Simulation Research

An open access professional development module for simulationists
How to use this module

Module progresses from foundational concepts to advanced practice. Self direct how deep you want to go!

Exercises are designed to work on your own or to discuss with a friend over coffee.

Open access links sometimes break! Let us know via @sim_podcast

This module is a collaboration with:

BOND UNIVERSITY

SIMULCAST
a hi-fidelity podcast

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Simulation and Research
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Overview:
Many starting their scholarly journey are interested in understanding how simulation and research intersect. There seem to be two main ways research and simulation interrelate.

1. **Research about simulation itself** – i.e. trying to understand what the best design, delivery, and debriefing methods are to achieve specific learning objectives.

   Or

2. **Simulation used as a tool to research another topic** – i.e. simulation used as part of a process to create an airway checklist or to test processes that are used to improve door to balloon time for patients with myocardial infarction.

Either way, the methods that are used may often feel quite unfamiliar. Randomized control trials – seen as the gold standard for much of medical research - are not always the best approach! As you explore, you are likely to come across more qualitative and mixed-methods approaches. Work through these exercises to explore the breadth of the intersection of research and simulation.

Exercise 1: Research about simulation

**Read the article:**

- [How does moulage contribute to medical students’ perceived engagement in simulation? A mixed-methods pilot study](#)

**Ask yourself:**

- What question ABOUT simulation are the authors trying to answer?
- What does mixed-methods mean? How did this team combine quantitative and qualitative data to answer their questions?
- What questions does this study raise for you? If you were going to further study the impact of moulage on learning how would you do it?
- The participants in this study are medical students. Do you think the findings can be translated to other groups? Why or why not?

Exercise 2: Simulation as a tool in researching other questions

**Read the article:**

- [Does utilization of an intubation safety checklist reduce omissions during simulated resuscitation scenarios: a multi-center randomized controlled trial](#)

**Ask yourself:**

- What question ABOUT intubation checklists are the authors trying to answer?
- What role does simulation play in trying to address this question?

**Thorny question:**

- If you were an ED director, would you find this research (conducted in a simulated setting) convincing enough for you to dictate a change practice for your group? Why or why not?

**Retrieval practice:**

- Discuss with a friend/colleague how you might use simulation to study a clinical problem relevant to your practice. Perhaps you want to further explore the issue, trial some solutions, or implement a new process/protocol.
**Exercise 3 : Research Paradigms**

Watch this short video and/or read this blog post about research paradigms, ontology, and epistemology.

Ask yourself:

- What ontology and epistemology resonate with your way of preferred way thinking? What research paradigm does most medical research fall under?
- Think of an issue in your clinical work that may align itself more with a constructivist approach.

Then read:

- Improving relational aspects of trauma care through translational simulation

Ask yourself:

- What research paradigm do you think the authors of this article have? How does it impact the methods they chose?
- What about for the articles covered in exercise 1 and 2?

Thorny question:

- Do research paradigms even matter? Find a colleague and debate what impact research paradigms might have on the questions we ask and way we choose to answer them.

**Exercise 4 : Staying up to date**

Listen to this episode of the Simulcast Episode 149 : Journal Club Podcast February 2022

Retrieval practice:

- What journals were the papers discussed from? Go to those journal websites and review some of the recent published articles. What other simulation journals are there?
- Then read Establishing a virtual community of practice in simulation: the value of social media and/or Simulcast: a case study in the establishment of a virtual community of simulation practice

Ask yourself:

- What is your community of practice for simulation scholarship (locally or virtually)?
- How are you going to stay up to date on simulation literature and scholarship? Make a tangible commitment.

**Exercise 5 : Participating in Scholarship**

Many people want to do “research” but it is also worth broadening understanding of scholarship to understand how we can contribute most meaningfully as simulationists.

Read the blog posts:

- Scholarship of teaching and learning
- Education Scholarship – Part 2

Ask yourself:

- How can you be more scholarly in the design, delivery, or debriefing of the next simulation activity you have planned?
- Write down your current contributions to each of the areas of scholarship (discovery, integration, application, teaching). Reflect on where your strengths and interests for future contribution are.
- Who can help you grow as a scholar? Contact them and discuss your reflection.


7. Thoma, Brent MD, MA, MSc, FRCPC; Brazil, Victoria MBBS, FACEM, MBA; Spurr, Jesse BN, BHM, MCN; Palaganas, Janice PhD, RN, NP, ANEF, FSSH, FAAN; Eppich, Walter MD, MEd, FSSH; Grant, Vincent MD, FRCPC; Cheng, Adam MD, FRCPC, FSSH Establishing a Virtual Community of Practice in Simulation, Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare: April 2018 - Volume 13 - Issue 2 - p 124-130 doi: 10.1097/SIH.0000000000000284


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Eve Purdy is an emergency physician and applied anthropologist interested in how healthcare teams improve. She researches how simulation can shape culture and uses those findings in real time with teams at Gold Coast University Hospital. She works for the Debriefing Academy and the Bond Translational Simulation Collaborative.