Case-based Learning Using Self-Regulated Modules

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Abstract

Introduction: Case-based learning (CBL) is well known to help health-care students to integrate theory into practice by developing critical thinking skills and solving clinical problems. Some of the traditional CBL limitations are reduced student satisfaction in learning and the need for more instructors to lead the discussions in groups. **Purpose:** The purpose of this study is to use case-based scenarios in self-regulated modules to help students gain an interactive learning experience and help with the retention of learning materials in various subjects. The usage of this type of technology may enhance a better understanding of clinical skill practices. **Methods:** Three self-regulated modules that consist of micro-videos, cases, and 3-D STL images were created on the Canvas application. A cohort of 23 second-year dental hygiene students was chosen as the sample group and randomly split into two groups. Twelve students in Group A were given access and had two weeks to complete the required case study assignments on Canvas. Eleven students in Group B did not have access to the case-based microlearning course. A case-based exam on ExamSoft and a nine questions QuestionPro survey were given to all students after the two-weeks period. **Results:** The exam results from 22 second-year dental hygiene students indicated there were no significant differences between the two groups. The survey results showed that 80% of the students in Group A thought that these modules will help them with patient care. Majority of the students recommended having these Canvas modules in the first year's second semester when they start seeing patients in the clinic, and that the Periodontal Classification module was the most helpful. **Conclusion:** There is a potential for implementation of self-directed case-based modules in the dental hygiene curriculums. Future studies would need to be conducted using a larger participant size and statistical analysis.