



Welcome to the
2009 Toronto SUN!

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Teaching/Learning/Experiencing Critical Decision Making with Micro Sim



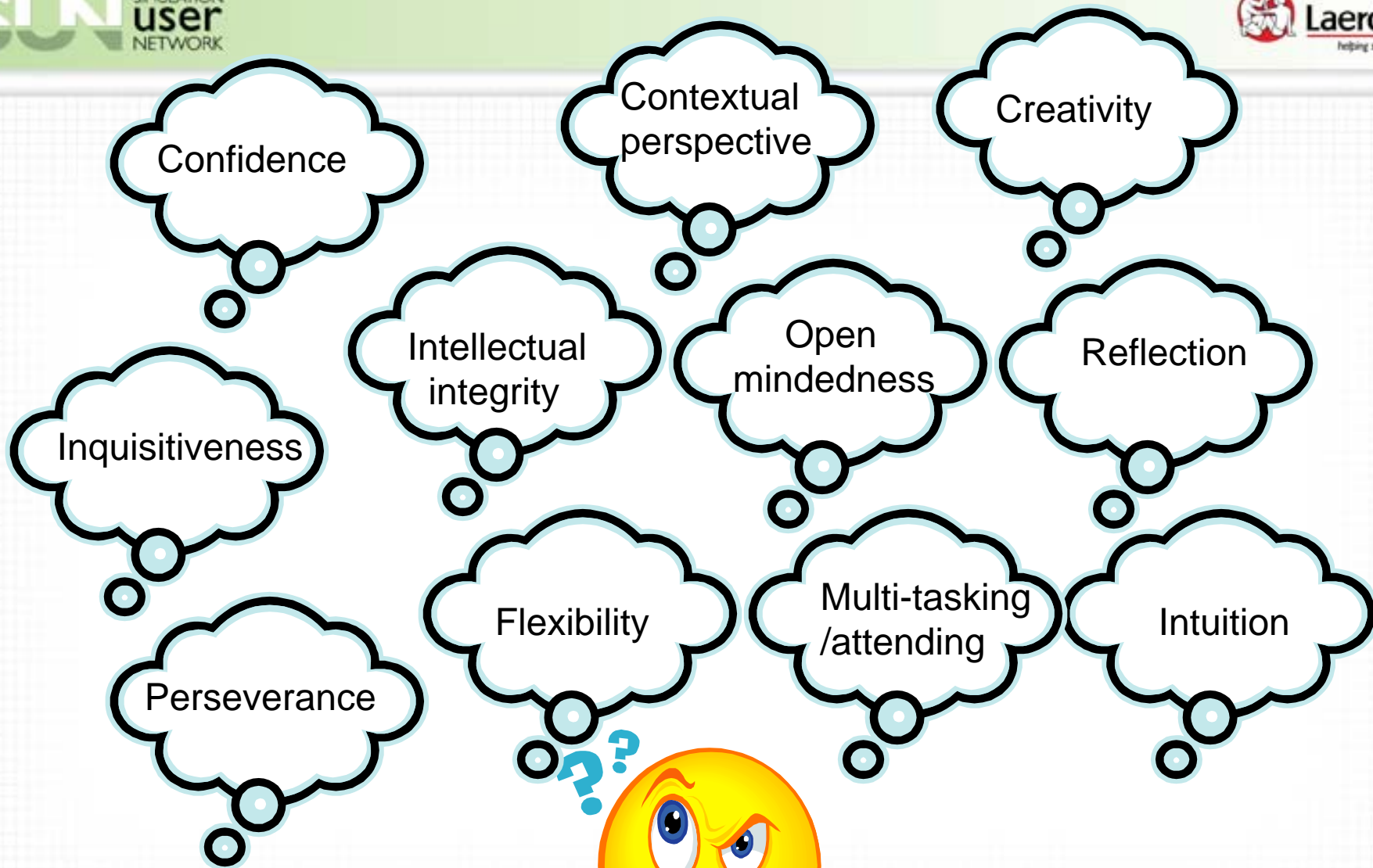
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Session Agenda

- Critical thinking skill development
- Rationale for integration of Micro Sim into curriculum
- Micro Sim In hospital familiarization
- Strategies for curriculum integration
- Functional components of Micro Sim
- Student evaluations of Micro Sim

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<http://simulation.laerdal.com>



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Skills of Critical Thinking in Nursing: Application in Micro Sim

- **Information seeking**
- **Applying standards**
- **Discriminating**
- **Logical reasoning**
- **Predicting**
- **Analyzing**
- **Transforming knowledge**

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Rationale for Integration of Micro Sim into curriculum

Chickering and Gamson's Seven Principles for Good Practice in Undergraduate Education

- 1. encourages contact between students and faculty**
- 2. develops reciprocity and cooperation among students**
- 3. encourages active learning**
- 4. gives prompt feedback**
- 5. emphasizes time on task**
- 6. communicates high expectations**
- 7. and respects diverse talents and ways of learning**

Additional Rationale for Integration of Micro Sim into curriculum

- Venue for development of technology and informatics skills
- Opportunity for students to engage in self-directed learning activity
- Challenges students to apply theory, “live a patient care experience” and “be in charge” of clinical decision making
- Learning strategy with decreased demand on faculty time
- Tool included for faculty review of student performance
- Information collection for curriculum review/evaluation
- Interactive preparation for human patient simulation activities
- Preparatory assignment for clinical placement eg marathon

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Micro Sim Familiarization Exercise

- Graphic user interface and introduction
- Administrator computer profile options
- CMS user functions
 - Learners
 - Groups
 - searches

MicroSim Inhospital



RESPONSE	AIRWAY	BREATHING	CIRCULATION	EXAMINE	EXPOSURE
Check responsiveness >> Ask questions	Check airway patency	Check breathing Ventilation >>	Check pulse Blood pressure >>	Check the skin Examine eyes	Temperature >>
DRUGS	Head tilt/chin lift Jaw thrust Procedures >>	Oxygen >> Monitoring devices >>	CPR >> ECG & Defibrillator >> Procedures >>	Head-to-toe examination Auscultation & percussion Lab & diagnostics >>	MISCELLANEOUS
IV lines Drugs and fluids					Medical record >> Procedures >>

Attributes/Characteristics of a Critical Thinker

From: Brock University – Loyalist College Collaborative Nursing Program Baccalaureate Handbook p. 32

Combining the knowledge, application skills, and attitudes which integrate the affective components of creativity, curiosity, open-mindedness, intuition and reflection with the skills of problem-solving and decision-making, the graduate will independently:

- Integrate and, with guidance, generate nursing knowledge
- Seek and synthesize information
- Identify, examine and challenge assumptions
- Identify and predict the relevance of patterns
- Predict outcomes in most learning/practice situations
- Generate options
- Determine a choice of action
- Evaluate outcomes and make revisions

Micro Sim strategies to develop Critical Thinking course outcomes in the Brock-Loyalist Collaborative Nursing Program

Integrate and, with guidance, generate nursing knowledge

Seek and synthesize information

Identify, examine and challenge assumptions

Identify and predict the relevance of patterns

Predict outcomes in most learning/practice situations

Generate options

Determine a choice of action

Evaluate outcomes and make revisions

Strategies for Curriculum Integration

Construct assessments and interventions specific to discipline and scope of practice (profile function)

Do a full class interactive case study with faculty as facilitator

Assign a small group of students to research a concept, practice the case study then present to class (emphasis on assessment and critical thinking) using Micro Sim on LCD projector

Assign Micro Sim cases either concurrent or subsequent to concepts taught in didactic

Strategies for Curriculum Integration

Micro Sim cases can be used to teach concepts NOT taught in didactic

Micro Sim cases can serve as an OSCE of application of theory

Assign Micro Sim cases as preparation for Human patient simulation activities

Assign Micro Sim cases as preparation for specific clinical placement activities (eg. Marathon, diabetes education center, emerg., etc)

Others??????????

Student evaluations of Micro Sim In hospital

Inquisitiveness
Flexibility

"I really like the Micro sims, can we do more of them?"

Contextual
perspective

"It helped me to understand the theory more"

"I understood what can happen to a person during a marathon and how to handle it"

"I understand acid/base balance better now"

"I enjoyed having an opportunity to use my knowledge on a "real" person that responded to what I did and decisions I made"

Perseverance

"I don't like that it is in other measuring units, I failed the case because of that"

Reflection

"a good learning tool that helps us learn through practice"

"helpful in applying pathophysiology to nursing"

Multitasking
& attending

"a great help through this course, a great learning tool that helps students to think their way through before making decisions."

Confidence
Intuition

"It taught me to trust my instincts but also that I need to know why I was giving a certain medication."

Intellectual
integrity

In end of term evaluations, students state that Micro Sim helps them apply theory that they have learned in class

Openmindedness
Creativity

And my favorite evaluative comment from one of our more extroverted students, "This program really kicks ass"

Faculty Evaluation of Micro Sim In Hospital used in a classroom setting

- The Micro Sim for chest pain (Mr. Winters) enable me to meet the objective “**discuss nursing and collaborative interventions for: acute pain, ineffective tissue perfusion, and activity intolerance**” as students cared for a client experiencing angina.
- For myself, these were very effective methods of teaching some critical thinking and nursing care.
- In terms of fitting with my objectives, it gave the students an opportunity to manage a client with hypoglycemia which fit well with my objective “**discuss independent nursing and collaborative interventions for the diagnosis: Potential for hypoglycemia**”.
- The students enjoyed having an opportunity to use their knowledge on a “real” person that responded to what they did and decisions they made.

Other Potential Uses for Micro Sim



References

Scheffer, BK., & Rubenfeld, M.G. (2000). A consensus statement on critical thinking in nursing. *Journal of Nursing Education*, 39(8), 352-359

Setareh Khosravani, Houman Manoochehri, Robabeh Memarian: Developing Critical Thinking skills in Nursing Students by Group Dynamics. *The Internet Journal of Advanced Nursing Practice*. 2005. Volume 7 Number 2.

Facione, Noreen C., & Facione Peter A., Critical Thinking and Clinical Reasoning in the Health Sciences: An International Multidisciplinary Teaching Anthology. 2008, The California Academic Press: Millbrae, CA.

www.insightassessment.com

Chickering, A. and Gamson, Z., Seven Principles for Good Practice in Undergraduate Education.
 From The American Association for Higher Education Bulletin, March 1987, Reprinted with permission

http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guid_ebk/teachtip/7princip.htm

Chickering, Arthur and Stephen C. Ehrmann (1996), "Implementing the Seven Principles: Technology as Lever," AAHE Bulletin, October, pp. 3-6.

<http://www.tltgroup.org/programs/seven.html>