



SPECIAL GUEST PRESENTATION

Monday, September 23, 2019

12:00-1:00 pm

Wilson Centre Boardroom, Toronto General Hospital

200 Elizabeth St, 1st floor Rm 559

Imagine E-learning that adapts to, rather than bores, you: Combining subjective and objective assessment to personalize and optimize E-learning content delivery

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Adaptive E-learning can combine ongoing subjective (i.e., how well you think you're doing) and objective (i.e., how well you're actually doing) assessment data to identify and specifically address individual learning needs using advanced algorithms based on user metrics and machine learning. It sounds promising and fancy, but which features of the adaptivity lead to more effective learning and better long-term retention? Results from a PhD program of research on an adaptive E-learning system for teaching airway management skills will be presented, followed by an interdisciplinary discussion of the implications for future studies and educational practices.

Ebbe's primary interests is in learning technology and in maintaining competence in airway management.

The first study of the PhD was a Delphi-based general needs assessment establishing consensus on procedural skills for simulation-based training in anesthesiology. Airway management was highly prioritized, which links to study two and three exploring post specialization training needs in advanced airway management for anesthesiologists using an electronic survey and an E-learning test.

The E-learning test was based on an adaptive E-learning program in airway management build on a platform from "Area9 Lyceum". In brief, the adaptivity works by continuously quizzing and thereby assessing the user. For all questions, the user also indicates confidence on a four-point scale, and the algorithm uses this metacognition combined with the correctness of answers, time usage, and many other factors to determine personalized knowledge gaps which will be addressed by the program. All learning objectives have a corresponding learning resource that can be used as needed.

Next in line is a clarification study that explores which features of the adaptivity that lead to more effective learning and better long-term retention.

Brown Bag session. **RSVP:** mariana.arteaga@uhn.ca