Scope of Massive Open Online Courses during Undergraduate Medical Training in India

Recently, University Grants Commission (UGC) of India gazette-notified “University Grants Commission (Credit Framework for Online Learning Courses through Study Webs of Active Learning for Young Aspiring Minds) Regulations, 2021.”[1] As Dean Academic Affairs of the University, I was going through the notification and was pleased to note that compared to its earlier notification of 2016,[2] UGC has increased the limit of percentage of courses in a semester that can be offered through “Study Webs of Active Learning for Young Aspiring Minds (SWAYAM)” to 40% from existing 20%. Subsequently, UGC released a list of 83 undergraduate (UG) and 40 postgraduate (PG) courses being offered through SWAYAM online platform for July–October 2021, semester.[3] Duty bound, my office forwarded all the letters to the constituent colleges of the University for perusal and suitable action.

It was extremely painful for me as the Principal of the constituent medical college of the University to write a reply to these letters to the University, stating that UGC recommendations can’t be implemented as the regulatory body, does not allow such online teaching and credit transfer. But, my spell of worries far-extended as I realized that even if permission is granted by regulatory body, it won’t be possible to offer any of the courses under current format of UGC offered courses through SWAYAM.

First, none of the 83 UG courses belong to medical field or can be of use for UG medical students. Second, UG medical sessions in India are not of the duration of July–October. As such, opportunities for additional content and courses for UG medical students are limited. Thus, tailor-made online courses need to be developed for medical UGs. Recently, released module on online learning and assessment provides the desired mandate for such courses,[4] particularly during COVID pandemic. Although medical training needs face-to-face interaction and experiential learning, massive open online courses (MOOCs) can supplement the traditional UG medical teaching.[5]

A tailor-made MOOC has already been made available for PG medical students and faculty of medical institute across India, titled ‘Basic Course in Biomedical Research’, offered by the Indian Council of Medical Research-National Institute of Epidemiology (ICMR-NIE), Chennai, through SWAYAM program of Ministry of Education.[6,7] Another tailor-made online course is ‘Prescribing Skill Course for Indian Medical Graduates’, being offered by the ICMR and National Virtual Centre Clinical Pharmacology.[8] Similar need-based, tailor-made courses can be designed for UG medical students and offered at a time adjustable to the regular schedule. Some of the opportunities provided by the new competency-based UG curriculum, as gazette notified in the ‘Regulations on Graduate Medical Education (Amendment), 2019’, where existing MOOCs may be helpful or tailor-made MOOCs can be designed, needs further deliberation.[9,10]

Undergraduate medical students may be allowed to undergo part of training during Foundation course of 1 month through MOOCs. This may particularly be useful when the session has already been delayed due to COVID-19 pandemic and regulatory body has allowed the completion of the foundation course through 1–2 h sessions daily, spread over months, and when colleges are already running on online mode. Furthermore, there is no possibility of commencing next session on-time. Some of the existing MOOCs available on SWAYAM, which may be offered to UG medical students during foundation course are - Communication skills (12 weeks duration) and Communication skills, modes and knowledge dissemination (8 weeks). The topics for which MOOCs can be designed for foundation course are - basic life support, first aid, biosafety, handling biomedical waste, and professionalism and ethics.

Another window provided by new curriculum for introducing MOOCs to MBBS students is the electives of 2 months to be introduced after final part 1 UG medical training.[11] Already available MOOCs on SWAYAM platform, such as basic human genetics (6 weeks), immunology (12 weeks), health research fundamentals (8 weeks), and academic and research report writing (8 weeks), can be offered during 1st block electives. Hopefully, regulatory body will duly consider the option. Other areas where MOOCs can be designed for electives during MBBS course are pharmacovigilance, basics of infection control, and bioinformatics. If required, such MOOCs for electives can be delivered in blended fashion.

As one search through the available MOOCs on SWAYAM, one will realize that the MOOCs which can be made available to MBBS students can be counted on fingertips. Hardly, any MOOC has been designed by a medical college faculty in India. Lack of regulatory body mandate is probably one of the reasons, besides lack of faculty training in designing and delivering a course through MOOC. With more and more reliance on online means, albeit a forced one during COVID, adoption of relevant MOOCs by regulatory body, identification of areas where MOOCs can be developed, capacity building and providing incentives to those faculty members who develop and offer MOOC will surely improve the quantity and quality of
MOOCs available for UG medical students in India, thus supplementing traditional teaching in a big way.

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**References**

1. University Grants Commission. University Grants Commission (Credit Framework for Online Learning Courses through Study Webs of Active Learning for Young Aspiring Minds) Regulations; 2021. Available from: https://www.ugc.ac.in/pdfnews/2727945_SWAYAM‑Regulations‑2021.pdf. [Last accessed on 2021 Jun 10].

2. University Grants Commission. UGC (Credit Framework for Online Learning Courses through SWAYAM) Regulation; 2016. Available from: https://www.ugc.ac.in/pdfnews/5963385_UGC‑(Credit‑Framework‑for‑Online‑Courses‑through‑SWAYAM)‑Regulation‑2016.pdf. [Last accessed on 2021 Jun 10].

3. University Grants Commission. Letter Enlisting UG and PG Courses being Offered through SWAYAM for July–October, 2021 Semester. Available from: https://www.ugc.ac.in/pdfnews/2094059_VC‑letter‑website.pdf. [Last accessed on 2021 Jun 10].

4. National Medical Commission. Online Learning and Assessment Module. Available from: https://www.nmc.org.in/wp-content/uploads/2020/11/Module‑8‑Online‑learning‑and‑assessment‑17-1-20‑version‑final‑for‑uploading‑converted.pdf. [Last accessed on 2021 Jun 11].

5. Mahajan R, Gupta P, Singh T. Massive open online courses: Concept and implications. Indian Pediatr 2019;56:489-95.

6. National Medical Commission. Basic Course in Bio-medical Research – Online Course for Postgraduates Medical Students and Medical Teachers. Available from: https://www.nmc.org.in/wp-content/uploads/2021/02/Reserach_Methods_Flyer_2ND_BULLET.pdf. [Last accessed on 2021 Jun 11].

7. National Institute of Epidemiology. Basic Course in Biomedical Research. Available from: http://nie.gov.in/niecer/bcbi/index.htm. [Last accessed on 2021 Jun 11].

8. Indian Council of Medical Research. Online Prescribing Skills Course for Indian Medical Graduates. Available from: https://main.icmr.nic.in/content/icmr‑online‑prescribing‑skills‑course-indian‑medical‑graduates‑img. [Last accessed on 2021 Jun 12].

9. National Medical Commission. Competency Based Undergraduate Curriculum. Available from: https://www.nmc.org.in/information‑desk/for‑colleges/ug‑curriculum. [Last accessed on 2021 Jun 12].

10. Medical Council of India. Regulations on Graduate Medical Education (Amendment); 2019. Available from: https://www.nmc.org.in/ActivitiWebClient/open/getDocument?path=/Documents/Public/Portal/Gazette/GME‑06.11.2019.pdf. [Last accessed on 2021 Jun 12].

11. Medical Council of India. Electives. Available from: https://www.nmc.org.in/wp‑content/uploads/2020/08/Electives‑Module‑20‑05‑2020.pdf. [Last accessed on 2021 Jun 12].

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