

Archives of Scholarship in Simulation and Educational Techniques (ASSET)

Lead Innovator

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Project Website

<http://www.cureus.com/channels/simulation-archives>

Description of Innovation

We write simulation scenarios (technical reports) in multi-disciplinary teams, with learners from all levels, and publish our scholarly product in a peer-reviewed journal that is indexed with PubMed Central. ASSET, our channel in the "The Cureus Journal of Medical Science", gathers our work under one roof, and provides a home for our Community of Practice (CoP) (1). By involving learners, we facilitate achievement of the CanMEDS roles (2). Our innovation also makes globally accessible, simulation scenarios that are resource-intensive to create, while at the same time encouraging scholarly activity.

Simulation is a commonly used and valuable vehicle for delivering health professionals education (HPE). While educators based in academic centres generally have access to simulation facilities and sophisticated teaching equipment, they may lack the protected academic time to write scenarios. Educators in rural settings are similarly challenged, particularly in distributed provinces like Newfoundland and Labrador (NL). Memorial University's mission states that students must receive the same quality of education wherever in the province they are learning (3), but in reality some are far away from the

simulation laboratory. Rural preceptors with punishing clinical schedules may have even less protected time than their urban counterparts. The challenge, then, is two-fold: finding resources to provide open and accessible simulation-augmented HPE, while enabling, encouraging and recognizing scholarly activity.

Our innovation potentially mitigates both issues. We write simulation scenarios in teams composed of undergraduates from across disciplines, residents, medical education researchers and clinical faculty, and publish them in a peer-reviewed journal. Each team member has a role to play, thereby fulfilling a CanMEDS role like leader, communicator or medical expert (2). Writing simulation scenarios allows students to actively learn patient management alongside contextual matters that affect patient care. For instance to write a scenario involving pregnancy and privacy in the emergency department (4), learners must diagnose and manage a potential ectopic pregnancy while maintaining patient privacy and confidentiality in the face of her anxiously hovering parent. Writing is itself a necessary skill for learners; the process of writing simulation scenarios reinforces the step-wise learning that simulation teaches (5). We feel this enables first and second year medical learners to consider complex simulated scenarios ahead of the actual ones they will encounter later.

Our teams are inter-disciplinary. Our collaborative educational laboratory gathers kinesiology, music and engineering students to work alongside learners from allied health professions. While not everybody can contribute medical knowledge, each learner has a valuable role. For example, an engineering student learns project management and leadership when she or he is tasked with bringing a publication to fruition. A human kinetics student familiar with literature on

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In order to encourage involvement and activity we have launched an inaugural Simulation by Design competition. This competition is primarily meant to promote the development of an online repository of simulation cases that can be freely shared across professions and geographical locations. The simulation cases are published as Technical Reports, all of which are subject to rigorous peer-review and publishing processes; as such they will be indexed in PubMed Central and distributed around the globe. Additionally, by using the Scholarly Impact Quotient (SIQ), a crowdsourcing feature that is unique to Cureus, to score the Technical Reports and choose the winner, we feel that we continuously build our CoP.

The setting for our innovation is our nascent inter-disciplinary laboratory, a natural home for a CoP. Necessary resources are few beyond human. Online connectivity helps to extend the CoP beyond the laboratory's bricks-and-mortar confines. On reflection, we learned that students must be empowered as project managers and given academic rewards in order to feel comfortable placing demands on busy medical faculty.

References

1. Wenger, Etienne. "Communities of practice: A brief introduction." (2011).
2. Whelan et al, "Can we Canmeds", in press
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4. Black, Holly, et al. "Pregnancy and Privacy in an Emergency Department: A Simulated Session." *Cureus* 6.10 (2014).
5. Gagne, Robert. *The Conditions of Learning and Theory of Instruction* Robert Gagné. New York, NY: Holt, Rinehart and Winston, 1985.