Short Communication

Challenges of E-Learning During Covid-19 Pandemic: An Experience Of Educators And Students Of Faculty Of Medicine And Defence Health (FMDH), National Defence University Of Malaysia (NDUM)

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Abstract

The COVID-19 pandemic has changed the medical teaching paradigm worldwide. Online classes and assessments have been introduced using many teaching platforms. Medical faculties in Malaysia faced many challenges in the past two years when most clinical teachings were halted. Students were also struggling to adapt to the new online learning versus traditional classroom settings. This paper describes the experience of educators of the faculty of medicine of NDUM.

Keywords: E-Learning, Moodle, Perception, Assessment,COVID-19

Online learning has become the primary method of education during the COVID-19 pandemic globally. It has given challenges to the educators as well as students in adopting this new norm of schooling. Educators and students who faced obstacles during online teaching-learning are adapting to a new model versus a traditional classroom setting, technical issues such as poor wifi reception, computer knowledge, time management, and self-motivation.

When the Malaysian government first announced in March 2020 to suspend all face-to-face education in schools and higher institutions due to the COVID-19 pandemic, all faculty members of UPNM and other Malaysian institutions were caught by surprise. The pandemic has not only disrupted the expected life of individuals but has threatened medical education. Lecturers scrambled to equip themselves with knowledge on online teaching. It had hit heavily on lecturers who were non-computer savvy. It was then Moodle (Modular Object-Oriented Dynamic Learning Environment) became famous as an interactive e-learning tool. Just before the movement control order (MCO) in March 2020, the medical faculty organized a short tutorial on familiarizing the UPNM e-learning moodle. Then, we were introduced to Microsoft Teams as an online teaching platform in conjunction with e-learning moodle. Later we learned about other teaching platforms such as WebEx, Zoom, and Google meet. We were also taught how to conduct an online assessment using Moodle platform.

Moodle v1.0 was first released as an open software system in 2002 by its creator Martin Dougiamas who was raised in the Australian outback who wanted to make a difference in distance learning. While working as a post-graduate student at the Curtin University of Technology of Australia in 1999, he designed Moodle and used it to solve problems with WebCT. Moodle has now been modified and developed by many users, especially educators of schools and university communities, and by private companies as an e-learning platform with an estimate of more than 200 million registered users worldwide. Presently, there are Moodle Mobile, Moodle Cloud, and Moodle Workplace[1]. In 2013 the first MOOC (Mass Open Online Course) was released and became the world's most utilized learning management system[2].

Benta et al. [3] found that Moodle platform improved professor-student communication and increased

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students' satisfaction with courses. Students' attendance was much better in online learning than traditional lectures (96% versus 83%). They also observed that Moodle platform has proven helpful for assignment submission, where many students submitted it compared to email submission (84% versus 34%). We noticed a similar observation whereby laboratory practical assignment submission was almost 100% compared to in-person submission before implementing online teaching. Other educators have found that Moodle developed students' cognitive ability, promoted discussion participation, and cooperated with peers[4].

The Moodle platform of UPNM or eLearning UPNM contains announcements, discussion forum, assignment, quiz (multiple-choice, single answer, essay type), questionnaire, survey, lesson plan, and feedback. A forum was posted in the e-learning Moodle platform to the year one medical student exploring their perceptions on online learning versus the traditional classroom setting in March 2021, almost a year after an e-learning experience. Some of the advantages stated by students were: they were able to watch recorded lectures several times for better understanding of lectures delivered, and it was helpful for revision; they were no longer shy or afraid to ask questions compared to classroom setting; slides can be seen very clearly compared to the classroom setting especially students in the back row; they saved time on the preparation to go to classrooms (such as proper clothing, walking to classrooms); most importantly they had good family bonding and support whereby food was served at home, and they saved money and time. Some of the disadvantages listed were in chronological order: distraction from noises made by family members, sharing of computers with other siblings, the expectation of parents for them to do housework, no socialization with peers, less motivation to study since it is not a university environment and lastly poor wife connection.

While online teaching may be more suitable for preclinical students, it may not be ideal for their senior counterparts during the pandemic. Clinical-year students must have patient contacts and good communication skills in history taking and patient management. Students at Imperial College London were introduced to teleteaching through computers at hospital sites as an alternative to clinical placements, but student-patient interaction was still lacking[5]. By not being able to engage with patients, students lack

clinical skills. During the MCO, The Malaysian Medical Council (MMC) made a statement that only the theoretical component of the posting can be taught and assessed online for the clinical years. At the same time, the hands-on teaching and patient interaction are halted and postponed until the MCO was lifted. Some institutions tried to use simulation software to cover the clinical component of the respective posting, such as creating a scenario for the students with relevant pictures. Videos demonstrating communication and clinical skills have also been used, which were later used for discussion among the students.[6] However, this setting can never replace bedside and face-to-face clinical teaching.

Some of the challenges faced by clinical teachers of FMDH include time constraints, inadequate infrastructures, unstable internet connections, students' engagement problems, and online assessments.[7] Students faced poor Wi-Fi connections either at home or hostels and resorted to their mobile data to participate in the online classes; unfortunately, the data could not support video teaching and thus resorted to only audio teaching. Psychiatric teaching was improvised by converting bedside teaching slots into online interactive problem-based discussion and role-plays, which can be assessed by MST as well as Youtube. The videos showed interview sessions between psychiatrists and simulated patients, demonstrating various symptoms of psychiatric ilnesses[7]. This was indeed an excellent initiative to ensure good bedside teaching is not all lost!

Developing online assessments was also a challenging process. Many medical faculties have designed innovative ways to assess the students. For preclinical disciplines such as Biochemistry, Anatomy, Physiology, Pharmacology, Parasitology, and Microbiology, we uploaded theory examination in the Moodle platform of the multiple true-false, one best answer, and essay type questions. The objective structured practical examination (OSPE) which was conducted face-to-face previously had to be performed online by inserting specific diagrams of the instruments, gross specimens, or blood and urine samples followed by questions. Invigilation of the examination was conducted by a live proctoring method whereby a group of 4 or 5 students was monitored by one lecturer, with a lateral camera (using handphones) set at students space showing their complete picture in front of their laptop performing the examination. To ensure students do not surf the internet or other sources during the examination,

each of them is required to install a secure exam browser (SEB) software. Marking examination was also conducted online using the e-Learning Moodle platform. Some students remarked that they preferred writing to typing answers for essay-type questions, especially when drawing or making a flow chart while writing the answers. Interestingly, a group of lecturers from Medical College Kanpur, India, conducted the gross anatomy examination by several interview methods such as telephone calls, WhatsApp video calls, or Zoom meetings with strict assessment procedure. Faculty members found that the interview methods the students preferred for evaluations had no significant impact on their obtained scores[8].

Conclusion

Currently, Malaysia is in its worst third wave of COVID-19 infection with cases over 20,000 daily, and it does look like online medical teaching will be the norm practice for few years to come. Challenges faced in the past two years in medical education must be overcome, and innovative instructions must be addressed, especially for the clinical years. Online assessments have to be improved to reflect the actual performance of the students. Internet connections must be improved and made accessible to remote areas. When the pandemic is over, will the e-learning be continued? That will be a significant concern among educators, where the teaching paradigm may shift to impact education worldwide post-pandemic.

Recommendations

Medical educators must equip themselves with innovative ways of imparting knowledge to the medical students; they can no longer depend on markers and whiteboards or chalks and blackboards.

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