000

The Comparative Fit index (0.931) and Tucker-Lewis index (0.911) indicators show that the model is adequately fit (Pituch & Stevens, 2016). The Root Mean Square Error of Approximation (RMSEA) is found to be 0.623 which is also showing the acceptable result for structural model (Schumacker & Lomax, 2016). The Standardized root mean squared residual (SRMR) value is 0.156 and the coefficient of determination is found to be very high, 0.998.

## Conclusion, Implication and Contribution of Study

Once it is established that MOOC provides the win-win situation for both investors, who want to create infrastructure for education as it is cheap in comparison of building schools or colleges, and learners because they can learn at their own pace, time and almost at negligible cost. The existing infrastructure of brick and mortar is insufficient to cater to the needs of such a large Indian population. Old teacher centric model would be changed to student centric model. Blended learning which includes both face to face and online instructions for huge Indian masses may be a model to implement but it is yet to be tested. Special focus on professional and skill enhancement can meet overall social objectives. It is imperative for policy makers and government to do their share of work. The policy makers must provide incentives, grants, permission of MOU to central and state universities towards building the infrastructure for MOOC. Many central and state universities are having quality infrastructure, thus, they can propose various open policies

supportive of the development of MOOC. The proposed study would suggest parameters which are important and throw light on how much they are important for the effective implementation of MOOC which can be utilized for policy formulations towards MOOC production and use.

Initially various aspects of teacher, curriculum and the technology have been explored in the study. It has been found that all three are the integral part for the effective implementation of MOOC in India. The effectiveness of MOOC has also been explored in the study and the three-dimensional structural model is proposed. As third waves of MOOC is started in India, in which the students who are able to earn some specified credit with the established MOOC provider (Coursera, edX etc.) and get some credits to the award of university degree. This simply means that the effective MOOC courses are now considered as equivalent to the courses provided by the university as face to face teaching. One of the oldest institutions in India, Indian Institute of Technology Madras is planning to launch a full degree course in data analytics Via MOOC because of its effectiveness. The present model provides the three dimensions that are required for the effective implementation of such courses.

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## Annexure

Items of the questionnaire:

Effectiveness	SD	D	N	A	SA
The online education/ MOOCs is of high quality					
The online education/ MOOCs is of low cost					
The online education/ MOOCs is a high scale education					
The online education/ MOOCs gives flexibility					
The online education/ MOOCs is a low cost medium of education					
The focus of online education/ MOOCs is learning rather than teaching					
learners are self motivated in case of online education/ MOOCs					
The online education/ MOOCs enhance the learning goal					
The online education/ MOOCs create a brand value for the provider					
<b>Teaching</b>					
The online education/ MOOCs explain a range of phenomenon					
The online education/ MOOCs creates new ideas					
In online education/ MOOCs teaching role is increased					
The online education/ MOOCs creates more appreciation for the teacher					
The online education/ MOOCs maintain interaction with the student					
<b>Curriculum</b>					
The online education/ MOOCs is structured					
The online education/ MOOCs is latest and according to specific requirement					
The online education/ MOOCs allows diversity					
The online education/ MOOCs is strategic form of education					
The online education/ MOOCs is accepted in large diversified geographical audience					
<b>Technology</b>					
The online education/ MOOCs is dependent on system quality					
The online education/ MOOCs is dependent on functionality and readability					
The online education/ MOOCs is dependent on knowledge ability					
The online education/ MOOCs is dependent on ease of usage/user-friendliness					
The online education/ MOOCs can be stored and used as per convenience					



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The Editorial Board had used the Urkund – a Swedish anti-plagiarism software tool which is a fully-automatic machine learning text-recognition system made for detecting, preventing and handling plagiarism and trusted by thousands of institutions across worldwide. Urkund is GDPR compliant with privacy by design and an uptime of 99.9% and have trust to be the partner in academic integrity. <https://www.orkund.com>] tool to check the originality and further affixed the similarity index which is {14%} in this case (See below Annexure-I). Thus, the reviewers and editors are of view to find it suitable to publish in this Volume-12, Issue-4, October-December, 2020

## Annexure 1

Submission Date	Submission Id	Word Count	Character Count
05-Nov-2020	D94637263 (Urkund )	5813	39853

### URKUND

Analyzed document	paper_script.docx (D94637263)
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Submitter email	skesharwani@ignou.ac.in
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#### Sources included in the report

<b>W</b>	URL: <a href="https://www.researchgate.net/publication/299576174_Exploring_the_factors_affecting_...">https://www.researchgate.net/publication/299576174_Exploring_the_factors_affecting_...</a> Fetched: 12/13/2019 6:52:05 PM	4
<b>W</b>	URL: <a href="https://www.researchgate.net/publication/306297656_Adopting_MOOCs_for_affordable_qu...">https://www.researchgate.net/publication/306297656_Adopting_MOOCs_for_affordable_qu...</a> Fetched: 12/11/2019 7:47:07 AM	3
<b>SA</b>	<b>Aman A2.docx</b> Document Aman A2.docx (D53569838)	1
<b>W</b>	URL: <a href="https://core.ac.uk/download/pdf/204833963.pdf">https://core.ac.uk/download/pdf/204833963.pdf</a> Fetched: 2/4/2021 5:34:00 PM	11
<b>W</b>	URL: <a href="http://dx.doi.org/10.19030/cier.v11i2.10148">http://dx.doi.org/10.19030/cier.v11i2.10148</a> Fetched: 2/4/2021 5:34:00 PM	1
<b>SA</b>	<b>23_MOOCs.docx</b> Document 23_MOOCs.docx (D92177276)	1
<b>W</b>	URL: <a href="https://link.springer.com/chapter/10.1007/978-981-15-4276-3_9">https://link.springer.com/chapter/10.1007/978-981-15-4276-3_9</a> Fetched: 5/22/2020 9:38:27 PM	2
<b>W</b>	URL: <a href="http://dx.doi.org/10.1186/541239-017-0086-6">http://dx.doi.org/10.1186/541239-017-0086-6</a> Fetched: 2/4/2021 5:34:00 PM	1
<b>SA</b>	<b>final paper bbau.pdf</b> Document final paper bbau.pdf (D43252277)	1
<b>J</b>	<b>Analysis of MOOCs practices from the perspective of learner experiences and quality culture</b> URL: <a href="https://doi.org/10.1186/541239-017-0086-6">caaa8b8b-9511-4190-a428-0c2b8da4ec51</a> Fetched: 3/13/2019 3:08:17 AM	1
<b>SA</b>	<b>B C Mal.docx</b> Document B C Mal.docx (D60767601)	1
<b>W</b>	URL: <a href="http://dx.doi.org/10.22381/KC5220175">http://dx.doi.org/10.22381/KC5220175</a> Fetched: 2/4/2021 5:34:00 PM	1

### Reviewers Comment



**Reviewer's Comment 1:** The paper is comprehensive in nature. It talked about the status of MOOC in India, Trend in MOOC in India and then identified the factors affecting the effective implementation of MOOC and at last built and tested the model on the basis of identified factors by using structure equation modeling.

**Reviewer's Comment 2:** The paper is rich in literature. A good number of supportive existing literatures are provided in the study. Also it has been presented in a structured manner. Overall the paper offers a strong basis for further study in the area.

**Reviewer's Comment 3:** The research tries to give a justify how Massive Open Online Courses can provide the answers to many of the challenges present due to limited economic resources in India. And how country can be benefitted from the latest way of learning



Anupam Saxena, Anurag Saxena, Sachin Gupta  
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**Editorial Excerpt**

The article has 14% of plagiarism which is the accepted percentage as per the norms and standards of the journal for the publication. As per the editorial board's observations and blind reviewers' remarks the paper had some minor revisions which were communicated on a timely basis to the authors (Anupam, Anurag & Sachin) and accordingly all the corrections had been incorporated as and when directed and required to do so. The comments related to this manuscript are noticeably related to the theme "**Factors affecting the effective implementation of MOOCs in India**" both subject-wise and research-wise. The present research article aims to get the insight about the factors affecting the effective implementation of MOOC and online education in India. The factors that affect the effective implementation of MOOC were identified and then a model on the basis of identified factors for the effective implementation of MOOC was built. The conceptual framework is tested and modeled using the structure equation modeling. Overall, the paper promises to provide a strong base for the further studies in the area. After comprehensive reviews and editorial board's remarks the manuscript has been categorised and decided to publish under "**Empirical Research Paper**" category.

**Acknowledgement**

The acknowledgment section is an essential part of all academic research papers. It provides appropriate recognition to all contributors for their hard work and effort taken while writing a paper. The data presented and analyzed in this paper by (Anupam, Anurag & Sachin) were collected first handily and wherever it has been taken the proper acknowledgment and endorsement depicts. The author is highly indebted to others who had facilitated in accomplishing the research. Last but not least endorse all reviewers and editors of GJEIS in publishing in a present issue.

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