LEARNING 360: PREPARING PRIMARY CARE ASSOCIATES (PCA) TO BE EFFECTIVE JUNIOR FACULTY MEMBERS

Olivia Ojano Sheehan, PhD, Briju Thankachan, PhD, Rich Latham, BS, and Jane Balbo, DO

Ohio University Heritage College of Osteopathic Medicine
Learning Objectives

Participants will be able to:

• Describe the PCA program and

• Discuss lessons learned from the program design, implementation, and evaluation.
PCA

- Additional year – teaching, tutoring, and mentoring first- and second-year medical students and developing a scholarly project
- PCAs receive mentorship
- Family Medicine PCAs – group facilitation, clinical skills labs, and teaching.
- OMM PCAs – group facilitation, teaching, tutoring in Osteopathic Manipulative Medicine.
Approach

• Multidisciplinary and multifaceted
• 6-step curriculum model
Step 1

Problem Identification:
Step 2

Needs Assessment:

Dear Colleague,
Professional development has become an integral part of our educational environment. Participating in this type of development helps to enhance personal and professional qualities and to improve knowledge, skills, and practice in teaching and learning. As part of an ongoing needs-based, assessment-driven faculty and professional development program, the following survey will give you an opportunity to self-assess your knowledge, skills and attitude, relative to faculty and professional development domains. Your insight is extremely important so we can customize our service and support.

Which one best describe your role at Ohio University Heritage College of Osteopathic Medicine:

- Academic Faculty (also include adjunct academic faculty teaching in Athens, Cleveland or Dublin campus)
- Adjunct Clinical Faculty (community preceptors that teach our medical students in the clinical settings)
- Discipline Directors
- PCA
Steps 3

Goals and Objectives:

- Curriculum, Instruction, & Assessment
- Technology-Integrated Teaching & Learning
- Experiential Learning & Simulation
- Administration, Management, & Leadership
- Professional Academic Skills
- Research & Scholarly Activity
Step 4

Strategies:

• Flipped classroom pedagogy
• Experiential sessions
• Small group discussions
• Online learning via Blackboard
• Independent readings/assignments
• Team Based Learning
Step 4

Strategies:

- How Doctors Think
- Crucial Conversations
- The 7 Habits of Highly Effective People
Step 5

Implementation:

- 10 PCAs started the Learning 360 in July 2018
- Blackboard platform was used to facilitate the Learning 360.
Learning Activity Workbook

The main goal of this planning document is to help students’ learn better

Decisions on what to teach.
Topic with:
- Facts
- Concepts
- Principles & Rules
- Procedures
- Reactive Skills
- Interactive Skills

CURRICULUM

INSTRUCTION

ASSESSMENT

Decisions on how to teach.
- Any purposeful activity to facilitate learning.

Decisions on how to evaluate learners’ performance.
- Formative & summative evaluation.
Brief Description: This workshop is designed to introduce participants to the basics of different types of assessments/evaluations.

Presenter: Briju Thankachan, Ph.D.

Target Audience: Anyone interested in learning more about assessments/evaluations.

Pre- Requisite(s): Attended a workshop on writing learning objectives.

Key Objective(s)
At the end of this workshop, the participants will be able to:

- Describe the purpose of Evaluation/Assessment.
- Distinguish ‘Formative’, ‘Summative’ and ‘Confirmative’ assessments.
- Explain how to judge achievement using ‘Relative’ and ‘Absolute’ standards.

Instructional Materials

Please read the following book chapter before attending the workshop on Thursday Aug 16

1. Evaluation/Assessment
1. Do a topic and procedural analysis for the topic “Cardiac Exam”, then create minimum four recall objectives and two application objectives (you can use performance – content matrix to write the objectives) then create a table that indicate the nature and number of test items to the instructional objectives. See an example in Table 11-1 and Table 11-2.

**TOPIC ANALYSIS**

**Facts**

1. The heart can be auscultated at 4 different locations.
2. Systole is when the ventricles contract
3. Diastole is when the ventricles relax
4. Murmurs are abnormal heart sounds that potentially indicate pathology

**Concepts**

1. **Valves**: the opening and closing of valves creates the sounds you hear when auscultating
2. Systole + Diastole: Aortic and pulmonic valves open during systole; mitral and tricuspid valves open during diastole.

**Principles + Rules**

1. Murmurs heard during systole can be caused by AS, PS, MR, TR.
2. Murmurs heard during diastole can be cause AR, PR, MS, TS.

**PROCEDURAL ANALYSIS**

1. What does the learner do?
   a. The learner observes the chest; palpates the chest; and auscultates the 4 appropriate locations on skin, on the chest
2. What does the learner need to know to do this step?
   a. The learner needs to know where on the chest wall the different valves can be auscultated. The learner needs to understand the concepts of systole and diastole, relative to the specific heart sounds.
3. What cues (tactile, smell, visual) inform the learner that there is a problem, the step is done correctly, or a different step is needed?
   a. Audio cues of S1 and S2 when auscultating the chest will let the learner know they are auscultating correctly. Faint S1 and S2, or no heart sounds at all, could indicate incorrect auscultation.
Recall objectives

1. Identify the four appropriate positions for auscultation of the heart.
2. Describe systole and diastole, including which valves open during each phase.
3. Identify which valve pathologies are detectable during each phase and at each location.
4. List the appropriate steps of the cardiac exam.

Application objectives

1. Demonstrate an appropriate cardiac exam on a standardized patient.
2. Given an area of auscultation and phase of systole/diastole, listen to audio file of a murmur and interpret appropriately.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Knowledge</th>
<th>Comprehension</th>
<th>Application</th>
<th>Analysis</th>
<th>Synthesis</th>
<th>Evaluation</th>
<th>Psychomotor</th>
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<tr>
<td>Recall 1</td>
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<td>Recall 4</td>
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<td>Application 1</td>
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<td></td>
<td>1</td>
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<td>1</td>
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<td>Application 2</td>
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<td></td>
<td></td>
<td></td>
<td>1</td>
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</table>

2. The main objective of the module is to describe and demonstrate “Cardiac Exam”- What basic approach and data gathering methods would you use in a formative and summative evaluation? See page 274 in the reading.

Formative

- A quiz after first instruction of knowledge but before the application (exam on standardized patient)
- Practice practical exam. Exam on standardized patient without grade attached.
- Evaluation by educators via a survey involved regarding any noted weaknesses in student performance
- Survey sent to students regarding how easily accessible prep materials were.

Summative

- Midterm exam.
- Graded practical exam on standardized patient.
<table>
<thead>
<tr>
<th>Content Structures</th>
<th>Recall Objectives (RO)</th>
<th>Objectives</th>
<th>Application Objectives (AO)</th>
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<tbody>
<tr>
<td>Facts</td>
<td>(a statement of association between two things) e.g., In each minute, how many gallons of blood heart pumps?</td>
<td>1. List common symptoms of anxiety</td>
<td>(apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, prepare, schedule, sketch, solve, use)</td>
</tr>
<tr>
<td></td>
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<td>2. List common symptoms of depression</td>
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<td>3. State the definition of Cognitive Behavioral Therapy</td>
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<td></td>
<td></td>
<td>4. Define cognitive distortions, including: All-or-nothing thinking, discounting the positives, mind reading, over-generalization, fortune telling, magnification/minimization, emotional reasoning, labeling, and personalization and blame</td>
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<tr>
<td></td>
<td></td>
<td>5. Define automatic thoughts and alternative thoughts.</td>
<td></td>
</tr>
<tr>
<td>Concepts</td>
<td>Describe the cognitive distortions.</td>
<td>Apply Cognitive Behavioral Therapy in a patient interview scenario.</td>
<td>Design a behavioral experiment to investigate a given scenario.</td>
</tr>
<tr>
<td>(a category used to group similar ideas or things) e.g., ‘cardiac arrest’</td>
<td>Describe Cognitive Behavioral Therapy.</td>
<td></td>
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</tr>
<tr>
<td>Principles &amp; Rules</td>
<td>Describe the relationship between a patient’s environment, their thoughts, moods, physical reactions, and behaviors.</td>
<td>Design an illustration showing the relationship between a patient’s environment, their thoughts, moods, and physical reactions.</td>
<td></td>
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<tr>
<td>(a statement that express a relationship between concepts) e.g., ‘heart attack &amp; blood pressure’</td>
<td>Discuss the pros and cons of nonpharmacological vs pharmacological interventions in mental health disorders.</td>
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<td></td>
<td>Describes thought records and their role in treating anxiety and depression.</td>
<td>Demonstrate the use of CBT thought record worksheet in a standardized manner</td>
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<td>Procedures</td>
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Step 6

Evaluation and Feedback: Feedback is gathered, and evaluation survey is planned at the end.

Q2 - The objectives of the workshop were met.

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<th>Answer</th>
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<th>Count</th>
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<tbody>
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<tr>
<td>Agree</td>
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<td>3</td>
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<tr>
<td>Neither agree nor disagree</td>
<td>0.00%</td>
<td>0</td>
</tr>
<tr>
<td>Disagree</td>
<td>0.00%</td>
<td>0</td>
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<tr>
<td>Strongly disagree</td>
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</tr>
<tr>
<td>Total</td>
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<td>10</td>
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</tbody>
</table>

Q3 - The information I learned from this workshop would assist me to design assessments.

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<tr>
<td>Total</td>
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Q7 - What was the single most valuable aspect of this workshop?

- The Application portion where we worked in our teams to come up with ways to teach and evaluate the Cardiac Exam
- Learning the terminology that other faculty will be using.
- Seeing how the topic/procedural analysis benefited objective writing
- Working through the topic and procedural analysis to make objectives was very helpful. There was enough time to do it completely and it made sense.
- Review of forms of evaluation with application
- Discussion of summative and formative assessment
- Working groups to come up with these teaching scenarios
- Working through examples
- Application and feedback process
- Understanding the different types of evaluation and the purposes for each.
To whom it may concern:

Throughout this academic year, I have had the opportunity to be mentored by Dr. Thankachan about curriculum development. As Ohio University Heritage College of Osteopathic Medicine began reformatting the education to encompass team based learning, Dr. Thankachan has been, and continues to be, an integral leader in this process. He has spent countless hours educating Doctors, Faculty, and staff about the premise of learning objectives, application and recall examinations, and how small group activities are best utilized. We were introduced to Dr. Thankachan at our first team based learning activity. He opened the session with an iRAT quiz, and the rest of the time framed what the curriculum will look like. His genuine interest in informing others, and improving medical education was evident. At our individual workbook meetings, he invested additional time trying to understand what our goal was, and helped us understand how we might incorporate that into a team based learning activity. Though he is not traditionally trained in medicine, he has able to quickly comprehend our main idea and how to incorporate that into this new curriculum. Overall, I am grateful to have had the opportunity to be mentored by Dr. Thankachan. My knowledge and skills in curriculum development would not be where they are now if it was not for him.

Maggie Dade

Maggie Dade, OMS-IV  
Primary Care Associate, Family Medicine  
Ohio University Heritage College of the Osteopathic Medicine
Team Based Learning (TBL) is the core of the new curriculum at Ohio University Heritage College of Osteopathic Medicine. I am a Primary Care Associate – a fourth year medical student taking a year off clinical rotations to help with the teaching of incoming first and second year students. My role in helping faculty with the development of the new curriculum was increased dramatically through my participation in a crash course on how to create TBL style curricular materials with Dr. Briju Thankachan.

Our course included a series of workshops on topics like writing objectives, creating assessments, and designing an interactive TBL lab. More importantly, all of us were tasked with designing a workbook and lab for a topic of our choice. To facilitate this, Dr. Thankachan has met with each of us individually to guide us through the process of topic and procedural analysis, coming up with appropriate objectives, designing assessment items, and more. These one on one meetings were the most meaningful aspect of the course and provided clarity on how to practically implement a TBL workshop. Dr. Thankachan’s mentoring through the TBL learning process has been exceptional and a great help to me.

Dorvan Byler | OMS IV | Ohio University Heritage College of Osteopathic Medicine
OMM/FM Primary Care Associate, 2018-19
6775 Bobcat Way, MEB-1, 212
Dublin, OH 43016
Office: (614) 793-5605
Briju Thankachan is a caring and devoted mentor. His passion towards teaching is obvious to me as a mentee. Dr. Thankachan has prepared various workshops on how to run a team based learning (TBL) exercise, the importance of clear and concise learning objectives, and how to write questions. My favorite of these workshops was when he taught us how to run a TBL exercise by running a TBL exercise with us as the learners. In addition to running various workshops, Dr. Thankachan assigned each of his learners to a topic of their choice, for which we were responsible for developing a TBL experience.

He has made himself available to each and every one of his students for individualized sessions. During these one-on-one meetings, Dr. Thankachan helped me to develop learning objectives for my topic. He aided me in understanding how to understand blooms taxonomy through application of my topic of choice. Our next meeting will involve him critiquing the examination questions I have formed for the topic. Dr. Thankachan is committed to making his learners become better teachers. He is open, honest, and seeks always to understand the topics we have chose so that he can best help us on our journey to becoming better educators. This course has been very valuable to me as someone who hopes to be an academic physician in the future.

Amanda Kuhlman, OMS-IV
Ohio University Heritage College of Osteopathic Medicine
Osteopathic Manipulative Medicine Primary Care Associate
ak236510@ohio.edu
Lessons Learned Along the Way...

• More reflection time
• Structured curriculum during the summer
• More in-person sessions
• Streamline collaborations
THANK YOU!