SWAYAM: Need to Train Teachers on Online Teaching and Learning

Prof. Chakrapani Ghanta
Director, Center for Staff Training and Development (CSTD), Dr. B. R. Ambedkar Open University, Hyderabad, Telangana, India

Abstract: **The covid-19 pandemic has caused havoc on the Education system worldwide and has significantly impacted the lives of millions of Learners. All the educational institutions from KG to PG are affected by restrictions of the people over a year. Hence, the education sector is forced to adapt new innovative technics and teaching-learning methodologies, pedagogies, and approaches to reach out to the learners. SWAYAM is one such alternative initiative based on technology, widely used in India as an alternative to classroom teaching and learning. Govt. of India and UGC are encouraging SWAYAM courses and allowing for credit transfer.**

Interestingly, in India, acquiring technology is very easy but training the teachers in technology-enabled teaching and learning methods is challenging. This paper attempts to discuss SWAYAM and its evolution as an alternative approach and the importance of the training component to prepare online courses and modules for SWAYAM. The paper also explains various skill sets required to adapt by teachers with simple training modules. The paper is based on the training program conducted by the Centre for Staff Training and Development (CSTD) at Dr. B. R. Ambedkar Open University.

INTRODUCTION

SWAYAM, the Hindi acronym for Study "Webs of Active-Learning for Young Aspiring Minds," is an Indian Massive Open Online Course (MOOC) platform. SWAYAM is an initiative launched by the Ministry of Human Resource Development, Government of India; under the Digital India program, all the Universities and Colleges in the country are encouraged to use the SWAYAM Online platform for Students. The University Grants Commission (UGC), the county's highest higher education policy-making body, considers SWAYAM a platform for future teaching and learning. The Commission, in its notification, has requested all the universities to adopt the courses offered through the SWAYAM platform so that the student community can get maximum benefits for their active cooperation in adopting and promoting MOOCs Courses offered through SWAYAM. UGC has also requested them to adopt the University Grants Commission's Credit Framework for Online Learning Courses through Study Webs of Active Learning for Young Aspiring Minds Regulations (UGC 2021).

SWAYAM is an Indian version of the Massive Open Online Course (MOOC). MOOCs are free online courses available for anyone to enroll in. The MOOCs began as a liberal education movement in early 2000, and this movement initiated the first-ever MOOCs, further sparked by the MIT open courseware project. In 2006, Wikiversity started, and in 2007 first open course was organized on the platform. The term MOOC was used for the open course "Connectivism and Connective K

nowledge" (CCK08) by Dave Cormier and was introduced at the University of Manitoba in Canada by Stephen Downs and George Siemens. (Stephen Downes 2012) MOOCs provide an affordable and flexible way to learn new skills, advance your career and deliver quality educational experiences at scale. Millions of people worldwide use MOOCs to learn for various reasons, including career development, changing careers, college preparations, supplemental learning, lifelong learning, corporate eLearning & training, and more. The connectivism theory for knowledge creation and generation was the main idea for the first generation of MOOCs, which became famous as cMOOCs; extended MOOCs, also known as xMOOCs, emerged, allowing free access with some closed licenses. Declared by New York Times the year of the MOOC, several well-financed providers like Coursera, Udacity, and EdX associated with top

universities emerged and revolutionized the education system with more diverse courses through this new online medium. Laura Pappano, who published a story titled 'The Year of the MOOC,' discusses various opportunities with this telemediated learning platform. 2012 (New York Times, 2012)

SWAYAM: INDIAN MOOC

India is one of the leading countries in enrolments in MOOCs, which are provided globally through various platforms. The scheme is designed to achieve three primary principles of Education Policy: access, quality, and equity. The Ministry of Human Resources Development (MHRD) and NPTEL, IIT Madras, with the help of Google Inc and Persistent Systems Ltd, has developed this scheme to meet the broad objectives of taking learning resources from the best available to all, including the highly deprived and to bridge the digital divide for students who have not yet experienced the digital revolution and are unable to join the mainstream of the knowledge economy. The move will also improve the gross enrolment Ratio (GER) MOOCS will also mitigate the shortage of infrastructure and teachers while making the Indian education system is more democratic and learner-centric. The courseware on SWAYAM is designed, developed, and structured in four quadrants, i.e., Video lectures, specially devised reading material that can be downloaded/ printed, Self-assessment tests, and an online discussion forum for clearing doubts. Any course related to any subject can be uploaded over SWAYAM as MOOC. Most of the courses are free; anybody can access them directly with simple enrolment. At each course's end, the student will be assessed through a supervised examination. The marks/grades obtained in this assessment can be transferred to the student's academic records. The University Grants Commission (UGC) has already issued a Credit Framework for online learning courses through SWAYAM; Regulation 2016 advises Universities to identify the courses where credits can be transferred on the academic record of the students who have pursued courses through the SWAYAM.

Anirban Ghosh (2020) opined that the Massive Open Online Courses (MOOCs) provides an affordable and flexible learning experience for the mass. The critical feature of the MOOCs available on SWAYAM this that academic resources can be accessed anywhere at any time by registered students at their convenience. They can repeatedly access the academic content, both e-text and audio video lectures, to clear their doubts. Explaining various features in SWAYAM, Ghosh says the online "Discussion Forum" is an essential component of online courses through which the students can interact with the course coordinator and peer members. The discussion forum is the key by which the students can be engaged towards the end of the course. Another feature is that if a student studies in any college, he can transfer the credits earned by taking these courses into their academic record. If a person is working or not working or dropping out, SWAYAM gives them a unique educational opportunity to expand their knowledge horizons.

The history of MOOCs began with NPTEL, which was founded in 2003 as an educational content repository akin to MIT's open courseware, but in a different format. Seven IITs and the IISc have begun to make available online the recorded lectures of their member institutions. It is currently the largest online archive of engineering, basic sciences, and selected humanities and social sciences courses in the world. It is also the most-visited peer-reviewed educational material library in the world. Later, in 2012, IIT Kanpur developed MooKIT, an indigenously produced platform, and presented two MOOCs titled Architecting Software for the Cloud and MOOC on MOOCs, which attracted 2,300 participants (Jagannathan et al., 018). It is a lightweight MOOC management system that is entirely based on open-source technology, allowing for the creation of freely accessible, editable, and redistributable content. The javascript-based technology utilized by the MEAN stack application allowed it to function on minimal bandwidth, a characteristic shared with other MOOC platforms. In the event of poor connectivity, learners were given the opportunity to switch to alternative content delivery methods based on a bandwidth indication resembling mobile bars. It utilized user-friendly elements throughout. MooKIT has provided close to thirty courses to about two million customers in over 100 countries.

To attract a global audience, IIT Bombay customized the open-source EdX platform in 2014-15. It was supported by the National Mission on Education through the Information and Communication Technology (NME-ICT) division of the Ministry of

Human Resource Development (MHRD) at the time. IIT Bombay was introduced as the basic edition of the blended learning MOOC on the EdX platform. Blended learning combines online and electronic media with traditional face-to-face instruction. In 2015, institutions other than IIT Bombay also provided MOOCs on EdX and Coursera. On the proposal of the then-Ministry of Human Resource Development (MHRD), now the Ministry of Education, SWAYAM, the Government of India's MOOC distribution platform, was finally launched later in 2017. There are a limited number of lesser-known providers in different disciplines.

GENESIS OF SWAYAM

The Government of India launched the SWAYAM Platform for providing MOOCs on July 9, 2017, in order to meet the different demands of the learner. It is a brilliant idea that allows great professors to share their expertise with everyone, especially the most vulnerable members of society. It is an initiative to provide access to high-quality education for all members of society, regardless of location. It primarily targets students who could not benefit from the digital revolution and cannot engage in the official education system as a whole. Making quality education accessible to all is a government aim, yet enrollment at top-tier institutions such as IITs and IIMs is extremely difficult due to limited resources and a large population. The extremely demanding entrance exams make it nearly impossible for pupils below their level to gain admission. Through SWAYAM MOOCs, learners can enroll in courses taught by the leading professors of these institutes, even if they were unable to gain admission. The government covers all costs associated with the SWAYAM project, including content creation, technical infrastructure, maintenance, and human resources. Nine national coordinators, AICTE, NPTEL, UGC, CEC, NCERT, NIOS, IGNOU, IIMB, and NITTTR, have been tasked with guaranteeing the creation and distribution of high-quality material to all school, higher, and vocational education learners. Nine National Coordinators have been chosen to ensure the formation and distribution of the highest quality content. The All-India Council for Technical Education (AICTE) coordinates self-paced and international courses, the National Programme on Technology Enhanced Learning (NPTEL) for engineering, the University Grants Commission (UGC) for non-technical postgraduate education, and the Consortium for Educational Communication (CEC) for undergraduate education. SWAYAM also focuses on School Education; the National Council for Education Research and Training (NCERT) National Institute of Open Schooling (NIOS), while Indira Gandhi National Open University (IGNOU) for the-school students (Indian Institute of Management, Bangalore (IIMB) for management studies and National Institute of Technical Teachers' Training & Research (NITTTR) for Teacher Training program, are responsible for the coordination of school education.

NPTEL is the oldest organization affiliated with MOOCs; in 2003, it created a collection of educational content equivalent to MIT's Open courseware. It was formed by seven IITs and the IISc to make online accessible the recorded lectures of its member universities. Later in 2012, IIT Kanpur released two MOOCs titled "Architecting Software for the Cloud" and "MOOC on MOOCs" with 2,300 participants utilizing the MooKIT platform (Chauhan 2017). Numerous Indians use this platform to develop their knowledge and abilities in all fields. Dave Cornier of the University of Prince Edward Island and Bryan Alexander of the National Institute for Technology in Liberal Education coined the term "MOOCs" in 2008. (Hiremath R, 2017). Massive open online course (MOOC) refers to an online course designed for limitless participation and open access. Massive indicates that it targets and reaches a vast number of people simultaneously, and anyone from any location and with any educational background can register at any time. This platform's courses are available to everybody, regardless of their location, because it is accessible to all. Additionally, openness implies flexibility in learning without prerequisites. Notably, the courses are accessible online for free at any time and from any location. Courses — Numerous courses are accessible to anybody, at any time, through MOOCs. In India, almost 30 billion students are enrolled in higher education; 2.72 billion of these students have registered through the Swayam site.

SUPPLY AND DEMAND GAP

In the post-covid-19 environment, online schooling has acquired relevance. As regulatory agencies, there

is a tremendous demand for online programs, and the government is promoting higher education institutions to go online; the UGC currently mandates that 40 percent of courses and curricula must be online, mostly through SWAYAM. Since the debut of the SWAYAM platform in 2017, around 7,115 courses have been provided, with 2.72 million students enrolled and 11.13 lakh diplomas given. During the lockdown caused by the COVID-19 pandemic, the SWAYAM platform was utilized roughly 2.5 million times more. (On Manorama 2022) In May 2022, the Ministry of Education ran an online survey to determine how students perceive SWAYAM MOOCs. This poll gives information about the preferences of students at the national and state levels. More than 70 percent (10,000+) of respondents from 338 universities/institutions in 29 states have showed interest in SWAYAM course credit transfer. The top three states for enrollment in this course were Tamilnadu, Maharashtra, and Karnataka. The data also reveals that the knowledge of MOOCs and online courses is greater in the southern Indian states than in the northern Indian regions. It may also be deduced from the statistics that the area and enrollment in the course are expanding while urbanization is focusing on enrollment growth (McCulloch et al., 2014; Pilli et al., 2018)

The significant challenge to the success of SWAYAM is the lack of trained teachers to develop courses for the platform. Indian teachers are habituated since ages to face-to-face teaching and classroom environment. From nursery rhymes to mathematic tables, loud recitation is an Indian style of teaching and learning, which is impossible in a telemediated environment. Moreover, some of the teachers' associations oppose the online education system, citing poor infrastructure and lack of suitable equipment for most students. Moreover, the technological and methodological barriers became a constraint to teachers not coming forward to teach online classes and share materials on SWAYAM.

Keeping the situation in view, to train teachers on online course development for SWAYAM, the Centre for Staff Training and Development (CSTD) of Dr. B. R. Ambedkar Open University organized a training program for teachers in collaboration with Commonwealth Educational Centre for Asia (CEMCA). Educational Media Center of Commonwealth of Learning, for Commonwealth Asia, was established in New Delhi in 1994. CEMCA promotes the meaningful, relevant, and appropriate use of media and technology to serve the educational and training needs leading to Sustainable Development through learning in Commonwealth member states of Asia. The CEMCA designed the program in the context of the Covid-19 Pandemic, which hit the country with unprecedented crises and led the Education sector to push in its acquisition and process of knowledge and its application. At this juncture, the MOOC is considered, on the one hand, as a panacea for education and, on the other, as a defilement of the sanctity of the higher education tradition. The truth will probably lie somewhere in between, and we must explore the potential of MOOCs to create a model of simultaneously teaching on-site and off-site learners, using synchronous and asynchronous teacher-learner interactions to deliver high-quality learning to large numbers, and maybe evolve a model for a classroom of thousands of learners.

The Centre for Staff Training and Development (CSTD) of Dr. B. R. Ambedkar Open University has launched a MOOC on Online Course Development for SWAYAM in collaboration with Commonwealth Educational Centre for Asia (CEMCA). Commonwealth Educational Centre develops the course for Asia (CEMCA) with highly experienced experts. This Innovative MOOC was designed and offered to the Teachers from KG to PG who want to learn more about online course development; they found it informative and engaging. Anyone interested in improving their online teaching skills. The CSTD offered this as a countrywide program. Almost 1800 teachers registered for this program.

LEARNING OUTCOMES

CEMCA designed the program with broad learning outcomes such as to make the participants familiarize the concept of online education and SWAYAM at a large, to Prepare the proposal for course development for SWAYAM as per the guidelines, and seek funding for the courses. The training outcomes also focused on Write content in text format using various resources and Open Educational Resources, delivering content in the form of videos using PPT, animations, and illustrations, facilitating the learners through a

discussion forum and Developing assignments and quizzes for learners' formative and summative assessment. The program was designed to familiarize the participants with the technology and pedagogy supporting MOOCs and acquire new skill sets needed for effective participation in MOOCs. Further adoption of e-Resources for Innovative Teaching & Learning practices focused. Online Course Instructional Design & Best Practices Introduction to Creative Commons Licenses, Open Educational Resources (OER) and MOOC, Learning & Teaching an Online course using MOOC/Moodle/Institutional LMS, Objectives of the Programme. This FDP MOOC is for Teachers/Researchers of Higher Education and researchers with the aim that they will learn the SWAYAM framework for designing Online Courses for SWAYAM with the following objectives: Preparing proposals for Swayam Understanding OER Understanding 4 quadrant approach developing modules for MOOCs.

Out of four quadrants of MOOCs, the first week focused on the preliminary understanding of MOOCs and quadrants I and II. Apart from an overview of Swayam and its context, the status of SWAYAM, SWAYAM guidelines, Four Quadrant Approach, and Proposal for SWAYAM Courses, the first week is focused on Quadrant-I (e-Tutorial and Quadrant-II (e-Content): The second quadrant is an e-content which could include e-books, illustrations, Case studies, Open-source content, Reference link, additional reading sources and so on.

The second week is designed to familiarize with Quadrant-III (Discussion Forum. The third quadrant is about clearing student queries; a discussion forum allows students to interact with other students and faculty to clarify their doubts. The discussion forum is like a doubt counter where any student or faculty can answer a student's question. Quadrant-IV (Assessment) is discussed this week. The fourth quadrant is self-assessment to check what a student has studied and whether he/she is eligible to get a certificate. It could be tested in the form of Multiple-Choice Questions (MCQs), quiz or short answer questions, long answer questions, etc. The fourth quadrant also has Frequently Asked Questions (FAQs) and their answers to clarify common misconceptions among students.

Using innovative learning design and simple, accessible technology, this course runs on an easy-to-use learning platform available via the Internet. It is designed to accommodate learners' busy schedules; the course offers flexibility with options for learning the content. Participants were required to learn from readings, videos, discussions with other participants and instructors, meaningful exercises, and quizzes. Certification was made available for those who wish to complete all required exercises and quizzes. The workload was 3 to 5 hours per week. The level was non-credit and was offered in English with no requirement of prior knowledge.

When the MOOC began, an online orientation session was organized, and a message was sent to each participant who registered for the course requesting to join in the orientation session. The primary objective of the orientation session is to welcome the course mentors and participants, introduce course mentors and coordinators, present the content outline and certification criteria, and demonstrate the course platform. After launching the program, the CSTD noted that there were many questions in the QA session of the first week, and subsequently, phone calls were received by the coordinators regarding logging in and some pertinent issues. It was noted that if an orientation session were arranged in the local language, it would result in more extensive participation. Hence, an orientation session in Telugu was arranged. The orientation session in Telugu was a stupendous success as participation increased manifold. Two live interactive sessions were organized during the course to avoid monotony, clarify doubts, and answer the questions. The course mentors participated in the live sessions and clarified the doubts of the participants; it was well received.

The response was overwhelming; teachers across the country from KG to PG teaching backgrounds responded to the notification and enrolled in the program. Since the program is on MOOCs, teachers complete their tasks at their convenient time within the schedules. Initially, the CSTD target was one thousand enrolments, but about 1800 enrolled for the training; about a thousand are women teachers. Most participants opined that such programs must be conducted frequently to upgrade the skill levels of teachers. UGC and governments must train teaching faculty on emerging online technologies and learning

platforms, including SWAYAM. Investment in training to improve the efficiency of teachers should be one of the priorities in the context of a paradigm shift. For this purpose, the UGC need to identify specialized training centers such as CSTD and designate them as Human Resource Development Centers by funding them for research and training in the field.

CONCLUSION

In the Post Covid-19 scenario, the Government of India heavily depends on online and technology-initiated teaching and learning methods, particularly on the SWAYAM platform. UGC is insisting on a 60:40 ratio where the 40 percent must be from online. Teachers' associations are raising objections to the University Grants Commission's directive to all universities and colleges to offer up to 40 percent of the courses in any program online on the Central Government's open digital platform Swayam. It is a fact that not just adapting the technology but proper training to the stakeholders is also essential; in any system, training becomes imperative for equipping the staff with the necessary knowledge, skills, and attitude to perform their jobs. The UGC and other coordinating agencies should focus on training the teachers immediately update their knowledge and skills.

REFERENCES

[1] Anirban Ghosh (2020), SWAYAM: A revolution in Indian Higher Education, The Management Accountant Journal 55(May 2020) DOI:10.33516/Maj.v55i5.76-80p

[2] Chauhan, J. and Goel, A. (2017). An overview of MOOC in India. International Journal of Computer Trends and Technology, 49(2).

[3] Harichandan, D. (2018). Ten years of MOOCs, One year of Swayam: Where do we go? CEMCA, Commonwealth of Learning Newsletter.

[4] Jagannathan, G. et al. (2018). MOOCs: A comparative analysis between Indian scenario and Global scenario. International Journal of Engineering & Technology,7(4.39)854-857 Website: www.sciencepubco.com/index.php/IJETE

[5] Pilli,O, Admiraal, W,and Salli, A(2018). MOOCs: Innovation or Stagnation? Turkish Online Journal of Distance Education, 19(3), 169-181

[7] Stephen Downes (2012) Connectivism and Connective Knowledge, Essays on meaning and learning networks, National Research Council Canada, Version 1.0 – May 19, 2012

[8] https://www.onmanorama.com/career-and-campus/top-news/2022/06/13/2-cr-students-pursuing-higher-education-swayam-portal.html

[9] Online Faculty Development Programme (FDP) - BRAOU. http://www.braou.ac.in/pdfs/Online_Course_MOOC.PDF

[10] https://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html

[11] http://timesofindia.indiatimes.com/articleshow/81986766.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

[12] Study Webs of Active Learning for Young Aspiring Minds –

[13] https://cleartax.in/s/study-webs-active-learning-young-aspiring-minds-swayam-scheme

[14] https://www.ugc.ac.in/pdfnews/2727945_SWAYAM-Regulations-2021.pdf