SIMULATIONS
An Emergent Tool in Education
supporting paradigm shift in Teaching and Learning

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Elsa V. Pena             University Architect
LEARNING OUTCOMES

• Explore the Paradigm shift in Teaching and Learning
• Understand difference between old mode Teaching and new way Learning
• Understand how simulation promotes and develop competency based Learning.
• Understand the technology and facilities challenges to support simulations
Paradigm Shift

EVOLVING

NEW TEACHING AND

• STUDENT CENTERED
• COLLABORATIVE
• EXPERIENTIAL

PEDAGOGIES

LEARNING MODES

• ENGAGING
• PARTICIPATIVE
• GROUP CENTERED
INNOVATION ADOPTION

- Dr. Keith Whitworth
- Sociologist Texas Christian University

LAW OF INFUSION OF INNOVATION
SPACE DOES MATTER

Jim Schwartz  PHD Grinnell College

Spaces that provide the tools to work with and that encourage Teaching thru Learning Pedagogy

ACTIVE NOT PASSIVE SPACES

Spaces that facilitate Learning as an Interaction

- With Information
- With Others
- Team Based

Motivational and Experiential Spaces
Simulation in the learning environment

• Reality based learning

• No difference between real and simulated activity

• Hands on - students become participants not observers or listeners

• Motivator for learning thru deep involvement

• Tailored and specifically designed for the audience/participants taking specific stages of development.
SIMULATION

• Total immersion in the activity
• Total and complete active learning
• Leads to competency progressing and moving to the next level.
• Needs space replications of the real thing.
Simulation activities

- Observation
- Activity
- Recording
- Assessment (Self, Peer, Instruction)
- Storage
- Study – Self Review
Simulation applications at UWG

• Nursing Hospital environment
  Including ICU, Exam rooms, automated medication dispenser, Obstetrics, Home care, Nurse station etc.
• Nursing skills lab . ER set up.
• College of Education Teach LivE
  Life size Avatar students
Nursing Floor plan
Nurse station
OBS-Pediatric SIM

SIM MOM

SIM Baby
Observation Room
Head wall and Services
Skills area debriefing
Nursing Simulation Costs

» 9,930 GSF

- AV & computers, equipment, Mannequins $665,328
- Headwalls-Bed Docks 58,790
- Cabling 75,000
- Pxys Med dispensing units (2) 59,596
- Piping, Power etc. In building cost
11 pieces of equipment with corresponding data connections and wiring.

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Teaching the Avatars
Working with the Avatars
Teach LivE
Room 200
Teach LivE Parent interaction
Teach Live interaction
Lessons Learned $$

• Significant implications on fiscal needs
• Installation- equipment-construction costs- applications support.
• Facilities management operational hours (24/7)
• Technology training
• Technology Support and Staffing
• Technical Responsibilities
Lessons Learned  Teaching and Learning

- Active and deep Learning
- Peer to Peer Training
- Significant Feedback and Self Assessment
- Competency Development
- Competency Reinforcement
- In depth preparation and guidance to meet Employment market demands
FOOD FOR THOUGHT

• CRITICAL, CREATIVE, SOCIAL, COURAGEOUS LEARNING

AND

• THE ABILITY TO LEARN FASTER, DEEPER THAN YOUR COMPETITORS MAY BE THE ONLY ADVANTAGE IN A COMPETITIVE ENVIRONMENT

Dr. MARK DAVID MIKULTON - CIVITAS, ORG
Simulation an Emergent and Innovative tool in Education

Dr. STEPHEN BRONACK  ASSISTANT DEAN COLLEGE OF EDUCATION
KRISTEK GILBERT  SIMULATION SPECIALIST  COE
ELSA V. PENA   UNIVERSITY ARCHITECT