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Hype for MOOCs in India and Necessary Readiness: A Critical Analysis of Higher Education System

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ABSTRACT

Expansion of higher education in terms of proliferation of Massive Open Online Courses seems an adequate alternative for higher education specially for those who are aspirant for it and are devoid of higher education due to one or the other reason. In last few years enrollment in MOOCs had a tremendous rise and are on hype specifically in India. After USA, India is at second rank in terms of enrollment in MOOCs. Recently Indian Government has launched many digital initiatives to support online education. The present research paper reflects the necessary readiness of Indian Higher education system by taking into account Teacher's Readiness, Students Readiness and Institutional readiness or preparedness. Teacher's readiness was studied from the aspects of awareness, attitude and aptitude for ICT based teaching and MOOCs. Student's readiness was studied from the aspects of availability of hardware and software, Teacher facilitation etc. Institutional Readiness was studied from the aspects of availability of access devices and connectivity, Policies and internal functionaries for supporting online education. Data was collected from sample comprising of 500 teachers of higher education, 500 students of higher education and from 50 institutes of higher education in India by the use of three different questionnaires sent by google form specifically to study Teacher's readiness, Student's readiness and institutional readiness. After data analysis, the findings related to Teachers readiness reflected that more than half of the teachers are having positive attitude towards ICT based pedagogy and MOOCs and considers it advantageous for their professional enhancement and from learning perspective of students. A significant number of teachers mentioned about the need of training programs to enable them to develop MOOCs. Student's readiness was also on the favorable side in terms of availability of access devices and internet connection. Students also exhibited positive attitude towards ICT based Pedagogy and MOOCs. Institutional readiness reflected that more then half of the institutions have availability in terms of access devices and connectivity. Policies and institutional mechanism is also supportive towards ICT based pedagogy and MOOCs. Although Institutional rewards and incentives are needed for teachers who are using ICT based teaching and MOOCs.

Keywords: Teachers Readiness, Student's Readiness, Institutional Readiness, Higher Education, ICT based Pedagogy, Online Education, MOOCs

Online courses in the form of MOOCs aims at massive participation and open access with the medium of web. MOOCs have recently gained significant attention from educationists (Holy, 2014). Some top notch private universities, IITs and IIMs were already offering online courses using course era and edx for their students. Many other institutions have also proposed to implement blended model of MOOC with an amalgamation of online access by the use of edx as an open source platform and its customization for incorporating multilingual support and face to face instructor

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support at various centres in the country (FICCI, 2014). Richard Levin, CEO Courseera stated that India is second largest user in terms of enrollment in online courses. And as per Economic Times, 2014, India is one of the top five countries to generate revenue for courseera. The most recently launched digital initiative by Government of India is SWAYAM initiated with an aim to serve masses of learners. With the intrusion of MOOCs in Education system during last decade, the three cardinal principles of higher education seem to be addressed. (Chauhan , 2017). Huge potential is associated with MOOCs in India to address the issue of access, equity and quality. Many platforms and support facilities have been started by Indian Government for successful implementation of online education in the country. In the beginning the purpose was to make available open resources in the form of libraries, e- books and repositories. E-PG *pathshala* launched in the year 2013 was more like a repository than MOOCs. Government of India set off to start online course by the development of its own portal. Few of the institutions and organizations have the facilities to start and support the initiative of online courses. Presently more and more users are enrolling and accessing the online courses with the help of mobile devices like smart phones and tablets.

Review of Related Literature

Cormier and Siemens, 2010 stated that participation in MOOCs is open and without any charge. The learner only need to have access to the internet. They can participate in more than one course. The content and other course related material is generated by the facilitator and the learners and is shared and accessible for public. Chauhan, 2017 in her research article mentioned that India has dominated in global growth for enrollment in MOOCs after USA. MOOCs has huge potential veiled in Indian education. In last few years tremendous hike in enrollment in MOOCs has been observed by Indian students over the globe. Further the various MOOC delivery platforms were explored and compared. Belanger and Thornton, 2013 conducted a survey at Duke University and reflected about student's motivation for enrollment in MOOCs. Student's motivation fall in one of the four categories; (a) To complement life long learning and to enhance understanding of subject matter without any expectation of course completion. (b) for social experience, Intellectual stimulation, fun and entertainment. (c) suitability, usually in conjunction with obstacles to traditional education. (d) to gain experience of and to explore online education. Onkvisit, 2014 studied and stated that certain criteria need to be developed to evaluate the effectiveness of MOOCs. Apart from working on the view point of teachers and administrators , students need and abilities need to be considered while developing MOOCs. Applicability of MOOCs, its positive and negative aspects, limitations and associated opportunities need assessment. Issues of student motivation, distraction and learning outcomes need to be addressed with research base. Nagasampige and Subbaiah (2017) studied MOOC in Indian University Education system and stated the main factors which influence motivation of students to learn in MOOCs are; economic benefits, need for personnel and professional identity, achievement and fun. Authors interviewed the participants on awareness, content, usage and learning outcomes. The findings demonstrated the awareness and motivation among the students and teachers in Indian Universities.

Significance of the Study

As MOOCs are on Hype in India in recent years and enrollment is also huge. But still after completion of phase-I of SWAYAM courses the drop out rate is very high. Like any other online course. Face to Face mode of teaching has been successful for quite long duration. But this mode is not adequate to fulfill the demand and aspiration to have enhanced access, equity based higher education and in addressing the issues of quality. So, online education and MOOCS have become indispensable in Higher Education. For having successful implementation of digital initiatives by Government of India or online courses a research based picture may help in understanding the readiness of our Higher Education system from the aspects of Teachers, Students and institutions. The present Hype in MOOCs and Skepticism about them may be addressed as the result of the research based picture of readiness of the system. So the researcher chose this topic for conducting Research.

Objectives

In the present research work the following objectives were undertaken:

1. To study the awareness and attitude of teachers of Higher Education towards ICT based Teaching.
2. To find the form of ICT used by teachers of Higher Education.
3. To study the readiness of Teachers of Higher Education for designing, developing and delivering Online Education.
4. To study Institutional Freedom and Support to Teachers of Higher Education for using ICT based Teaching and MOOCs.
5. To study Institutional readiness for using ICT based pedagogies and online Education.
6. To study students readiness for learning with ICT based pedagogies and online Education.
7. To find the form of ICT used by learners of Higher Education.
8. To study facilitation and assistance by teachers to their learners for using ICT based pedagogies and online Education.
9. To study enrollment of learners in SWAYAM initiative by Government of India.

Hypotheses

1. Are teachers of Indian Higher Education System ready to adopt ICT based pedagogies and MOOCs?
2. Are students of Indian Higher Education System ready to learn with ICT based pedagogies and MOOCs?
3. Are the institutes of Indian Higher Education System ready to implement ICT based pedagogies and MOOCs?

Sample

The sample for present research work comprised of three types—

1. **Teachers Sample:** It constituted of 500 teachers of Higher Educational Institutes of India.
2. **Learners/ Students Sample**: It constituted of 500 students from Higher Educational Institutes of India.
3. **Institutional Sample**: It consisted of a total of 50 Higher Educational Institutes of India.

Tools

To achieve the above stated objectives, Three different questionnaire in the form of Google Form was developed; Each for Teachers Readiness, Institutional Infrastructural and Policies Readiness and Students Readiness.

Teacher Readiness questionnaire has 20 objective type questions and two open ended questions with the dimensions; Awareness and Attitude, Form of use of ICT, Skills for using MOOCs, Institutional Freedom and Support.

Institutional Infrastructural and Polices Readiness questionnaire has 10 questions under the dimensions related to availability of access devices and internet connectivity, Policies support for ICT, Conduction of FDPs, Digital Cell, Measures for SWAYAM, Adoption of LMS.

Student's Readiness Questionnaire: Availability of Hardware and Software, Form of ICT use, Teacher Facilitation, Enrollment in SWAYAM.

Statistical Techniques: Percentage as a mean of descriptive statistics was used to study the responses of questions under different aspects.

Analysis and Interpretation

To study the awareness and attitude of teachers of Higher Education towards ICT based Teaching.

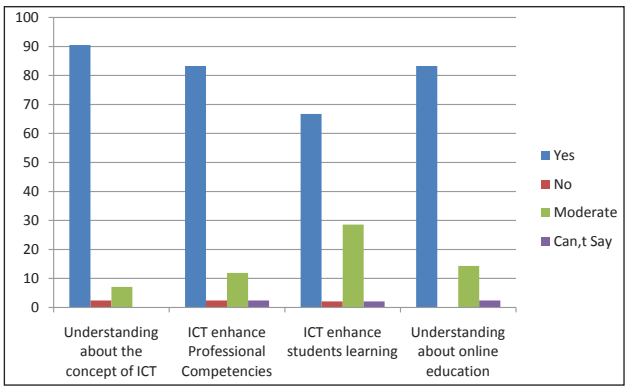

Fig. 1

The first graph in the Fig. 1 reflects that out of 500 teachers, 452 (90%) teachers have understanding about the concept of ICT.35 (7%) teachers have moderate understanding about Concept of ICT. And 17 (3%) teachers have no understanding about

Concept of ICT. The second graph in the Fig. 1 reflects about the attitude of teachers whether they consider ICT as a tool to enhance professional competencies of teachers. 415 (83%) teachers agree that ICT enhance professional competencies of teachers. 60 (12%) Teachers consider role of ICT in enhancing professional competencies of teachers up to a moderate level. While 12 (2.4%) teachers don't think ICT as a tool for professional enhancement of teachers. The third graph in the above Fig. reflects about the attitude of teachers whether they consider ICT as a tool to enhance students learning.333 (66.7%) teachers agree that ICT enhance students learning. 143 (28.6%) teachers consider role of ICT in enhancing students learning up to a moderate level. While 10 (2.1%) teachers don't think ICT as a tool for students learning.

The fourth graph in the Fig. 1 reflects about the understanding of teachers about online education. 415 (83%) teachers have understanding about online education. 72 (14.3%) teachers have moderate understanding.

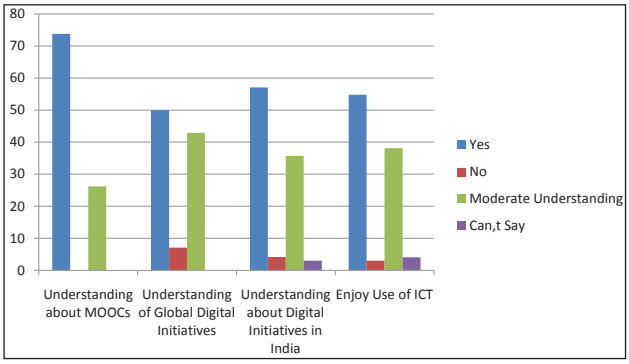

Fig. 2

The first graph in the Fig. 2 reflects about the understanding of teachers about MOOCs. 369 (73.8%) teachers have understanding about MOOCs .131 (26.2%) teachers have moderate understanding about MOOCs. The second graph in the above Fig. reflects about the understanding of teachers about Global digital initiatives. 250 (50%) teachers have understanding about Global digital initiatives .214 (42.9%) teachers have moderate understanding about Global digital initiatives and 35 (7%) teachers have no understanding about Global digital initiatives. The next graph in the above Fig. reflects about the understanding of teachers about digital initiatives in Indian Education. 285 (57.1%) teachers have understanding about digital initiatives in Indian Education .178 (35.7%) teachers have moderate understanding and 36 (7.2%) teachers have no understanding about digital initiatives in Indian Education. The last graph in the above Fig. reflects the interest/ enjoyment of teachers in ICT based Pedagogies and MOOCs. 274 (54.8%) teachers enjoy teaching with ICT based pedagogy. 190 (38.1%) teachers enjoy it up to a certain level. 17 (3%) teachers do not enjoy it at all.

To find the form of ICT used by teachers of Higher Education.

Fig. 3

The above Fig. reflects the form in which teachers use ICT for the teaching learning process.274 (54.8%) teachers use Power point Presentations for their teaching. 143 (28.6%) teachers use Open educational resources and 15 (2.3%) teachers use Video lectures from internet and further 71 (14.3%) teachers have developed MOOCs.

To study the readiness of Teachers of Higher Education for designing, developing and delivering Online Education.

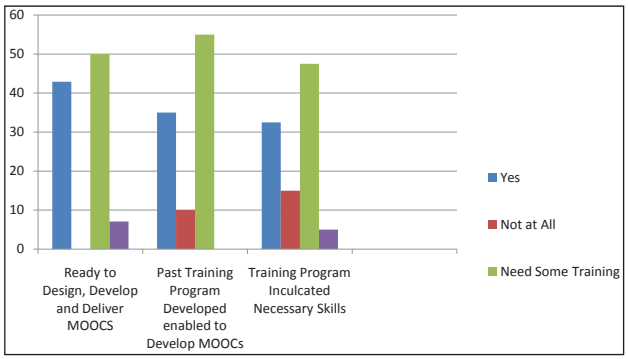

Fig. 4

The first graph in the above Fig. depicts that a total of 214 (42.9%) of teachers are ready to design, develop and deliver MOOCs, where as 250 (50%)

teachers said they need some training for MOOCs development and 35 (&.1%) teachers said they cant say about it. The next graph in the Fig. reflects that past training program enabled them to develop MOOCs or not. 175 (35%) teachers said their past Training program enabled them to develop MOOCs. 50 (10%) teachers said the past training program did not enable them to develop MOOCs. 275 (55%) teachers said they need some more training to get enabled to develop MOOCs. The last graph in the Fig. reflects that past training program inculcated skills to develop MOOCs or not. 162 (32.5%) teachers said their past Training program equipped them with skills to develop MOOCs. 75 (15%) teachers said the past training program did not equip them to develop MOOCs. 237 (47.5%) teachers said they need some more training to get enabled to develop MOOCs . 25 (5%) Teachers said they can not say about this.

To study Institutional Freedom and Support to Teachers of Higher Education for using ICT based Teaching and MOOCs.

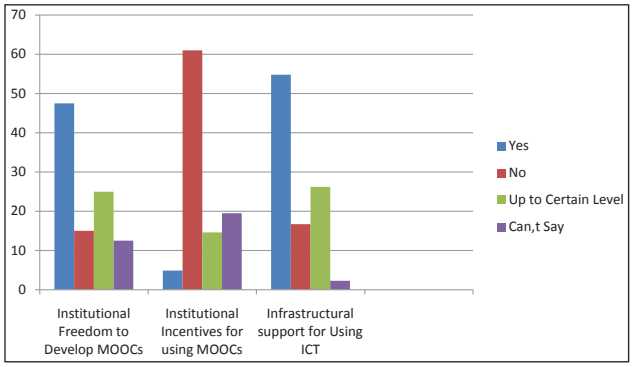

Fig. 5

The first graph in Fig. 5 reflects the institutional freedom for teachers to develop MOOCs. A total of 237 (47.5%) Teachers said they are provided with full institutional freedom to develop MOOCs. 75 (15%) of teachers are not provided with institutional freedom. 125 (25%) of teachers said they are provided freedom up to a certain level to develop MOOCs where as 62 (12.5%) teachers filled option of can not say. The second graph in Fig. reflects the institutional Incentives for teachers for using MOOCs. A total of 23 (4.9%) Teachers said they are provided with institutional incentives to develop MOOCs. 305 (61%) of teachers are not provided with institutional incentives. 73 (14.6%) of teachers said they are provided incentives up to a certain level to develop MOOCs where as 98 (19.5%) teachers filled option of can not say. The last graph in Fig. reflects the infrastructural support for teachers for using MOOCs. A total of 274 (54.8%) Teachers said they are provided with infrastructural support to develop MOOCs. 84 (16.7%) of teachers are not provided with infrastructural facilities. 131 (26.2%) of teachers said they are provided infrastructural facilities s up to a certain level to develop MOOCs where as 12 (2.3%) teachers filled option of can not say.

To study Institutional readiness for using ICT based pedagogies and online Education.

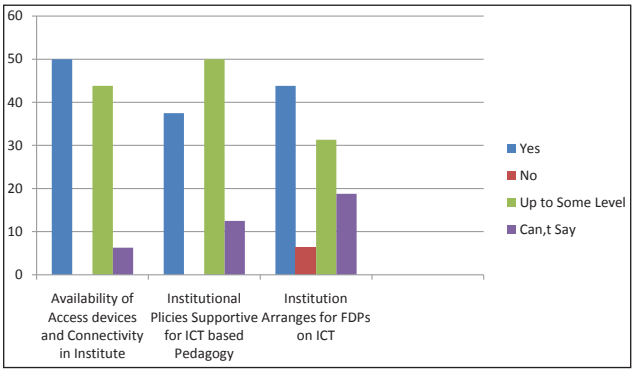

Fig. 6

The above Fig. reflects institutional readiness for online education. The first graph depicts that 25 (50%) of the institutes have availability of access devices and connectivity. And 22 (43.8%) institutes have these up to some level. 3 (6.2%) institutes are under can't say option.

The second graph depicts that 19 (37.5%) of the institutes have framed policies supportive for ICT based pedagogy. And 25 (50%) institutes have these up to some level. 6 (12.5%) institutes are under can't say option. The third graph showed that 22 (43.8%) Institutes have arranged for Training on MOOCs for teachers. 4 (7%) Institutes have not arranged for Training and 16 (31.3%) institutes have conducted but up to some level. 10 (18.8%) Institutes are under option Can't say.

In first graph of below Fig. 7 it can be seen that a total of 12 (25%) institutes have established specific digital cell or centre to support ICT based pedagogies. 16 (31.3%) institutes have not worked in this direction. And 19 (37.5%) institutes are under process to establish such cell. And 3 (6.3%) institutes are not aware about it.

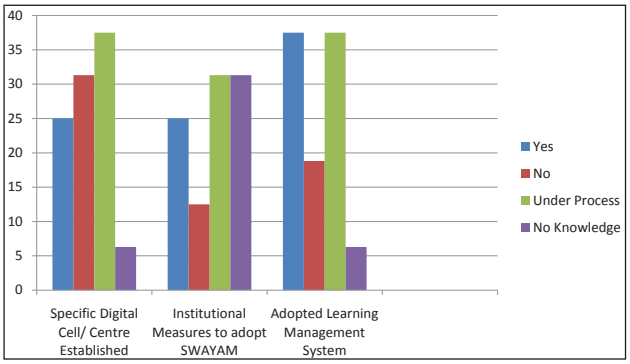

Fig. 7

The second graph of above Fig. reflects that a total of 12 (25%) institutes have devised measures to adopt SWAYAM. 6 (12.5%) institutes have not worked in this direction. And 16 (31.3%) institutes are under process to establish such cell. And 16 (31.3%) institutes are not aware about it. The third graph of above Fig. reflects that a total of 19 (37.5%) institutes have adopted LMS. 9 (18.8%) institutes have not worked in this direction. And 19 (37.5%) institutes are under process of adoption. And 3 (6.3%) institutes are not aware about it.

To study students readiness for learning with ICT based pedagogies and online Education.

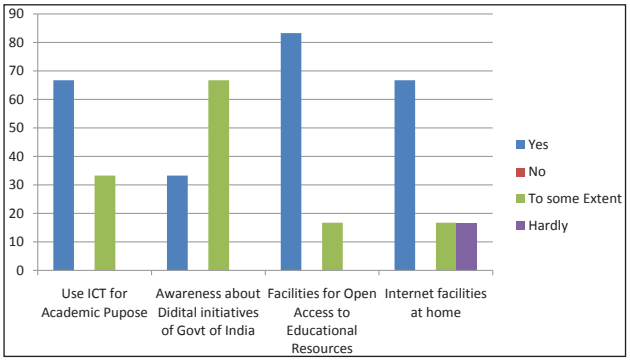

Fig. 8

The first graph in the Fig. showed that out of 500 total 333 (66.7%) students in Higher Education use ICT for academic purpose. Whereas 167 (33.3%) students use ICT for academic purpose up to a moderate level. The second graph reflected that 167 (33.3%) students in Higher Education have awareness about digital initiatives of Government of India. Whereas 333 (66.7%) students have moderate level of awareness about digital initiatives of Government of India in Higher Education. The third graph showed that a total of 416 (83.3%) students in Higher Education have facilities for online resources in Education. And 84 (16.7%) students have facilities for online resources up to a moderate level.

The last graph in the above Fig. depicted that a total of 333 (66.7%) students in Higher Education have internet facilities at home. Whereas 84 (16.7%) students have limited Internet access and 84 (16.7%) students have rarely any internet access at home.

To find the form of ICT used by learners of Higher Education.

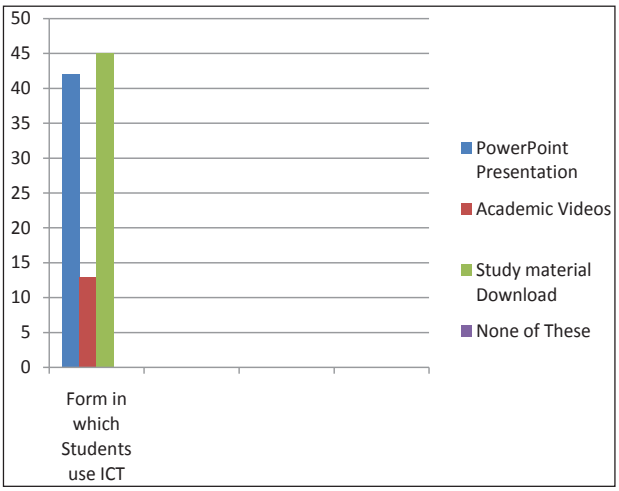

Fig. 9

The graph in the Fig. 9 reflects that a total of 210 (42%) students use Powerpoint presentation. 65 (13%) students use academic videos and 225 (45%) students use internet for downloading the study material as a form in which they use ICT.

To study facilitation and assistance by teachers to their learners for using ICT based pedagogies and online Education.

Fig. 10

The Fig. 10 depicted the facilitation of students by their teachers as per students perspective. 166 (33.3%) students consider that their teachers always facilitate them to use ICT.

Whereas, 166 (33.3%) students consider that their teachers facilitate them to use ICT most of the time. 166 (33.3%) students consider that their teachers some times facilitate them to use ICT.

To study enrollment of learners in SWAYAM initiative by Government of India.

Fig. 11

The graph above reflected that 84 (16.7%) students have enrolled themselves in any of the course on SWAYAM Portal. 333 (66.7%) students have not enrolled in any course on SWAYAM portal. Whereas 84 (16.7%) students have no knowledge about SWAYAM.

Conclusion and Educational Implications

The findings related to Teachers readiness reflected that more than half of the teachers are having positive attitude towards ICT based pedagogy and MOOCs and considers it advantageous for their professional enhancement and from learning perspective of students. A significant number of teachers mentioned about the need of training programs to enable them to develop MOOCs. The Governments Vision and mission of successful Implementation of online Education can be well accomplished if the main human force behind this mission is well equipped for designing, developing and delivering of online courses. Student's readiness was also on the favorable side in terms of availability of access devices and internet connection. Students also exhibited positive attitude towards ICT based Pedagogy and MOOCs. Teacher facilitation for students for use of ICT based pedagogies and MOOCs is a factor which may be enhanced. Institutional readiness reflected that more then half of the institutions have availability in terms of access devices and connectivity. Policies and institutional mechanism is also supportive towards ICT based pedagogy and MOOCs. Although Institutional rewards and incentives are needed for teachers who are using ICT based teaching and MOOCs. Some efforts in this direction may also motivate teachers to adopt ICT based pedagogies and MOOCs. The study presented an overall picture of Readiness of Indian Higher Education System towards implementation of Online education and MOOCs. The results may be utilized for further planning and implementation programs related to Online education and MOOCs.

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