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Global Collaborations Using Emerging Technologies to Promote Teaching Innovations

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Nurses are educators and leaders who can stimulate advances in learning strategies by recognizing the diversity and strength of a global teaching team. Collaborating with international experts and incorporating emerging technologies in the classroom can engage students in active learning by applying innovative teaching strategies. The purpose of this session is to discuss interprofessional collaborations, use of emerging technologies, and provide innovative teaching exemplars.

Global Interprofessional Collaborations

Interprofessional collaborations promote team science approaches to improve patient outcomes. The Interprofessional Education Collaborative (IPEC) has updated core competencies in 2016, which includes four main competencies (Interprofessional Education Collaborative, 2016). These IPEC competencies address values/ethics, roles/responsibilities, communication, and teams and teamwork. Nurses can lead the implementation of the IPEC competencies in clinical practice to improve patient outcomes by role modeling these standards in an academic learning environment. Clinical teams of physicians, nutritionists, pharmacists, and respiratory therapists can come together in a telehealth environment to provide consultation with the nurse to guide the care for a patient. People can be located anywhere in the world and connect globally via a distance enabled tool such as telehealth. An example of a global team science approach is inviting international experts to address specific areas of expertise in the classroom setting or in a simulated clinical setting (Shaw, 2018). Global collaborations involve emerging technologies.

Emerging Technologies

A variety of emerging technologies are available to be used and incorporated in learning environments. What and how these technologies can be incorporated in innovative teaching approaches will be discussed. Kolb's Theory of Experiential Learning can easily be applied to global team science, interprofessional collaboration, and emerging technologies (Fewster-Thuente and Batterson, 2018). Kolb's dimensions of "perception" and "processing" directly involve experience, conceptualization, observation, and experimentation. (Kitchie, 2014). Individuals have a concrete experience, they reflect on that experience (reflective observation), they derive meaning from the experience (abstract conceptualization), and they try out or apply (active experimentation) the meaning they have created, thus continuing the cycle with another concrete experience. Simulation is an example of how to apply technology to build concrete experiences for the students (Jeffries, Swoboda, & Akintade, 2016). Simulation may consist of high fidelity or low technical requirements (Richardson & Claman, 2014). The purpose of simulation is to create an environment that is realistic and allows the students to experiment with interventions and monitor the associated outcomes without any harm befalling a patient. Effectiveness of simulation is not based on the cost of the technology, but it is associated with the application of Kolb's concepts of reflective observation, abstract conceptualization, and active experimentation. In addition to simulation, digital videos is another technology that can be incorporated to promote optimal learning. Digital videos are recordings of moving visual images made digitally (Wirihana, Craft, Christensen, & Bakon, 2017). This may be procedural setup videos for new graduate nurse orientation in intensive care units, "how to" videos of a procedure. Incorporating digital technologies in learning environments is one example of how to engage others in active learning strategies. Learning evaluations using a variety of emerging technologies have demonstrated positive outcomes. Active learning occurs from innovative teaching approaches.

Teaching Innovation

Teaching innovation is not about what is taught but how the content is taught to maximize learning. Nursing programs teach general information about disease processes, interventions, and management. Health promotion and wellness aspects of populations are common core knowledge in all nursing programs. What distinguishes innovation in teaching is how to connect with students and engage them in active acquisition of new knowledge, skills, or attitudes. Incorporating technology is a method of innovation, but the actualization of learning occurs when the students take individual responsibility for their own learning. They initiate active involvement in learning based on the culture established by the teacher. Teaching mechanisms such as the Socratic method, debriefing, and reflection operationalize Kolb's experiential learning theory. Innovative teaching approaches are essential to engage students, stimulate learning, and translate knowledge to the bedside when caring for complex patients.

Conclusion

In summary, global team science approaches using emerging technologies can be applied to promote innovative teaching strategies. Telehealth, simulation, and digitalization can be techniques to develop international collaborative opportunities to present new information to students and engage them in new knowledge acquisition. The principles of Kolb's Experiential Learning Theory can be easily applied to the global collaborations using technology to promote optimal learning.

Title:

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Abstract Summary:

This session will discuss innovative technology advances to connect with global partners to improve individual learning and promote positive patient clinical outcomes. The focus will be on applying a learning theory to telehealth, simulation, and digital teaching approaches to promote learning of complex concepts.

Content Outline:

I. Introduction A. Learning advances through global team science B. Purpose is to discuss interprofessional collaborations, use of emerging technologies, and provide innovative teaching exemplars. II. Global Interprofessional Collaborations A. Team science B. Interprofessional education competencies C. Telehealth exemplar III. Emerging Technologies A. Application of Kolb's Theory of Experiential Learning B. Simulation activities C. Digital video learning activities

IV. Teaching Innovations A. Connection with and engagement of students B. Active learning approaches C. Socratic method, debriefing, and reflective approaches to learning V. Conclusion A. Global team science B. Emerging technologies C. Innovative teaching approaches D. Knowledge acquisition using Kolb's Experiential Learning Theory

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Author Summary: Dr. Aultman has an extensive background in critical care and as a nurse leader. She

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Author Summary: Dr. O'Neal has over 25 years in clinical and academic leadership. She has served as a Dean at three different state Universities. She served as President of Beta Phi Chapter of STTI and President of the North Alabama Chapter of the American Association of Critical Care Nurses. She has served as Chair of the IRB at UAH. She has exemplified PRO Level Leadership in both clinical and academic positions.

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