Supplementary materials- Appendix 1 - Figures

Figure 1
Figure 2

TBL Process and Blooms Taxonomy of Cognitive learning

1 SDP

Creating

Phase 4 (2-3 weeks)
Out of class
Post-Reflection-
Introduced by SDP
Higher End of Bloom's Taxonomy

Understanding
Remembering

Phase 2
In-class: Application of exercise
Higher End of Bloom's Taxonomy

Phase 3
In-class: Readiness
Assurance test
Lower End of Bloom's Taxonomy

Phase 1 - Pre-class (4 days prior to session)
Online Independent study & assignment

Week 1 - Student Accountability & Engagement
Week 2 - Shared Commitment

Week 4 - Community of Creative inquiry

Students

Educator Faculty
Figure 3

HC2126 Problem Definition COPD
Coursework Structure

Section 1: This section will be launched on 25th Nov 2019.

This section comprises of: Introduction to COPD, diagnosis & management, co-morbidities and Palliative care. This section ends with a virtual case study challenge and an Editorial review to enhance your understanding of COPD.

How much time I require to complete Section 1?

This Section 1 comprises 4 short videos each 5-7 mins, Case study challenge and some MCQ’s. You should be able to complete this section in between 40-60 mins depending on your pace of learning.

It is important to complete SECTION 1 before your lecture session on 29th Nov in order to be able to complete SECTION 2 in your lecture session.

HC2126 Problem Definition COPD
Coursework Structure

Section 2: Critical reflection: This section will be launched on 29th Nov 2019 in your lecture session.

You are provided with one Journal article related to COPD in Learning Central. You are required to read and produce a creative piece for a given question. Your creative piece could be a ‘Blog’ not exceeding 500 words in a Word document, or a ‘PowerPoint Presentation’ not exceeding 5 power point slides or an “Infographics”. You should submit your creative work no later than 9th December 2019 using the Turnitin link provided.

What to expect on 29th Nov in your lecture session - between 9.00am -10.00am, LT2.

You will experience a team based learning that includes but not limited to discussion, debate and presentation on multidisciplinary themes. Be prepared to contribute and display your creative side towards this lecture. To facilitate an effective use of our time, I would request everyone a prompt presence 5-10 mins earlier for your 9.00 am session on 29th Nov.
Figure 4

Phase 1 - Pre-Class course work: Course content and virtual case challenge - 40 - 60 mins

Phase 2 - Readiness assurance test
A. Individual assessment test (iRAT) - 10 mins
B. Facilitator provides 10-15 mins key message on the theme- COPD and any clarifications covered.

Phase 3 - Application exercise
A. Peer discussion in teams - 25 min
B. Peer presentation & Debate - 20 mins
C. Test the Knowledge - 5-10 mins

Phase 4 - Post class reflection: Creative assignment
Student given common theme to produce a creative work with choice of either one of 3 formats
1. Power Point – Max 5 slides
2. Blog – Max 50 words
3. Infographics – one page
**Intended learning Outcomes**

- **Assess and Integrate** the learning obtained from your COPD pre course work (online learning), apply these lessons to critical reflection of COPD exacerbations & management (Readiness test).

- **Understand the importance of ground rules** prior to the session to facilitate confidentiality and nurture critical self-reflection.

- **Explore the cognitive reasoning skills** used by themselves and other learners behind COPD management to enhance learning experience for all.

- **Emphasize enhanced Verbal & Non verbal communication skills** between and within multidisciplinary team.
Figure 6

Your Timelines for this Session

- COPD Readiness Test: 10 mins
- Team Based Discussion: 20 mins
- Peer Presentation: 20 mins
- Test my Knowledge: 5-10 mins
Figure 7

Rules of Engagement

- Contract: This is not an assessment!
- Curious Stance throughout session
- Reflect with evidence based practice
- Be open for new thoughts
- Debate promoted
- Be critical with respect
- Challenge ideas but don’t be defensive
Figure 8

Reflection on COPD

Focus
What is exacerbation of COPD?

Management of COPD exacerbation
What does evidence say?

Prevention of COPD Exacerbation
What evidence say?

Future
What needs to be more focused in future for COPD management?
# Rubric for Students reflection

<table>
<thead>
<tr>
<th></th>
<th>Above Expectations</th>
<th>Meets Expectations</th>
<th>Near Expectations</th>
<th>Below Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reflective Thinking</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The reflection explains the student’s own thinking and learning processes, as well as directions for future learning.</td>
<td>The reflection explains the student’s thinking about his/her own learning processes.</td>
<td>The reflection attempts to demonstrate thinking about learning but is vague and/or unclear about the personal learning process.</td>
<td>The reflection does not address the student’s thinking and/or learning.</td>
<td></td>
</tr>
<tr>
<td><strong>Analysis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The reflection demonstrates an in-depth analysis of the learning experience, the value of the derived learning to self or others, appreciation of the subject related to discipline.</td>
<td>The reflection demonstrates an analysis of the learning experience, the value of the derived learning to self or others.</td>
<td>The reflections attempt a shallow analysis and value of the learning to the student or others is vague and/or unclear.</td>
<td>The reflection does not move beyond a description of the learning experience.</td>
<td></td>
</tr>
<tr>
<td><strong>Making Connections</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The reflection articulates multiple connections between this learning experience and content from other courses, past learning, life experiences and/or future goals.</td>
<td>The reflection articulates connections between this learning experience and content from other courses, past learning experiences, and/or future goals.</td>
<td>The reflection attempts to articulate connections between this learning experience and content from other courses, past learning experiences, or personal goals, but the connection is vague and/or unclear.</td>
<td>The reflection does not articulate any connection to other learning or experiences.</td>
<td></td>
</tr>
</tbody>
</table>

Figure 10

**STUDENT ENGAGEMENT IN H-TBL**

- **Phase 1 - Web-based Content and Case Challenge**: 82%
- **Phase 2 - TRAT**: 82%
- **Phase 3 - Application Exercise**: 80%
- **Phase 4 - Creative Assignment**: 74%

Figure 11

**STUDENTS FEEDBACK**

- **COPD2 Session Attendance**: 80%
- **COPD 1 & 2 Session**: 72%
**Team Readiness awareness test (tRAT)**

<table>
<thead>
<tr>
<th>No</th>
<th>Questions</th>
<th>Total response</th>
<th>Right response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What is COPD?</td>
<td>37 teams</td>
<td>19/37</td>
<td>51%</td>
</tr>
<tr>
<td>2</td>
<td>What is main cause of COPD?</td>
<td>37 teams</td>
<td>37/37</td>
<td>100%</td>
</tr>
<tr>
<td>3</td>
<td>COPD comprises of?</td>
<td>37 teams</td>
<td>34/37</td>
<td>91%</td>
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<tr>
<td>4</td>
<td>What are cardinal symptoms of COPD</td>
<td>37 teams</td>
<td>35/37</td>
<td>95%</td>
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<tr>
<td>5</td>
<td>Why is exercise tolerance limited in COPD</td>
<td>37 teams</td>
<td>20/37</td>
<td>54%</td>
</tr>
<tr>
<td>6</td>
<td>What does COPD management comprise of?</td>
<td>37 teams</td>
<td>36/37</td>
<td>97%</td>
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<tr>
<td>7</td>
<td>Which additional investigation gives more information on oxygen needs in COPD patients? 4 choices</td>
<td>37 teams</td>
<td>25/37</td>
<td>68%</td>
</tr>
<tr>
<td>8</td>
<td>COPD patients who experience frequent exacerbations are more likely to also experience</td>
<td>37 teams</td>
<td>32/37</td>
<td>86%</td>
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<tr>
<td>9</td>
<td>Exacerbation frequency is the best measure for predicting exacerbation risk – True or false?</td>
<td>37 teams</td>
<td>18/37</td>
<td>47%</td>
</tr>
<tr>
<td>10</td>
<td>What is the key patient related outcome measures?</td>
<td>37 teams</td>
<td>30/37</td>
<td>81%</td>
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