

Integration, a Tool to Develop Critical Thinking Skills of Undergraduate Veterinary Students

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Abstract : Curricular integration is an important concept in medical education for developing students' ability to create connections between different medical disciplines. Problem-Based Learning (PBL) is one of the vehicles through which such integration can be achieved. During the recent review of the veterinary curriculum at the University of Peradeniya, a series of courses in Integrative Veterinary Science (IVS) were introduced, in which PBL was the primary teaching methodology. The objectives of this study were to evaluate students' opinions on PBL as a teaching method: it should be noted that, within the context of secondary and tertiary education in Sri Lanka, this would be an entirely novel learning experience for the students. Opinions were sought at the conclusion of IVS sessions where students of semesters 2, 4, 6, and 7 (of an 8-semester program) were exposed to a two, 2-hour PBL-based case scenario. The PBL-based case scenario in semesters 2, 4, and 7 were delivered using material previously developed by an experienced PBL practitioner, whilst material for semester 6 was prepared de novo by a less experienced practitioner. Each student (semesters 2: n=38, 4: n=37, 6: n=55, and 7: n=40) completed a questionnaire which asked whether: (i) the course had improved their critical thinking skills; (ii) the learning environment was sufficiently comfortable to express/share student's opinion; (iii) there was sufficient facilitator guidance; (iv) the online study environment enhanced learning; and (v) the students were overall satisfied with the PBL approach and IVS concept. Responses were given on a 5-point Likert-scale (strongly agree (SA), agree (A), neutral (N), disagree (D), and strongly disagree (SD)). SA and A responses were summed to provide an overall 'satisfactory' response. Results were subjected to frequency-distribution statistical analysis. A total of 88.5% of students gave SA+A scores to their overall satisfaction. The proportion of SA+A scores differed between different semesters, such that 95% of semester 2, 4, and 7 students gave SA+A scores, whereas only 69% of semester 6 students did so for their respective sessions. Overall, 96% of the students gave SA+A scores to the question relating to the improvement of critical thinking skills: semester 6 students' scores were marginally, but not significantly, lower (91% SA+A) than those in other semesters. The difference of scores between semester 6 and the other semesters may be attributed to the different PBL-material used and/or the different experience levels of the practitioners that developed the study material. The use of PBL as a means of teaching IVS curriculum-integration courses was well-received by the students in terms of their overall satisfaction and their perceptions of improved critical thinking skills. Importantly, this was achieved in the face of a methodology that was entirely novel to the students. Finally, the delivery of the PBL medium was readily mastered by the practitioner to whom it was also a novel methodology.

Keywords : critical thinking skills, integration, problem based learning, veterinary education

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