The Use of Technology in Simulation
## Consequences and the Butterfly Effect

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Objectives

- To get insight in faculty development experiences
- To get insight in simulation implementation
- To get insight in simulation research
- To get insight in future simulation barriers
- To discuss the impact of technology
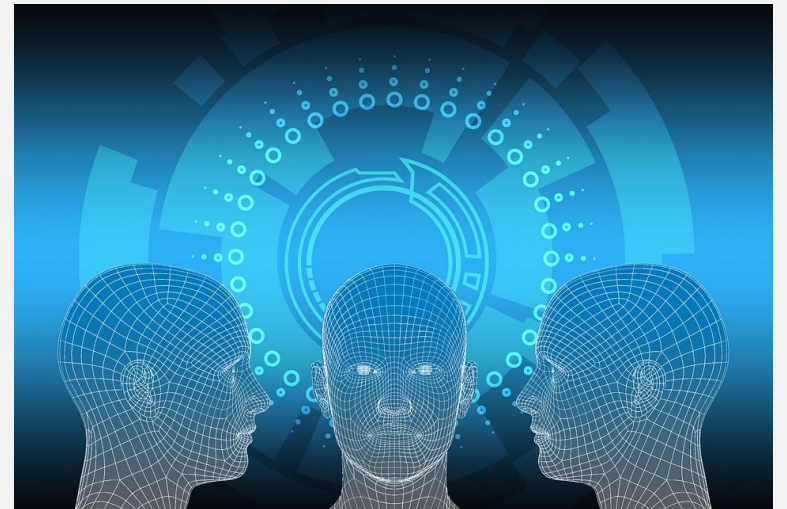
UNIVERSITY of WEST FLORIDA

Academia

Simulation Promotes Community Health

University Story Developing from Cocoon to Pupa

Jill Van Der Like, DNP, MSN, RNC
Director, Nursing Skills & Simulation Learning Center

Start with Support

2013

Blending in...not ready to stand out

School of Nursing Faculty Development

Transition to High-Impact Learning

7 years later…
Implementation~

Simulation and Learning by doing

Focus 2019

Peer learning

[INACSL standards](#)

[World Health Organisation - *Simulation in nursing and midwifery education 2018*](#)

[The Danish Sosu SimPortal](#)

The effects of Technology

Technology impact in healthcare simulation

Peer learning

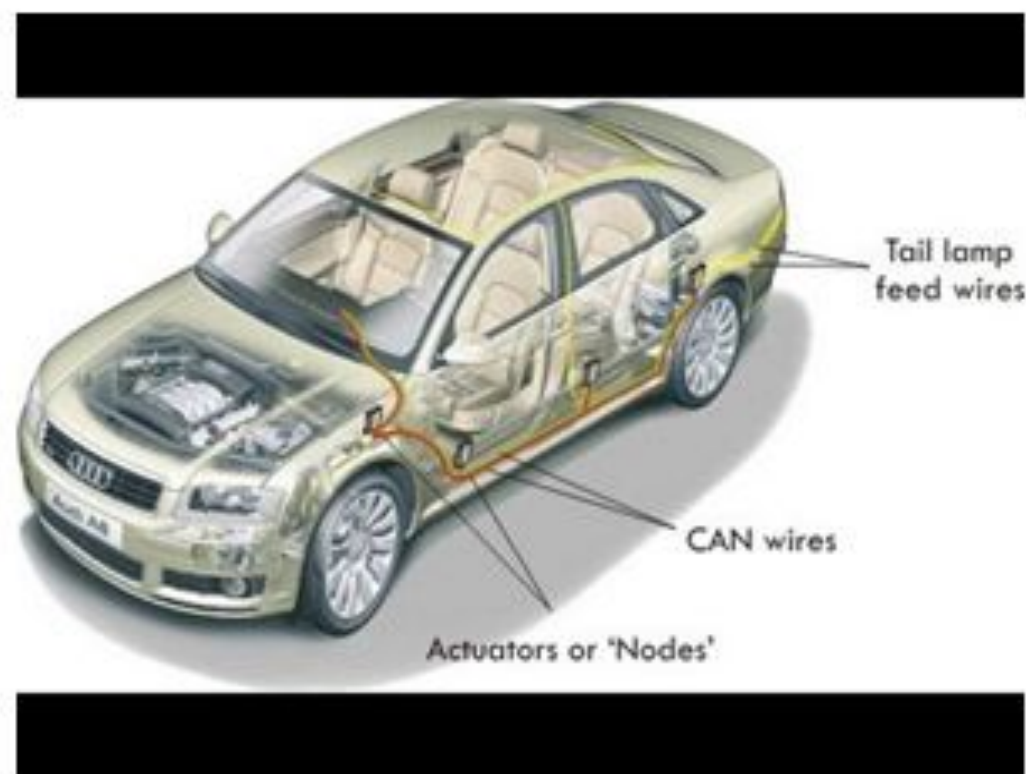The Can-Bus era - **Controller Area Network**

- more functionality

AI – Machine Learning

- designed content

Virtual platforms – what to do with it?

Standardization

- INACSL standards

- WHO – SNME Report

Tail lamp feed wires

CAN wires

Actuators or 'Nodes'

Laerdal

Peer Learning – is it a new mega-trend?

Personal development and professional development

"The experiences allowed them to:
- enhance self-confidence
- increase communication skills
- obtain emotional support
- gain socialization

- This contributes to the personal development of undergraduate nursing students".

Arena of learning:

X

Nelwati, Khatijah Lim Abdullah, Chong Mei Chan,
A systematic review of qualitative studies exploring peer learning experiences of undergraduate nursing students,
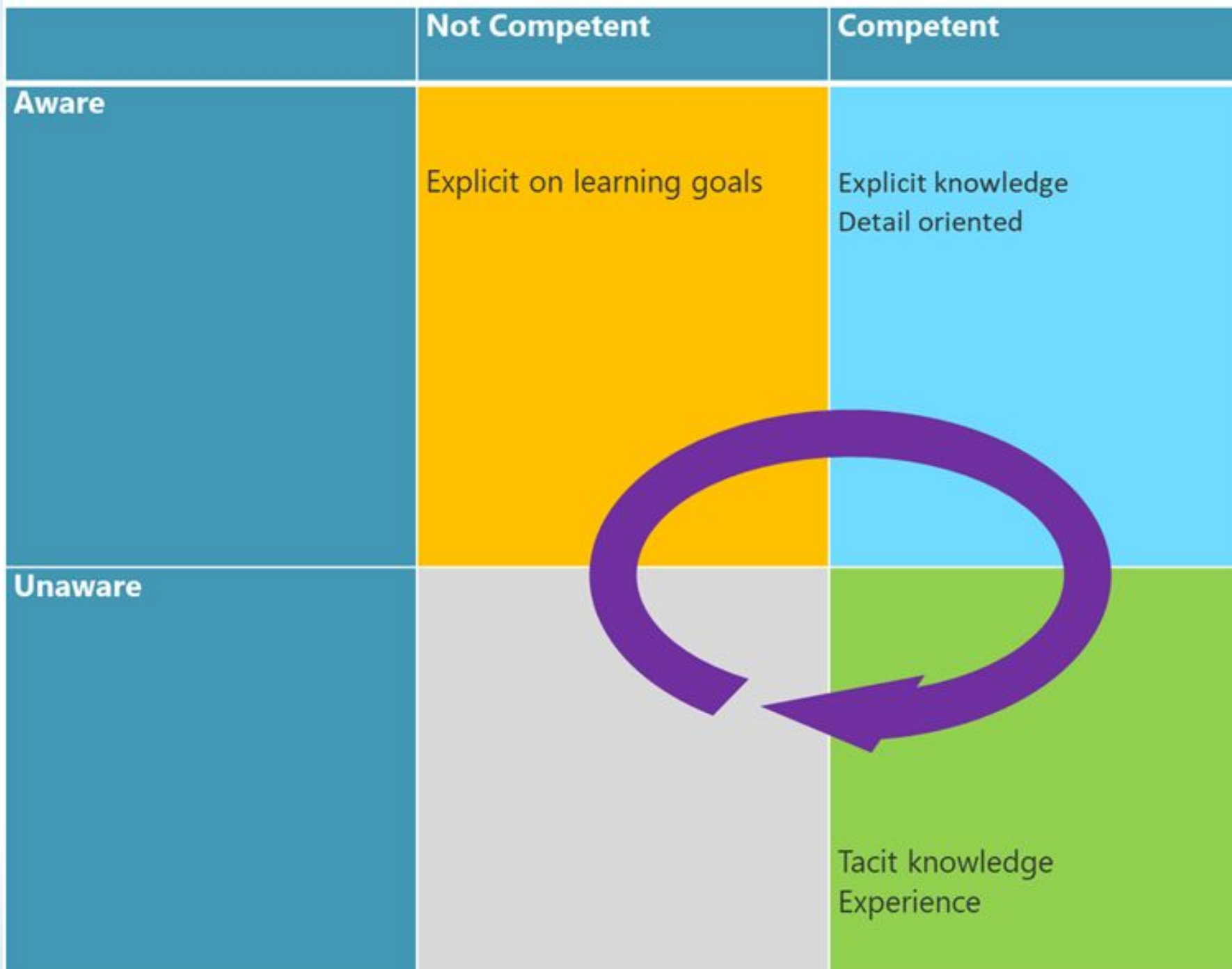
Nurse Education Today, Volume 71, 2018, Pages 185-192,

Solving the Big Group Issue

Skill Acquisition and Maintenance

How do we demonstrate and practice skills and competencies?

Storytelling from a PhD study; demonstrating the butterfly effect at a micro-sociological level

Anne Mette Felsted Rasmussen

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Erhvervsakademi og Professionshøjskole

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A PhD study in progress

The relationships between technologies, society and science (STS)

Focus: High fidelity simulation training in nursing education

Research question: When approaching technologies with a relational view, then how to understand and describe a practice using high fidelity simulation training in nursing education?

A micro-sociological field study at my own organization

Started out backwards in 2009 by buying the simulators without acknowledging any need.

Today's status: (a full-grown butterfly)
- Well integrated scenarios at 1st, 2nd, 3rd and 5th semester
- Well equipped simulation laboratories
- A resource group and a dedicated management
- A full time employed simulation assistant
- Dedicated and experienced educators (mostly)
- Ongoing research

We ought to have control over the situation....

...but when a butterfly flaps their wings, it might cause non-linear impacts.

The butterfly effect is the idea that even tiny events can serve as catalysts on complex systems.

John Gribbin (2005) writes in his book "Deep Simplicity: "Some systems … are very sensitive to their starting conditions, so that a tiny difference in the initial 'push' causes a big difference in where they end up.

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Story 1: A bed rail is taken down

Story 2: A box of bandages goes down the table

Story 3: The cleaning staff wipes the table in the operator room

A future vision

Technologies cannot be controlled in the way that we would like to and accepting precisely that, is a part of the implementation of high fidelity simulations.

We will have to learn to go with the mess…to stay with the trouble. And then maybe, our understanding of technologies might be developed.

Questions & Discussion

Thank you!

References

University of West Florida

Available Upon Request

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