Case Study-Based E-Learning Modules In Medical Education: A Delicate Balance of Innovation, Time, and Educational Outcomes

Tanya Custer, MS, R.T.(R)(T), Kimberly Michael, MA, R.T.(R), RDMS, RVT

Department of Medical Imaging & Therapeutic Sciences, University of Nebraska Medical Center

**Issues/Methods**

**Issue to be addressed:** Active learning, e-Learning, and Blended learning are all terms familiar to faculty who strive to improve educational outcomes and meet institutional missions. This presentation will focus on the authors’ journey in creating 53 case study-based e-Learning modules including: highlights, challenges and student feedback and outcomes.

**Method:** As part of a required course, students reviewed the modules in an online, blended or flipped classroom. Once the module had been reviewed, students were asked to complete a short survey to gather both qualitative and quantitative data. This data was used to explore the beliefs and perceptions of imaging sciences students in regard to the use of the e-Learning modules within the curriculum. Questions within the survey gathering information regarding the quality of the module, student confidence in topic knowledge after reviewing the module, quality of the quizzes and interactivity, ease of navigation, technical difficulties, strengths and weaknesses and overall enjoyment in viewing the module.

**Outcomes/Conclusions**

**Outcomes:** Various modules have been administered to approximately 22 undergraduate medical imaging students, 8 degree-advancement students, and 30 post-primary imaging students. A total of 390 explanatory responses have been coded and categorized. The case-based modules have been employed to enhance the online, blended and/or flipped classroom. Preliminary data from student feedback reports on the quality of the module, student confidence in topic knowledge after reviewing the module, quality of the quizzes and interactivity, ease of navigation, technical difficulties, strengths and weaknesses and overall enjoyment in viewing the module. Analysis of these preliminary data indicate that students enjoy the modules and view them as an effective teaching tool. Feedback from students has also helped to identify improvements needed within the modules.

**Conclusions:** Case study-based e-Modules are an effective method to introduce or augment student education when teaching/learning pathology. Recommendations for designing an e-Module include use of a unique pathology, multiple case studies which demonstrate the pathology, multiple formative quizzes, numerous interactions, use on any device, and no more than 15 minutes for completion time. E-Modules take over 100 hours to design; an instructional designer familiar with Articulate Storyline or similar software is recommended.

**References**


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