The Andragogy of Simulation

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NO DISCLOSURES
OBJECTIVES

- Describe pedagogy vs andragogy in simulation
- Understand debriefing as a reflective learning process
- Discuss realism in simulation
How many years have you been using simulation as an educational strategy?

A. 0-2
B. 3-5
C. >5
Would you consider yourself

A. Novice
B. Competent
C. Proficient
D. Expert
E. Master
Are faculty development programs ongoing at your facility?

A. Yes
B. No

0% Yes
0% No
Have you ever enrolled in a formal debriefing course?

A. Yes
B. No
ASSUMPTIONS
“Simulation is a technique, not a technology, to replace or amplify real experiences with guided experiences, often immersive in nature, that evoke or replicate substantial aspects of the real world in a fully interactive fashion.”

Gaba, 2004
Fatalities Due to Medical Errors

Leading Cause of Death in United States

1. Heart Disease 652,091
2. Cancer 559,312
3. Stroke 143,579
4. Chronic Lower Respiratory Disease 130,933
5. Accidents (unintentional injuries) 117,809

Preventable Medical Errors 98,000

6. Diabetes 75,119
7. Alzheimer’s Disease 71,599
8. Influenza/Pneumonia 63,001
9. Nephritis/Nephrosis 43,901
10. Septicemia 34,136

IOM 1999

Accidental Deaths in the U.S.

An estimated one million people are injured by errors during hospital treatment each year and 120,000 people die as a result of these injuries, according to a study led by Lucian Leape of the Harvard School of Public Health. Here’s how that number compares with other causes of accidental death in the United States.

*SOURCE: (for accidental deaths shown in blue) National Safety Council. Data are for 1996.
KEVIN BURKE / Inquirer Staff Artist

Harvard, 2013
John, 2013
“As the demands on faculty continue to expand, it is now recognized that preparing health professions faculty for their teaching responsibility is a necessary function of academic institutions.”

Hendricson, et.al, 2007
Ever enrolled in an education class prior to taking on teaching role?

A. Yes

B. No
Survival Essentials

- Who is on the team?
- What is the mission?
- What is the goal?
- Roles & responsibility?
- Workload?
- Resources?
- Psychological safety?

Team Strategies & Tools to Enhance Performance and Patient Safety
Bloom’s Taxonomy
http://www.lbschools.net/Main_Offices/Curriculum/Common_Core/docs/dok_blooms_comparison.pdf
TERMINOLOGY - STANDARD 1

- Statement: Consistent terminology provides guidance and clear communication and reflects shared values in simulation experiences, research, and publications. Knowledge and ideas are clearly communicated with consistent terminology to advance the science of simulation.

- To promote consistent understanding by explicating the terms used in the Standards of Best Practice: Simulation.

- FACILITATOR

- PARTICIPANT

INASCL, 2013
Simulation Theoretical framework

- Cognitive Overload
- Adult Learning
- Social Constructivist
- Kolb’s Experiential Learning
Kolb’s Experiential Learning Theory

Concrete experience (CE)- the learner actively experiences an activity such as a lab session.

Reflective observation (RO)- the learner consciously reflects back on that experience.

Abstract conceptualization (AC)- the learner attempts to conceptualize a theory or model of what is observed.

Active experimentation (AE)- the learner is trying to plan how to test a model or theory or plan for a forthcoming experience.

Kolb, 2001
Bandura’s Triadic Reciprocal Determinism

Wood & Bandura, 1989
FIGURE 1.
The Linkages among the components of the experiential learning exercise.

- **Content**: Evidence-based
- **Process**: constructive, cognitive, consistent
- **Learning Objectives**: Complexity of scenario based on Level of the participant
- **Exercise Mode**: Timing of session
- **Debriefing Methodology**: Programmed, Nonprogrammed, Structured, Spontaneous

Warwick, Hunsaker, Cook & Altman, 1979/ Randall, 2014
DEBRIEFING IS THE

"HEART AND SOUL"

OF THE

SIMULATED EXPERIENCE

RALL, MANSER, & HOWARD, 2000
E’s of Debriefing

- Events
- Emotions
- Empathy
- Explanations and analysis

Petranek, 1992
“Cognitive Assimilation of Experience”

*It is often the most overlooked part of the experiential learning process*

Lederman, 1992
Why Debrief?

Kriz, Simulation and Gaming, 2010: “...ineffective and even unethical” ... to conduct a simulation without debriefing.

Savoldelli, et al, Anesthesiology, 2006: “...exposure to a simulation crisis without debriefing seems to offer little benefit to learners.”

Van Heukelom, et al, Simulation in Healthcare, 2010: “Studies have indicated...in the absence of structured feedback, no learning of clinically relevant parameters occurs.”
Simulation Essentials

- Pre-briefing
- Simulation event
- Debriefing
Debriefing starts with Prebriefing

- Describe the purpose of the simulation
- The learning objectives
- How the process of debriefing will occur
- The learner will in turn:
  - Know the expectations of the simulation
  - Know the ground rules for their experience

Facilitator must be prepared
Tasks of debriefing

What do you see?
How long do you debrief?

- 20 mins
- 30 mins
- 60 mins
- Plenty
- Not enough
- Depends on the scenario
Debriefing leads to new frames

Debriefing changes later actions

Arkansas Children’s Hospital
Who evaluates your debriefing technique?

A. Sim Director
B. Anesthesia peers
C. Nursing peers
D. Myself
E. No one
Debriefing Checklist

G
Guidelines (EBP and local policy guidelines for managing the situation being simulated)

R
Recommendations (published recommendations for certain procedures)

E
Events (participants are given time to reflect on the activity and identify important events)

A
Analysis (patient’s s/s were identified and promptly treated using appropriate guidelines, resources were used effectively)

T
Transfer of knowledge to clinical practice (what has been learned to improve patient care. Take home messages)

Owen & Follows, 2006
REALITY vs. REALISM
FICTION CONTRACT

Dieckmann, 2007
Realism

- Relevant and matched to outcomes
- Conceptual clarity
- Theoretical framework
- Based on modes of thinking
- Dynamic interactivity

Dieckmann, Gaba, Rall, 2007
THE GIG: STANDARDIZED PATIENT PRETEND TO BE SICK SO THAT MEDICAL STUDENTS CAN PRACTICE BEING DOCTORS ON YOU. THE PAY: $15 AN HOUR. SOME IMPROV PREFORMERS ON FACEBOOK TOLD ME ABOUT IT.

IT'S AN EASY JOB. ALL YOU HAVE TO DO IS MEMORIZE A FEW SYMPTOMS AND SIT AROUND. THEN YOU GET MANHANDELED BY COLLEGE STUDENTS. SOME OF THEM PRETTY ATTRACTIVE.

IT'S EASY MONEY UNLESS YOU'RE SELF CONCIOUS.

TAKE OFF YOUR GOWN AND LAY ON YOUR STOMACH?
Faculty Development Resources

- ASPE
- Certified Healthcare Simulation Education References
- INACSL standards/website
- Faculty Journal club
- On line networking
- Policy manual
- Procedure manual
- Professional meetings
- Professional memberships (SSIH, INACSL)
- SSIH website and webinars
- Simulation Alliance websites (CA, FL, TN)
Moulage Online Resources

www.pocketnurse.com

www.imageperspectives.com

www.militarymoulage.com

www.behindthesimcurtain.com
References

- Bloom’s Taxonomy [http://www.ibsbeds.net/Main_Offices/Curriculum/Common_Core/docs/dok_blooms_comparison.pdf](http://www.ibsbeds.net/Main_Offices/Curriculum/Common_Core/docs/dok_blooms_comparison.pdf)