Utilizing Unfolding Case Studies in Lecture to Improve Critical Thinking and Knowledge Synthesis

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OBJECTIVES

- Discuss process of developing and incorporating case studies appropriate for various courses.

- Discuss strategies for student buy-in and full participation.

- Discuss evaluation of impact of intervention through various means.

- Discuss implications for nursing education.
DISCLOSURES

- The presenter(s) have no conflict or interest, financial or otherwise related to the content of this presentation.

- The implementation of this teaching innovation was not funded by any organization and is the original work of the presenter(s).
THE PROBLEM IN NURSING

- Projections of nursing shortage
- Increase in enrolment in traditional tracks
- Emergence of non-traditional avenues into nursing
- Strain on nursing faculty
- Clinical placement for students
IMPACT ON STUDENTS AND FACULTY

- Increased class size
- Use of technology
- Less one-one-one interaction with faculty
IMPACT ON STUDENTS AND FACULTY

- Emergence of alternative teaching and learning styles
- Critical thinking
- Knowledge synthesis
Why Unfolding Case Studies?

- Utilized in simulation over the last decade
- Evidence for fostering critical thinking and clinical reasoning
- Scarce evidence for utilization in classroom
- Engaging, learner centered, and develops spirit of inquiry
THEORETICAL FRAMEWORK

Paul-Elder Critical Thinking Model

Intellectual Standards
- Accuracy
- Clarity
- Relevance
- Logical
- Sufficiency
- Precision
- Depth
- Significance
- Fairness
- Breadth

Intellectual Traits
- Humility
- Autonomy
- Fair-mindedness
- Courage
- Perseverance
- Empathy
- Integrity
- Confidence in reasoning

Must be applied to

Elements of Reasoning
- Purposes
- Questions
- Points of view
- Information
- Inferences
- Concepts
- Implications
- Assumptions

to develop

THE UNIVERSITY OF ALABAMA® Capstone College of Nursing
STAGE THEORY OF CRITICAL THINKING DEVELOPMENT

STAGES OF DEVELOPMENT

Unreflective
No awareness of flawed thinking

Challenged
Limited awareness

Beginning
Recognizes need for critical thinking

Practicing
Regularly practices skills

Advanced
Regularly uses skills

Master
Critical thinking is second nature

STAGES OF DEVELOPMENT OF CRITICAL THINKING

Master Thinker

Advanced Thinker

Practicing Thinker

Beginning Thinker

Challenged Thinker

Unreflective Thinker
IMPLEMENTATION AND METHODS

- Choosing the appropriate course
- Selecting the pilot topic setting expectations
- Student buy-in
- Setting expectations
IMPLEMENTATION AND METHODS

- Forming Student groups
- Developing case studies

Sample questions

1. What fluid and electrolyte imbalance is this client experiencing?
2. What associated symptoms you should check for?
3. What other diagnostic exams are required to fully understand client condition and why?
4. What possible nursing interventions would you implement?
5. List 3 applicable nursing diagnoses
6. How would you evaluate the impact of nursing interventions?
IMPLEMENTATION AND METHODS

- Classroom presentations
  - Clear guidelines
  - Safe environment
  - Group presentations
  - Changing an aspect of the case
  - Questions from other students
# Results

## Exam Grades

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<thead>
<tr>
<th>Exam</th>
<th>Fall 17</th>
<th>Spring 18</th>
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<td>89.5*</td>
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<td>70 - 98</td>
<td>74.9 - 96</td>
<td>79 - 97</td>
<td>74.3 - 98.7</td>
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* = p < 0.05
## Results Cont....

### Simulation Experiences

- **Pre-simulation work**
- **Exit questionnaires**

<table>
<thead>
<tr>
<th>Question</th>
<th>Fluid and Electrolyte</th>
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<td>I feel better prepared to care for real patients</td>
<td>Strongly Agree: 65</td>
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<td></td>
<td>Somewhat Agree: 16</td>
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<td>Do Not Agree: 2</td>
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<td>I feel more confident in my decision-making skills</td>
<td>Strongly Agree: 62</td>
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<td></td>
<td>Somewhat Agree: 17</td>
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<td></td>
<td>Do Not Agree: 3</td>
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<td>I feel more confident that I will be able to recognize changes in my real</td>
<td>Strongly Agree: 62</td>
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<td>patient's condition</td>
<td>Somewhat Agree: 19</td>
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<td></td>
<td>Do Not Agree: 2</td>
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<td>Completing the simulation helped me understand classroom information</td>
<td>Strongly Agree: 77</td>
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<td>better</td>
<td>Somewhat Agree: 6</td>
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<td>Do Not Agree: 0</td>
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RESULTS CONT....

- Observational and Anecdotal data
  - Student personal testimonials
  - Use of compiled document as study tool
  - Office hour visits
  - Student opinions of instructors
IMPLICATIONS FOR NURSING EDUCATION

- Only 35% of entry level nurses meet expected standards of critical thinking and clinical judgment

- Aging population with comorbid medical conditions

- Student self confidence and efficacy

- Type of student population

- Institutional support for faculty
Your thoughts?
REFERENCES

• Carter, J. T., & Welch, S. (2016). The effectiveness of unfolding case studies on AND nursing students’ level of knowledge and critical thinking. Teaching and Learning in Nursing, 11, 143-146. doi: 10.1016/j.teln.2016.05.004