

Experience in teaching ICT for medical students through Moodle

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Abstract

Moodle is the most widely used free open-source-learning platform that serves educators and learners across the globe to create online courses. A resource is an item that a teacher can use to support learning, such as a file or link. An activity is a general term for a group of features in a Moodle course that makes the students to interact with the teacher or with other students. Student interactions with the Moodle resources and activities can be assessed using Moodle logs.

Moodle course contents can be mainly classified as resources and activities. Resources includes files (links to files; eg. PowerPoint, PDF), pages (HTML pages with an editor created by the teacher), uniform resource locators (a web link for the students to reach on their web browser) and books. Activities includes quizzes, assignments, questionnaires, forums and surveys. Quiz allows teachers to design and set quiz tests. Assignment enables teachers to grade and give comments on uploaded files as students' assignments. The Questionnaire enables teachers to collect feedbacks.

Faculty of Medicine, University of Kelaniya started using Moodle based virtual learning as an intranet service in 2008 and at present, the Faculty uses Moodle based Computer Assisted Learning (CAL) system of University of Kelaniya to deliver teaching and learning materials to students. Over the period of 8 years ICT Centre of Faculty of Medicine delivered the ICT course through Moodle platform and the ICT course consist of introduction to computers, internet and email, information literacy, word processing, electronic presentation, spreadsheet, image and video editing and R-programming language. ICT course is delivered during first 3 terms of the 1st year in the medical curriculum and this study was done to assess the 1st year medical students' Moodle usage pattern.

We analyzed the ICT course log of medical students in the first two terms which was held from 01/02/2016 to 30/06/2016. Hundred and seventy medical students were in the 1st year and the practical classes were conducted on group basis (i.e. approximately 60 students per a class) and each practical class had 3 hour sessions. All together 45 classes were conducted using Moodle during the 1st and 2nd semesters which contained 48 assignments and the breakdown as follows; 15 Moodle resources containing 12 files, 2 Pages and 1 URL and 33 Moodle activities containing 7 Quizzes, 10 Assignments and 16 Questionnaires.

Moodle course log related to ICT module was downloaded. We considered the number of "views" and "posts" for the analysis. View is an event where the user has visited the course, activity or resource, whereas post is an event where an entry is made to Moodle database such as quiz attempt, file submissions or questionnaire submission. We calculated the average number of views and posts

for each resource and activity by dividing relevant total log entries with number of available resources and activities in the ICT course.

Total 23,395 records were found for the period. Number of records relevant to students' entries were 21,509 (92%) and the rest were administrator 339 (2% and teacher 1547 (7%) logins. 21,258 (99%) hits were recorded through the faculty network and the rest were from the other fixed and mobile data networks during the study period.

The average number of "views" per resource during the course as follows; 107 for page, 103 for file, 104 for URL and the average number of "views" per activity as follows: 314 for quiz, 248 for assignment and 109 for questionnaire. The average number of "post" per activity during the course as follows; 92 for quiz, 59 for assignment, 55 for questionnaire. Overall average views per activity and resource were 194, 104 respectively.

Comparison of the average number of views for term 1 vs term 2 as follows; 368 vs 241 for quizzes, 155 vs 72 for questionnaire, 110 vs 100 for files and the average number of posts were 112 vs 66 for quizzes and 77 vs 38 for questionnaire.

Limitations of the study as follows; calculation of average number of views could be overestimated as there could be multiple visits by the same student, also ICT module is not a compulsory course and number of student's participation in the practical were varied during the study period.

According to the results, Quiz and Assignment have the highest average number of views and posts and other resources such as files, page and URLs have less number of views. Therefore, Moodle activities (quiz and assignments) should be encouraged instead using Recourses (reference materials).

Keywords: Moodle course Log analysis, ICT course, Moodle activity, Views, Posts