The added value of Moodle quizzes to medical statistics knowledge gain

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Abstract

Aim: In this study, the Moodle platform was used to provide undergraduate students with e-testing quizzes environment to improve their medical statistics learning outcomes. *Materials and methods*: This was a prospective study conducted with first year medical undergraduate students during 2018-2019 academic year, English section attending the Faculty of Medicine, Iuliu Haţieganu University of Medicine and Pharmacy. Eleven Moodle quizzes each covering one topic were available for 6 days after the presentation of the topic in face-to-face teaching environment. A quiz was open to be filled once, with attempts submitted after time expires not counted. The use of Moodle quizzes on the knowledge gain was compared between those with valid participation (counted as at least one, four, or three quizzes with a mark ≥ 5) as compared to those without a valid participation. *Results*: One hundred seventy-five out of 187 students were eligible for the study. The participation varied from 17% (30/175) to 42% (74/175. The quizzes marks varied from 1 to 10; 73% to 98% of students who submitted the quiz achieving the threshold of 5. Sixty-nine students never participated or have no valid participation (mark≥ 5). The number of valid participations varied from 1 (23 students) to 11 (7 students). The number of point to the theoretical exam positively correlated with the number of Moodle passed quizzes ($\varrho=0.31$, $p<0.0001$). The group of students with valid participation (24 points at least one, 25 points for the other two criteria) archived a median higher with 2 points as compared to those without participation (p-values < 0.002) and more than one valid participation increase the median with one only point. *Conclusion*: Extra work verification of medical statistics knowledge is reflected in the knowledge again.

Keywords:
Moodle; Online Quizzes; Medical Statistics; Undergraduate Students