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FLIPPED CLASSROOM: ONLINE PRESSBOOK AND CASE STUDIES IN BACTERIAL AND FUNGAL DISEASES OF ANIMALS

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"Bacterial and Fungal Diseases of Animals" is an online educational resource produced by James Cook University, tailored for Australian veterinary students. In use for three years, it functions like a traditional infectious disease textbook but is specifically designed to meet targeted learning objectives.

The resource features numerous images of diseases and organisms, along with illustrations that explain disease processes. Each section concludes with quizzes that provide an engaging way for students to assess their learning, contributing to a high pass rate. This year, the resource, along with student-researched online materials, forms the basis for ten 50-minute case study tutorials. Each session begins with a short quiz on topics such as bacterial causes of reproductive failure, followed by student-presented case studies. Other students are encouraged to ask questions, and the lecturer clarifies any misconceptions or gaps.

Students who attend these sessions offer valuable information and feedback. However, only 25% of students attend these non-compulsory tutorials, which may reflect the characteristics of the student cohort rather than the teaching method itself. Therefore, further evaluation of this teaching approach is needed.

SUPPORTING STUDENT LEARNING WITH BUILT-IN FEEDBACK FEATURES IN A MULTIFUNCTIONAL LIFE-SIZED COW MODEL

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Feedback is a vital approach to facilitate students' development as independent learners to monitor, evaluate, and regulate their own learning. As positive feedback increases student motivation, a variety of feedback mechanisms were incorporated in a life-sized fiberglass cow model that had been modified to enable practice of a range of large animal skills.

Henryetta's features include intravenous access; intramuscular injections; stomach tube placement, fluid administration and rumen auscultation; ear tagging and nerve block simulations. All veins (jugular and coccygeal) are fluid-filled allowing students instant feedback when inserting needles correctly. Electrical circuits are part of paravertebral, cornual and auriculo-palpebral nerve block simulations which trigger light colour changes and buzzing sounds if needle placement is correct. To accommodate student preferences and neurodiversity, the buzzing sound can be disabled easily, and feedback is given by lights only. Another feedback mechanism is a heating pad in a hidden pouch in the 'skin' over the paravertebral fossa which mimics the vasodilation related temperature increase after paravertebral block placement. Another pouch enables adding of extra padding to the lumbar area, making identification of the paravertebral block landmarks more difficult as the body condition 'increases'. Further feedback features include listening to the rumen when the stomach tube has been placed correctly, and fluid is administered.

Students especially like the build-in feedback mechanisms as they instantly know if they are doing something correctly. Henryetta is a one-of a kind unique teaching model complementing our large animal skills training and supporting student learning.

APPLYING WHAT THEY KNOW: SCENARIO-BASED MASTERY TESTS IN A PRE-CLINICAL CURRICULUM

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Competency-based curricula emphasise not just what students know, but what they can do with that knowledge. This principle extends to how we assess learning, even in pre-clinical subjects. At Massey University, second-year students in our integrated courses complete a range of assessments, including a series of short, fortnightly Mastery Tests. These tests focus on core topics such as anatomy, physiology, animal science, radiography, and radiographic anatomy.

Each Mastery Test presents scenario-based questions featuring fictitious veterinarians Marama and Sam, along with the clients and patients they encounter in practice. These narrative-driven questions are designed to assess application of knowledge, helping students connect theoretical content with situations they are likely to face in clinical settings. The tests are cumulative, covering new and previous material. This design encourages regular revision and supports long-term retention. The fortnightly schedule helps students stay engaged and provides frequent checkpoints, allowing teaching staff to identify students who may be struggling and offer targeted support early in the semester.

Student feedback has been positive, and early results suggest that this assessment model promotes deeper engagement with course material and stronger preparation for clinical learning.

FROM CONCEPT TO CLINIC: TEACHING PHYSIOLOGY THROUGH CASE-BASED LESSONS

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To support the development of clinical reasoning in physiology, we have introduced short, online case-based lessons into our veterinary curriculum. These 4–6-page lessons use realistic clinical scenarios to help students apply physiological principles in context.

Each case presents a fictitious patient with evolving clinical signs or test results. Students are prompted to answer questions that connect those findings to underlying physiological mechanisms. For example, one case follows a dog accidentally locked in a shed without food or water. Over several weeks, students use their understanding of physiology to explain how the dog becomes dehydrated, thirsty, tachycardic, and acidotic, and how it maintains blood glucose levels during starvation.

Case lessons are carefully aligned with weekly physiology content and are designed to reinforce traditional teaching while fostering the application of knowledge. They also serve as a scaffold to help students transition into the clinical phase of the programme, where integration of basic science into clinical reasoning becomes essential. Student feedback has been encouraging, with many noting that the cases are enjoyable and help them understand how physiology applies to real-world scenarios.

TEACHING VETERINARY STUDENTS IN 2025: INTEGRATION OF 3-6 MINUTE CLINICAL VIDEOS INTO THE VETERINARY CURRICULUM

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During the COVID-19 pandemic, veterinary schools had to adapt teaching modalities to accommodate the volatile working environment and student contact restrictions. Many institutions embraced technology in the form of on-line webinars, discussion sessions, interactive quizzes and problem-based learning, as well as development of training videos.

In the post-COVID era, some of these modalities have evolved to supplement the veterinary curriculum. Training videos have been used in medical and veterinary undergraduate courses, in disciplines such as anatomy and histology. Research suggests that students who viewed supplementary teaching videos in human medicine had a more positive performance outcome compared to those students who did not view the videos[1]. Studies have also shown that the maximum median student engagement time for a training video of any length was 6 minutes[2]. The majority of digital resources available to veterinary students exceeds this optimal duration.

This presentation considers the potential integration of short, 3–6-minute clinical procedural videos into the veterinary undergraduate curriculum through a specifically-designed virtual learning platform. Key elements of educational videos such as cognitive load and student engagement will be discussed, along with recommendations to address these to maximise student learning.

References:
1. Kruskie ME, Wisner RL, Byram JN, Vargo-Gogola T, Deane AS. Does viewing pre-lab dissection summary videos correlate with student performance outcomes in medical gross anatomy? *Anatomical Sciences Education* 2025;n/a.
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TEACHING VETERINARY STUDENTS LOCAL FACIAL BLOCKS IN EQUINE AND BOVINE PATIENTS VIA VIRTUAL REALITY SIMULATIONS

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Local anaesthetics are used frequently in veterinary medicine to remove the local perception of pain. For this specific teaching purpose, the focus is on facial local blocks that would be used for eye exams and enucleation in horses and cattle, dehorning in cattle, dentistry in horses and for additional pain control during and after surgery in both species.

To perform facial nerve blocks, a veterinary student must be able to recall anatomy, palpate and identify the nerves running beneath the skin, and be able to deliver the drugs into the nerve fibres via a needle. This requires students to have a solid understanding of facial anatomy as well as confidence in their clinical skills when handling large animals and performing these tasks.

A virtual reality (VR) program was designed to address a gap in existing veterinary teaching by providing fully interactive 3D equine and bovine standing models that students can practice their facial nerve blocks on. Using this simulation in mixed reality or full VR, the students can walk around the patient, palpate the appropriate anatomy, draw up their drugs using virtual needles and syringes, and then inject into the virtual reality model. This VR program enhances the rate of learning, and elevates the final level of skill by providing personalised feedback to students on their performance. It also helps them overcomes barriers of transition from preclinical to clinical practice and improves the quality of care of their patients during live animal practicals and work integrated learning.

MOTIVATING AND INSPIRING FINAL YEAR VETERINARY STUDENTS TO ADOPT POPULATION-BASED PARA-CLINICAL TRAINING

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Traditionally para-clinical subjects within the veterinary curriculum include epidemiology, state veterinary medicine and veterinary public health, and are usually taught in preclinical years when students often do not see the practical application or relevance of the subjects to themselves as qualified veterinarians, leading to resistance to undertaking the subjects.

In 2011, a small group composite learning approach was implemented at James Cook University. The course is taught both on and off campus and has been developed in several phases since its inception. Voluntary anonymous feedback in the form of a Likert scale questionnaire and written comments has been consistently collected from each group over the 12 years and analysed using descriptive statistics to assess student perception of the benefits of para-clinical training. These findings have been benchmarked against other clinical rotations including medicine and surgery, which used the same feedback methodology. Feedback from most students (>78%) over the 12 years has consistently been positive and students have rated their enjoyment and significance of the population-based subjects as equivalent or better than the traditional clinical based subjects using this composite learning approach.

Application of population-based subjects requires high-level cognitive ability, problem-solving skills and integration of veterinary knowledge. Our model addresses this, equipping students with the means and desire to apply these subjects in veterinary practice. The training of final year students in population-based subjects is possible and the use of blended and work-integrated learning inspires veterinary students to adopt population-based disciplines as an important part of their clinical veterinary training.

EFFECTIVE COMMUNICATION AND APPROACH TO LARGE ANIMAL CONSULTATION

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This presentation introduces an innovative, interactive teaching activity designed for clinical-year students in a production animal course. This practical exercise engages students in a simulated-client scenario, where students apply knowledge of anatomy, pathology, pharmacology, and professional skills to develop a comprehensive approach to a large animal consultation. The activity provides a framework for real-life consultations and HEAPc record-keeping practices, therefore preparing students for rural practice.

Utilizing Mentimeter technology, the interactive components of this activity offer students active learning opportunities. Students engage in clinical decision-making and justification related to history taking, triage, differential diagnoses, diagnostic testing, and treatment. Immediate feedback from the facilitator and group discussion enhances the learning experience and provides a focus on the effective use of communication skills.

Previously, this activity involved pen-side simulation-based education, including patient physical examinations and client communication. However, due to an increase in class size, the current format accommodates up to 35 students in a 1–2-hour session. The focus has shifted from practicing physical examination to building communication skills, decision-making skills and high-level application of theoretical knowledge. The collaborative approach fosters skills for psychological safety, emotional intelligence and resilience in the face of real-time and scenario-based challenges.

Students develop graduate attributes such as creative and critical thinking, teamwork and communication, self-awareness and emotional intelligence, professionalism and leadership and strengthen multiple areas of Day 1 Competency for rural practice.

WHAT IS THE RIGHT LEVEL OF CONFIDENCE FOR A NEW GRADUATE? PERSPECTIVES OF VETERINARY EMPLOYERS

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Confidence is important for the successful transition of veterinary graduates to the workplace, but both underconfidence and overconfidence may be detrimental – so how should educators prepare graduates for the right level of confidence?

This project conducted semi-structured interviews with 14 Western Australian veterinary employers regarding confidence in new graduates (i.e. how it is recognised; signs and impacts of under- and overconfidence; how to gauge the right level). Transcripts were analysed by reflexive thematic analysis (Braun & Clarke). Employers assessed confidence from personal interactions (communication, body language, demeanour), clinical workflow (structured decision process) and attitudes (e.g. adaptability, growth mindset), and note its significant impacts including client confidence, team dynamics, and productivity. Emergent themes included (i) the importance of interpersonal communication as a 'front' for confidence, which to some extent can be 'faked'; (ii) confidence must be tempered by awareness of competence limits, including honestly admitting knowledge gaps; and (iii) confidence does not equal independence, whereby graduates should have the confidence to proactively seek feedback and reflective guidance (cf. passive direction).

Employers agreed there is a right level of confidence, albeit contextual and hard to define, but were evenly split on whether they would err towards under- or overconfidence during recruitment. Results reveal both the importance and the elusiveness of confidence, but provide useful guidance for graduates and educators.

THE PRIVATE PRACTICE IN DELIVERING QUALITY VETERINARY EDUCATION

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Tableland Veterinary Service (TVS) has a rich history of veterinary education, with hundreds of undergraduate veterinary students passing through the rural mixed practice clinic in Malanda, North Queensland. Specifically, veterinary undergraduate students from James Cook University (JCU) and more recently City University of Hong Kong (CityU) participate in a formal teaching program in cattle medicine and surgery.

This program helps prepare students for rural mixed practice with a structured, practical hands-on approach, catering for a wide range of student abilities. Students are provided with responsibility for in-clinic cases, empowering them in their decision-making skills, whilst under the supervision and guidance of the teaching team. With small teaching groups of 6-8 students, the focus is on development of practical skills, in a fully immersive rural practice environment. Students live on-site for 3-week rotations allowing participation in after-hours caseload and clinic-life.

This presentation aims to showcase the role of private practice in enhancing veterinary education. Details of the formalised structured program will be delivered, along with valuable insights from the teaching team.

EVIDENCING DISTRIBUTED CLINICAL EDUCATOR EFFICACY: INSIGHTS FROM THE UNIVERSITY OF MELBOURNE

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It is widely recognised that employment as an academic veterinarian does not automatically confer teaching expertise. However, educator development in academia is supported through multiple mechanisms including strong peer exemplars, mentors, substantial opportunity to practice and refine teaching skills, as well as formal and informal education training and credentialing systems. Distributed clinical educators are expected to teach and assess our students in work-integrated learning, yet they do not generally benefit from the same support provided to academic clinical educators.

Developed pedagogical skills in teaching, assessment and feedback are crucial qualities for an educator to ensure strong student experience and day-one graduate competence outcomes. As distributed clinical education becomes increasingly central to veterinary training globally, accrediting bodies have responded with new competencies and policies aimed specifically at supporting and evaluating educators in these roles. Recent changes have also emphasised the need for *outcomes-based* evidence of educator efficacy, signalling a shift from inputs to impact.

In this presentation, we will share the University of Melbourne's journey in building a robust, outcomes-focused framework for training and evaluating distributed clinical educators' impact. Using our program as a case study, we will explore the strategies we've employed—spanning training design, delivery, and the multimodal evidence we collect to assess educator efficacy.

HIGH IMPACT STUDENT-CENTRED FEEDBACK IN THE WORK-INTEGRATED LEARNING ENVIRONMENT

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Meaningful, actionable feedback is crucial for student learning, especially in clinical and work-integrated learning environments. The Veterinary Teaching Hospitals at the University of Queensland recently introduced a novel student-focused assessment and feedback strategy to assess placement performance.

This design combines strong formative foundation with summative performance assessment. Before placement, students prepare a placement plan, reflecting on prior performance and setting goals. During placement, students initiate daily or weekly assessment and feedback forms, self-assessing and providing brief reflective justifications. This self-assessment is presented to attending clinicians for discussion, leading to agreement on student performance or adjustments to marks based on clinician evaluation. Individual performance is aggregated with a coordinator global assessment to determine a summative mark at rotation completion. In addition, rotation coordinators meet students at mid-rotation to discuss performance, well-being, and progress towards goals.

Student engagement and response to the student-centred feedback design have been overwhelmingly positive. Staff report minimal time increase in providing feedback. Feedback quantity and quality have increased, partly due to increased awareness of the diverse feedback opportunities provided during WIL placements. Challenges include overcoming staff time concerns, student motivation for critical self-assessment, and removing barriers between students and clinicians for honest and dialogic discussions. Despite these challenges, objective performance outcomes have remained similar, and initial data suggests increased student confidence in seeking feedback and a greater self-awareness of performance against realistic standards over time.

INTEGRATING AND SCAFFOLDING EUTHANASIA DISCUSSIONS AND LEARNING ACROSS CURRICULA FOR VETERINARY PROFESSIONALS

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Euthanasia is widely recognised as one of the most emotionally and ethically complex aspects of veterinary practice, representing a crucial test of a graduate's technical skill and professional competence. Despite the importance of this procedure, euthanasia education is often introduced late in veterinary and veterinary nursing/technology (VN/VT) programs.

Our findings from the early introduction of euthanasia education in a Veterinary Technology program, suggests that facilitated teaching sessions on this topic can also create opportunities to explore advanced professional competencies. Building on the success of this initiative, we developed a curriculum roadmap to embed a euthanasia-related learning framework vertically and horizontally across a Veterinary Technology program.

This roadmap can be used to scaffold professional competencies that are critical to progressively build student's confidence and capability in navigating end-of-life care, whilst simultaneously developing students' graduate attributes.

Key Takeaways:

- Early and repeated integration of euthanasia learning framework may support development in not only the technical, but also professional competency aspects of euthanasia.
- Vertical and horizontal euthanasia curriculum ensures progressive learning, creating opportunities to integrate professional skills which are aligned with the students' readiness and learning needs.
- Embedding euthanasia training early can foster early alignment to professional identity and enhance emotional preparedness for clinical practice.
- Industry collaboration is critical to ensure curriculum relevance and integration of contemporary practice and excellence in euthanasia services for clients.

LESSONS LEARNED FROM THE EARLY INTEGRATION OF EUTHANASIA DISCUSSIONS FOR VETERINARY PROFESSIONALS

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Euthanasia is a complex aspect of veterinary practice, demanding technical skill, sensitive communication, ethical reasoning, and emotional resilience.

Despite its significance, there is considerable variability in how euthanasia training is integrated into veterinary and veterinary nursing/technology (VN/VT) programs. Reflections on informal student feedback during first-year professional skill development activities revealed widespread apprehension about euthanasia, some students expressing that they are questioning their suitability for the profession due to exposure to euthanasia.

In response, and in collaboration with industry partners, we piloted the early integration of euthanasia discussions into a first-semester foundational subject. This initiative aimed to assess the impact of introducing euthanasia discussions early in a Veterinary Technology program on student confidence and professional skill development. Informal student feedback suggests that early exposure not only alleviated student concerns about euthanasia but also created opportunities to explore advanced professional competencies.

Key Takeaways:

- Outline of advanced professional competencies identified from facilitated euthanasia discussions with first year students.
- Early euthanasia discussions may reduce student anxiety around end-of-life care and can create opportunities for sophisticated professional skill development.
- Industry collaboration enhances the relevance of early euthanasia education.
- Integrating emotional intelligence frameworks at the outset strengthens professional identity formation.

FINDINGS FROM A HYBRID APPROACH TO TEACHING TECHNICAL AND COMMUNICATION SKILLS FOR SMALL ANIMAL EUTHANASIA

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The ability for students to develop, and become competent in, both technical and communication skills in small animal euthanasia is a fundamental day one skill. However, there is commonly very little timetabled space for these specific skill sets, with a reliance on placement-based experience to fill in the gaps.

Recognising this, we developed an online asynchronous module flanked by two synchronous workshops for third year Doctor of Veterinary Medicine students, comprising a total of five hours. The online resources included a revision of the pharmacology of sedation and euthanasia protocols and introduced the flow of a small animal euthanasia consultation. The in-person workshops focused on simulation-based education to address communicating the three pillars of quality of life (QoL; emotional, social and physical wellbeing) to pet owners, incorporating pain scoring techniques and negotiating differing cultural beliefs in a consultation. Students were invited to complete an anonymous online survey prior to the first workshop and at the conclusion of the teaching material in 2023 and 2024.

This presentation will focus on the survey results regarding the impact and relevance of the newly introduced teaching resources. Paired student responses allowed us to further evaluate the impact of these resources on confidence levels in both technical and communication euthanasia skills. This teaching intervention allowed us to explore the benefits and limitations of using technology in education and showed how combining technology and in person teaching augmented student experience and learning.

PARASITOLOGY CURRICULUM AND RESOURCES THAT REVEAL THE BEAUTY, TERROR AND IMPACT OF ANIMAL PARASITES

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Students have traditionally considered veterinary parasitology to be a dense and complex subject that is neither easy nor enjoyable to learn. Across the subject, the students have to learn and apply a vast amount of information on morphology, life cycles, and control measures for a large number of parasites, so the method of teaching and delivery become paramount.

The challenge for educators is to design learning experiences which reduce cognitive load while emphasising the relevance and practical application of parasitology. Recent increases in both student numbers and diversity, combined with the increasing demand for digital learning experiences further challenges educators to leverage digital technology to make learning more engaging, interactive, and accessible.

The JCU multidimensional approach to curriculum design invigorates student learning through six key strategies: 1) use of visually beautiful and shocking images to leave memorable experiences, 2) incorporation of research expertise, 3) delivery of engaging and entertaining stories in interactive lectures to stimulate student thinking and recall, 4) use of digital technologies (e-books) and 5) authentic case studies and 6) creation of innovative engagement resources, such as parasitology suits, 3D printed parasites, parasite sheriff badges etc. In this presentation key teaching strategies are presented, and the outcomes are discussed.

EXPLORING THE STRUCTURE-FUNCTION PARADIGM IN VETERINARY HISTOLOGY AND PHYSIOLOGY EDUCATION

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Understanding the correlation between organ structure and function is fundamental in veterinary education yet often approached through passive memorization. The "Structure/Function program: An Integrated Approach to Veterinary Histology and Physiology" is a pioneering course designed to challenge this norm by integrating microscopic anatomy and physiology with dynamic teaching methods. This course enables students to understand and articulate the relationships between tissue architecture and its functionality, essential for comprehending disease pathogenesis.

Through a series of lectures, microscopy classes and interactive exercises starting from drawing histological structures to modifying tissue structures to create new functional outcomes or predicting disease manifestations based on structural alterations this structure/function program provides a holistic learning experience fostering a deep understanding of tissue architecture's role in health and disease.

This approach also enhances student engagement, makes learning enjoyable and deep understanding of complex histological and physiological concepts possible. By replacing traditional rote learning with a more interactive and investigative approach, students not only grasp but also apply their knowledge which prepares them for advanced studies and research in their Doctor of Veterinary Medicine degree and future professional practice.

LESS CUTTING, MORE CONNECTING: A NEW MODEL FOR ANATOMY TEACHING

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As veterinary class sizes grow and curricula shift toward competency-based outcomes, traditional student-performed dissection becomes increasingly difficult to sustain as the foundation of anatomy teaching. To address these challenges, we redesigned our anatomy curriculum using a flipped-classroom model and a more clinically focused, station-based laboratory approach.

Students now complete a series of interactive online anatomy lessons before attending lab sessions. These lessons include embedded questions and visual resources that promote active engagement and retrieval practice. By arriving better prepared, students are able to maximise their time in the lab, work more independently, and focus on reinforcing key concepts. Dissection still plays a limited role in the curriculum, but lab sessions now centre on clinical relevance and efficiency. Students rotate through stations featuring articulated skeletons, models, pre-dissected and preserved specimens, and occasional fresh tissues. Working in small groups, they complete tasks aligned with anatomical structures and functions most relevant to veterinary practice.

Initial feedback from students has been positive, with many reporting that the new format helps them learn more effectively and make better use of lab time. This blended, clinically integrated approach offers a sustainable and scalable model for anatomy teaching in modern veterinary programs.

ONE COURSE TO RULE THEM ALL: LESSONS FROM ROLLING OUT A SINGLE COURSE PER SEMESTER STRUCTURE

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Implementing a new curriculum is more than a content update, it's a culture shift. In this session, I'll share insights from introducing a unified course structure across a veterinary program. From integrative assessment and winning over students, to designing consistent online platforms and online lesson approaches, we'll walk through what worked, what we had to rethink, and how a cohesive approach can transform both teaching and learning.

Key Takeaways:

- Clarity is kindness: How consistent course layout and structure reduced cognitive load for students and staff.
- One-course model benefits: How using a shared course identity (vs siloed subjects) improved continuity and integration of key competencies.
- Student reactions: What students loved, what they struggled with, and how their feedback shaped ongoing tweaks.

IMPLEMENTATION OF AN EVIDENCE-BASED SCAFFOLDED TEACHING APPROACH FOR BOVINE TRANSRECTAL PALPATION

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Bovine transrectal palpation (TRP) is a complex clinical hands-on skill that is difficult to teach. To optimise achievement of learning outcomes, a scaffolded evidence-based approach was implemented to teach this skill to 4th-year veterinary students (of a 5-year course) over a one semester period.

Student training included lectures (reproductive anatomy and physiology) and practical classes (Breed'nBetsy® simulators and abattoir organs) in week one, student driven practice over an eight-week period, additional simulator practice (Haptic Cow®), a formative TRP Objective Structured Clinical Examination (OSCE), followed by two life-cow palpation sessions at the end of the semester. The formative TRP OSCE assessed students' ability to estimate ovary sizes without visualisation and recognising ovarian structures. These are skills that have been reported to be positively correlated to palpation abilities. The OSCE was a barrier assessment students had to pass before live cow access was granted. OSCE preparation opportunities were created by making "Mini-Cow-Palpation-Boxes", ovary palpation models and instruction manuals available. Students could practise anytime and as often as they needed. The OSCE could be repeated as many times as necessary, immediate feedback was given and students signed up for the assessment when they felt ready.

Student feedback indicates appreciation of the practice, assessment and feedback opportunities. This approach is not only setting students up for success but also improves animal welfare and teaching animal use as students have basic palpation skills and are optimally prepared for the life-cow palpations. Furthermore, it supports learner diversity and empowers students to be in charge.

EXPLORING ACADEMIC AND STUDENT APPROACHES TO ENGAGEMENT IN A PARASITOLOGY COURSE

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Higher education institutions recognise the importance of constructivist teaching and learning approaches in their policy and practice documents. However, these practices are measured by institutions using behaviour-based tools and metrics. These tools narrowly capture the perspectives and behaviours of the students whilst silencing the voices of those imperative to constructivist approaches: teaching academics.

This study worked to address this gap by adding holistic insights into student engagement from the perspective of both a teaching academic and students. An interpretivist qualitative case study was used to explore the voices of a teaching academic and his students in a veterinary parasitology course at a regional university in Australia. Two research questions were used: How and why does a teaching academic approach the engagement of their students in their parasitology subjects? and How and why do students approach their engagement in their parasitology studies? Qualitative data were collected and analysed to reveal an approach to engagement that is dynamic and relational that involves interactions and affect for constructing and sustaining deep learning and contextual understandings.

These engagement understandings highlight the ideographic details that are currently missed by institution-wide reporting mechanisms. This study provides an example of student engagement research that is aligned with and can work to inform contemporary higher education teaching and learning approaches at the pedagogical interface.

NET ZERO IN PRACTICE: IMPLEMENTING A STRATEGY TO DELIVER SUCCESS

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Net Zero and sustainability represent a significant opportunity for veterinary practice to improve team purpose, client value and profitability. Climate change is the biggest long-term challenge to the future health of all animals and as guardians of animal health, veterinarians will need to respond. Veterinarians are a trusted scientific voice in the community and provide leadership to the animal caring community. Veterinary practice can contribute to slowing climate change by reducing emissions and building support from clients through a shared commitment to the future of animal health.

Implementing a Net Zero strategy starts with management commitment, then setting targets, measuring carbon footprint, implementing reductions and collaborating to share success. Emissions reductions is about systems review. An easy way for practices to begin reductions is to identify the 4 key areas of emissions they have direct control over (Scope 1 &2), then review the processes and systems that create that emission and implement reductions using existing technologies. Moving to all-electric appliances using renewable energy, electric vehicles and implementing anaesthetic gas reduction programs will deliver significant financial benefits, better patient care and a more engaged team.

A well designed and implemented Net Zero strategy can deliver significant immediate benefits as well as providing a long-term framework for the entire veterinary community to implement a path to Net Zero carbon emissions by 2050.

VETERINARY ANAESTHESIA: A PRACTICAL PATHWAY TO A MORE SUSTAINABLE FUTURE

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The role of volatile anaesthetic gases in both human and veterinary health care settings and their contribution to greenhouse gas emissions and climate change are now fundamentally recognised.

All of the major volatile agents as well as the anaesthetic gas nitrous oxide that are presently in use fall under the Scope I category of emissions and therefore provides an opportunity for veterinary practices to develop alternative anaesthesia techniques to reduce their use, therefore mitigating their effect on the environment. Alternatives may involve anaesthetic protocols that can be performed without the use of volatile agents altogether or by multimodal techniques that are able to significantly reduce the reliance on volatile agents.

The veterinary profession faces some unique challenges in the delivery of anaesthesia services when compared with human medicine. Not least is the significant patient variety that veterinarians are tasked with anaesthetising and how this relates to maximizing patient safety and ensuring satisfactory outcomes. Additionally, anaesthetic maintenance and monitoring in veterinary private practice is still largely undertaken by veterinary paraprofessionals under direct veterinary supervision. There is significant scope for improvement in anaesthesia teaching practices within both veterinary and veterinary paraprofessional training programs to both maximise patient outcomes and also to minimise environmental damage.

THE CHANGING CLIMATE IN VETERINARY EDUCATION

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As experts in animal health, veterinarians hold a unique position to educate the public about managing their animals in the face of the changing climate and extreme weather events. Veterinary schools need to empower and equip students to educate the public about managing animals in the changing climate, as well as informing them about the environmental impacts of our professional work and how these might be mitigated.

The Day One competencies for graduates now include explicit reference to promoting sustainability of the environment, providing an additional imperative for educators in Australasia to teach climate content in their curricula. Our recent research in Australia and New Zealand has shown that veterinary students rate education related to environmental sustainability as very important, and desire more information than they have been receiving in their schools. However, embedding a climate curriculum into a veterinary program is challenging, with limited guidance available, difficulty in identifying and mapping current content, and determining how to incorporate this important new information into crowded curricula.

In this session, we will discuss our recent student-led research and climate-related curriculum at the Melbourne Veterinary School and facilitate attendees to reflect on and share their experiences.

EQUINE CASTRATION SIMULATOR ENHANCES SURGICAL SKILLS AND CONFIDENCE OF FINAL-YEAR JCU VETERINARY STUDENTS

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Equine castration is a fundamental surgical procedure that may be performed by newly-graduated veterinarians. However, opportunities for students to gain proficiency on live animals are often limited in the university setting due to logistics, shortages of live and post-mortem models, animal ethics concerns and Hendra vaccination status of horses.

This presentation describes the development and implementation of an equine castration model designed for final-year James Cook University (JCU) veterinary students. The simulator enables simulation of the surgical procedure in a controlled setting and overcomes some of the aforementioned learning barriers. The model is constructed using inexpensive and readily available materials such as stockings, elastic bands, Penrose drains, zip ties and material offcuts. The components aim to replicate key anatomical structures including the scrotum, testes, ligament of the tail of the epididymis, and spermatic cord, allowing for realistic practice of open and closed castration techniques. The model facilitates repetitive practice using real equine castration surgical instruments in a low-stress environment, enabling students to simulate critical steps such as tissue identification, ligation, and emasculation.

Preliminary feedback indicates timely skill re-enforcement with improved student confidence and preparedness for live animal surgery. The model's integration into the JCU curriculum enhances the acquisition of key surgical skills, improves decision-making, and promotes a deeper understanding of surgical anatomy and potential complications. This teaching tool represents a valuable addition to veterinary surgical education, fostering competent and confident equine practitioners and conceivably better patient outcomes.

ADMISSIONS AT MURDOCH – A NEW PROCESS AND PLAN FOR TRACKING COURSE OUTCOMES

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The Murdoch University School of Veterinary Medicine has instituted a new process for admissions, with students admitted to the course for 2025 required to complete online Situational Judgement testing and an asynchronous online recorded interview, as well as demonstrating academic success.

The asynchronous online recorded interviews employed the multi mini-interview format and were considered more reliable than face to face interviews, catered for students in various locations, and could be re-assessed should issues arise. They were rated by university academics and external veterinary practitioners, with each student being assessed by 10 different individual raters.

The admission interviews were assessed against those Course Learning Outcomes that are more difficult to explicitly teach. This entry data will be used to track and assess students' progress against these outcomes throughout the course and compare graduate outcomes with admission data, thus seeking to validate the admission interviews and situational judgement test.

EXPLORING THE ROOTS OF VETERINARY FACULTY ATTRITION THROUGH THE SYSTEMS THINKING LENS

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The profession is facing a significant workforce shortage globally. In Australia, the need for more veterinarians became apparent during the COVID-19 sudden peak in demand and led to an NSW enquiry in 2023 to explore causes and potential solutions.

As the profession is evaluating the best ways to maintain a critical number of veterinarians to serve the community, another more insidious crisis is looming: the ongoing attrition of veterinary medical educators.

Academic medicine is a complex beast with many interacting interfaces, entangled layers of activities and actors dealing with conflicting demands. From a systems thinking, academic medicine is a complex adaptive system which responds to interventions in non-linear and often unpredictable ways. At times, some patterns of behaviours called archetypes can be recognised and point to where the deep-seated issues might lie. In this presentation, I will introduce a few of these archetypes bringing new insights into the veterinary educator challenges which might contribute to the current shortage crisis.

EMBEDDING PSYCHOLOGY SERVICES WITHIN A VETERINARY SCHOOL: WHERE TO START AND HOW TO MAKE IT WORK

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To support student wellbeing, Australian veterinary schools must have easily accessible services available to their students, as per Australasian Veterinary Boards Council Accreditation Standards 2024.

Australian universities offer counselling services for students, with most services centrally located and available to all students in the university. For veterinary students requiring psychology services, this centralised model often presents barriers related to accessibility (time, location) and students' perceptions of contextual relevance – "most psychs just don't get vet school" being oft-quoted.

The simple solution to supporting veterinary student welfare is to embed psychological services within the veterinary school, but overcoming University resistance to service duplication is a significant barrier. This presentation explores the barriers, the challenges, the unexpected benefits, and the data demonstrating the positive effects of embedding this service within Murdoch University's School of Veterinary Medicine. The authors hope that sharing this presentation will empower other veterinary schools to do the same.

IMPROVING STUDENT SUCCESS AND RETENTION IN VETERINARY EDUCATION THROUGH DATA-DRIVEN INSIGHTS

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This presentation explores a decade of data on veterinary student progression, retention, and satisfaction at James Cook University (JCU), offering insights relevant to veterinary schools across Australasia. Between 2016 and 2022, JCU recorded the sector's lowest subject success rate (89.5% in 2022 *vs.* 97% sector median), with the most pronounced challenges in second and fourth-year subjects. These years showed increased academic demands, workload pressure, and susceptibility to high failure rates.

Despite this, average annual retention remained high (94.3%), and 2024 data reflect improved outcomes following curriculum and support interventions. Key risk factors for attrition included lower Australian Tertiary Admission Rank (ATAR), low socioeconomic status, and declared disabilities. The data also highlighted variations in teaching quality and the impact of staff development needs.

JCU has responded with strategic reforms: development of revised admission pathways favouring students with prior tertiary study, enhancing mental health support, curriculum redesign to reduce cognitive load, and increasing emphasis on a flipped teaching model from 2026. This study demonstrates the power of institutional analytics of longitudinal data to shape targeted interventions, inform admissions and curriculum reform, and ultimately offering strategies to enhance student success in veterinary education.

RAISING STUDENT AND STAFF ENGAGEMENT TO OPTIMISE MODEL USE: THE STORY OF HENRYETTA MOORNI-MOORNI MCCOWFACE

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It can be difficult to get student and staff enthusiasm for new clinical skills models. When the opportunity arose to modify a life-sized fibreglass cow, students and staff were involved from the beginning to raise interest and engagement.

First, an email introduced Mrs Cow as well as all features that were planned to be added. Staff and students were invited to participate in a naming competition and to submit ideas for additional modifications that were not included yet. A naming committee decided on 'Henryetta Moorni-Moorni McCowface'. 'Henryetta' is based on Henrietta Lacks whose story within medical research is fascinating. With such an inspiring name we hope that Henryetta will make a difference within Veterinary Education. 'Moorni-Moorni' means very black in Noongar. When Henryetta's modifications were done, and her right side had some space, a local indigenous artist helped us paint her. This was another excellent opportunity to advertise Henryetta as all staff and students were invited to participate. The Noongar art piece represents the coming together, diversity and journey of students. As the art is based on yarning circles which are a symbol of sharing knowledge, building respectful relationships, and fostering a culture of reflection, we hoped to create a positive and engaging story around Henryetta that allows students and staff alike to embrace the learning opportunities she offers.

Henryetta is now not only a unique teaching model but also beautiful, telling a story, and there is probably no one at our vet school who doesn't know her!

THE VIEW FROM WADJEMUP – STRENGTHENING RECONCILIATION AND INCLUSION WITHIN VETERINARY EDUCATION

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The view from Wadjemup is a statement formed from dialogue and consensus of 53 delegates and other contributors to the VetEd Down Under 2023 post-conference workshop *'Strengthening reconciliation and inclusion within veterinary education – begins with truth telling'*, Wadjemup/Rottnest Island, 9 February 2023.

The view from Wadjemup is that representation of Aboriginal and Torres Strait Islander people in the Australian veterinary profession remains **unacceptably low**, and **we must increase our efforts and ambitions**. This is important not only for representation, equity and diversity, but also for the cultural wisdom and indigenous knowledge that can be shared by First Peoples, for whom One Health is not a new concept but is deeply embedded in living ancient culture. As the gatekeepers to the veterinary profession, we must acknowledge our urgent responsibility to: • recruit and graduate more Indigenous students (target >3% of graduates); • promote access pathways and engagement; • provide dedicated admissions places and equity adjustments; • provide holistic support and safe learning environments; • actively recruit to increase staff representation; • incorporate Indigenous knowledge, culture, and experiences in curriculum; • build enabling staff capacity and resources; and consult and build networks and partnerships to: • better understand barriers and consult on solutions; • increase the visibility of Indigenous veterinary role models; • co-fund substantial financial supports; • learn from successful approaches in other contexts; and • grow a network of leaders, champions and researchers.

The view from Wadjemup is that it is time for proactive, consultative, collaborative, evidence-based, joined-up, systematic change for real impact on Indigenous inclusion through veterinary education.

ENGAGING AUSTRALIAN FIRST NATIONS PEOPLE IN VETERINARY EDUCATION - WAARDONG

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The crow is a fastidious and highly self-sufficient and industrious bird. Waardong values "learning together to lift the sky…" especially when considering the underrepresentation of Australian First Nations people within the profession which is below parity with the National Aboriginal and Torres Strait Islander population. Murdoch University's School of Veterinary Medicine began addressing the underrepresentation of Aboriginal and Torres Strait Islander people participating in veterinary medicine in 1989.

Measures to address the issue include an alternate entry pathway for Aboriginal and Torres Strait Islander people to enter university, provide in-person assistance, pastoral support, and various learning and teaching resources and access requirements throughout the 5-year double degree. The Waardong program continues to assist First Nations people to meet their aspirations to become veterinarians. The current Lecturer of Waardong will provide insights into effective collaborative relationships, the program and strengths of a holistic learning and teaching engagement to assist students' graduate.

Waardong is recognised as the crow (Australian raven) in Noongar cultures of the southwest of WA.

VIEWING PROFESSIONAL IDENTITY THROUGH A DIVERSITY LENS: AN INTRODUCTORY ACTIVITY FOR FIRST YEAR VETERINARY STUDENTS

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The development of an inclusive professional identity begins early in veterinary education and can be fostered through exposure to diverse professional role models. This presentation describes the pilot introduction of new learning resources and a teaching activity into the very first week of the Doctor of Veterinary Medicine program at The University of Melbourne.

An online learning resource scaffolded individual reflections on personal professional identity and included video content of veterinarians reflecting on the influence of their diverse identities in shaping their professional roles and identities. This resource included representation of cultural diversity, gender diversity, neurodiversity and disability amongst veterinarians. The online resource was paired with an in-person discussion-based workshop session where students were invited to consider how diverse experiences, identities, and perspectives shape client relationships, team dynamics, and clinical outcomes. This activity aimed to build self-awareness, foster empathy and strengthen a sense of belonging within the veterinary community.

The presentation will describe the design process and pilot implementation of these new learning experiences in 2025, providing an example of how veterinary educators can enable early exposure to, and conversations about diversity and inclusion in their programs.

BUILDING VETERINARY AND VETERINARY TECHNOLOGY STUDENT CAPACITY FOR CULTURALLY SENSITIVE ENGAGEMENT WITH FIRST NATIONS CLIENTS AND COMMUNITIES

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This presentation outlines the UQ School of Veterinary Science's approach to enhancing students' capacity for culturally sensitive engagement with First Nations clients and communities. UQ's Indigenising Curriculum initiative, informed by the Universities Australia's Indigenous Strategy 2022–2025, aims to embed Aboriginal and Torres Strait Islander knowledge and inclusive teaching practices across the university. Anchored by UQ's 'cultural capability' graduate attribute, this initiative emphasises understanding and respecting Australian Aboriginal and Torres Strait Islander values, cultures, and knowledge.

In 2024, we received a Faculty of Science Teaching and Learning Grant to expand our content to develop 6-hours of Indigenous-led interactive online resources for the Bachelor of Veterinary Science and Veterinary Technology programs. Students can further develop their knowledge and skills via placement opportunities, including a 4-week clinical elective for final-year veterinary students. Our approach is informed by the UQ Reconciliation Action Plan (2019) and Stretch RAP (2025), engagement with the Faculty of Science Indigenising Curriculum Working Party (2024-) and supported by an institutionally funded Indigenising Curriculum Teaching Innovation project (2024-).

These initiatives are scaffolded by the AIATSIS Core Cultural Learning (Aboriginal and Torres Strait Islander Australia) modules, recently made available to all students during their UQ studies. Additionally, all students are invited to join the UQ RAP Network to engage in reconciliation initiatives and continue their cultural learning journey.

DEVELOPMENT OF A LIFE-SIZED EQUINE GASTROINTESTINAL TRACT: MAKING 25M OF CONFUSING ANATOMY EASIER TO DIGEST

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Students find learning equine gastrointestinal tract (GIT) anatomy particularly difficult. This is largely due to the unique conformation of the ascending colon, which has considerable specialisation compared to other species. An understanding of this anatomy is important and a prerequisite to understanding pathological equine GIT conditions.

To complement the traditional teaching of equine GIT anatomy (didactic lectures, workshops and practical sessions using fresh and fixed specimens), a life-sized fabric equine GIT tract was developed and constructed using pink kids' leggings to represent small intestines while suede fabric was used for the caecum, colon and rectum. Mesentery, mesocolon and ileocaecal fold were made of white tulle fabric, a spleen of neoprene fabric and a tennis ball resembles the left kidney. Varying shades of grey, green, blue and brown fabric were used to colour-code the components of the large intestinal. Details like taeniae were added using elastic and fabric trimmings. Entry points allow for adding intestinal content (polyfill stuffing) and faecal balls (6cm sponge balls). The model can be used as a benchtop model or in a fibre-glass horse that has been modified to allow for abdominal access, visualisation and palpation. Features mimicking specific pathological GIT conditions such as impactions, displacements and strangulations can be added. This enables use of this model not only for anatomy but equine medicine too.

This life-sized, low-cost (AU$400.00), colour-coded model is an additional learning resource giving students repeated practice opportunities to master the understanding of equine GIT anatomy as well as GIT pathologies.

RESILIENCE OF VETERINARIANS AT DIFFERENT CAREER STAGES

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Background: The aim of this study was to determine the effect of demographic and psychological factors on resilience in new graduate-, mid- and late-career veterinarians working in Australia.

Method: An online cross-sectional survey of 800 veterinarians collected demographic and descriptive data in two stages from late 2015 to 2017, such as gender, average hours worked per week, type and region of practice and intention to leave veterinary medicine. Psychological factors were measured utilising the Brief Resilience Scale, the Veterinary Resilience Scale–Personal Resources, the Brief COPE and General Self-Efficacy measures.

Results: Using a full-factorial univariate General Linear Model, no significant difference in general resilience was evident between the three career-stage groups ($p > 0.05$). However, higher self-efficacy, higher personal resources for resilience in veterinary practice, and lower problem-focused, higher emotion-focused and lower dysfunctional coping strategies were related to higher resilience. In the model for mid- and late-career veterinarians, a weak positive relationship existed between higher average hours worked per week and higher resilience, while intention to leave veterinary practice was also related to lower resilience in mid- and late-career veterinarians.

Conclusion: This study supports the value of personal resources, rather than career stage, gender or region of work, as influential in developing veterinarian resilience.

SMALL ANIMAL CLINIC ROTATION – A LONGITUDINAL INTEGRATED CLERKSHIP

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Before 2020, students at the University of Queensland small animal veterinary teaching hospital used two-week placements in specific disciplines for student teaching. The teaching hospital adopted a Relationship Centred Practice model in 2020, moving away from siloed, independent service structure. This change presented a unique opportunity to combine student rotations into a single, eight-week rotation in which students are integrated across the hospital in a service agnostic structure. Students are assigned each day to clinician teams and movement between clinicians facilitates continuity of patient care.

This flexible structure helps protect student learning from daily staffing and case load variations. Student experience is not limited to specific services or short blocks, accommodating discipline streaming and preferences. Students provide continuous care for their patients during the length of the rotation, allowing student engagement over a longer duration than was ever possible with short block rotations. Daily feedback combined with the length of rotation support student growth through repeated action learning cycles, resulting in few students requiring remediation outside of the eight weeks. Students frequently cite the flexibility and length of the rotation as the most positive aspects of the rotation.

The administrative demand for daily coordination of student movements (typically 20 students per day) poses challenges. Traditional, blocked discipline placements with smaller student numbers are still preferred by some staff and students in some disciplines due to a perception of a block resulting in deeper subject engagement and a more consistent and intimate learning environment.

VETERINARY NURSING CLINICAL COACHING PROGRAM

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Workplace learning (WPL) is an important element of Veterinary Nursing (VN) education. The role of clinical veterinarians and veterinary nurses (VNs) who supervise students on clinical placement is of particular importance and the student's perception of their influence on learning ranges from positive to negative. If VN educators are able to understand supervisor's experiences of clinical placement supervision it can inform the training and support needed to help optimise WPL and professional identity formation in students.

A good clinical supervisor not only helps students with the more tangible aspects of WPL such as clinical skills and knowledge acquisition but also helps guide students through more tacit aspects of WPL, such as socialisation and professional identity development Many clinical supervisors feel unprepared for the role. They want to be provided with more extensive formal training particularly on how to support students. Support and recognition from colleagues are also important, particularly from managers. Supervisors also called for better communication and support from educational institutions.

To help prepare veterinarians and VNs working in clinical practice for their role as clinical supervisors, Melbourne Polytechnic has developed a clinical coaching program. This will train and support VNs and veterinarians who are interested in supervising students on placement to enable them to become clinical coaches.

VETERINARY SCIENCE STUDENTS' EXPERIENCES OF THE PRECLINICAL TO CLINICAL TRANSITION

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The education of health professionals is interrupted by a number of major transitions, each of which can have significant implications for the student experience. The transition from pre-clinical to clinical studies has been consistently reported as a steep transition in several healthcare disciplines. However, there is a paucity of data on the transition experience of veterinary science students. This pilot study aimed to explore the preparedness, expectations and experience of veterinary science students during their pre-clinical to clinical transition.

During 2022 and 2023 a total of 71 fourth year students completed a questionnaire, validated by previous studies, about their experiences. Subsequent focus groups involving a total of 7 participants provided in-depth understanding of the questionnaire results. Across both years, the questionnaire revealed that the majority of participants (97% in 2023) found the workload after the transition to clinical studies substantially higher. Participants recognised the value of real patient contact for knowledge retention (96% in 2022) and directing their studies (90% in 2023). Case-based learning was perceived to be good preparation for clinical training, but overall participants lacked confidence in their ability to perform clinical tasks and interact with patient owners. Consistent with other health professions, participants reported a shift in priorities through this transition. One participant highlighted the shift of *"learning to learn rather than to pass exams"*.

It is anticipated that the results from this study will inform an evaluation of the revised curriculum which integrated aspects of clinical training into the preclinical years of study.

STRENGTHENING DISTRIBUTED CLINICAL TRAINING THROUGH ANNUAL AUDITS AND EDUCATOR SUPPORT

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In the final year of The University of Adelaide's Doctor of Veterinary Medicine (DVM) program, a significant portion of the rotations are delivered through a distributed model, whereby clinical teaching occurs in partner veterinary practices across rural and regional Australia. To ensure these distributed practices meet the standards required by both the Australian Veterinary Boards Council (AVBC) and the Royal College of Veterinary Surgeons (RCVS), we have implemented a structured auditing and support framework.

Central to this initiative is the development of a comprehensive handbook that clearly articulates the requirements of both accrediting bodies, alongside university expectations. This manual is provided to each distributed practice to foster shared understanding and alignment with competency-based teaching and assessment. Annual mock audits are then conducted at each site, using inspection guides aligned with accreditation standards. These audits serve a dual purpose: quality assurance and educational development. They provide practices with targeted feedback, reinforce standards, and promote reflective teaching practices.

The repetitive cycle of handbook engagement and annual audit visits creates a consistent platform for continuous improvement. This process not only protects accreditation status but also enhances collaboration, clinician engagement, and student learning outcomes, ultimately strengthening the clinical education experience in distributed settings.

A QUALITATIVE STUDY OF FACTORS AFFECTING MOTIVATIONS AND PERCEPTIONS OF AUSTRALIAN VETERINARY STUDENTS

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*This paper has been submitted the Australian Veterinary Journal – Currently unpublished.

Objective: This study aims to investigate veterinary students' perceptions of, and motivations to join, the veterinary profession and explore factors that might influence male's enrolment in veterinary degrees and the recently observed shift in gender proportions within the profession. Exploration of these factors may help identify areas of difficulty for students and implementation of protective factors for wellbeing, therefore, enhancing the student experience and preparing them for longevity and sustainability within the profession.

Method: A cross-sectional approach analyses qualitative and quantitative responses from 399 Australian veterinary students. Thematic review identified factors that influence decreased motivation to be a veterinarian such as: academic stress, emotional stress, poor remuneration and understanding the scope of the degree and profession. Perceived factors influencing male's speculated lower rates of enrolment included: financial remuneration, maternal perception of the profession, reduced academic and emotional intelligence, and poor recruitment or awareness during pre-tertiary experiences.

Conclusion: Qualitative data found that >50% of students that experienced a change in motivation, had experienced variable or decreased motivation throughout the degree. Findings highlighted interesting areas of future research and potential implementations for maintaining or enhancing motivation for students during the challenging but rewarding journey of studying and practicing veterinary medicine.

REAL-WORLD CASE STUDIES: HOW AI IS TRANSFORMING VETERINARY EDUCATION ACROSS THE U.S.

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Artificial intelligence is rapidly reshaping the landscape of education, and *iseek* is at the forefront of this transformation in veterinary colleges. This workshop explores how *iseek* leverages AI to enhance teaching, learning, and assessment through real-world case studies from multiple U.S. veterinary schools.

Using machine learning and natural language understanding, *iseek* delivers intelligent content recommendations, personalized learning pathways, and actionable, rubric-aligned feedback. Across contexts, *iseek* helps students discover conceptual links, educators identify knowledge gaps and create aligned assessments, and administrators ensure the written, taught and assessed curriculum is aligned to the standards. Through case studies, we'll examine how AI is being used to streamline academic workflows, reduce administrative burdens, and elevate the student experience. From early detection of at-risk learners to AI-supported formative assessment and content alignment with professional competencies, the presentation highlights practical applications that are already making an impact in veterinary programs. A focus on ethical AI practices, data transparency, and pedagogical alignment ensures that these tools support—not replace—the critical role of veterinary educators.

Attendees will gain a clear understanding of how AI can be responsibly and effectively integrated into veterinary education to improve outcomes and empower instructors. Join us to interrogate data from live implementations to see how other programs are benefitting from the power of iseek.

STANDARD SETTING AND ITEM PERFORMANCE ANALYSIS – NOT AS COMPLICATED AS THEY SOUND!

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Educators spend large blocks of time creating and marking written assessment but far too often fail to consider how the assessment itself performs beyond grade outcomes and reliance on a "gut feeling" that the exam was "about right". In the case of written assessment, post hoc analysis of examination performance is uncomplicated and provides enormous insight into student, staff, and program performance. Simple calculations can provide objective analysis of teaching successes, identify unexpected gaps in teaching, and provide a foundation for building quality assessment in future iterations.

This workshop will focus on single-correct-answer question formats. We will discuss standard-setting procedures such as Angoff and Ebel followed by statistical performance analysis such as calculating the point biserial (discrimination index), distractor quality, and difficulty (difficulty index) of a question. Example calculations and analysis will be demonstrated followed by open discussions of interpretation and value of different indices.

Participants are strongly encouraged to bring their own device and examples of their own assessment outcomes (total marks and individual question marks broken down to the student-level) to apply the methods discussed. Participants will break out into groups to practice standard setting and item analysis on their own data and to spark conversation around exam content and quality.

INTEGRATIVE SIMULATIONS: DEEPENING COMMUNICATION SKILLS WHILE DEVELOPING CLINICAL REASONING AND TEAMWORK

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Introduction: Integrated Simulation-Based Education (SBE) is a powerful learning modality. It offers the opportunity to combine clinical communication, clinical skills, and clinical reasoning in one teaching modality which is representative of real life.

Background: Communication and teamwork skills do not exist in a vacuum. Learners benefit from integration of communication skills into a variety of contexts which simulate authentic interactions.

Workshop overview: This workshop will provide an immersive experience focused on core communication skills which can enhance team effectiveness and client satisfaction in a simulated clinical setting. Using a fishbowl-style set-up, participants will observe specific areas of focus and rotate into the action as indicated and desired. The simulation will be approximately 30 minutes. The remaining time will involve pre-brief and debrief. There will be opportunity to discuss integrated SBE more broadly and how these immersive and authentic learning experiences can be incorporated into veterinary education.

Learning objectives: This workshop will explore the impact of using SBE to practice key communication skills related to team effectiveness, patient safety, client satisfaction and to simultaneously develop clinical reasoning skills.

INCORPORATING INDIGENOUS KNOWLEDGES, PERSPECTIVES AND CULTURAL COMPETENCE INTO VETERINARY CURRICULA

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All Australian universities are expected to incorporate Indigenous knowledges and perspectives in curricula as specified in the Higher Education Standards Framework and Universities Australia Indigenous Strategy. Accreditation standards of the Australasian Veterinary Boards Council and other international bodies expect curricula to foster cultural competence and humility in graduates for the purpose of respectful engagement with diverse clients, colleagues and communities. Individual institutional Reconciliation Action Plans also require these activities for the benefit of graduates and society at large.

For educators intending to incorporate Indigenous knowledges and cultural competence, barriers may arise in finding space in crowded curricula, accessing contextual examples of Indigenous knowledges, and in the confidence to deliver content respectfully without overstepping cultural boundaries.

This workshop will explore the incorporation of Indigenous knowledges and cultural competence in curriculum design and delivery. Workshop participants will engage in activities provoking a core component of cultural humility – reflection – on themselves and their institutions. They will also engage in collaborative activities exploring common concerns and utilise educational frameworks to offset these barriers. Authors will share examples of curricula from the Universities of Queensland and Melbourne and encourage workshop participants to share ideas.

After this session, attendees will be better equipped with content and confidence to design and deliver culturally relevant, contextual and integrated curricula. While the focus of this workshop will be Indigenous knowledges and perspectives, the frameworks and implementation will be applicable to cultural competence training in all respects and institutions.

DESIGNING EXTENDED REALITY (XR) RESOURCES FOR TEACHING

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A range of extended reality (XR) teaching resources have been developed and are an excellent teaching tool to assist with student learning. CattleVR, a virtual reality experience that safely and effectively teaches cattle handling skills to students, was developed to address a critical challenge in veterinary/agricultural education; the compromise between necessary live animal experience, safety and animal welfare concerns.

This workshop will provide participants with an interactive, behind-the-scenes look at how CattleVR was developed, from concept to classroom, highlighting the pedagogical thinking, safety concerns, and practical decisions that informed its design.

Participants will engage in a hands-on design sprint, mirroring the process used in creating CattleVR to create content for a VR resource of their own exploring the tools used in the development of immersive content, such as 360° cameras, along the way.

This workshop is suited to educators interested in integrating immersive learning tools in veterinary and agricultural education.

ENHANCING FEEDBACK FOR WORK INTEGRATED LEARNING IN A DISTRIBUTED MODEL: A COLLABORATIVE WORKSHOP

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Feedback helps learners develop skills, confidence and competence. It is fundamental to developing self-reflection and evaluative judgement for veterinary students during work-integrated learning experiences. To be effective, feedback should be timely, specific and provide forward actions for improvement.

The expansion of distributed teaching models for final year veterinary students, utilising external partner practices, has shifted feedback delivery from academic university clinicians to partner practice clinicians with potentially limited expertise in effective feedback and assessment strategies. The University of Melbourne Doctor of Veterinary Medicine program has moved to a distributed model of delivery for its final year students and has been developing educational programs and support to assist our distributed partners in these practices.

This workshop that aims to foster sharing and collaboration in tackling barriers to effective feedback provision in distributed models. A brief presentation will utilise the University of Melbourne model as a case study to highlight successes and struggles in developing effective feedback practices in external clinical educators. Small and large group interactive activities will focus on practical brainstorming to overcome barriers and develop actionable solutions for teaching effective feedback provision across a variety of work-integrated learning settings.

DESIGNING A WELLBEING CURRICULUM FOR SUSTAINED ENGAGEMENT IN THE VETERINARY PROFESSION: OPPORTUNITIES AND CHALLENGES

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Recent research has highlighted the need for a proactive, curriculum-based approach to wellbeing in veterinary education. This workshop will explore the design and implementation of wellbeing curricula that aim to equip students with the knowledge, skills, and reflective capacity necessary for sustained engagement in the veterinary profession. Drawing on current evidence from veterinary and health professions education, this interactive session will present models for integrating wellbeing into the formal curriculum, co-curriculum, and broader learning environment.

The authors will share the work-in-progress within the Melbourne curriculum, and explore case examples of activities that embed principles of wellbeing, resilience, mindfulness, self-compassion and strengths-based career planning. Through collaborative activities, workshop participants will reflect on existing wellbeing efforts within their programs, and map intended learning outcomes to Day 1 competencies and graduate outcomes. Discussion will also explore the role and types of educators contributing to this curriculum.

By the end of the session, attendees will be better equipped to design contextually relevant, evidence-informed wellbeing curricula that promote resilience, belonging, and purpose; and align with accreditation and graduate outcome expectations. This session will be relevant to veterinary educators, curriculum leaders, and student support staff seeking to enable the wellbeing of future veterinary professionals.

WHY DID THAT HAPPEN? USING MECHANISTIC DIAGRAMS TO CONNECT THE DOTS

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In outcomes or competency-based veterinary programs, it can be tough to design assessments and feedback that truly support learning — especially when trying to connect basic science with clinical reasoning. This interactive workshop looks at mechanistic diagrams as a flexible tool to help students make sense of complex processes and build clear, logical links between cause and effect.

Mechanistic diagrams ask students to show how one event leads to another — for example, how a drop-in glomerular filtration rate might lead to hyperkalaemia. They're a practical way to bring physiology, pathology, and clinical medicine together, and they're backed by solid educational research. Used well, they can support students at any stage of a veterinary science program and work as assessments for learning and of learning.

In the workshop, you'll complete a simple physiology-based diagram yourself, then explore how this can be expanded as students learn more clinical detail. We'll discuss our experience with using mechanistic diagrams over the past 10 years at Massey University to help students' reasoning, give insight into their thinking, and support meaningful feedback — even when time and resources are limited.

Whether you're looking for new assessment strategies, ways to encourage integration across years, or tools for developing clinical reasoning, this session will give you something practical to take away.

EMBEDDING EXTENDED REALITY (XR) RESOURCES INTO THE CURRICULUM

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Advancements in extended reality (XR) technology have unlocked a range of resources capable of simulating the student learning experience. CattleVR, a virtual reality experience that safely and effectively teaches cattle handling skills to students, was developed to address a critical challenge in veterinary/agricultural education; the compromise between necessary live animal experience, safety and animal welfare concerns.

This workshop will raise awareness of the steps required to integrate CattleVR into the curriculum, including identifying curricular gaps that highlighted where to embed the immersive resource into formal teaching activities to suit learning outcomes and enhance student engagement.

Participants will engage in a hands-on brainstorming sprint to identify gaps in their curriculum that could utilise extended reality resources, exploring the tools to develop immersive content, such as augmented reality (AR), along the way.

This workshop will delve into evaluating classroom implementation strategies, address practical teaching use and explore assessment strategies. It is suited to educators interested in integrating immersive learning tools in veterinary and agricultural education.

AUSTRALASIAN VETERINARY COMMUNICATION COMMUNITY OF PRACTICE MEETING

Aitken, J1., Bell, M2., McArthur, M3., Schull, D4., Van Gelderen, I5., Colquhoun, K6., Eastwood, M7., and Jillings, E8.

[1]The University of Melbourne; [2] Murdoch University; [3]Adelaide University; [4]The University of Queensland; [5]The University of Sydney; [6]James Cook University; [7]Charles Sturt University; [8]Massey University

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This workshop aims to bring educators together to discuss and explore innovative strategies for teaching communication across diverse veterinary learning environments. Whether you are new to communication education or an experienced educator, this session offers a collegial space to strengthen practice, support student learning, and contribute to the growing body of veterinary communication scholarship in the Australasian context.