International Nursing Association for Clinical Simulation & Learning

INACSL Standards of Best Practice: Simulation

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Presented by: Lori Lioce, Matthew Aldridge, and Colette Foisy-Doll
Disclosures

Lori Lioce  
DNP RN, FNP-BC, NP-C, CHSE, FAANP  
- Vice President Operations INACSL  
- Clinical Associate Professor of Nursing & Executive Director, Learning & Technology Resource Center The University of Alabama Huntsville

Matthew Aldridge  
RN, RNT, MEd, BSc (Hons), FHEA  
- INACSL Chapter Europe President  
- University of Wolverhampton, Faculty of Health and Wellbeing, City Campus

Colette Foisy-Doll  
RN, BScN, MSN, CHSE  
- Chair Nominations and Awards Committee INACSL  
- Simulationist-Nursing Faculty, MacEwan University, Edmonton, Alberta, Canada
Aim: To explore current contextual realities and challenges in simulation-based education

Objectives: By the end of the two-day session delegates should be able to describe:

- International Nursing Association for Clinical Simulation & Learning
- Simulation and Educational Theories
- Standards of Best Practice: Simulation & Resources
- Curriculum Integration
- Current Nursing Research
- Simulation Scenario Design
- Getting Simulation Programs Off the Ground and
- Simulation in Nursing Education in Turkey
INACSL Organization Chart
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INACSL Mission & Vision

INACSL is the global leader in transforming practice to impact patient safety through excellence in healthcare simulation.

Mission:
Advance the science of simulation.
## Strategic Plan

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<tr>
<th>Goal</th>
<th>Objectives</th>
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<tbody>
<tr>
<td>1. Increase professional recognition and</td>
<td>1.1 Provide visionary leadership</td>
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<td>advancement of INACSL</td>
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<td>2. Advance the science of simulation and</td>
<td>2.1 Promote scholarship.</td>
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<td>learning environments.</td>
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<td>3. Membership enhancement</td>
<td>2.3 Disseminate information related to clinical simulation pedagogy and</td>
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<td>4. Strengthen organizational structure</td>
<td>3.1 Expand membership.</td>
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What is Simulation

“A person, device or set of conditions that tries to present problems authentically” - McGaghie 1999

“An educational technique that allows interactive and at times immersive activity by recreating all or part of a clinical experience without exposing patients to the associated risks” - Maran & Glavin 2003

“Technique not technology to replace or amplify real experiences” - Gaba 2004

“A pedagogy using one or more typologies to promote, improve, or validate a participant’s progression from novice to expert” INACSL Standards of Best Practice: Simulation, 2013 p. S9
Session 1: Matt Aldridge
Educational Theories in Simulation
Aim: To explore current educational theories underpinning simulation

Objectives: By the end of the session delegates should be able to:

• Describes the history of simulation in nursing and simulation
• Describe some of the educational theories which might underpin situated learning and the evolution of simulation as a pedagogical approach
• Explore to what extent simulation may be classed as an emerging discipline in its own right
• Express a view as to whether simulation needs further development on its theoretical underpinnings
Simulation in Context

- Simulation is not new in nursing education - we’ve been doing it for ever!

- Over the last decade it has gained Momentum - driven particularly by technology of high-fidelity manikins
  - But, we know simulation is more than manikins!

- High profile projects
  - Laerdal/NLN project 2006
  - UK nursing and midwifery simulation pilot 2006
  - INACSL/CAE simulation fellowship 2015
Theoretical Frameworks For Clinical teaching

- Schön - “The reflective practitioner”
- Vygotsky - “Zones of proximal development”
- Lave and Wenger - “Situated cognition”
- Kolb - “Cycle of reflective practice”
- Bandura - Social learning theory
- Ericsson’s deliberate practice theory
The Reflective Practitioner - Schon

► “The reflective practicum”
  ▶ “A practicum is a setting designed for the task of learning a practice” - where students learn by doing

► Willing suspension of disbelief
  ▶ One cannot will oneself to ‘believe’ until one understands. But understanding often will only arise from experience. Understanding often will only arise from experience
Zone of Proximal Development (Vygotsky)

Can do

Can do with help

Can’t do

Educator provides “scaffold” to support students in the “ZPD”
Examples of “scaffolding” with simulation

• Questioning

• Feedback and debrief

• Modelling of desired behaviour

• Clinical skills instruction
Lave and Wenger

- Theory of situated learning
  - Learning is not an event where there is “beginning and end”
  - Learning is unintentional and situated within authentic activity
  - Legitimate peripheral participation - community of practice
    - The domain
      - Shared interest; scenario outcomes
    - The community
      - Building interest and sharing knowledge; shared goals
    - The practice
      - Shared repertoire of experiences, tools, stories and resources

- Simulation is “situated learning”
“A person’s intentions to learn are engaged, and the meaning of learning is configured, through the process of becoming a full participant in a socio-cultural practice. This social process, includes, indeed it subsumes, the ‘learning of knowledgeable skills’”

(Lave and Wenger 1991: 29)
Bandura - Social Learning Theory

► People learn from one another through observation, imitation and modelling
  ▶ “Bobo doll” experiment

► Bandura distinguishes between “knowledge” and “skill” - both are not necessarily synchronous
  ▶ Simulation can help by linking these both and provide “modelling” for students to learn
Adaptation of Kolb’s (1984) Experiential Learning Cycle
Blooms Taxonomy Domains of Learning

- Cognitive
- Affective
- Psychomotor
Blooms Taxonomy

Knowledge
Comprehension
Application
Analysis
Synthesis
Evaluation

Increasing difficulty
Miller’s Pyramid of Professional Competence

- **Knows**
  - Test factual recognition
    - Context-free MCQs, reports written by students, oral exams
- **Knows How**
  - Assess capacity for clinical-context application
    - Essays, triple jump, case-based MCQs
- **Shows How**
  - Assessment in controlled situations
    - OSCEs, simulations, lab practicals, standardized patients
- **Does**
  - Assessment in work environment; focus on overall performance, not components
    - Direct observation of learner performance, portfolios, clinical triple jump, 360 assessment, clinical competency exams, videotaping with follow-up review

Deliberate Practice (Ericsson)

1. You must be motivated to attend to the task and exert effort to improve your performance.

2. The design of the task should take into account your pre-existing knowledge so that the task can be correctly understood after a brief period of instruction.

3. You should receive immediate informative feedback and knowledge of results of your performance.

4. You should repeatedly perform the same or similar tasks

Repetition of poor practice will *not* improve performance = practice does not necessarily make perfect, but deliberate practice can make permanent
Is simulation a discipline in its own right?

Schneider's stages of a discipline applied to simulation?

Editorial: Kardon-Edgren, S. Clinical Simulation in Nursing (2013) 9 e181-182
Schneider's stages of a scientific discipline

- Editorial discussion in “Clinical Simulation in Nursing” journal by Suzie Kardon-Edgren (Editor-in-Chief)

- Based upon Schneider's four stages of a scientific discipline

Schneider's stages of a discipline

- Stage 1: New subject matter entered into the field of scientific analysis
  - Breaking new ground, trying out new concepts and abstract ideas
Stage 2

- Development of techniques and formulation of a common scientific “language”

*Nomenclature and taxonomy of phenomenon*
Stage 3

- Scientists re-describe their subject matter in the construct of the developed language, creating new insights, new answers and new questions

  e.g. DNA sequencing, was biology, now used for history and archaeology
Stage 4

- Practical application of previously generated knowledge and maintenance of knowledge already gained to prevent “re-discovery”

“e.g. periodic table of the elements”
Definition of a scientific discipline

- Noun 1. *scientific discipline* - *a particular branch of scientific knowledge; science of*:
  - Genetics
  - Informatics
  - Mathematics
  - Linguistics
  - Metallurgy
  - Natural science

- source: the science dictionary.com (2013)
“A discipline incorporates types of knowledge, expertise, skills, people, projects, communities, problems, challenges, studies, inquiry, approaches, and research areas that are strongly associated with academic areas of study or areas of professional practice.”

source: the science dictionary.com
Further definitions

“Hard” sciences:
- physics, biology, mathematics

“Soft” sciences:
- anthropology, economics, psychology, sociology
Comte’s theory of science
Workshop discussion

- Is simulation a “scientific discipline” within its own right?
  - Does it require its own discipline or should it be defined within the framework of another?

- Where does it sit with Schneider's four stages of “scientific evolution”?

- What needs to be done, if anything, to develop or reposition simulation within this framework?

- What can you do in your own setting with regards to this?
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