Future-proofing our Doctor of Veterinary Medicine degree program: building student confidence in self and peer assessment

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The Sydney School of Veterinary Science has a long history of educational innovation dating back to 1910, when the school first opened to provide critical professional education to a nation founded on agriculture, commencing with its First Nations people. Positioned across 2 campuses in inner-city Sydney (Camperdown) and semi-rural Camden, the school remains committed to ongoing innovation and continuous curriculum refinement. Recent changes in the evolving curriculum that exemplify this include a constructively aligned teaching framework to improve foundational surgical skills and a blended learning approach to build skills in livestock practice.

Surgical training commences early with surgical skills classes in the Doctor of Veterinary Medicine (DVM) program year 1 that progress in DVM year 2 to suture patterns, including the simple continuous suture with buried knots. This skill is formally assessed by use of an Objective Structure Barrier Examination (OSBE). The program includes pre-laboratory learning activities that increase student engagement and skills-learning self-efficacy, including an introduction to surgical theory that governs competent skill performance, an online resource that contains a demonstration video of a benchmark skill performance, a detailed photo-guided instruction booklet with descriptors of skill steps, a skill checklist of mandatory steps, and a self-help quiz allowing students to explore their understanding of important concepts.

Surgery skills teaching in the laboratory includes a skill demonstration, deconstruction, and discussion, followed by students performing the skill under supervision. Post-laboratory activities involve learners engaging further with self-evaluation and peer review of skills competency using online demonstration videos, photo-guided instruction booklets, and skill checklist rubrics to define the performance goal. A careful review of learning activity design to ensure that skill components progressively build in a logical sequential order has resulted in a dramatic improvement of the OSBE competency achieved, with the percentage of students passing the OSBE on the first attempt jumping from 34% (2019) to 80% (2021) and on the second attempt from 79% to 99%.

Australia’s agricultural industries require our veterinary graduates to be actively engaged in improving the health and welfare of our production animals. To inspire and equip our students for livestock practice, an innovative blended approach to learning is applied to livestock practice teaching that includes the following:

• Mannequin-based simulators to support student learning of cattle restraint skills (halter placement and manual restraint of the head of a cow) and cattle reproduction skills (pregnancy diagnosis, artificial insemination, and obstetrics) in a safe, non-confrontational manner.
• Collaboration with the veterinary professional education website, Versatile Vet (www.versatilevet.com), to enhance methods of teaching veterinary skills and create 46 cattle and 11 sheep practical skills videos that are used to enhance teaching livestock handling and clinical skills.
• Development of self-directed case- or herd-based modules that allow students to work independently or in groups to approach real-life clinical scenarios and develop diagnostic plans, assessments, and treatment plans.
• Medical record data collection software that facilitates the development of data collection and recording skills in final-year students to create medical case records and invoices while in the field.

Innovative and structured approaches to enhance students’ learning are hallmarks of the Sydney School of Veterinary Science DVM degree program.