Problem-Based Learning to Enhance Day 1 Skills for Veterinary Students

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ABSTRACT

Background: A problem based learning (PBL) approach is implemented in the veterinary curriculum of CVASU as a part of an OIE supported Educational Twinning Project between CVASU and Cummings School. PBL is an active student-centered cooperative learning process and helps student develop critical and analytical thinking. The goal of the PBL at CVASU is to enhance problem-solving skills by integrating Day 1 competencies taught in various courses.

Implementation: Several presentations and discussions were made to faculty explaining how PBL can help students better learn the Day 1 competencies and how to implement PBL in practice. Next, PBL sessions were conducted with a few groups of faculty and students from CVASU using PBL cases developed by Cummings School. These sessions were facilitated by visiting Cummings School faculty and students. Briefly, the group is given a problem case with minimum background information and asked to solve the problem. They are to identify “what is known” and “what is unknown” and then come up with a series of learning objectives, find answers on their own from all relevant sources and proposes the next steps. At each step, the group must agree on the rationale for seeking further information and the role of facilitator is to assure that predefined learning objectives are satisfactorily addressed during the discussion. Finally, a PBL committee composed of various course directors at CVASU was charged with developing PBL cases with learning objectives that emphasize transboundary and zoonotic diseases, client communication, antimicrobial resistance, etc.

Outcome: A number of PBL cases are at various stages of development with input from Cummings School Faculty. An example of the cases developed will be presented at the poster session. Participating students and faculty responded enthusiastically to this form of learning. The PBL committee is fully engaged in developing PBL cases and instituting PBL in the CVASU curriculum.

INTRODUCTION

Veterinary medicine has an increasingly important role in global health and food security by assuring animal health, which involves combating antimicrobial resistance and managing transboundary and zoonotic diseases among others. Today’s veterinarians must receive training in critical thinking and problem-solving skills to address animal health issues at a local and global level. Problem based learning (PBL) is an active student-centered cooperative learning process and helps student develop critical and analytical thinking by allowing students to solve a problem on their own. Briefly,

• a group of student is given a clinical case with minimum background information.
• They are asked to identify the basic problem within the case and the knowledge gap by listing “what is known” and “what is unknown”.
• This exercise leads to a series of questions (developing analytical skills) culminating in a set of learning objectives.
• Students then seek answers to “what is unknown” (guided by the learning objectives) on their own (developing self-learning skills).
• Students must discuss the problem and their own findings as a group (developing cooperative learning skills) and come to a consensus for the next step (developing communication skills).

The goal of the project was to introduce PBL in the veterinary curriculum at CVASU to enhance problem-solving skills by integrating Day 1 competencies taught in various courses.

ACTIVITIES

What is PBL?
A series of seminars on PBL were presented to CVASU faculty. These seminars addressed how PBL can help students better learn the Day 1 competencies and how to implement PBL. These seminars also included an overview of how a PBL session is conducted, what is the role of facilitators and what are the various components of a PBL case including learning objectives.

How to conduct a PBL session?
Several PBL sessions were held with a few groups of faculty and students from CVASU using PBL cases developed by Cummings School. These sessions were facilitated by visiting Cummings School faculty and students. In the morning students discussed a case and came up with few learning objectives (left). In the afternoon, students returned to discuss those learning objectives after researching the topics on their own (right). These sessions allowed CVASU faculty to learn how to facilitate PBL sessions and how facilitators can assure that the learning objectives are addressed by students. These PBL sessions were well received by students.

How to develop PBL cases?
A PBL committee composed of various course directors at CVASU was formed and charged with developing PBL cases with learning objectives that emphasize transboundary and zoonotic diseases, client communication, antimicrobial resistance, etc. The committee generated draft cases and then met with faculty from Cummings school to refine one of the case. In an one-day workshop, the draft case was used to generate learning objectives for students. Since then, the committee has developed a number of PBL cases with feedback from Cummings faculty via emails.

CONCLUSIONS

• PBL has been incorporated in the veterinary curriculum at CVASU.
• The PBL committee is fully engaged in developing PBL cases.
• PBL is being implemented for veterinary students at CVASU.

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