Nursing Education in a Virtual World

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Disclosures

vSim for Nursing™ was co-developed by Laerdal Medical and Wolters Kluwer Health and based on simulation scenarios written by the National League for Nursing. Dr. Foronda is also a paid consultant for Wolters Kluwer Health. Dr. Foronda has served as a member of the CliniSpace™ Advisory Board.
Objectives

• Describe emerging technologies involving augmented reality and virtual simulation.
• Appraise the evidence regarding virtual simulation in nursing education.
• Apply strategies to successfully implement virtual simulation in a nursing curriculum.
Background

• Evidence suggests virtual simulation is an effective pedagogy

• In the midst of a global shortage of nurse faculty, many lack time and resources to implement technology

• Faculty may consider applying the EBP of virtual simulation into teaching practice
Purpose

• Display technologies including virtual simulation and augmented reality
• Provide a synthesized review of the evidence in virtual simulation
• Provide strategies for successful implementation with students
Definitions

**Virtual Simulation:** “Clinical simulation offered on in a digital learning environment including single or multiuser platforms” (Foronda, et al. 2017)

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Definitions

**Augmented Reality (AR):** “Combining digital and physical media” (Foronda, et al., 2017)
Virtual Simulation

Virtual Simulation

Virtual Simulation

• Simtabs™
• http://www.simtabs.com/
Augmented Reality

Augmented Reality

Flight Simulator. Copyright Frances Payne Bolton School of Nursing at Case Western University, Cleveland, Ohio, 2015, Reprinted by permission of Frances Payne Bolton School of Nursing at Case Western University, Cleveland, Ohio, 2017.
Video on Nurse Educator

The Evidence

• Improve teamwork (Caylor et al., 2015; Kalisch et al., 2015)
• Leadership (Foronda, Budhathoki, & Salani, 2014),
• Communication (Foronda, Gattamorta, Snowden, et al., 2014),
• Decision-making (Hudson, Taylor, Kozachik, et al., 2015; McCallum, Ness & Price, 2011)
• Art of instruction (Foronda, Lippincott, & Gattamorta, 2014)
• Disaster triage (Foronda et al., 2016a; Farra, Miller, Timm, & Shafer, 2013; Farra, Smith, Gillespie, Nicely, Ulrich & Hodgson, 2015; Jose & Dufrene, 2014).
The Evidence

- Students have expressed learning skills of assessment, prioritization, and emergency management (Foronda, et al., In Review).

- Impact students’ cognitive and affective knowledge of evidence-based practice (Foronda, Hudson, & Budhathoki, 2017).
The Evidence

- Foronda and colleagues (2016) examined use of virtual simulation to teach disaster management.
- Qualitative data revealed the following themes:
  - (a) Fun,
  - (b) Appreciation for Immediate Feedback,
  - (c) Better than Reading, and
  - (d) Technical Issues.
The Evidence

• Wide and not deep
Ready to Take a Risk?
Facilitating Adoption

The faculty member must possess
• motivation,
• administrative support,
• time,
• resources, and
• technological assistance.
Facilitating Adoption

• Designate a champion
• Obtain funding for purchase or obtain complimentary use,
• Pilot test,
• Faculty development.
Facilitating Adoption

- Examine the curriculum for existing gaps, weaknesses, or areas that can be enhanced or supplemented
- Align with learning objectives
- Consider an evaluation plan
- Educational research
Student Buy-In

- Proper orientation
- Trial
- Technological support
The Future?

University of Miami School of Nursing and Health Studies
Simulation Hospital (Opening July 2017)
Questions?

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References

Foronda, C., & Bauman, E. (2014). Strategies to incorporate virtual simulation in nurse education. *Clinical Simulation in Nursing, 10*(8), 412-418. DOI: http://dx.doi.org/10.1016/j.ecns.2014.03.005


