Pedagogical Strategy for Teaching Innovation and Business Concepts to Graduate Nursing Students

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Introduction/Background

Today’s health care environment is increasingly complex, emergent and unstable1,2 where ethical issues abound3. Future nurses need transformational leadership skills to better understand the complexity of the health care system and find innovative solutions to problems.

Our Challenge

How to better engage a heterogeneous group of master’s level nursing students in a learning activity that will boost their ability to:

- make ethical decisions consistent with the Code for Nurses4,
- Innovate,
- develop “soft” leadership skills (e.g., team communication, decision-making, strategy development, and tactics)5 and think creatively and critically6.

Our answer was the Innovation Leadership Project for APRNs (ILPA; adapted with permission from an innovation game used at Kaiser Permanente, with permission).

Objectives

How well did ILPA assist graduate nursing students to:

1. develop critical thinking and innovation skills?
2. use ethical decision-making and problem-solving?
3. develop their “soft” leadership skills?
4. acquire knowledge about business concepts?

Methods

- ILPA introduced to autumn 2016 sections of a core course in the Master’s program: Innovation Leadership in Advanced Nursing Practice
- Gauged students’ response to ILPA and their perceived learning outcomes in four domains:
  - Critical thinking and innovation skills,
  - Ethical decision-making in a healthcare setting,
  - Leadership skills (e.g., team communication, decision-making, strategy development, and tactics) and
  - Basic business terminology and skills in healthcare.
- Nine item survey was developed (Table 1). Students who completed the study were entered into a drawing for a $100 Visa gift card.
- IRB approved.

Sample

- 543 Innovation Leadership in Advanced Nursing Practice, 3 Sections (n=90)
- Response rate of 36.6%

Analysis

- Kruskal-Wallis test to examine group differences between section, type of student (traditional vs. graduate entry), formal project/business management experience/education.
- None of the tests for group differences were statistically significant, indicating that there is no evidence of group differences in the survey scores.

Results/Findings

- Participants lacked confidence in their knowledge of business skills
- Participants had confidence in their knowledge of evidence-based practice and ethics

Table 1. displays the mean and standard deviation of responses to survey questions (1-5 point scale with 1 = strongly disagree 5 = strongly agree).

<table>
<thead>
<tr>
<th>Question</th>
<th>N</th>
<th>Mean</th>
<th>STD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. identify and solve a unit-based clinical problem.</td>
<td>33</td>
<td>3.7</td>
<td>1.0</td>
</tr>
<tr>
<td>2. identify the perspective of internal/external stakeholders (those who worked together on the unit) involved in solving a unit-based clinical problem.</td>
<td>33</td>
<td>3.8</td>
<td>0.8</td>
</tr>
<tr>
<td>3. make ethical decisions involving a unit-based clinical problem.</td>
<td>33</td>
<td>3.9</td>
<td>1.0</td>
</tr>
<tr>
<td>4. use pertinent evidence related to solving a unit-based clinical problem.</td>
<td>33</td>
<td>4.0</td>
<td>1.0</td>
</tr>
<tr>
<td>5. appraise multiple factors (e.g. equipment, education, staffing, roles, expenses, supplies, etc.) in developing a project to address a unit-based clinical problem.</td>
<td>33</td>
<td>3.8</td>
<td>1.0</td>
</tr>
<tr>
<td>6. create a project budget that accounts for costs, cost savings or revenue.</td>
<td>33</td>
<td>3.5</td>
<td>1.0</td>
</tr>
<tr>
<td>7. use a variety of communication strategies within a team.</td>
<td>33</td>
<td>3.8</td>
<td>1.1</td>
</tr>
<tr>
<td>8. use project planning skills in my current or future practice.</td>
<td>33</td>
<td>3.7</td>
<td>1.1</td>
</tr>
<tr>
<td>9. participate in work projects more confidently based on what I have experienced in Innovation Leadership Project for APRNs.</td>
<td>33</td>
<td>3.5</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Discussion/Future Directions

- Factors that build confidence of Master’s level students’ business skills.
- Continued course evaluation and revision.
- Consideration of faculty experience and knowledge of business skills.
- Teaching and measuring innovation and business skills.

References

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Quotes from Students

- “I feel like this course provided me with great knowledge about the business side of healthcare and implementing projects for clinical based problems. I learned a lot about critical thinking and finding evidence, and appraising factors needed for the project.”
- "I really enjoyed the aspect of the innovation project where we were allowed to brainstorm ideas (fictitious or not) for possible solutions to our clinical problem. I thought this was a great exercise in creativity-something that is vital for an innovation project…..”
- “Another important take home message that resonated with me was total cost…thinking about the implications of spending a small fortune for a proposed solution and determining if the investment was cost effective.”

Limitations

- Response rate of 36.6%
- Self-report may have been conflated with course/faculty evaluation.
- Different course instructors across sections with various delivery modalities.
• Measures/Data Analysis

• Qualtrics Survey Software is an online survey software survey tool.
  – Qualtrics Survey is a hosted solution supported centrally at OSU by OCIO giving administrators total control over the survey environment.
  – Only OSU authenticated users can log in to create surveys or view the responses.
  – Users can be assigned to roles so users can be authenticated for viewing or modifying survey questions or viewing the responses.
  – The Qualtrics system is secure and HIPAA/FERPA compliant approved.
• Descriptive statistics, bivariate tests, mean plots and Chronbach’s alpha........