EMERGENCY NURSING EDUCATION SHOWCASE

The Emergency Nursing Education Showcase is a collection of scholarly work demonstrating techniques and the outcomes of Emergency Nursing Education from across Canada.

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Flipping the virtual classroom: A novel approach to critical care education in undergraduate nursing

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The Problem

Case studies had been adopted as an active learning strategy in delivery of critical care nursing content at an undergraduate level. In the setting of a flipped classroom, students completed assigned readings independently prior to leading case discussions in weekly face-to-face seminars. Owing to the unexpected COVID-19 lockdown in March 2020, this model was rapidly transitioned to an asynchronous online forum where real-time interactions and instructions were not possible. In keeping with the goals of active self-directed learning, an alternative method of knowledge translation was needed to disseminate complex critical care concepts to pre-registration nurses.

The Solution

Prior to the pandemic, the Canadian Alliance of Nursing Educators Using Simulation (CAN-Sim) and the Emergency Nurses Association (ENA) made use of the Shareable Content Object Reference Model (SCORM) to create post-graduate-level virtual simulations and interactive e-courses. SCORM is a useful eLearning instrument characterized by engaging learner-centric features such as multimedia contents and graded interactivities. Based on favourable anecdotal experiences of these resources, a SCORM on upper gastrointestinal bleed management was developed with PowerPoint and trialled with 15 undergraduate learners. Using the SCORM, learners acquired knowledge through a series of textual information and adaptive interactivities. Case knowledge was then confirmed and assessed in an asynchronous online plenary.

The Evaluation

In creating this learning package, care was taken to maximize its reach across a diversity of learning styles in the virtual space. PowerPoint emerged as the most appropriate authoring tool, due to its ease of use and adaptivity to a Learning Management System (LMS) that was not optimized for SCORM. Built around a set of predetermined discussion questions and learning objectives, knowledge was transferred through a series of carefully curated texts and a variety of interactivities, such as sequencing, true or false, branching, and graphics labelling. Where direct instruction is needed, Socratic questions and mini quizzes were used to promote introspection and critical thinking. Through interactivities, learners reported a high level of understanding of pharmacology and pathophysiological concepts in the setting of an upper GI bleed.

The use of PowerPoint as the primary authoring tool presented several key challenges. Owing to its limitations as a tool designed for traditional presentations, most activities and information was delivered textually on screen. While favourable to visual and read/write learners, the absence of a live presenter and narration represented a challenge for aural and tactile learners. PowerPoint was also unable to showcase the full range of features of SCORM created by dedicated professional authoring tools. Activities such as drag and drop, Likert scales and short answers were not possible in the PowerPoint runtime environment. Most importantly, an assessment framework was absent. Key metrics such as time spent on module and scoring was unable to be reviewed

and collected. Lastly, development of a SCORM in the absence of a professional authoring tool proved to be resource and time intensive, as it required a considerable technical proficiency with PowerPoint.

Sustainability

Due to low levels of adoption of eLearning prior to the pandemic, technologies like SCORM were seldomly deployed in undergraduate nursing education. In envisioning the future of nursing education, SCORM represents a powerful alternative to traditional passive eLearning instruments, such as online discussion boards and pre-recorded lectures. Successful and sustainable implementation of SCORM, however, requires thoughtful realignment of course content to meet the goals of active self-directed learning in an increasingly virtual learning environment. A concerted effort to optimize of LMS to SCROM on the part of the learning institution is also required. Lastly, a degree of technical competency in all parties involved is necessary in a successful deployment of SCORM in nursing education.

About the Author

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