



INTRODUCTION OF COURSERA LEARNING IN FORMATIVE ASSESSMENT OF COMPETENCY BASED MEDICAL EDUCATION FOR FIRST MBBS STUDENTS

Medical Science

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ABSTRACT

Coursera became the most popular massive open online courses (MOOC) during the online learning in this COVID-19 pandemic. It works in collaboration with universities globally to offer online courses, certifications and degrees. Coursera learning has been introduced at our institution for the first time as a part of formative assessment for phase-1 MBBS students. 3 topics from Physiology, 7 from Biochemistry and 1 from Anatomy were selected by the respective faculty and were given to phase-1 MBBS students of 2019-20 batch. They were asked to complete one course from each subject and submit their certificates to their respective mentors. Each course had 4 weeks duration with video lectures and reading materials and the assessment was done by quiz or peer graded assignments. The most interesting part of this coursera learning was that quizzes can be practiced number of times till they were understood completely and only the highest grade was reflected in the certificate. This was very much similar to the certified competencies that has been introduced in the new competency based medical education curriculum. 96.5% of phase I MBBS students gave a positive feedback. 93% students opined that this was the first ever online learning platform in their academic career. 82% replied that they got a comprehensive understanding on the topic as the course was allotted after teaching that topic. 58% students said that they got in depth clarity of the subject.

To conclude, Coursera learning has been proved to be a complementary tool for formative assessment to accomplish the goals of new competency based medical education. For the first time, Coursera has been implemented successfully at our institution. Depending on the overall response we will continue it as a part of formative assessment in the next phases also.

KEYWORDS

Coursera, formative assessment, first MBBS students, Massive open online course.

INTRODUCTION

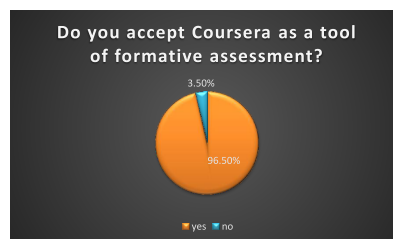
Coursera, the popular massive open online course (MOOC) has gained importance during the online learning in COVID-19 lockdown. It was founded in 2012⁽¹⁾. It works with universities globally. Princeton, Stanford, the University of Michigan and the University of Pennsylvania were the first universities to work with coursera⁽²⁾. Very few studies were done on the effectiveness and perspectives on coursera learning worldwide. Aboshady OA et al⁽³⁾ concluded that students showed a positive attitude towards the learning experience though only about 6.5% actively enrolled in the courses. The impact of coursera learning has increased in medical education. In 2013, 98 free courses were made available in the fields of health and medicine⁽⁴⁾. According to Emanuel EJ⁽⁵⁾ these courses were possibly a solution for the challenges in medical education. Competency based medical education (CBME) which has been introduced all over India for MBBS batch 2019-20, insists on assessment that is more continuous and frequent. Eric et al⁽⁶⁾ describes the importance of ongoing assessment in CBME. The present study aims at introducing coursera learning as a tool for formative assessment in the medical education.

MATERIALS & METHODS

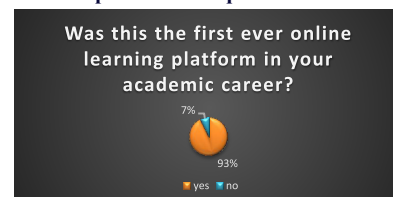
150 students of phase-1 MBBS 2019-20 batch were asked to enroll in Coursera that has been provided by our university. As a tool of formative assessment, they were asked to complete one course from each subject and submit their certificates to their respective mentors. The topics from Anatomy, Physiology and Biochemistry were selected by the faculty of the respective departments. The students were given one month time for their completion. Student feedback was taken regarding the implementation of Coursera learning as formative assessment.

RESULTS

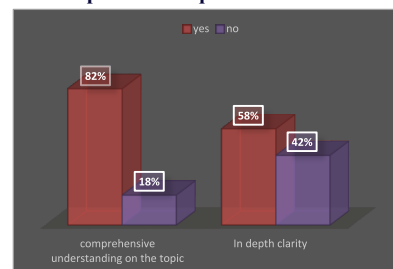
All the students completed the certified coursera topics allotted to them. The following graphs depict their feedback on coursera learning.



Graph 1: student responses for the question 1.



Graph 2: student replies for the question-2.



Graph 3: student feedback on coursera learning

DISCUSSION

Competency based medical education (CBME) involves a robust and multifaceted assessment system as reported by Norcini JJ⁽⁷⁾.

Assessment of the students facilitates the developmental progression of the competency. The sudden unpredicted lockdown due to the pandemic disturbed the implementation of CBME. Online learning methods had to be imposed in medical education during the lockdown. Coursera was thought to be introduced as a part of formative assessment for the phase-1 MBBS students. The most interesting part of this Coursera learning was that quizzes can be practiced number of times till they were understood completely and only the highest grade was reflected in the certificate. This was very much similar to the certified competencies in CBME. Eva and Regher⁽⁸⁾ described that feedback is the key component that guides the students. Kogan et al⁽⁹⁾ reports that we still lack a full understanding of how best to utilize the assessment tools available. Feedback is the single most important factor that has shown to have the maximum impact on student learning according to Rushton⁽¹⁰⁾. The present study reports the effectiveness of Coursera learning and its implementation as a formative assessment tool in phase-1 curriculum. From the study it can be observed that 96.5% students accepted Coursera as a tool of formative assessment. 93.5% agreed that this was the first ever online learning platform in their academic career. This reflects the enthusiasm of the students to learn something new. When the student feedback regarding the comprehensive understanding of the subject was analysed, 82% replied 'yes'. 58% opined that they could get in depth clarity on the subject. This study depicts the student feedback and implementation of Coursera as a tool of formative assessment.

CONCLUSION

Coursera has been the first ever online learning platform for the phase-1 MBBS students at our institution. CBME has been implemented from this batch and Coursera learning has been proved to be a complementary tool for formative assessment. For the first time, Coursera has been executed successfully at our institution. Students gave a positive feedback towards Coursera learning.

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