Formative and Summative Assessment in Veterinary Pathology and Other Courses at a Mexican Veterinary College

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ABSTRACT

The Faculty of Veterinary Medicine and Animal Science of the National Autonomous University of Mexico (UNAM) uses the Moodle learning management system for formative and summative computer assessment. The authors of this article—the teacher primarily responsible for Moodle implementation and a researcher who is a recent Moodle adopter—describe and discuss the students' and teachers' attitudes to summative and formative computer assessment in Moodle. Item analysis of quiz results helped us to identify and fix poorly performing questions, which greatly reduced student complaints and improved objective assessment. The use of certainty-based marking (CBM) in formative assessment in veterinary pathology was well received by the students and should be extended to more courses. The importance of having proficient computer support personnel should not be underestimated. A properly translated language pack is essential for the use of Moodle in a language other than English.

Key words: certainty-based marking, CBM, computers, Moodle, assessment, pathology

INTRODUCTION

From the early use of multiple-choice questions and machine-readable forms, computer-graded assessment has developed to include sophisticated online systems that may incorporate interoperability and be used in students' own homes. Systems have been developed by universities and companies, and as part of virtual learning environments.[1] Even the simplest of multiple-choice quizzes can enable students to check their understanding of a wide range of topics, whenever and wherever they choose to do so.[2,3] Regular online tests have been shown to improve performance on an end-of-year examination.[4,5] Moodle[6] is a learning management system (LMS) designed to provide educators, administrators, and learners with a robust, secure, and integrated single system to create personalized learning environments. Moodle is often used for assessment, both formative (to enhance learning) and summative (to provide a grade). Mexico is the country with the fifth most installed Moodle servers.[7] There are more than 50 colleges of veterinary medicine in Mexico, but only one is currently accredited by the American Veterinary Medical Association (AVMA). The purpose of this paper is to review the origin and progress of Moodle-based assessment at the only AVMA-accredited college of veterinary medicine in Mexico.

METHODS

The authors of this article—the teacher primarily responsible for Moodle implementation and a researcher who is a recent Moodle adopter—analyze and discuss the initial setup and evolution of Moodle assessment at the Faculty of Veterinary Medicine and Animal Science of the National Autonomous University of Mexico (FMVZ-UNAM). We describe both the official Moodle 1.9 (EXAMS) server for departmental (summative) tests and an experimental Moodle 2.6 (PAPIME) server for formative assessment (http://apuntesenlinea.fmvz.unam.mx).

Organization of the Veterinary Pathology Courses

General Veterinary Pathology and Systemic Veterinary Pathology are compulsory core courses for the Bachelor in Veterinary Medicine and Animal Science program at UNAM. The syllabus for the Veterinary Medicine program[8] and the General and Systemic Veterinary Pathology courses are available online.[9,10]

Veterinary Pathology Groups

In the winter semester, there are nine (sixth-semester) groups taking General Veterinary Pathology and five (seventh-semester) groups taking Systemic Veterinary Pathology, while the summer semester has the reversed situation. Each group usually has one (different) lecturer for the duration of each semester.

Assessment and Grading

For summative assessment in both pathology courses, all students in all groups must take the same four departmental computer-based partial exams. The partial departmental exams comprise all parts of the syllabus that have