

TECHNOLOGY ENHANCED LEARNING, A CASE STUDY IN PHARMACOLOGY CLASS

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Introduction:

Teaching and Learning through web-based learning platforms is a complementary method of conventional teaching and learning approaches with potential to produce meaningful learning experiences and further engage and motivate students. The study of Pharmacology in the Pharmacy Degree at Polytechnic Institute of Porto is normally taught face-to-face. With this paper we aim to share and describe a technology enriched environment to the teaching of this subject.

Objectives:

Analyze the Pharmacology curriculum and propose technology enriched scenarios. Additionally we aimed to develop and assess two e-learning modules and supplementary materials. Methods: Using Moodle as an LMS, and commercial software, we were able to implement several technology enriched scenarios that make part of two different modules of Pharmacology. The modules were offered as mandatory training for the third year students. Knowledge retention was assessed 10 weeks later in a written exam.

Results:

Students enrolled in both modules and engaged thoroughly in learning activities and learning contents. All students had a good performance in online quizzes. After 10 weeks, knowledge retention was analyzed via written test. Students were grouped according to their final achievement in the discipline. Students with high and medium achievement grades showed greater knowledge retention than other groups. There was no difference between genders.

Conclusions:

A technology enriched environment was successfully designed and implemented for complementing the teaching of Pharmacology. Knowledge retention does not seem to be associated with shifting paradigm to online learning, but is probable related to student characteristics or motivations for learning. We did not aim to demonstrate superiority of technology enriched learning in student performance. Much more important, is to demonstrate that these initiatives can be achieved effectively, following pre-established teaching methods and above all, does not negatively affect student performance.

keywords: distance education, educational technology, online courses, web based instruction, pharmacology, instructional design.