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## ABSTRACT

With the increased and innovative use of on-line technologies in the healthcare industry, many medical institutions around the world have been using Virtual Patients as a part of their curricula for delivering both undergraduate and postgraduate clinical training. A virtual patient has been defined as an interactive computer simulation of real-life clinical scenarios for the purpose of medical training, education, or assessment.

This research project was conducted in the Faculty of Medicine, University of Colombo to develop and implement online virtual patients in its learning management system. The mode of Virtual Patients developed was online case scenarios.

A feasibility study and a need analysis were conducted to assess the usage and attitudes towards online learning among medical students and their needs for online case scenarios. Two questionnaires were distributed for a whole batch of the faculty. Both studies successfully carried out with 5% error level at 95% confidence interval.

After the analysis, the results showed that sufficient physical resources are available with students for implementing an online learning program. They had positive attitudes towards online learning. Majority of students needed training on online learning and many of them preferred to have the training just after entering to the faculty.

As far as cardiovascular medicine is concerned, Majority of students preferred to have online case scenarios in the faculty learning management system and they wanted to have them as an adjunct to the current clinical training. Many students agreed with that the online case scenarios are helpful in learning History taking, examination and making clinical decisions.

Cases were developed in the locally installed moodle system of the researcher's computer. The uploaded subject contents were validated by a content expert in the faculty. Activities like choices and quizzes were included and multimedia content added with each case scenario accordingly. Tools for evaluation were incorporated with the online module of case scenarios.

After the development process, the implementation was done in the faculty Moodle platform successfully. The evaluation of the project was done with ten medical students and many of them stated that the on-line learning tool using Virtual patients were relevant and interactive. Many of them answered well for the questions and assignments after each lesson.