

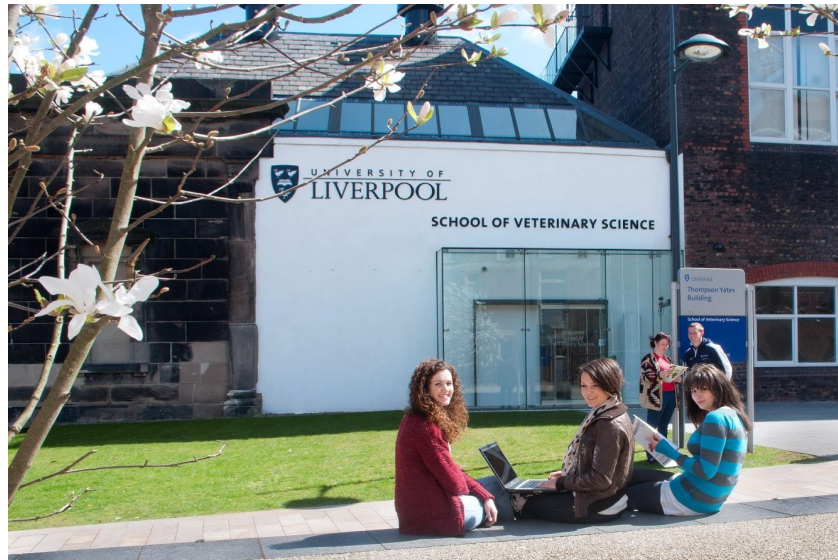


UNIVERSITY OF  
LIVERPOOL



VetEd 2017

International symposium of the  
Veterinary Schools Council



5th, 6th and 7th July 2017



## Welcome to VetEd 2017

We are delighted to welcome you to the University of Liverpool for the 8<sup>th</sup> Veterinary Education Symposium.

The aim of the VetEd Symposium is to provide an open and friendly atmosphere in which to share ideas, innovations, research and the best practice in veterinary education. The symposium welcomes a wide range of delegates including veterinary and veterinary nursing educationalists, clinicians, academics, students, and researchers from many countries.

It is a great honour for us to host this event and the City of Liverpool will, as always, provide a truly friendly welcome to delegates. We hope that you enjoy your stay in Liverpool and find the symposium interesting and inspiring.

### University of Liverpool Organising Committee:

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### We would like to thank our sponsors for this year's event:

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Royal Veterinary College  
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## **Registration**

Registration for the pre-conference workshops will be open from 09.30 on Wednesday 5<sup>th</sup> July in the Thompson Yates Building.

Registration for the main conference will be open from 08.00 on Thursday 6<sup>th</sup> July in the Central Teaching Hub (CTH). You can sign up for workshops and poster sessions if you have not pre-booked these, and collect your delegate information pack.

## **Information for poster presenters**

Posters will be displayed in Mountford Hall in the Guild Building.

Each poster has been assigned a number which will be available from the registration desk in the Central Teaching Hub. Please use the Velcro tabs provided to display your poster on the board in the position indicated by the corresponding number. It is the author's responsibility to remove posters at the end of VetEd. Any posters remaining after 18.00 on Friday 7<sup>th</sup> July will be removed.

Poster presentations will be in parallel sessions in lecture theatres and seminar rooms. If you are presenting in a session, please sit near to an aisle to cause minimal disruption to other members of the audience. During your presentation slot your poster will be displayed and you will have 3 minutes to present then have 2 minutes to take questions from the audience. Extended posters are marked with an asterisk\* in the programme and presenters of these posters will have 6 minutes to present then 4 minutes for questions.

It is very important that we keep strictly to time to allow these sessions to run smoothly – there will be plenty of opportunities in the programme for later discussions.

## **Information for workshop facilitators**

Workshops will run in parallel sessions of 90 minutes and you will have access to a computer, projector and flip chart or white board. Delegates are asked to sign up for workshops in advance so you will be provided with attendance figures for your workshop and a suitable room will be allocated according to numbers. A vet student ambassador will be assigned to facilitate as required in each workshop.

## **Information for delegates**

If you expressed a preference for workshops and poster session in advance, you will find details of your allocated workshops and poster sessions along with locations and times on your personalised timetable.

If you have not yet signed up for workshops and poster sessions, there will be an opportunity to do so during registration in the Central Teaching Hub. This will be on a first-come, first-served basis subject to available space.

**If you are a workshop/poster presenter – please ensure you choose the session you are due to present in!**

### **Cloakroom**

There is no luggage storage facility in CTH, however bags can be left at reception in Crown Place Halls of Residence. Items are left at your own risk and neither VetEd nor the University of Liverpool can accept responsibility for lost or damaged items.

### **Accommodation**

Accommodation is at Crown Place Halls of Residence. Towels are provided and tea/coffee making facilities are available in your room. TV and ironing facilities can be found in the communal kitchen areas, and hairdryers are available from the reception desk.

Check in is from 16.00. Please report to the reception desk at Crown Place on arrival to collect your room key. Delegates will need to vacate their room by 09.30 on the day of departure, please check out and hand in your room key at the reception desk in Crown Place. Left luggage facilities are available (free of charge) at Crown Place.

### **Food and refreshments**

Breakfast will be provided for delegates booked into university accommodation and will be served at the Victoria Gallery and Museum from 07.30 – 09.00 on both days of the conference. For those not using university accommodation, there are several coffee shops and convenience stores nearby.

Lunch will be provided for all delegates in Mountford Hall in the Guild

If you are arriving for the pre-conference workshops or not attending the conference dinner you will find Liverpool full of lovely restaurants and coffee shops only a short walk from the venue so you don't have to go too far to find somewhere to eat.

### **Events**

#### **Pre-conference activity: Wednesday 5<sup>th</sup> July**

The Beatles tour: If you have booked for this 2 hour magical mystery tour, your coach will depart from Crown Place at 18.00 on Wed 5<sup>th</sup> July. Following the tour, the coach will make one drop off at Hope Street near the world famous Cavern Club for those who wish to extend their evening in Liverpool, then return to Crown Place for those looking to have an early night.

#### **Gala Dinner: Thursday 6<sup>th</sup> July**

The conference dinner will be held in the Merseyside Maritime Museum for delegates who booked at the time of registration. Coaches will depart from Crown Place at 18.30 and return to the accommodation at 00.00 and 00.30. Dress code is formal, so please dress to impress!

### **Cash points**

Cash points are available at the Guild, Crown Place and the Tesco store on Brownlow Hill.

## **Transport**

The conference venue is a short walk from the accommodation block, as can be seen on the map provided in this pack. The city centre is a 15-20 minute walk from Crown Place and therefore easily accessible. Taxis are plentiful and can usually be hailed from the street. If you wish to book in advance there are several options:

Comcab Liverpool: 0151 298 2222

Delta taxis: 0151 922 7373

Alpha private hire: 0151 722 8888

Buses run regularly from Brownlow Hill into the city centre – details can be found at [www.merseytravel.gov.uk](http://www.merseytravel.gov.uk)

## **Parking**

There is limited parking available on campus on a first-come, first-served basis. Payment is by machine on exit at a rate of £6 per day and £3 per overnight stay (therefore £9 per 24hrs). Please park in the 'Visitor Car Parking' sections only.

## **Internet access**

You can access the wireless internet from your own laptops, tablets and smartphones. You will be provided with a passport and instructions for logging in to the free Wi-Fi at registration.

If you are visiting from an organisation participating in the Eduroam group you can connect to Eduroam for the fastest internet access. Please use your login name and password from your home institution.

## VetEd 2017: Integration – Developing professionals in a changing environment

### Pre-conference programme - Wednesday 5<sup>th</sup> July

Time	Activity	Session title	Page
9.30-10.30	Registration – Thompson Yates Building Tea and coffee provided		
11.00-12.50	Workshop Session 1	0.1: How do you prepare students for the reality of practice?	08
		0.2: Building peer learning into the curriculum – an antidote for spoon feeding?	08
13.00-14.00	Lunch/Networking – Thompson Yates Building		
14.10-16.00	Workshop Session 2	0.3: How do we maximise the educational value of six months of compulsory work experience?	09
		0.4: Focus groups as a tool for veterinary educators	09

Evening programme		
The Beatles Tour (Pre-booking required)	Coaches depart from Crown Place at 18.00	Coaches drop off at Hope Street then return to Crown Place following the tour

## VetEd 2017: Integration – Developing professionals in a changing environment

### Main conference programme - Thursday 6<sup>th</sup> July

Time	Activity	Speaker/Session title	Page
10.00-10.15	Welcome address	Professor Susan Dawson	
10.15-11.05	Keynote speaker 1	Louise O'Dwyer <b>Teamwork and breaking down the hierarchy in veterinary medicine</b>	10
11.15-12.35	Workshop session 1 6 parallel workshops	1.1: When is role play not role play?	11
		1.2: Curriculum interventions to support professional reasoning	11
		1.3: LIFTUPP	12
		1.4: Innovative research methods – beyond surveys and interviews	13
		1.5: How to run a successful OSCE with peer assessors	14
		1.6: Should we teach Motivational Interviewing skills within communication skills training in the veterinary curriculum?	15
12.35-13.20	Lunch – served in Mountford Hall, Guild Building		
13.25-14.15	Keynote speaker 2	Professor Pat Bailey <b>Are metrics changing the way we teach, for better or worse?</b>	16
14.25-15.20	Poster session 1 3 parallel poster sessions	1.1: Clinical Teaching	17-24
		1.2: General Teaching 1	25-31
		1.3: Professional Skills and Engaging with Others	32-39
15.20-15.35	Tea/Coffee		
15.40-17.00	Workshop session 2 6 parallel workshops	2.1: Understanding mental wellbeing in veterinary students: can a student led approach lead to change for the better?	40
		2.2: The use and implementation of ePortfolios in veterinary education	41
		2.3: Using creativity as an educational method in veterinary surgery	41
		2.4: Developing and assessing resilience in healthcare professionals	42
		2.5: “Make the shoe fit the horse, not the horse fit the shoe” Exploring the challenges of developing academic skills and academic confidence with farriery students at the Royal veterinary College	43
		2.6: Ontology, epistemology, methodology...oh my!	44

Evening event		
Gala Dinner Merseyside Maritime Museum	Coaches depart from Crown Place at 18.30	Coaches return to Crown Place at 00.00 and 00.30

## VetEd 2017: Integration – Developing professionals in a changing environment

### Main conference programme - Friday 7<sup>th</sup> July

Time	Activity	Speakers/Session title	Page
09.00-09.55	Poster session 2 3 parallel poster sessions	2.1: Transition through the course	45-51
		2.2: Careers and employability	52-60
		2.3: Wellbeing	61-69
09.55-10.10	Tea/Coffee		
10.15-11.35	Workshop session 3 6 parallel workshops	3.1: From compassion fatigue to compassion resilience	70
		3.2: Discussing veterinary education/profession postgraduate qualifications (Masters, PhDs)	71
		3.3: Gamification – can we make learning fun?	72
		3.4: Curriculum mapping with Google Sheets	72
		3.5: Teaching students to work with visually impaired clients	73
		3.6: Building the veterinary nurse–client communication model: Unblocked minds, thinking allowed	74
11.45-12.35	Keynote speaker 3	Professor the Lord Sandy Trees <b>Retention of graduates in the profession</b>	75
12.35-13.20	Lunch – served in Mountford Hall, Guild Building		
13.25-14.15	VetEd Debate <b>Transition into the workplace – is it the job of the vet schools or the professionals?</b>		76
14.25-14.30	Tea/coffee		
14.35-15.30	Poster session 3 3 parallel poster sessions	3.1: Clinical skills models	77-84
		3.2: Pre-clinical teaching	85-89
		3.3: General teaching 2	90-95
15.40-16.00	Closing address & VetEd 2018 handover	Professor Gavin Brown	



## **0.1 HOW DO YOU PREPARE STUDENTS FOR THE REALITY OF PRACTICE?**

***FRASER Mary***

**Vets Now / Girling & Fraser Ltd.**

Stress within the veterinary profession is well documented (Bartram & Baldwin, 2010, Batchelor & McKeegan, 2012, Bonnema, 2017, Williams & Robinson, 2014) and has been highlighted in recent months by the RCVS Mind Matters initiative and Vet/VN Futures (Burnell & Lockett, 2015).

Students of both human and veterinary medicine / nursing face similar challenges. Recent work for the GMC (Monrouxe et al, 2014) reviewed how prepared medical students are for practice. This research identified that teaching focussed on knowledge and practical skills and that some time needed to be spent on the development of responsibility and emotions.

Work by Fraser (2015, 2016) and Fraser & Girling (2017) examining factors relevant to the preparation of veterinary nurses for practice demonstrated a belief that students could be taught about the challenges of practice in a directed class, covering topics such as stress management, putting professionalism into context and using scenarios. However, it was also possible to incorporate these topics within other subjects such as ethics to allow students to understand the relevance of these classes to their final career. The controlling factor was that any teaching method would only work if the lecturers had experience of practice and were honest in their teaching.

This session will present a review of current literature on the topic of preparing vet / vet nursing students for the emotional aspects of working in practice, followed by a discussion / group work where delegates will have time to share their own experiences of teaching these topics, learn from each other and leave with some new ideas about how we tackle this subject in veterinary education.

Questions for group work:

1. How do you prepare a vet / vet nurse for the emotional aspects of practice?
2. What are you already doing?
3. What methods of delivery could we use?
4. What skills / training do staff need to deliver this training?
5. Should we teach resilience, mindfulness, emotional detachment, emotional empathy?
6. How do you make students see the relevance of this to their career?
7. Is this taught as a subject in isolation, alongside ethics, or integrated into all teaching?
8. Which aspects should we now focus on for future research?

## **0.2 BUILDING PEER LEARNING INTO THE CURRICULUM - AN ANTIDOTE FOR SPOON-FEEDING?**

***PENROSE Fay, REID Alison, MACDIARMID Rosie, ORMANDY Emma***

**University of Liverpool**

Digitisation, provision of rich, varied resources and a full BVSc curriculum have led to staff concerns over the impact on students' confidence, communication and learning skills. Some students lack confidence in the face of the unknown, would rather text than talk, and prefer emailing a staff-member to opening a textbook.

Our solution? Peer learning - giving students ownership of their learning. We are increasing peer-learning in our curriculum, and have had some great successes and some flops.

This workshop discusses our experiences, encourages you to share your practice and seeks ways to further use this approach in our teaching.

### **0.3 HOW DO WE MAXIMISE THE EDUCATIONAL VALUE OF SIX MONTHS OF COMPULSORY WORK EXPERIENCE**

***NOBLE Karen***  
**University of Liverpool**

For many years, The Royal College of Veterinary Surgeons (RCVS) have required for accreditation purposes that all UK veterinary degree programmes contain 38 weeks of extramural studies (EMS), consisting of 12 weeks pre-clinical placements (animal husbandry) and 26 weeks of clinical placements. There is no direct equivalent of EMS elsewhere on mainland Europe or the USA or any requirement for EMS within the EU.

Extramural studies is work-based learning which undergraduates undertake during official university vacations. As registered veterinary undergraduate students they are covered by the Veterinary Surgeons (Practice by Students) (Amendment) Regulations 1993 and therefore allowed to examine, treat and perform surgical operations under supervision.

The RCVS requirement for EMS has not changed for many years. During this time period, there have been significant changes to both veterinary curricula and veterinary practice. It is widely accepted that there are substantial variations in the educational value of placements and mounting pressures on “good” practices to provide “free” training to an increasing number of students.

All UK veterinary schools have local rules about the timing and administration of EMS. Vet Ed 2017 therefore provides a great opportunity to share experience and practice.

The overall aim of this workshop session is to interrogate and come up with potential solutions to the following question:

“How do we maximise the educational value of six months of compulsory work experience?”

We will use round-the-table discussions with delegates and invited stakeholders to look at this issue from the perspectives of students, practitioners and the University.

### **0.4 CLINICAL SKILLS - THE LIVERPOOL APPROACH**

***MACDIARMID Rosie, ORMANDY Emma, SALMON Kieron***  
**University of Liverpool**

The launch of the new Veterinary Science curriculum in 2013 saw the inclusion of clinical skills from day one of the course.

Eight core skills are introduced during each of the first two years of the BVSc course and students are allocated two hours per week in the clinical skills lab for largely self-directed study. Third year students are allocated two hours in the clinical skills lab per fortnight, during which the 16 core skills introduced in years one and two are built into case-based scenarios to allow further consolidation of knowledge from across the curriculum.

Each skill is taught using a variety of methods including introductory lectures, alongside online resources such as videos and discussion forums. Within the clinical skills lab, a peer learning strategy is employed in the form of clinical skills student “experts”. Students are also encouraged to track their progress and reflect on their learning and performance using online clinical skills diaries. The skills are assessed by formative, then summative OSPES in all three years.

This workshop will introduce the core skills, the clinical skills models used, and allow for discussion of assessment format.

## **Teamwork and breaking down the hierarchy in veterinary medicine**

**Louise O'Dwyer MBA BSc(Hons) VTS(Anaesthesia/Analgesia & ECC)  
DipAVN(Medical & Surgical) RVN**

Louise gained her Diploma in Advanced Veterinary Nursing (Surgical) in 2004 followed by her Diploma in Advanced Veterinary Nursing (Medical) in 2007 and Veterinary Technician Specialist (Emergency and Critical Care) in 2011 and Veterinary Technician Specialist (Anaesthesia) in 2014. Louise has contributed to over 45 books, journal articles and book chapters, and lectures worldwide on all aspects of anaesthesia, emergency and critical care, surgery and infection control, within the UK, Europe, Scandinavia, Australia and USA.

Louise worked spent 15 years working at PetMedics in Manchester firstly as Head Nurse and then Clinical Director and in October 2015 Louise moved to Vets Now to take up the position of Clinical Support Manager. Louise's interests include all aspects of emergency care but particularly trauma patients, as well as anaesthesia, surgical nursing, infection control and wound management. Louise was delighted to be the recipient of the prestigious Bruce Vivash Jones Veterinary Nurse Award 2016, which is given in recognition of outstanding contributions to the advancement of small animal veterinary nursing as well as in July 2016 being awarded the Golden Jubilee Award by the RCVS for exceptional contribution to veterinary nursing.

## **1.1 'WHEN IS ROLE PLAY NOT ROLE PLAY?'**

***ORPET Hilary, JEFFERY Andrea***

**Royal Veterinary College / University of Bristol**

Communicating to clients about their pets is a key skill for veterinary professionals. It is essential that sufficient information about the patient's health status and normal routine is obtained to ensure a complete clinical history.

Practising these encounters in a safe environment during the course is an important component for both veterinary and veterinary nursing training, but there is not always funding available for professional actors.

The aim of this workshop is to demonstrate how utilising the student's own experiences as a pet owner, introduces the students to history taking, nursing assessments, care planning and advising clients, prior to attending clinical placement. An inter-professional aspect of this activity provides an understanding of each professions' role in the care of the animal and acknowledgement of the different information required by each profession to ensure holistic patient care.

## **1.2 CURRICULUM INTERVENTIONS TO SUPPORT PROFESSIONAL REASONING**

***ARMITAGE-CHAN Elizabeth***

**Royal Veterinary College**

The professional competences are increasingly emphasised in veterinary curricula, and there is increasing recognition that professional identity formation contributes to competence and resilience in the veterinary graduate. Student engagement, motivation and mindset to learning persist as challenges to professionalism teaching, yet engagement in deep learning approaches is necessary for students to become competent in areas such as managing uncertainty in their decision-making, and forming context-dependent solutions that involve conflicting stakeholder needs.

The workshop will include group discussion to explore the types of learning activities that will engage students to achieve higher order learning outcomes in problem-solving professional dilemmas. Participants will be encouraged to take an integrated approach to curriculum design, designing teaching strategies that incorporate themes relating to identity formation, professional skills and clinical competences.

Examples of curriculum interventions from our own institution will be used to stimulate critical analysis and creation of adaptable interventions that can be integrated into different stages of veterinary education.

### **1.3 LIFTUPP - Developing and Measuring Real-World Competency**

**DAWSON Luke, FOX Kathryn**  
**University of Liverpool Dental School**

Many of those who are directly involved with teaching undergraduate students will have recognised changes in the ability of many to handle perceived failure (1), as well as the numerous students with a directive task approach toward learning, exemplified by the eternal question of 'Is this going to be on the test? '. It is likely that these changes in student behaviour, combined with the failure to alter teaching and assessment practices, is leading to a situation where students are passing the assessments set, but the teaching and assessments are falling short of developing and predicting real world clinical competency (2). This is a situation that has likely contributed to the worrying finding that since the introduction of high stakes objective assessment in medical education the level of patient harm has actually increased (3). The purpose of this workshop is to explore these lessons from medical education and share approaches to support the development of holistic veterinary clinicians that are demonstrably prepared for practice.

At the end of the session participants should:

- Understand the potential impact of student mindset on their behaviours and learning
- Be able to distinguish the difference between 'competence' and 'capability' and how it can be measured
- Be able to discuss programmatic approaches to curriculum design
- Be aware of how technology can support the development/assessment of clinical capability;
- Recognise the role of large data learning analytics in supporting development and defending progress decisions
- Understand the difference between 'supportive development' and 'destructive assessment'.

The workshop will comprise:

- A short overview of the pedagogical considerations
- An exploration / discussion over mindset and student behaviours
- Background and discussion over the current limitations of competency assessment
- Background and an interactive demonstration over how limitations can be addressed
- Introduction and discussion over programmatic curriculum design approaches, and the role of technology
- The use of learning analytics to support learner development and progress
- Q&A

Who should attend?

Anyone who has an interest in:

- Developing holistic clinicians
- Providing meaningful feedback
- Competency assessment
- Programmatic assessment
- Making defensible decisions
- Learning analytics
- Technology-supported assessment/curriculum management
- Instilling a culture of self-reflection

## **1.4 INNOVATIVE RESEARCH METHODS - BEYOND SURVEYS AND INTERVIEWS**

***PERRIN Hannah***

**Royal Veterinary College**

Half of the research papers in the Journal of Veterinary Medical Education use questionnaires as a data source. A further quarter use individual or group interviews.

This workshop aims to introduce the principles and practice of some alternative – and vastly more interesting - research methods in order to encourage participants to extend the depth and richness of their educational research. It will use a combination of traditional presentation, demonstration, practical activities, and group discussion.

It is aimed at practitioners, researchers and students who are planning to undertake qualitative research with an educational or similar social science focus, who might like to consider taking a bolder or more innovative approach.

The session will include:

- an introduction to the principles of visual and geographic qualitative research
- an overview of some creative research techniques including photo-elicitation, artefact research and ethnosemiotics, and mobile research; with examples of how these techniques have been applied in the social sciences and can be applied to the field of veterinary education
- hands-on individual and small group practical exercises using real data to develop participants' skills with these techniques
- discussion of the benefits and challenges of using novel research methods
- suggestions for sources of further information and training in innovative research methods

By the end of the session participants should have a broader understanding of the potential of creative research techniques and a plan for applying these to their own work.

## **1.5 HOW TO RUN A SUCCESSFUL OSCE WITH PEER ASSESSORS**

***WOLFE Lissann, MARSHALL Zamantha***  
**University of Glasgow Vet School**

Glasgow Veterinary School administers multiple formative and summative OSCEs each year, costly in both time, and staff involvement. Clinical staff are reluctant to take time away from the hospitals to assess mock exams, so we recruit senior students to peer assess junior undergraduates during their formative OSCEs. In a recent internal study, >97% of Glasgow students highly rated the PAs' ability to provide constructive feedback, believed they had been given helpful advice on improving future performance, and that they had been fairly assessed. Peer assessors believed that peer assessing would benefit them in their own OSCEs, because of their inside knowledge of the OSCE scenarios, and that they would feel more confident, and reported an increased understanding of the assessment process. Peer assessment of formative OSCEs has now been used successfully at Glasgow for several years.

The workshop would provide useful advice on the following:

How to choose your peer assessors

How to train your peer assessors

How to ensure peer assessment is accepted by your students

How to run an OSCE entirely with peer assessors

During the workshop we would plan to discuss the following questions:-Why should we use peer assessors?

Who should they be?

How do we train peer assessors?

What do we include in the training?

Is it acceptable to use peer assessors in summative exams?

What are the Pros and Cons of peer assessment?

What are the benefits of peer assessment for staff, students and peer assessors?

## **1.6 SHOULD WE TEACH MOTIVATIONAL INTERVIEWING SKILLS WITHIN COMMUNICATION SKILLS TRAINING IN THE VETERINARY CURRICULUM?**

***BLAXTER Alison, BARD Alison, MAIN David, REYHER Kristen***  
**University of Bristol Vet School**

Motivational interviewing (MI) is an established evidence-based communication methodology used in human medicine to effect behaviour change. The primary tenet of MI is that it is through engaging with and facilitating an individual's intrinsic motivation that behaviour change results.

The concept of motivational interviewing evolved from experience in the treatment of alcoholism and addiction (Miller and Rose, 2009) and is now widely applied to a range of psychiatric disorders including eating disorders and psychosis (Treasure, 2004) It is also used to improve general health by eliciting change in maladaptive features of lifestyle such as smoking, excessive weight gain and inadequate exercise (Rubak et al, 2005). A national network of training and evidence exists <http://www.motivationalinterviewing.org/> and MI training is being increasingly used in medical schools to support undergraduate communication skills training with increasing calls for it to be mandatory (Shemtob, 2016).

MI has applications to the context of veterinary medicine. Its particular use appears to be where the veterinarian is advising change in farmer or owner behaviour that is challenging to implement, such as changes in herd health approach or in changing pet owner behaviour associated with health issues such as obesity and prevention of disease. In these contexts, MI specifically focuses on exploring and resolving the psychological ambivalence that is common in complex decision making to better engage owners with veterinary recommendations.

Empirical evidence suggests that skillful use of this methodology can alter client volition and choice, as well as related behaviour (Miller and Rollnick 2013). Its inclusion in curricula could therefore enhance undergraduate skill in engaging and motivating clients towards behaviour change for their animals. However, the question of teaching this skill set is not only a practical one; the ability to influence client decision making also engenders ethical considerations (Yeates and Main 2010).

The authors are a group of researchers and clinical teachers at Bristol Vet School where evidence is being gathered on the effect of MI on vet-client interaction, and MI skills have also been introduced to undergraduate veterinary students within the curriculum in both farm and small animal clinical work in Years 4 and 5.

The aims of this workshop are for participants to:

- Gain understanding of the theory of MI
- Gain awareness of ongoing research into the application of MI in farm and small animal veterinary work
- Experience aspects of the MI process
- Discuss how MI might be integrated into veterinary communication skills curricula
- Discuss the ethics of using motivational interviewing to influence client behaviour



## **Are metrics changing the way we teach, for better or worse?**

**Professor Pat Bailey MA, DPhil, CChem, FRSC, FRSE, FRSA, FHEA**

**Deputy Vice-Chancellor at London South Bank University**

Pat Bailey has been the Deputy Vice Chancellor of London South Bank University since September 2014. Prior to this, he has held academic posts at the Universities of York, Heriot-Watt, Manchester and Keele. He has wide experience of supporting and leading educational activities, as well as having a strong research record (over 100 papers). His teaching has been recognised by a number of awards, including his appointment as a National Teaching Fellow in 2005, and he is a member of the TEF Panel. His research expertise is in medicinal chemistry (>100 papers), especially the synthesis of biologically active heterocycles and the development of drug delivery systems, for which he has attracted significant funding (*ca* £4M). He is a passionate supporter of widening access and participation in HE, and his outreach activities and commitment to sharing science with the wider community led to him receiving the BSA Lord Kelvin Award in 1999. He has a strong commitment to the principles of 'sustainability' and 'social justice', and is a Fellow of the Royal Society for the Arts, the Royal Society of Chemistry, and the Royal Society of Edinburgh.

## **ASSESSING THE IMPACT OF THE VIN VIRTUAL CLINIC'S CONGESTIVE HEART FAILURE SIMULATOR ON STUDENTS**

**BALOGH Márton , PION Paul, KITTLESON Kate, SEAMAN Nicholas, JOHNSON Tony  
Veterinary Information Network**

In late 2016, the Congestive Heart Failure (CHF) Simulator was unveiled in the Veterinary Information Network (VIN) Virtual Clinic (VVC; <http://www.vin.com/virtualclinic>). The focus of the CHF simulator is the management of canine patients with cardiogenic pulmonary edema (left heart failure) due to either severe mitral regurgitation or end-stage dilated cardiomyopathy. The simulator has six defined learning goals.

The aim of this study is to test the impact of the simulator on student competency using controlled, pre- and post-interventional multiple choice tests. For this study, we will divide students, each in their 4th and 5th years at the University of Veterinary Medicine, Budapest, into 4 groups. All students in each group will give prior consent and then write an anonymous multiple choice test focused on questions relating to the management of a patient suffering from cardiogenic pulmonary edema (left heart failure). After the completion of this examination, students will be divided into the following groups: Group A: Students in this group will practice treating canine patients using the VVC CHF simulator.; Group B: These students will only attend the Cardiology Elective Course of the University of Veterinary Medicine, Budapest; Group C: Students assigned to this group will treat patients using the simulator and will attend the elective course; and Group D: Students in this group will constitute the control group(no intervention). After their respective interventions, the students in each group will be re-evaluated using the same multiple choice questionnaire.

We hypothesize that students using the simulator will achieve improvement in their results similar to the ones attending the elective course and better than the control students and that those undergoing both interventions will achieve the highest scores.

## **INTRODUCING A SERIES OF NEW PRACTICALS FOCUSING ON SKILLS AND PROCEDURES FOR FIRST OPINION PRACTICE**

***CHRISTOPHER Rachel, CATTERALL Alison, LINDSEY Sarah, MUGUET-CHANOIT Audrey, WILLIAMS Julie, BAILLIE Sarah***

**University of Bristol**

In recent years clinical skills laboratories have been introduced to many veterinary curricula with associated benefits for student learning through provision of structured practicals, a less stressful environment for initial mastery of skills (than the clinical workplace) and opportunities for repeated practice. To complement existing basic clinical skills teaching, we introduced a new set of practicals in 4th year with a focus on first opinion procedures. A list of skills was identified through discussion with students, employers, charity clinics and hospital staff and a set of models and supporting learning resources were developed. These included otoscopic examination (handling the otoscope, examining an ear on a model dog), ophthalmic examination (direct ophthalmoscopy using a modified ping-pong ball situated in a model dog, Schirmer tear test using an eyelid cut in a lime, eye drops applied to an Ikea dog), dermatological procedures (tape strip, Diff Quik, skin scrape), basic dentistry (handling instruments, ultrasonic scaling on modified tiles, dental charts), intermediate level suturing (cruciate, intradermal, Aberdeen knot) and small animal neutering (bitch spay using an adaptation of the ROSSie, cat castration using string and beads). In some practicals the students remake the model s (dentistry, cat castration). In each practical, groups of 30 students rotated round several stations in 1.5 hours. The student feedback, gathered using post-it notes and via TurningPoint, has been positive and indicated that the practicals were useful and enjoyable although some timings need to be reviewed. Additionally, having some 'down-time' when re-making models was appreciated.

## **AN INTERACTIVE AID TO ECG INTERPRETATION**

**COX Ruby, HEZZEL Melanie**  
**University of Bristol**

Interpretation of electrocardiograms (ECGs) can initially seem daunting. The relationship between cardiac physiology and a page covered in strange glyphs is not immediately obvious to most people and can appear abstract and confusing. In teaching this subject area it is important to break down and simplify the approach to interpretation, encouraging a logical, step-by-step analysis. The aim of this poster was to provide clear, straightforward descriptions and explanations for the most common ECG abnormalities, combined with detachable example ECG recordings. The student (or small group of students) is given the task of analyzing the ECG recordings and attaching each to the place on the poster that corresponds to their final diagnosis. The facilitator then checks the accuracy of the students' diagnoses, discusses any areas of confusion and addresses any questions that have arisen from the task. The advantage of this approach is that it requires the students to actively participate in the task. The activity involves practicing the logical, stepwise approach to the interpretation of 13 example ECG recordings, helping to consolidate this approach, which we want to become second nature. The presence of the facilitator will help to prevent the students from losing focus or confidence if they find the task challenging, as the facilitator will be able to provide guidance if required. The teaching aid was produced by a student, who has recently undertaken the process of learning to interpret ECGs and so has first-hand experience of the inherent challenges.

## **CLINICAL SKILLS FOR DIVERSE SPECIES**

**MACDIARMID Rosie**  
**University of Liverpool**

Diverse species (small mammals, reptiles, birds and fish) are growing in popularity and are therefore increasingly likely to be encountered by new graduates in general practice. A recent survey by the Pet Food Manufacturers Association (2016) estimates that there are around 3.4 million exotic pets in the UK. Put into context, this compares with 8.5m dogs and 7.5m cats.

These pets are often presented to specialists, or no vet at all. Anecdotal evidence suggests that many general practitioners are reluctant to treat them, even in emergency situations, because of a lack of confidence or experience with these species.

The diverse species teaching at Liverpool consists of a six week lecture based block in the first semester of 2nd year, with a one week clinical block in 4th year. Due to their 'specialist' nature exotics are not readily available for practical classes, especially in the numbers we require.

Using easily obtainable low cost specimens, mannequins and equipment a new practical class was developed. This aimed to equip students with a few basic skills they may find useful when providing first line care for exotic pets. This poster outlines the development of this new class and highlights areas for future consideration.

## **FORMATIVE OSCES: STUDENT EXPERIENCES AT BECOMING AN OSCE EXAMINER**

**MOSLEY C, WARD R, BELL C**  
**University of Edinburgh**

It is recognised that students often feel anxious during their Objective Structured Clinical Examinations (OSCEs) (Hecker et al, 2010), which may interfere with their performance on the day. A formative OSCE (FOSCE) class was developed introduce them to the concept of being both an OSCE examiner and a student in order to assist in their understanding of the exam structure (Rhind & Paterson, 2015). Class structure Class size: Twenty 4th year students, 90 minutes duration, split into three sections:

Part A: Introduced the role of an OSCE examiner using a 'making a cup of tea' OSCE (Idea thanks to Prof Emma Read & UCVM team) whilst using an OSCE checklist to assess video footage of 'mock' students performing the task. A debrief followed to identify issues, agree which checklist items had been a pass/fail and prepare for Part B.

Part B (main section): Each student adopted the role of an OSCE examiner and student in two different stations (four in total). The four stations ran consecutively to provide an authentic simulation of typical timings during a summative OSCE examination using the official OSCE timer.

Part C: A final debrief took place to review OSCE mark sheets, discuss any questions and to recap the exam format of the summative OSCEs. Feedback Students found it to be extremely useful to adopt the role of an examiner to assist them in self directed learning. Staff observed the use of the Clinical Skills Lab for self-directed learning increased dramatically after the FOSCE session.

## **EVALUATION OF CALVING SIMULATOR TRAINING IN THE VETERINARY UNDERGRADUATE CURRICULUM AS PART OF A BLENDED LEARNING PROGRAMME.**

**ORR Jayne (1), MIHM-CARMICHAEL Monika (1), KELLY Rob (2)**  
**University of Glasgow (1), University of Edinburgh (2)**

Veterinary graduates in the UK are required to be competent from the first day when attending an emergency such as a calving cow, however, such competence is rarely acquired during undergraduate education. Curriculum development at the School of Veterinary Medicine, University of Glasgow, has facilitated the implementation of cattle obstetric simulator models (SIM) to increase safe practice opportunities, as part of a blended learning approach with obstetrics lectures (LECT) and a simulator-based, computer-assisted learning (CAL) activity.

The aim, therefore, was to evaluate whether a one hour practical training session using the bovine obstetric simulator models improved the performance of 4th year veterinary students in a formative Objective Structured Clinical Examination (OSCE) of obstetrical skills. Before the scheduled OSCE date, students were assigned to LECT only (n=19), LECT+CAL (n=23), LECT+SIM (n=32), and LECT+CAL+SIM (n=32) groups. The voluntary participation was high (91 %), and overall students performed extremely well in this new OSCE, with a 94% pass rate and an average of 16/20 marks. The students in the LECT only group had a lower mean OSCE mark ( $p<0.05$ ) than students in the groups exposed to CAL and/or SIM ( $14\pm0.7$ ,  $17\pm0.5$ ,  $16\pm0.5$  and  $17\pm0.4$  for LECT only, LECT+CAL, LECT+SIM, LECT+CAL+SIM respectively). Students receiving SIM training had a higher proportion of excellent ratings (13/64,  $p<0.05$ ) than those that did not (1/42). We propose that even a short practical session using the new bovine obstetrics simulator models significantly improved the clinical competence of veterinary students. (This study was conducted under ethics licence No. 200160009 and with informed consent).

## **EVALUATION OF THE ATTITUDES AND CONFIDENCE OF VETERINARY UNDERGRADUATES TOWARDS WORKING WITH CATS IN THE VETERINARY HOSPITAL ENVIRONMENT**

***REEVE Jenny, HIBBERT Angie***

**University of Bristol**

**Introduction:** An understanding of feline behaviour is required to successfully handle cats in the hospital environment. Escalation to fear aggression due to heightened anxiety and negative associations with previous veterinary visits is not uncommon. Some veterinary students appear to misinterpret feline behavioural cues, which can result in frustration and poor success when performing basic handling.

**Aims:** To (1) investigate student attitudes towards working with cats in the hospital environment, (2) establish whether they had acquired satisfactory confidence in handling skills, (3) evaluate factors that may influence handling confidence.

**Materials and methods:** An electronic questionnaire was circulated to IVth and Vth year BVSc students for anonymous voluntary completion.

**Results:** 173 students completed the questionnaire. Of year V students, 87/115 (75.7%) indicated they enjoyed interacting with cats in veterinary hospitals. 95/115 (82.6%) were satisfied with their cat handling skills. 105/115 (91.3%) and 63/115 (54.8%) felt confident handling quiet and wriggly cats versus unpredictable cats respectively; this was significantly different ( $p < 0.0005$ ;  $\chi^2 = 38.952$ ). Factors found to significantly affect confidence handling unpredictable cats included: frequency of examination practice during extra-mural studies ( $p = 0.01$ ;  $\chi^2 = 9.949$ ), enjoyment of interacting with cats in veterinary hospitals ( $p < 0.0005$ ;  $\chi^2 = 16.622$ ), understanding of feline behaviour ( $p < 0.0005$ ;  $\chi^2 = 13.954$ ), ability to interpret cats' behavioural expressions ( $p = 0.0025$ ;  $\chi^2 = 9.250$ ), satisfaction with cat handling skills ( $p = 0.001$ ;  $\chi^2 = 11.824$ ) and perception of feline versus canine handling ability ( $p < 0.0005$ ;  $\chi^2 = 23.984$ ).

**Conclusions and relevance:** This study has identified factors that influence feline handling confidence; addressing these may enhance student success handling cats. Larger studies, ideally including other institutions, may provide further insight.

## **STUDENT “ROUNDS”: MANAGING A MANY-TO-MANY TEACHING ENVIRONMENT**

***REMNANT John, COBB Kate, MOSSOP Liz***  
**University of Nottingham**

Students undertaking clinical rotations complete three farm animal rotations and a public health rotation. At the end of each two-week rotation, all student groups gather to present to their peers and staff across the rotations. This results in a group of around 18 students and 10 clinical staff/postgraduates. The aim of these sessions was to enable the students to learn from each other's experiences and practice presenting. They also provide an opportunity for discussion and debate around cases. Discussion following each case tended to be dominated by staff, with staff asking most questions and responding to questions from students. A student survey was used to gather feedback on the student experience during “rounds”. There were 46 respondents out of 95 students (48%). Generally feedback was positive with 76% of respondents agreeing or strongly agreeing both that “rounds helped their learning” and that they “enjoyed rounds”. Whilst 82% of respondents agreed or strongly agreed that “The questions and discussion from the staff was beneficial”, free text comments were mixed with some respondents stating that they found the discussion useful to see different viewpoints and others finding the differing opinions confusing and at times intimidating. Following this feedback changes were made to give more structure to the discussion, chairing the clinician's comments and summarising them for students. All staff are also reminded to let students ask any questions before staff do. The survey will be repeated in May and the impact of these changes will be presented.

## **USE OF AN ONLINE FORUM TO FACILITATE CLINICAL DISCUSSION AND DEVELOPMENT OF REVISION CASE EXAMPLES**

***REMNANT John, WARD Jake, ALLEN Yvonne, MOSSOP Liz***  
**University of Nottingham**

During the final year clinical rotations students undertake a two week, farm animal practice rotation in groups of five to six. Students attend ambulatory calls one-on-one with clinical staff. To encourage discussion and reflection on the cases students were provided with a template for a simple note-form case report, with sections for describing useful resources and discussing the cases. Students are asked to upload the cases reports to a moodle forum specific to their group by the beginning of the second week. The group then discuss each other's case reports in the respective discussion forum during the second week. Ultimately, both the reports and discussion will be released to the whole cohort at the end of clinical rotations as a revision resource. Engagement in the process is variable between groups and also partly dependent on caseload (both in terms of having cases to discuss and in having time to engage with the forum). Ensuring comments are in good time to enable the authors and remaining group to respond appears important. At the time of presentation student feedback on the value of each stage of the process (producing the report, the forum discussion and the release of all case reports) will be available and presented. Potential developments include producing the case reports as a group activity, using alternative software or tools to allow more interactions (e.g. Use of a wiki or online document). This approach appears to have the potential to enable students to learn from the experiences of others.



**\* TWO MINUTE TASKS – KEEPING THE LEARNING EXPERIENCE RELEVANT AND FUN.**

***NOBLE P-J, GERMAN Alexander, BATCHELOR Dan***  
**University of Liverpool**

During clinical rotations at Liverpool University, the Small Animal Internal Medicine service aims to help students develop key skills relevant to managing internal medicine cases. These include collection of key clinical data through history taking and physical examination, the formulation of problem and resultant differential diagnosis lists along with a diagnostic and therapeutic plan. Additionally we seek to foster the ability to identify key, relevant gaps in knowledge and quickly address these.

Traditionally, prepared work during rotations took the form of one written or spoken presentations often lasting 15-30 minutes during the rotation week. We reasoned that a daily study focussed on case material, presented in a concise, enjoyable format would be well received. To this end, we developed 2-minute tasks.

Students are allocated their presentation during afternoon case rounds. The remit is to spend less than thirty minutes researching the challenge and to present the answer in up to two minutes in afternoon rounds the following day. Questions range from direct objective facts through to key underlying physiology, pharmacology or pathology underlying a given condition. A degree of humour is applied to help relax the students who are informed that these do not contribute to formal assessment of the rotation, rather, they are development of practical skills.

A database of these tasks is maintained for use randomly during longer periods of internal medicine rotations (three-week electives).

Focus-group feedback on clinical rotations has regularly highlighted that these tasks are a popular and informative adjunct to this part of the course.

## **THE IMPACT OF FORMATIVE PEER ASSESSMENT AND SCREENCAST LECTURER FEEDBACK ON VETERINARY NURSING STUDENTS' LEARNING IN A PHARMACY MODULE.**

***DUNNE Karen, BRERETON Bernadette***  
**Dundalk Institute of Technology**

Detailed and timely formative feedback is necessary to enable students to improve their work prior to final submission. However, such feedback is time-consuming to deliver. The purpose of this qualitative case report was to evaluate two methods of formative feedback that were intended to improve student learning in a timely and achievable manner: small-group peer assessment and lecturer feedback on individual draft work in the form of screencasts. 26 final year B.Sc. in Veterinary Nursing students at Dundalk Institute of Technology were recruited to take part in this study following the completion of the pharmacy component of a five credit Pharmacy, Law & Ethics module. Students reported initial apprehensions about both giving and receiving peer feedback. However the peer feedback was reported to be beneficial as it allowed the students to self-assess against the work of their peers in addition to providing them with several sources of formative feedback and a fresh perspective on their work. The tone of the screencast and the sound of the lecturer's voice were found to be more motivational than written comments alone. A criticism was the tendency reported by some students for peers to leave overly positive feedback, instead of constructive criticism that highlighted specific areas for improvement. Both interventions used were found to be time-efficient for the lecturer and the participants reported improved confidence in their communication skills relevant to the veterinary workplace.

## **STUDENT ENGAGEMENT AND PERCEPTIONS OF BLENDED-LEARNING IN A CLINICAL VETERINARY DEGREE PROGRAM**

**KELLY Rob, MIHM-CARMICHAEL Monika**  
**University of Edinburgh**

The concept of blended learning has received much interest in higher education to facilitate efficient and effective learning. By combining face-to-face teaching with technology-enhanced-learning, through online resources, students can manage their own learning. There is a trend for clinical teaching to be orientated around problem based learning activities to apply clinical concepts using face-to-face and online methods, yet it is unclear if this blended approach is perceived as beneficial by students.

This article describes the feedback received from 123 veterinary students undertaking a new 4-week clinical farm animal module in the middle of a veterinary degree in 2016. The module combined face-to-face lecture, practical and tutorial sessions with multiple online resources. Feedback was collected using a structured online questionnaire at the end of the module and log data were collected as part of routine teaching auditing. Questionnaire responses were a mixture of multiple-choice, likert-scale or free-text. Appreciation and value of different resources was analysed from these responses using simple quantitative and thematic methods.

Overall, students perceived that they benefitted from aspects of the face-to-face and technology-enhanced learning resources. Face-to face teaching was appreciated for practical activities whereas online resources were particularly appreciated for course organisation and flexibility to access course materials. A blended approach was highly regarded in most areas but particularly for clinical skills teaching combining video/ image and practical activities. However students identified limitations with online resources which are of importance when constructing blended courses. Overall, blended learning shows potential in clinical courses to enhance student-led learning.

## **CAN PRACTICAL SKILLS BE TAUGHT ONLINE? INTRODUCING NEW RESEARCH FINDINGS INTO THE CURRICULUM**

**KIRKWOOD Rosanna, WAPENAAR Wendela, MOSSOP Liz, COBB Kate**  
**University of Nottingham**

Recent research has shown that cattle in poor body condition are at risk of iatrogenic sciatic nerve damage from current intramuscular injection technique (Kirkwood 2016). However, transferring this information to students, clinicians and farmers in order to influence their injection site choice is challenging. As a starting point teaching should be included in veterinary curricula although access to cadaver material is limited due to logistical, health and safety concerns and welfare considerations restrict practicing on live animals. The majority of students probably learn this skill on placement, where clinicians and farmers are unlikely to be familiar with the new research and therefore may give detrimental advice. As an alternative means of teaching this an online resource was created and tested on year one veterinary students. The resource asked participants to select an injection site once at the beginning and again, following a short tutorial on the subject, at the end of the resource. They were asked a third time to indicate their injection site choice 2 months later, in a summative exam, to test knowledge retention. Improvement within the tool was significant however, knowledge retention was poor. This may have been due to the implementation of the resource or the ability of the students to clinically apply knowledge at this early stage in the course. With increasing student numbers and limited opportunities to train in a practical environment, finding effective, alternative ways of teaching practical skills is essential.

## **TIHO ENGAGES IN INTERDISCIPLINARY JOINT PROJECT: ECOMPETENCE AND UTILITIES FOR LEARNERS AND TEACHERS (ECULT+)**

**KLEINSORGEN Christin, EHRICH Felix, SCHAPER Elisabeth**  
**University of Veterinary Medicine Hannover**

The University of Veterinary Medicine Hannover (TiHo) is now taking part in the second funding period of the joint project “eCompetence and Utilities for Learners and Teachers” (eCULT+). In eCULT+ 13 Universities from Lower Saxony, the e-Learning Academic Network (ELAN e.V.) and the software developers from the learning management platform Stud.IP collaborate. The aim of the project is to improve the quality of teaching at the participating universities by facilitating and supporting the use of digital teaching and learning technologies. This shall be achieved by sharing existing experiences, by enhancing and further developing utilities and tools and by mutual consulting services and trainings within the network. Therefore, teachers, educationalists and software developers work together in order to determine the needs of the target groups and to produce suitable offers. The target groups are students and lecturers at the participating locations, but many offers are available as open educational resources. At the beginning of the project, an initial investigation of the awareness and usage of e-learning services at the TiHo was conducted using an online survey. 43% of the participants already use e-learning for their teaching (CASUS®, Audience Response Systems, Videos etc.). 57% are interested in the production of videos as learning and teaching material. Further interests for specific trainings covering technical or didactical issues were expressed. Results of the survey, derived measures and further prospects will be presented.

## **WHIZQUIZ - CAN WE MAKE LEARNING FUN?**

**KREKELER Natali**

**University of Melbourne**

The integration of gaming elements into veterinary teaching has not yet been widely applied. "WhizQuiz" is an iOS quiz application that encourages students to answer questions in competition with each other. Players can challenge other users for a game choosing from several clinical and pre-clinical topics. Questions need to be answered in a certain time frame that can be easily adapted by the administrator. A single player option is also available.

The upload of questions is straightforward and players are encouraged to contribute questions in order to expand the database. The question format is currently limited to multiple choice questions but has the potential to include other formats, such as short-answer questions. Media files can readily be incorporated into the current version.

The poster will summarise the features of the app and include download information. The app will be available for free download during the conference and feedback is sought from conference participants before the app is being launched in the app store later in the year. The extraction of learning analytics is planned for a follow-up version and input from participants focussing on this aspect is especially appreciated. More information can be found on the website: [www.whizquiz.com.au](http://www.whizquiz.com.au)

## **SUPPORTING STUDENT ACHIEVEMENT, WELLBEING, EMPLOYABILITY AND PERSONAL DEVELOPMENT**

**RUTLAND C, BRAITHWAITE K**

**University of Nottingham**

Supporting students with their personal achievements and development outside of the formal curriculum is an increasing part of university life. The University of Nottingham offers an 'Advantage Award' scheme where students can achieve formal recognition for personal development, career orientated engagement and citizenship activities. Due to logistical complications and pedagogical commitments our veterinary students were generally unable to participate in the scheme.

Over the last 18 months three custom built modules have been developed for the Advantage Award using expertise from within the school, university and with external collaborators. The modules titled 'Career Skills for Veterinary Students', 'Communicating Anatomy through Art and Media', and 'Effective Volunteering' were offered to the students for the first time this academic year. Uptake to the scheme was high with all three modules running to capacity. Attendance was observed at 100%. Feedback from the students has been good with students enjoying the extra opportunities for student and staff interaction, in addition to interacting with students from another campus. None of the students have reported that the coursework provided a greater burden of work, indeed most students exceeded the minimum requirements. Small changes to session timings will be made but otherwise the feedback indicated that the modules should be run in a similar fashion.

Enhancing participation in extracurricular activities can enrich personal and professional development and can therefore have a positive effect on employability. This poster illustrates the development through to implication and feedback stages of this initiative.

## **AN INTEGRATED, REFLECTIVE APPROACH TO COMMUNICATION SKILLS**

**SERLIN Ruth, WHITTLESTONE Kim**  
**Royal Veterinary College**

The veterinary workplace is a messy and complex environment. Success in practice involves integration of skills such as effective communication, team working and self analysis with clinical skills and knowledge. Day one expectations of new graduates entering practice are based on their ability to perform all of the above.

Recent communication skills teaching at the RVC involves a spiral curriculum in which there is early integration of communication and different professional skills. In clinical years, there is further integration with clinical decision making.

In the first term of their first year in 2016, pre clinical students had two novel communication skills sessions. Students watched videos and then had structured discussions based on different topics arising from the content. In these peer to peer sessions, students gave feedback on each other's communication skills.

Session one introduced the key skill of active and reflective listening.

In session two, students watched a real life videoed consult and discussed the expectations of the individual stakeholders.

Novel, integrated, elements of this session include recognition of elements of canine and human communication, teamwork and reflection.

Reflection was a group activity and resulted in students writing an online team blog on their experiences.

Blogs showed differing levels of reflection on their ability to assess different stakeholder expectations, and experience of teamwork. Some identified learning needs and further study plans.

This integrative approach was well received by students who showed a high level of self direction in the sessions.

## **“RESEARCH FOR FARRIERS – IS IT NECESSARY OR POSSIBLE?” A NEW GRADUATE DIPLOMA IN EQUINE LOCOMOTOR RESEARCH**

***WELLER Renate, PFAU Thilo, PULLEN Sophie, BARSTOW Amy, RAPLEY Eve, DAVIS Rachel***

**Royal Veterinary College**

Farriery plays an important role in the treatment and prevention of lameness in horses, there is, however, a lack of scientific evidence in this area. Recently there has been a shift amongst farriers to recognise the importance of scientific findings and lifelong learning. This is reflected in changes to the requirements postulated by the governing bodies nationally and internationally. However, there is a distinct lack of opportunities for farriers to acquire the professional skills to be able to practice on an evidence basis and to contribute to enhancing the scientific evidence. The Royal Veterinary College has established a Graduate Diploma in Equine Locomotor Research. The course is offered in a blended model combining online learning with six residential weekends. It comprises 5 modules that systematically and progressively introduce the learner to research providing them with the knowledge and skills to perform their own research project within the constraints of their daily practical work. It includes modules on literature search and critical evaluation of literature, study design and research methodologies, data processing and analysis, scientific writing and presentation skills to finally cumulate in a hypothesis driven research thesis. The majority of learners on this course have not had any experience of studying since they left school (often at an early age) and to address this, the course starts with a standalone module ‘Study skills for online learning’ which helps them develop the necessary academic skills but also acknowledges and alleviates any fears and anxiety they might experience around learning.

**\* SWOT ANALYSIS OF A CLINICAL SKILLS LAB – HOW MUCH OBLIGATION IS NEEDED IN THE CURRICULUM?**

***HEIMES Michel, TIPOLD Andrea, DILLY Marc***  
**University of Veterinary Medicine Hannover**

Clinical skills laboratories (CSLs) are supporting animal welfare issues and educating clinically competent graduates. In Germany, the establishment of CSLs began at the University of Veterinary Medicine Hannover in 2013. By now all German veterinary schools have established CSLs. In Hannover, a total of more than 4,000 non-mandatory courses were attended by students since the opening in 2013. Until now, the clinical skills lab is not fully integrated into the curriculum and serves mostly as an additional learning resource. The aim of this study was to investigate opportunities for implementing the CSL into the curriculum. The method of strengths, weaknesses, opportunities and threats (SWOT) analysis was used as a qualitative approach to learn from eight focus groups (nG participants) about their perception of the CSL. Therefore, semi-structured guided interviews were conducted with groups from first (n□), third (n□) and final-year students (n□) and with teachers (n□) from the university. In every interview a discussion about the necessity of obligation to attend the CSL emerged. Students evaluated the CSL consistently very positive because of new skills learning opportunities and for motivational reasons. Teachers commented alike and both groups clearly argued for mandatory courses (e.g. pre-courses for clinical rotations). As the study pointed out there is a need for obligation to attend the CSL though students also wish to keep a certain amount of self-determination. Several approaches to implement the CSL further into the curriculum were suggested in the interviews.



## **PEER FEEDBACK ON NON-CLINICAL SKILLS: THE STUDENT PERSPECTIVE**

**BROWN Andrew, WHITTINGTON Rachel, THOMAS Emily, MCKAY Jill, HUGHES Kirsty, RHIND Susan**

**University of Edinburgh**

Veterinary graduates are required to take part in self-audit and peer-group review processes in order to improve performance as an RCVS day one competence.

It is known that in medical education, students are often reluctant to provide feedback to their peers yet it is a skill that is important to develop as students report feeling ill prepared in feedback techniques when entering the workplace. The BVM&S final year curriculum although heavily based on groups and team work does not currently provide formal opportunities for students to engage in peer-feedback. This pilot study is designed to explore final year student's experiences of giving and receiving peer feedback in the context of a high pressure clinical environment: emergency and critical care.

Students on the selective Emergency & Critical Care rotation were asked to provide non-clinical feedback to their four peers at the end of the three week rotation. Feedback was confidentially obtained using WebPA and consisted of multiple questions using a Likert scale and the opportunity to provide free-text feedback. Questions covered positivity, approachability, recognition of limitations, ability to stay calm, delegation and leadership skills. A summary of the feedback was then given back to the students automatically through WebPA and was completely separate from formal course assessment methods.

After the feedback was released to the students, their experiences were evaluated using a short survey followed by focus groups to explore any emerging themes in detail. The results of these surveys and focus groups will be presented.

## **DEFINING THE GOOD CONSULTATION: A SCOPING REVIEW**

**CORAH Louise, MOSSOP Liz, COBB Kate, DEAN Rachel**  
**University of Nottingham**

The consultation is arguably the most crucial step in the veterinarian-client-patient relationship. However, the nature of the veterinary consultation is a complex one, with multiple stakeholders, time and often financial constraints. Veterinary undergraduates at all UK universities are taught consultation skills using the Calgary-Cambridge model, which has been adapted for veterinary medicine. This model focuses on vet-client communication. There is currently no veterinary-specific consultation teaching model.

Searches were performed in May 2016 using CAB Abstracts and MEDLINE. Results were sorted systematically to identify and quantify consultation 'success factors' recognised in peer-reviewed veterinary medical literature. 11,330 results were returned with 17 publications meeting the inclusion criteria. Four of these measured the success of a consultation and 13 described it. 9/17 of papers were published in JAVMA and 12/17 had been published since 2010. The success factors measured were compliance, client satisfaction and vet satisfaction. Publications primarily used communication analysis tools to measure success.

The review has shown that published research focuses on communication using a limited number of tools of questionable validity and reliability, in small sample populations. In addition, the majority of this research has been undertaken outside of the United Kingdom. This review forms the foundation for the development of a validated consultation teaching model to inform the undergraduate curriculum. The model will be informed by stakeholder focus groups and the validation of identified themes with nationally disseminated surveys. This work is ongoing as part of a PhD thesis at the University of Nottingham.

## **TEACHING EARLY ACQUISITION OF LIVE DOG CLINICAL SKILLS: A BALANCED APPROACH**

**CRIPPS Sarah, ROSHIER Amanda**  
**University of Nottingham**

Nottingham School of Veterinary Medicine and Science has a practical curriculum with an emphasis on early acquisition of clinical skills and frequent hands-on contact with animals from the first term. The increase in student numbers this year presents challenges in terms of maintaining the student experiential learning and also ensuring that animal welfare is of the highest standard for our teaching dogs that are staff owned pet dogs.

By collaborating input from all affected academics and technicians, with specific clinical and behavioural input from suitably qualified staff, a range of teaching interventions have been put in place to ensure the practicals remain at a high standard. The poster details some of these interventions.

Informal feedback from staff and student has been positive, and positive specific comments were recorded on one module review. Further plans are outlined to maintain and expand the improvements for the future.

## **AN ITERATIVE PROCESS TO TOOL MODIFICATION: FARRIER QUALITY MONITORING ASSESSMENT**

***ESCALONA Ebony, BROWN Ashleigh, SECK Mactar, WILLIAMS Shereene, THOMAS Aurelie, SKIPPEN Laura, BURCH Thomas, SAVILLE Klara***

**Brooke**

Lameness is widespread in working equids (Broster et al., 2009), and often related to hoof imbalance. Low competency levels in farriers contribute to reduced welfare due to poor handling, insufficient time allocation, poor anatomical knowledge and trimming methods used. Training can enhance welfare but risks inflicting novel problems if not adequately supported.

Brooke, an international organisation, works to improve working equine welfare in poor communities. Our support to farriers aims to increase confidence and competence with equids. Work-based assessment (WBA) provides formative guidance on practice using immediate short-loop feedback between trainers and trainees. Farrier performance is observed throughout a hoof trim and assessed using a rubric covering four areas (welfare advocate, communicator, farriery expert and kit content).

Field trials from UK farriers and 2 farriery trainee communities in Senegal and Nicaragua provided iterative information through qualitative discussion about trainer and trainee experience and assessments from a farriery workshop. Opportunities for WBA improvement, included non-negotiable criteria, the assessment's length, weighting of rubric, objective scoring measures and language used.

Assessment criteria must be specific, objective and user-friendly. Checking lameness, medio-lateral balance, hoof-pastern angle and heel height were made essential criteria to obtain an acceptable standard of work. Conformational observations that cannot be enhanced via trimming were omitted to reduce the WBA's length. Ambiguous jargon was removed to make the WBA accessible for people without English as a first language and to increase objectivity such as replacing sentences: 'dress hoof wall' to 'trim distal third of hoof wall to ensure improved hoof-pastern angle'.

## **VETERINARY AND HEALTHCARE STUDENTS' PERCEPTIONS OF HUMAN EMPATHY IN PRACTICE AND THEIR STUDIES.**

***HUGHES Kirsty, ALEXJUK Eva Joanna, PATERSON Jessie, WHITTINGTON Rachel, SPIELMAN Stacy***

**University of Edinburgh**

In this interdisciplinary study undergraduate veterinary and postgraduate healthcare students' understanding of empathy to the human patient or client were investigated. The research questions related to the students' understanding of human empathy and how this is facilitated within their courses. In-depth interviews were held with five students, including two veterinary students, during which they were asked to define empathy and give examples from day to day life and practice. The students also highlighted where they felt empathy was discussed in their professional curricula. There was a recognition by all students that empathy is important for their roles but the interviews drew out certain conflicts around how this might be expressed. Workplace pressures including time and culture were the main challenges raised by all five students that might hinder practitioners' ability to empathise with their human patients and clients. Additionally the fear or risk of burnout due to caring too much was highlighted. The veterinary students in particular pointed out that because the animal patient was the primary concern for veterinarians this could lead to tension with the owner over care of the patient and make it harder to empathise with them. These students felt that empathy was not talked about explicitly in the veterinary curricula and that there was room for more discussion of the topic to help them increase their understanding of the importance of empathy to the client relationship as well as its limits and to develop their skills in that area.

## **CLIENT EXPECTATIONS OF VETERINARY SURGEONS**

***RHIND Susan, MOSSOP Liz, HUGHES Kirsty, COBB Kate, CAKE Martin***  
**University of Edinburgh, University of Nottingham, Murdoch University**

The VetSet2Go project is an international collaboration which aims to define the capabilities most important for employability and success in the veterinary profession and following this, to create assessment tools and resources to build these capabilities. One sub-project is focusing on client expectations of their veterinary surgeons.

A series of client focus groups and interviews were held in the UK gathering data from small animal, equine and farm clients across 2 geographical locations. Data were transcribed and thematically analysed generating six 'capabilities and definitions of satisfaction': Client Engagement, Professionalism, Communication Skills, Decision Making and Problem Solving, Commitment to Animal Welfare and Commitment to Quality and the Profession.

This was subsequently iteratively developed into an online survey which was made available to clients through a number of routes including social media, online forums and species specific magazines.

Results: 1275 completed surveys were received. Analysis of overall importance of Capabilities : The capability with the highest rating of perceived importance overall was Commitment to Animal Welfare (mean 4.72), which was closely followed by Decision Making and Problem Solving (mean 4.69) and Commitment to Quality and the Profession (mean 4.67). Client Relationships had the lowest reported mean (4.21); although stakeholders still rated this capability as 'very important'. Further analyses were undertaken with regards to the mean perceived importance of each behavioural indicator. The highest overall indicator was 'Has good knowledge about veterinary medicine and surgery' (4.85). The lowest rated indicator was 'Tailors their communication to your understanding; avoids jargon and technical terms' (3.86).

## **HERD HEALTH MANAGEMENT AND COMMUNICATION SKILLS SIMULATION**

**TISDALL David, MAIN David**

**University of Bristol / University of Surrey**

Farm animal veterinary surgeons (VS) must be able to apply epidemiological principles to understand disease patterns and prioritise interventions as part of Herd Health Management (HHM). However, they can have no impact on animal health and welfare without the communication skills to actively engage farmers in and motivate them towards sustainable change. A case-based learning (CBL) task was developed for fourth-year students at the University Of Bristol School Of Veterinary Sciences to integrate both these aspects. The aim was to prepare a simulated HHM discussion on one of five aspects of herd health (Clinical mastitis, Mobility, Pregnancy rates, Heat detection and Calcium-related disorders) using real data from the University Dairy Unit. Within each group of 4-5 students, different students took the lead in presenting the analysis of data, suggesting recommendations, role-playing the discussion with the farmer and reflecting on the likely effectiveness of their communication strategy. Each of the 24 groups were required to submit a contribution sheet and five were randomly selected to present during a whole-year review session. This task integrated prior teaching on epidemiology, production diseases, HHM, communication skills and professional studies, preparing students for the final-year population medicine rotation. It was supported by staff with expertise in HHM and communication skills, as well as online tutorials and resources. Students performed well, demonstrating skills in epidemiology, communication and reflective practice. Some groups intentionally modelled examples of both good and bad communication. Engagement and enthusiasm was high, and informal feedback extremely positive.

## **WHERE'S THE VETERINARY EVIDENCE? LEARNING FROM A BEME REVIEW OF ASSESSMENT TOOLS USED TO MEASURE SELF-REFLECTION**

***WILLIAMS Julie, WARMAN Sheena, IRELAND Tony, CAKE Martin, FOWLER Ellayne, DYMOCK Dave, BAILLIE Sarah***  
**University of Bristol**

The ability to self-reflect is a crucial life-long skill for all health professionals. The RCVS Day One Competences (2014) include requirements for veterinary graduates to be able to reflect on their performance and experiences and to take measures to improve.

A Best Evidence Medical Education (BEME) systematic review has been undertaken by a multidisciplinary team (from dentistry, medicine and veterinary science) to evaluate the literature and identify tools used to measure self-reflection. A search strategy was devised for electronic databases, supplemented by citation searches. A set of inclusion/exclusion criteria was applied to all records identified and the review team rated included studies using a data extraction sheet.

From the 106 studies reviewed, assessment tools could be classified as one of five types: self-rating scales or surveys, rubrics, observations (of performance), coding of reflective writing and holistic assessment of reflective writing. Only two studies were included from veterinary science: a self-reported survey of critically reflective work behaviour (de Groot et al. 2012) and a report of two preliminary case studies (Adams et al. 2006). The utility formula (reliability, validity, cost-effectiveness, acceptability and educational impact) was applied to the individual assessment tools to assist educators when considering which tool to implement in a particular context.

Findings from this BEME review can inform veterinary educators of best-evidenced approaches to assessment of self-reflection and offers opportunities for undertaking further research that would add to the overall body of evidence as well as specifically benefitting the veterinary community.

**\* PROFESSIONAL AND CLINICAL EXPERIENCE (PACE): A PROGRAM FOR DEVELOPING PROFESSIONAL PRACTICE ATTRIBUTES**

**MARSHALL Zamantha**  
**University of Glasgow**

The University of Glasgow School of Veterinary Medicine began a program in 2015 aimed at developing professional practice attributes in our students, such as client communication, ethics, professionalism, self-reflection and team-working. These attributes are critical to the future success, self-learning and longevity of our graduates. This poster presents an overview of the program that our third and fourth year students take part in known as PaCE or Professional and Clinical Experience. The PaCE program is structured around 6 different themes that are designed to help develop professional practice attributes; these include echelon learning, peer review, team-working, client communication, health and safety in the workplace and legal responsibilities. The students complete an activity within each theme during both their third and fourth year. The activities are designed to provide extra opportunities for personal and professional development without causing an increased workload. The importance of these attributes is reflected well in that they all map directly to RCVS day one competencies. This poster will summarise the activities the students participate in within each of the 6 themes to date.



## **2.1 WORKSHOP: UNDERSTANDING MENTAL WELLBEING IN VETERINARY STUDENTS: CAN A STUDENT LED APPROACH LEAD TO CHANGE FOR THE BETTER?**

***IRVINE Lucy, HAMMOND Jennifer, WASON Joyce***  
**University of Glasgow**

Mental Health in the Veterinary Profession is a real problem which we all need to strive to find a solution for, so why not start at the beginning? Amongst veterinary students mental illness is common and most students know at least one friend in the vet school who has struggled in one way or another and we wanted to do something to help. We wanted to understand how published studies of mental health morbidity in vets and vet students related to our own situation at Glasgow and to focus on our school specifically.

The workshop session reports on a student-led project and campaign. We surveyed other vet students asking questions such as: "Do you regularly feel stressed during Vet School?", "Do you think it's 'normal' to be feeling stressed during a veterinary degree?" and "What encouraging message would you give to your fellow students having a difficult time with stress/anxiety?". We used the results of the survey to mould our new Wellbeing Campaign called 'Feel Good February' which included a series of different talks, free tea and coffee sessions, a 5k run, free tshirts, a dodgeball tournament, emails and a video to share online. The month was a real success and we would like to share our insights into the challenges and benefits of running the campaign by hosting a discussion session to explore what other institutions do and exchange and collaborate on ideas to improve mental wellbeing in veterinary students.

## **2.2 THE USE AND IMPLEMENTATION OF EPORTFOLIOS IN VETERINARY EDUCATION**

**KREKELER N (1), JABBAR A (1), SAEED M (1), WHITTLESTONE K (2), MOSSOP L (3)**  
**University of Melbourne (1), Royal Veterinary College (2), University of Nottingham (3)**

Recently, the use of ePortfolios has tremendously increased in the higher education sector as these platforms have successfully been implemented for various purposes, including self-directed learning, assessment and showcasing in various disciplines. However, the use of ePortfolios in veterinary education varies widely between veterinary schools.

Contemporary teaching methods aim to transform education from summative-driven assessment methods to competency-based practices that promote reflective learning and foster personal and professional growth. Tools are needed to facilitate the self-directed and reflective learning processes that are widely accepted as essential for effective integration of knowledge, monitoring the development of competence, continuing professional development and lifelong learning in veterinary students and practitioners.

In addition, veterinary education has changed considerably over the past two decades. Not only because of tracking streams that many programs offer or new veterinary schools whose students gain practical experience in distributed or community-based models, but also due to a more diverse student body. These changes lead to very diverse graduates, whose experiences differ quite significantly from each other. Hence, new approaches are required to capture and showcase these various skills that students acquire during and beyond their education in a veterinary school.

The proposed workshop will explore the benefits and challenges of integrating a course-wide ePortfolio platform and discuss different types of available ePortfolio platforms. The facilitators and delegates will share their experiences regarding ePortfolio implementation in veterinary education. In addition, the workshop will help to create an international consortium to foster collaboration for developing the “ideal ePortfolio” for veterinary schools worldwide.

## **2.3 USING CREATIVITY AS AN EDUCATIONAL METHOD IN VETERINARY SURGERY**

**LANGEBÆK Rikke**  
**University of Copenhagen**

The aim of this workshop is to experiment with an active, inductive and creative educational method and together investigate and discuss if such teaching methods can encourage deep learning and foster reflection, creativity and self-efficacy in students, thereby improving students' ability to handle surgical situations that diverge from the textbook 'recipe'.

In the workshop, participants will meet a creative challenge and work in groups to come up with a solution. The solutions will be presented and an example of a similar process, conducted with surgical students at University of Copenhagen, will be described. We will then discuss our thoughts and experiences regarding creativity as an educational tool – or maybe even goal - in surgical training.

## **2.4 DEVELOPING & ASSESSING RESILIENCE IN HEALTHCARE PROFESSIONALS**

***KERRIN Máire, ROWETT Emma, FLAXMAN Charlotte, ZIBARRAS Lara, PATTERSON Fiona***

**Work Psychology Group**

Workshop Objectives:

By the end of the session, participants will:

- Understand the importance of developing resilience effectively within a healthcare setting
- Consider the different approaches to developing and assessing resilience
- Understand the features important in developing effective situational judgement scenarios for developing and assessing resilience (e.g., designing items, response formats and 'expert' rationales)
- Practice the development of situational judgement scenarios for developing resilience
- Consider the pros and cons of using a 'low fidelity' text based SJS with 'medium fidelity' video-based situational judgement scenarios.

Workshop Description:

Resilience can be understood as 'the ability to bounce back or positively adapt to ongoing stress or adversity'. Many resilience-enhancing interventions have shown improvements in developing resilience resources in employees so that they can better cope with workplace stressors that lead to increases in goal attainment, productivity, and improved performance.

Drawing from theories of stress inoculation, it is possible that exposing individuals to simulated challenging workplace scenarios, through Situational Judgment Scenarios (SJS), can promote the development of resilience to future workplace challenges. The SJS approach aims to build competence in harnessing resilience resources to deal with workplace stressors relevant to healthcare with the provision of immediate feedback, time for problem-solving, evaluation, and reflection.

The workshop will begin with an overview of different approaches to developing and assessing resilience, to provide participants with an understanding of metrics in this context. Participants will then be introduced to the features involved in developing an effective situational judgement scenario for use in developing and assessing resilience utilising text based or video-based scenarios. Working in small groups, participants will practice developing situational judgement scenarios, as well as developing 'expert' rationales for feedback. In the final part of the workshop, groups will consider developing these scenarios into scripts, suitable for the use in a video format.

## **2.5 “MAKE THE SHOE FIT THE HORSE, NOT THE HORSE FIT THE SHOE”. EXPLORING THE CHALLENGES OF DEVELOPING ACADEMIC SKILLS AND ACADEMIC CONFIDENCE WITH FARRIERY STUDENTS AT THE ROYAL VETERINARY COLLEGE**

***PULLEN Sophie, BREWSTER Veronica, RAPLEY Eve***  
**Royal Veterinary College**

There is an old saying amongst farriers ... “Make the shoe fit the horse, not the horse fit the shoe”. Tutors from the RVC Learning Development team have taken inspiration from this adage when designing and facilitating an academic study skills module for the newly created Graduate Diploma in Equine Locomotor Research (GDELR) programme. In response to the growing need to recognise the essential role farriers play in maintaining equine health and welfare, the GDELR programme is aimed at strengthening the evidence base of farriery, and reinforcing the importance of farriers as allied professionals within the wider veterinary/animal care sector. The programme aspires to develop research and enquiry skills amongst a community of working farriers, in order to generate new knowledge and understanding of farriery and foot care. By way of prefacing the specific scientific content modules, students take part in a 12 week blended learning module covering academic writing, reading, information searching and communication, all of which culminate in students producing a 3000 word, Level 6 essay at the end of the module. This is commonly the first academic assessment the students have done since school. Typically the cohort is comprised of mature students, many of which have specific learning differences, poor school experiences and low confidence. As such, they might typically be classed as being students from a widening participation background.

Drawing up pedagogic and inclusive education literature, the team will facilitate participants to explore notions of personalised and inclusive learning, consider the relative fragility of learning and reflect upon barriers to learning for students at their own institutions. Within an interactive workshop, student video narratives from the first GDELR cohort will provide participants with the opportunity to begin to understand the lived experiences of students who are returning to learning after many years of absence. With an emphasis on exploring solutions to engage and motivate students, participants will take part in practical activities and discussions as a means of teasing out why students can find academic writing and reading so daunting, and how teachers and tutors can smooth the student journey by exploring their own teaching practices, and developing approaches towards greater inclusivity.

Key words: Inclusivity; Blended learning; Pedagogy; Academic skills; Widening Participation

## **2.6 ONTOLOGY, EPISTEMOLOGY, METHODOLOGY... OH MY!**

***VINTEN Claire***

**Royal Veterinary College**

As a science-based profession, the positivistic assumptions of quantitative research are so ingrained into our heads – from our training and keeping up to date with the literature – that it can be hard to accept there may be another way of doing things. A different way of interpreting everything – from raw data, to the nature of reality.

The workshop aims to demystify ontologies, epistemologies, methodologies and paradigms. It will encourage participants to explore their own assumptions about the nature of reality, knowledge, learning; then to reflect on the effect these might have on their interpretation of research. It will present, unbiasedly, some key schools of thought from both quantitative and qualitative research and challenge participants to try out a new way of thinking.

The workshop will also discuss the importance of clarifying your position on these when performing qualitative research, and revisit the first person vs third person narrative debate.

## **EDVET - WIDENING PARTICIPATION IN VETERINARY SCIENCE**

***BADHAM Hannah, BARKER Alice, HYAMS Lucy, LOCK Livvy, JONES Ella, HOLMBERG Emma***  
**University of Liverpool**

EdVet is a society set up by six Liverpool students that aims to provide primary schools, secondary schools & colleges with student-run sessions and events based around making an application to studying veterinary science; and to produce a website dedicated to providing support and guidance on all aspects of applying.

We have recently launched our website which advises prospective vet school students on how to be successful in their applications and to give them idea of whether veterinary is the degree for them. Currently on the website we have a range of topics covering finance, vet school life, interviews, work experience, personal statement. We have assembled content contributions for the website from not only students at Liverpool but all UK Vet schools. Most of the website is written in the form of case studies and personal experiences from vet students. This is to show that no one route into and experience at vet school is the same. This format also provides a real perspective of what vet school is like once you get in and how current students have made the most out of the course.

In the long term, we are aiming to run sessions in local schools that inspire primary school children about the veterinary profession and the importance of hygiene around animals. We would also like to go into colleges and 6th forms to advise older years about vet school and how they can make their application as strong as possible. Volunteer ambassadors from Liverpool vet school will run these sessions in schools.

## **DIGITAL IDENTITY: UNDERSTANDING HOW VETERINARY STUDENTS VIEW THEIR DIGITAL IDENTITY AND WORKING IN PARTNERSHIP WITH VETERINARY STUDENTS TO DEVELOP A POSITIVE DIGITAL IDENTITY.**

**DOWELL Fiona, MCLEOD Gordon, HAMMOND Jennifer, LINN Aileen**

**University of Glasgow**

Social media is omnipresent with the number of people with online digital profiles now in its billions. Every tweet, post, like or tag produces a digital footprint that can be connected perpetually to your digital identity. Many students will have started their digital footprint before they have even begun their University experience but do our students know what they should or shouldn't post on social media and the consequences that any ill-considered posts may have on their future employability?

Professional bodies publish guidelines for social media use and misuse, but how do our students actually feel about the advice or apply the guidance that is provided to them? The undergraduate schools within the College of MVLS at the University of Glasgow are currently working on a partnership project with students to focus on digital identity, wellbeing and professionalism.

A needs analysis survey has identified key areas for development including the "grey" area of digital professionalism (students commented that it was easy to identify 'good' and 'bad' practice but the difficulty was knowing what the boundaries are); managing digital distractions and caring for their digital well-being. This poster will present further details of the needs analysis survey from the perspective of the veterinary student cohort. We will also outline the resources that are being developed to encourage student reflection on both their personal and professional development as they transition through their degree programme increasing individual awareness of digital well-being and how students might balance usage of their always-connected devices.

## **360 VIRTUAL TOURS**

**MATHER Brian**

**University of Edinburgh**

The R(D)SVS have been experimenting with the potential of 360 video in teaching and have identified some useful applications in other areas. We make great efforts with our Online Distance Learning students to bridge the gap between their experience and that of our On Campus students. By documenting our facilities in this way we have created an opportunity to share our campus with them and to immerse them in the physical space. We have found, with alternative audio tracks, we can repurpose the tour for a range of different requirements giving us the ability to:

- Provide pre arrival familiarisation for incoming students, with current students creating audio descriptions and their own unique take on the facilities.
- Demonstrate the quality of facilities to potential students, clients and collaborators across the world
- Demystify 'controlled environments' for current students anxious about moving from the teaching building to practical facilities.

This poster will present some of the work we have created and demonstrate the planning and logistics involved.

## **USING MULTIPLE MINI INTERVIEWS FOR SELECTION PURPOSES ON A VETERINARY NURSING DEGREE**

**ORPET Hilary**

**Royal Veterinary College**

Methods of selecting students for a course can range from purely paper based applications, one-to-one interviews, group interviews and now more commonly for medical schools, interviews consisting of a range of stations that the candidate has to complete.

University selection processes for veterinary, medical and other health professional degrees have been studied closely over the last few decades in an attempt to identify 'predictors of success' and review admission processes (Parry et al. 2006; Hudson et al. 2009). Suggested 'predictors' in the literature vary, ranging from academic qualifications to performance in interviews and also relating to particular personality traits. The studies indicate that high academic qualifications, along with personality traits of conscientiousness and commitment are likely to lead to success on the course (Ferguson et al. 2002; Lievens et al. 2002).

Multiple Mini Interviews (MMI) are a series (between 5 – 12) of ten minute interviews each testing a number of different attributes. These are becoming more popular due to the fact the multiple interviewers increase the validity of the assessment process. They are designed to assess more of the cognitive and non-cognitive attributes of a candidate that interviews were originally intended for (Eva, Rosenfeld et al. 2004). MMI stations can be tailored to the individual institutions values and curriculum and also to a range of professional healthcare courses.

## **BREAKING THE CLASS CEILING: USING SITUATIONAL JUDGEMENT TESTS FOR WIDENING ACCESS IN SELECTION**

**PATTERSON Fiona, KERRIN Máire, ROWETT Emma**

**Work Psychology Group**

It is vital in today's workplace to ensure widening access so that more people from different backgrounds are able to enter healthcare professions. This study explored the benefits that using a situational judgement test (SJT) and the UK Clinical Aptitude Test (UKCAT) had in terms of applicant diversity relating to: Socio-economic status (SES), Ethnicity, and Gender.

Data from two student applicant cohorts into medical and dental schools were explored. Results showed the higher SES group scored better than the lower SES group on the SJT and the cognitive ability tests; however the effect size for SES was bigger for the cognitive ability tests ( $d = 38-0.35$ ) than for the SJT ( $d = 13-0.20$ ), which showed a negligible effect. White candidates scored higher than BME candidates on both the SJT and the cognitive ability tests, with a small effect size. Males scored better than females on cognitive ability tests, whereas the opposite was true for SJTs.

In medical and dental school admissions, an SJT can be used to complement cognitive tests in selection and potentially level the field in relation to SES. The SJT method is likely to widen participation of students based on gender and SES. The SJT method offers a practical solution for widening participation to help to broaden the characteristics measured during selection, for example assessing specific attributes known to be important in healthcare professionals (such as empathy). Importantly, the SJT selection methodology can be applied to any organisation where widening access is an important consideration.



## **SELECTION OF VETERINARY STUDENTS: DOES THE INTERVIEW DO WHAT WE THINK AND WHAT WE WANT?**

***PHILLIPS Claire, ARGYLE Sally Ann, HANDEL Ian, SHAW Darren***  
**University of Edinburgh**

The veterinary profession is rapidly changing and our veterinary curricula evolve and change to keep pace with the demands on and of the profession. At the same time there is a need to ensure that the students we select demonstrate the desired attributes and have the potential, to not only succeed within the veterinary curricula, but to flourish and thrive within the veterinary profession.

As the final step on which we base our offer decisions, the interview performance is critical, but is perhaps the part of the selection process most vulnerable to subjectivity, bias and assumption. One of the main drivers for the increasing use of the multiple mini interview (MMI) in university admissions has been the perceived reliability and robustness that this should offer<sup>1, 2</sup>.

At the R(D)SVS we have adopted the use of MMIs which is employed for all of our prospective veterinary students (national and international). Over three admissions cycles we have interrogated our data for any evidence of bias in the MMI process and evaluated the utility of the MMIs as predictors of academic performance and practical aptitude in the early years of the veterinary degree programme.

In other words, is the MMI doing what we need and want, is it offering any additional benefits and are there any unwanted and unintended consequences or biases?<sup>1</sup> Barbour, M.E.; Phys, M.; Sandy, J.R. (2014). Multiple mini Interviews for Selection of Dental Students: Influence of Gender and Starting Station. *Journal of Dental Education*, 78(4):589-596

<sup>2</sup> Rees, E.L.; Hawarden, A.W.; Dent, G.; Hays, R.; Bates, J.; Hassell, A.B. (2016). Evidence regarding the utility of multiple mini-interview (MMI) for selection to undergraduate health programs: A BEME systematic review: BEME Guide No. 37. *Medical Teacher*, 38(5):443-455

## **MAPPING THE INTENDED CURRICULUM - REFLECTIONS ON THE PROCESS**

***RACKARD Sue, CASHMAN Diane***  
**University College Dublin**

### Introduction:

In 2015 a curriculum committee was established to coordinate a curriculum review process for the UCD MVB and Graduate Entry programmes. The committee set out to assess the intended curriculum to ensure that (a) it's quality and uniqueness is maintained, (b) the standards of its accrediting bodies' are delivered, and (c) to develop specific proposals to continually improve the student learning experience. This poster offers reflections and lessons learnt on the implementation of this process.

**Method**  
Curriculum mapping was chosen as the method to assess the intended curriculum. A five step approach was undertaken: (i) programme vision and values articulation, (ii) definition of day 1 competencies, (iii) curriculum map macro view, (iv) curriculum map micro view, (v) review.

### Results:

A vision and value statement for the MVB programme was defined that emphasises the promotion of autonomous and lifelong learning that is driven by a strong community of learners and practitioners. A Day 1 competency framework was developed that defines the knowledge, skills and attributes of a UCD MVB graduate. Two curriculum maps were developed that provide a macro view (how modules contribute to the Day 1 Competencies) and micro view (scope, sequencing and level of content taught) of the curriculum.

### Reflections:

The maps offer an unique perspective to assess the intended curriculum. Future development of stage outcomes could facilitate greater demonstration of how modules contribute towards the Day 1 competencies within each stage of the programme. Mapping requires extensive debate and engagement by all stakeholders.

## **CREATING A CLINICIAN - DEVELOPING A METHODOLOGY TO EVALUATE CLINICAL REASONING**

**REID Alison, NOBLE Karen**  
**University of Liverpool**

Clinical reasoning and decision-making are challenging to teach, and it is not always clear how and when these skills are acquired. There is a body of work in medical and nursing education (Arocha & Patel (1993, 1995), Botti & Reeve (2003) among others) investigating development of these skills, but literature in veterinary education is sparse.

A pilot study began in 2016, drawing on the methodologies of the above authors and of Farnsworth et al (2008) to investigate development of clinical reasoning and case-based decision-making skills during the rotation phase of the BVSc at the University of Liverpool. This first iteration involved students thinking aloud while working through paper-based clinical cases. Useful data was gathered on types of reasoning employed and students' use of information, but it was clear that there was more we could learn with changes to the methodology. Returning to the literature led to the inclusion of script-concordance tests, based on the work of Power et al, 2016, and Dory et al, 2012.

The second phase of data-gathering, in April 2017, proved the updated methodology very effective. The synthesis of methodologies used by other authors yielded a novel approach, interrogating several levels of clinical reasoning and case-based decision-making. This poster will present the revised methodology with reference to data from the pilot study.

## **LIFTUPP FOR COMPETENCY DETERMINATION? IT'S MORE ABOUT 'LETTING GO' FOR ACADEMICS!**

**SENIOR Avril, SALMON Kieron**  
**University of Liverpool**

At the University of Liverpool Institute of Veterinary Science, clinical rotations are currently assessed using a paper form. Students must meet all of that week's learning objectives to "pass" the rotation. Whilst some rotations deliver mid-week feedback on student performance, this is not universally done. Even with midweek feedback, there is little time to address issues that are raised mid-week, in time for the final assessment.

The University of Liverpool dental school run similar clinical rotations, but rather than "assess" the students on a weekly basis, they use a software package developed in-house (LIFTUPP) that focuses more on the development of clinical competence over an extended period. Their system allows timely feedback to allow students to develop their competence. It also enables early identification of struggling students thereby allowing early intervention to enable them to develop competency.

The veterinary institute is working with the LIFTUPP team to adapt the LIFTUPP software for our clinical rotations, and is currently piloting it with 4th year students (the first cohort of students on the new curriculum) alongside our existing assessment method.

Feedback from both staff and students in the dental school has been very positive as it is quick and intuitive to use, allows multiple opportunity for students to develop competence over an extended period, and takes away the onus of staff having to decide whether a student should pass or fail their rotation. This will be a considerable change to the training and assessment practices currently running in the rotations but we are hopeful that the veterinary clinical staff and students will also see the benefits.

## **\* USING SIMULATION TO DEVELOP CLINICAL REASONING IN VETERINARY STUDENTS**

**VINTEN Claire, MOSSOP Liz, COBB Kate**  
**Royal Veterinary College**

Veterinary graduates have been shown to have underdeveloped clinical reasoning ability. The aim of this research was to investigate the use of high fidelity clinical simulation as a method to improve the clinical reasoning ability and confidence of fifth year veterinary students.

A simulated general practice consultation exercise, focusing on clinical decision-making and utilising standardised clients and animals, was created and implemented for final year veterinary students. Clinical reasoning improvement during the simulation was determined using both quantitative (researcher-assessment, self-assessment, survey) and qualitative (focus groups) methods.

Results showed that standardised client simulation did increase student confidence in their clinical reasoning ability. It also provided opportunity for situated learning; allowing practice of multi-tasking, coping with stress and being responsible for clinical outcomes. There is some evidence that the simulation objectively improved several aspects of clinical reasoning, including differential diagnosis formation. However, further work needs to be done to clarify this.

During this study, the differences between the decision-making students practice during their time in education, and the decision-making they will use once working were highlighted. High fidelity simulation partially bridged this gap, by emulating the responsibility of making clinical decisions without a teacher acting as a 'safety net'.

Within Veterinary education, simulation is mainly limited to communication skill development using standardised patients, or part-task simulators. This should be expanded on, as there is potential for simulation to improve higher order skills. Although expensive and time consuming, the potential benefits appear to outweigh the costs.

## **AN INITIATIVE TO PROMOTE VETERINARY GRADUATE EMPLOYABILITY THROUGH A MOCK INTERVIEW DAY**

***BAILLIE Sarah, SLINGSBY Louisa, CLARK Esther, BLAXTER Alison***  
**University of Bristol**

Professional Studies was introduced as a vertical theme in the BVSc curriculum in 2011-12 with a unit (module) in every year composed of five elements: Communication skills; Professional conduct, ethics and law; Business management; Health & safety; Study learning and investigation.

In final year there is a Professional Studies Week when the whole cohort participate in a range of activities culminating in an employability workshop when every student has a face-to-face mock interview with an 'employer' (alumni, local practitioners and from other veterinary organisations). The students apply for posts advertised in the 'Langford Record' and are then offered an interview with a prospective 'employer'. Students submit a covering letter and CV to the email address given in the advert, which we forward to 'employers'. The interviews are run using an OSCE style timing system, with approximately 15 minutes for the interview and 5 minutes for feedback. Employers also provide general written feedback on the CVs, covering letters and interviews, which is collated and presented to students at the end of the day.

The employability workshop is in its fourth year and feedback has been positive. One employer commented that being involved in the student interviews was one of the best days of the year while students find having the opportunity to prepare (and receive feedback) before starting to apply for real jobs particularly useful. There are logistical challenges even with excellent administrative support and efficiencies continue to be considered while maintaining the overall student experience.

## **'85 COLLEAGUES IN 2 YEARS': ENGAGEMENT LEVELS WITH AN IN-HOUSE FACULTY DEVELOPMENT PROGRAMME (THE EDINBURGH TEACHING AWARD)**

***BELL Catriona, PATERSON Jessie, MCCUNE Velda, RHIND Susan***  
**University of Edinburgh**

The Edinburgh Teaching Award (EdTA) is a mentored, longitudinal, faculty development programme for teaching and learning that leads to internationally accredited fellowship of the Higher Education Academy (HEA) at one of four levels (Associate Fellow, Fellow, Senior Fellow and Principal Fellow). To help overcome local barriers to EdTA engagement at the central University of Edinburgh campus, we launched an in-house version of the EdTA at the R(D)SVS in June 2015, in close collaboration with colleagues at the Institute for Academic Development. The initial R(D)SVS cohort (June 2015) comprised 15 participants and eight mentors. To date (March 17) eight colleagues have successfully completed the longitudinal programme, 50 are currently participating, 15 are joining the next cohort, and 7 are on a 'waiting list' to join subsequent cohorts. Nine colleagues are active EdTA mentors, four of whom were recruited from the pool of successful EdTA completers. Thus, over a two year period, EdTA engagement has expanded to include 85 colleagues, comprising 70 academic staff and 15 veterinary nurses, teaching technicians and PhD students. (Academic staff/130 T%)

School policy changes have also been implemented: EdTA engagement plans are now discussed at all annual appraisal meetings, and participation is a requirement for new recruits (unless existing HEA Fellows). Engagement with the EdTA has far exceeded our expectations and has been achieved through word of mouth endorsement by EdTA participants, strong leadership and public endorsement by school senior management, convenient accessibility and timings, relevant programme content, and attainment of nationally accredited HEA fellowship status.

## **VETERINARY PUBLIC HEALTH, A POTENTIAL CAREER OPTION?**

**HITCHMAN Emma, BRENNAN Marnie, NOVA Rodrigo**  
**University of Nottingham**

Veterinary public health (VPH) covers all the areas of the veterinary profession. However, choosing VPH career pathways after graduation is not often considered as a potential career option by veterinary students. This study aimed to analyse the perceptions of UK veterinary students on VPH.

An on-line questionnaire consisting of 33 questions was distributed to veterinary students in the UK. The analysis of multiple choice questions was carried out through descriptive statistics; while open-ended qualitative responses were analysed by basic thematic analysis, grouping and categorising themes. The survey had the ethical approval of the School of Veterinary Medicine and Science of the University of Nottingham.

A total of 578 students responded the questionnaire. An 82.2% (nF6/568) of the respondents showed an increase in knowledge and awareness of VPH throughout the period of studying the veterinary degree. The veterinary curriculum was found to be one of the biggest influences resulting in raising awareness of VPH (68.22%; 380/557). Veterinary work related to farm animal was considered as highly relevant for VPH (Median□0; nR3). However, the majority of students identify only slaughterhouse work as a VPH career path for veterinary graduates. A low proportion of respondents were able to identify potential employers in non-clinical careers.

More emphasis on the wider role of the veterinary profession, providing role models in VPH, should be given during the veterinary training in order to highlight potential career pathways to students and positively change their perceptions on this subject.

## **NON-TECHNICAL COMPETENCIES CONTINUING PROFESSIONAL DEVELOPMENT CAN CHANGE RELUCTANCE, UNEASE AND STRESS INTO STIMULATION, CONFIDENCE AND HARMONY**

**KINNISON Tierney, MAY Stephen**  
**The Royal Veterinary College**

At VetEd Cambridge (2015), we presented results from an initial research project. The project utilised essays summarising learning from the veterinary professional key skills (PKS) module of the Certificate of Advanced Veterinary Practice (CertAVP), a form of Continuing Professional Development (CPD). By completing the PKS module, participants identified client/patient benefits, practice benefits and personal benefits. Personal benefits included reduced work stress. This follow up study aimed to explore all changes from 'negative' to 'positive' emotions associated with the module, such as stress being replaced by a positive emotion.

Consent was received from 46 participants to analyse their module summaries. The focus of analysis was identification of a 'negative' to 'positive' emotional change regarding a specified topic. Thematic analysis was performed on sections of the summaries relating to these emotional changes to understand their context.

Three themes were identified: 1) PKS module. Negative emotions regarding the module such as 'reluctance' became positive, for example, 'stimulation' when participants realised the importance of non-technical competencies for their daily work. 2) Developing non-technical competencies. Participants wrote about learning new skills and changing emotions from 'unease' to 'confidence'. 3) Stress and coping through a reflective focus. Participants reflected on their work and utilised coping mechanisms including cognitive reframing of self-do (reasonable expectations), self-feel (not alone) and the organisation (recognising stressors). Emotions changed from 'stress', 'guilt' and 'fatigue' to 'coping', 'enjoyment' and 'harmony'. Benefits for self, practice, colleagues/friends and client/patients were again noted. This research supports more attention to professional skills CPD for all health professions.



## **IMPACT OF INTERNATIONAL DISTANCE LEARNING VETERINARY POSTGRADUATE EDUCATION**

***KINNISON Tierney, SILVA-FLETCHER Ayona, KALUPAHANA Ruwani, THURANIRA-MCKEEVER Christine***

**Royal Veterinary College, University of Peradeniya**

Veterinarians across the globe must continually expand their knowledge and skills. Where knowledge and skills are limited, this may affect global health, as issues including zoonotic diseases know no geographical boundaries. Continuing professional development (CPD) for veterinarians in many countries is limited financially and by available expertise.

This study assessed the impact of three distance learning courses on Sri Lankan veterinarians. The courses were scientific: MSc in 'Livestock Health and Production' and 'Veterinary Epidemiology and Public Health' and education related: 'Postgraduate Certificate in Veterinary Education'. They were offered in a collaboration between the Royal Veterinary College (RVC) and Faculty of Veterinary Medicine and Animal Science, University of Peradeniya.

Six (of seven) graduates and three university staff participated in face-to-face interviews, three current students attended a focus group. Discussions focussed on the impact of the course at different levels: individual, institutional, institution's students, profession, public and animals. Data was transcribed and thematic analysis conducted per level of impact.

Participants gained understanding of novel topics including risk analysis and valued this knowledge. They achieved significant career progression. Participants disseminated their knowledge with colleagues, students, and the public, suggesting societal impact. They made changes in their work, from improving animal welfare laws, to changing individual teaching and developing the veterinary curriculum. Several graduates now teach at the university and inspire future generations of veterinarians.

The university identified the influence these veterinarians, as a new community of practice, will have on the veterinary profession within the country and supported the continuation of the collaboration.

## **ENCOURAGING STUDENTS INTO TEACHING: THE TEMS PLACEMENT**

**MOSSOP Liz, COBB Kate**  
**University of Nottingham**

The VetFutures project group recommendations included ensuring veterinary graduates are aware of the wide range of career opportunities available to them. Whilst there is a very traditional career path to becoming a veterinary educator - of intern, resident and lecturer - increasingly in modern curricula non-specialists teachers are required.

We decided to highlight the option of becoming a veterinary educator by providing "Teaching EMS" (TEMS) placements at Nottingham. The programme has been mapped to the Day one Competencies and covers a wide range of skills. It is available to final year students who engage in peer teaching to younger years and take part in tutorials, learning some basic educational theory during their two week placement.

Feedback has been extremely positive from participants so far. Students enjoy teaching their peers and find the communication and teamworking skills benefit them on later clinical placements. They also appreciate the opportunity for revision of earlier curricular content.

Staff also benefit from the insight and feedback obtained from the final year students, as well as the extra assistance during practical classes. A final benefit is pastoral, as participants report that younger students ask them a range of questions about the final year experience when they are teaching them.

## **VETERINARY ALUMNI MENTORING AT UCD**

**MULCAHY G, GRAHAM Helen, RYAN Eoin, O'DONOGHUE Niamh**  
**University College Dublin**

The School of Veterinary Medicine at UCD launched its Alumni Mentoring Scheme, for new veterinary nursing and veterinary medicine graduates, in 2016. We recognized that the year following graduation can be stressful, and for many, their first clinical post provides less structure and support than is the case for other healthcare professions. The Scheme is designed to provide personal and professional support, outside the framework of a line-management relationship, to new graduates. Mentoring is a concept with which UCD students become familiar during their studies, through our Peer-Mentoring scheme. In extending this concept to graduates, we hoped to build on what they have already experienced as students, and facilitate supportive mentoring relationships between new graduates and those of 3-10 years standing. Information sessions were provided for both mentors and mentees, and online training provided for mentors. Matching of mentors and mentees was based on type of practice (or other veterinary work), geographical location, and personal preference. In the first year, 27 veterinary and 10 veterinary nursing graduates were mentored. Overall, reaction was positive, and there are examples of concrete outcomes. Suggestions for improvement including some more structured guidance and discussion points for mentors, and focusing on the good experiences, as well as the difficulties, of graduates. It is hoped to use the cumulative feedback to analyse the experiences of UCD veterinary graduates in different types of employment, and in different parts of the world.

## **DEVELOPING A NATIONAL EMPLOYER SURVEY FOR THE VETERINARY PROFESSION**

***RHIND Susan, FLAXMAN Charlotte, KERRIN Maire, ANDERSON Jim, BAILLIE Sarah, BOSWOOD Adrian, KREMER Wim, MOSSOP Liz, RACKARD Sue, SALMON Kieron, WILLIAMS Alun***

**Vet Schools Council Education Committee**

As part of 'Outcomes Assessment' measures, accrediting bodies require veterinary schools to survey employers to receive feedback on how well they feel graduates are prepared for the workplace. Whilst these are essential data to gather, the problem arises that employers can potentially be contacted by several schools, each using different survey instruments and each asking for similar information. In 2016, the Veterinary Schools Council Education Committee (VSCEC) embarked on a project to redesign and develop a single employer survey to be used by all the VSC member schools. The design and development work was carried out by Work Psychology Group [<http://www.workpsychologygroup.com/>] and consisted of a three stage process. Stage one was to undertake a desk review of all existing information, including current surveys from each of the schools and the RCVS day one competencies and new (draft) AVMA domains of competence, which were used to inform the survey question content. In the second step, teleconferences were held with representatives from each school to gain feedback regarding the survey design (e.g. survey length and demographic questions). The outcomes of phases one and two were used to draft an initial survey. Step three involved reviewing the draft survey at a half day workshop attended by VSCEC members followed by further electronic iterations and piloting with employers. The survey will be launched in May/ June 2017. Options and opportunities for analysis and reporting going forward will be presented.

## **CAREER CHOICES OF NOTTINGHAM VETERINARY GRADUATES AND THEIR ROUTE TO EMPLOYMENT**

**WALL April, MOSSOP LIZ, COBB Kate**  
**University of Nottingham**

### Background

Traditionally the term “vet” meant a veterinarian working in clinical practice. Today there is a broader understanding of the career paths within the veterinary profession, causing much recent discussion. There has also been an increasing awareness and inclusion of professional and employability skills in the veterinary curriculum. This research aimed to establish the career choices and skills deemed important by University of Nottingham veterinary (SVMS) graduates and assess the support provided to them on these aspects.

### Methods

A mixed methods approach was utilised via a preliminary questionnaire distributed to all SVMS graduates and follow up telephone interviews. Quantitative survey data were analysed via statistical and descriptive methods and qualitative interview data were analysed via thematic analysis.

### Results

SVMS graduates followed the profession trend in regards to job choice. Career guidance was sought from trusted, familiar people and communication was the strongest employability skill. Common themes in career choice included support and experience.

### Conclusion

SVMS graduates seem reasonably well prepared in obtaining a job. However, if more experiences were offered, it would make career decisions easier and highlight the importance of employability skills. Career guidance could be improved by increasing links with veterinary professionals.

**\* WHAT ARE VETERINARY EMPLOYERS LOOKING FOR FROM NEW VETERINARY GRADUATES? A CONTENT ANALYSIS OF UK VETERINARY JOB ADVERTS**

**PERRIN Hannah**  
**Royal Veterinary College**

Despite changes in the nature of work, the adoption of new technology, and advances in communication, the effectiveness of an organisation remains dependent its employees. As veterinary educators, we have a responsibility to ensure that we are producing graduates who are prepared for working life. Modern veterinary curricula encompass a range of teaching to support this including communication, teamwork, problem-solving, and business skills; and the employability agenda is beginning to have a greater presence in veterinary training. Previous studies have examined the qualities required of a good early-career veterinarian as viewed by veterinary educators, veterinary students and recent graduates, pet owners, practitioners, and employers; however, no-one has previously constructed a picture of the contemporary UK employment market for new graduates by exploring the nature of its recruitment advertising. 1,095 job adverts from the Veterinary Record were analysed. A surprising initial finding was the striking homogeneity of the adverts. The most common characteristic sought by a long way was enthusiasm; followed by communication skills, teamworking, and client care. The significant valuing of enthusiasm for the job is interesting in terms of student motivation, as there is evidence to show that this is a factor that actually reduces with time in vet school as the pressures of veterinary training mount. This work therefore provides further evidence of the personal and practical value of supporting our students in maintaining their personal well-being; and, alongside this, their enjoyment of the profession they have chosen to join.

## **BE MORE VET! THE DEVELOPMENT OF A MENTAL WELLBEING TOOLBOX FOR THE UNDERGRADUATE CURRICULUM AT BRISTOL UNIVERSITY.**

***BATES Lucy, SLINGSBY Louisa, GROGONO-THOMAS Rose, TOWNSEND Julie, WILLIAMS Julie, BAILLIE Sarah***  
**University of Bristol**

The Vet Futures initiative (from RCVS and BVA) has highlighted mental wellbeing as an ongoing issue for the veterinary profession. A veterinary undergraduate mental wellbeing curriculum is being developed at Bristol University with the aims of promoting a positive perspective on wellbeing and developing relevant skills.

A literature review was undertaken to identify practices for promoting mental wellbeing in the veterinary and medical undergraduate and practising populations. Findings indicated that curricula rarely focus on positive mental wellbeing; instead students are taught how to recognise and deal with stress, develop time management skills and create self-care plans (Drake et al. 2014; Collins & Foote 2005; Gelberg & Gelberg 2005). Emphasising the need to develop coping strategies in order to work in the profession may result in an expectation of poor wellbeing, despite a veterinary career having the potential to be rewarding and contribute to positive wellbeing (Cake et al. 2015).

Based on the literature, a "Mental Wellbeing Toolbox" has been created and will be embedded as a vertical theme in the curriculum. It aims to provide students with skills that will both support and promote a positive, fulfilling and successful career, whilst also developing coping strategies for professionals who may be faced with mental ill-health. Teaching sessions using the toolbox will highlight how anyone can benefit from improving their mental wellbeing, resulting in improved job (and life) satisfaction. An initial version of the toolbox has been presented to focus groups of final year veterinary students.

Cake MA, Bell MA, Bickley N, Bartram DJ (2015). The Life of Meaning: A Model of the Positive Contributions to Well-being from Veterinary Work. *Journal of Veterinary Medical Education*. 42 (3): 184-193

Collins H, Foote D (2005). Managing Stress in Veterinary Students. *Journal of Veterinary Medical Education*. 32 (2): 170-172

Drake AS, Hafen Jr M, Rush BR (2014). Promoting Well-being among Veterinary Medical Students: Protocol and Preliminary Findings. *Journal of Veterinary Medical Education*. 41(3): 294-300

Gelberg S, Gelberg H (2005). Stress Management Interventions of Veterinary Students. *Journal of Veterinary Medical Education*. 32(2): 173-181

## **MINDSET AND ITS RELATIONSHIP TO ANXIETY IN VETERINARY STUDENTS PRIOR TO ROTATIONS**

***BOSTOCK Rebecca, KINNISON Tierney, MAY Stephen***  
**Royal Veterinary College**

This study investigated anxiety, one aspect of poor mental health. Poor mental health has been linked to mindset, so the association between anxiety and mindset was studied. The target population was veterinary students before they entered the final clinical section of their course, intramural rotations, which is anecdotally stressful.

Individual mindset and subjective anxiety (scale of 1-5) towards rotations was assessed via a questionnaire (n=10, 59.3% response rate). Based on responses to 20 statements, students were categorised as strong growth, growth or fixed mindset, according to Dweck's terminology. Mindsets could also be summarised as relating to ability or personality. The majority of students (63.1%) had overall growth mindsets. However, males generally scored higher than females on mindset scores (Ability: males  $64.4 \pm 2.1$  females  $60.7 \pm 1.0$ ; Personality – males  $58.8 \pm 2.5$  females  $54.4 \pm 1.3$ ) indicating a stronger growth mindset. Females were significantly more anxious than males. Ability mindset had a significant correlation with anxiety, where fixed mindset was associated with high anxiety. There were no correlations with personality mindset and anxiety.

Interviews and very small focus groups (VSFG) were held with students of each mindset type to discuss the causes of anxieties. Some reasons crossed mindsets: being underprepared, dealing with new species, long days and feeling stupid. Reasons also varied between mindsets. Fixed mindset students focused more on current knowledge, while growth mindset students realised that rotations were an opportunity for learning, were concerned about knowledge translation to their future career, and considered issues such as work-life balance.

## **EVALUATION OF A COACHING INTERVENTION DESIGNED TO REDUCE STUDENT ANXIETY DURING VETERINARY NURSING PRACTICAL EXAMINATIONS.**

**DUNNE Karen, MOFFETT Jenny**  
**Dundalk Institute of Technology**

Objective structured clinical evaluations (OSCEs) are high-stake summative assessments, frequently associated with acute test anxiety, which may have a negative effect on student performance. This qualitative case study will evaluate the effectiveness of a tailored coaching intervention designed to reduce the level of test anxiety experienced by third year veterinary nursing students at Dundalk Institute of Technology (DkIT). The students will be invited to complete an online mini-IPIP personality inventory before a coaching workshop on managing test anxiety. The workshop will be held one week prior to a formative assessment OSCE consisting of four stations on May 4th 2017. The inventory results will be used to tailor the workshop content to best match the personality traits and training needs of the participants. Some measures designed to reduce anxiety immediately prior to the assessment will be incorporated in to the examination waiting area: these include consideration of the room layout, background music and access to a short (2-3 minute) audio podcast of a positive efficacy message. Following the mock OSCE all the students will be invited to participate in a focus group session. Participants will be asked to share their experiences, giving insights into the effects of the workshop and practise OSCE on their emotions and self-evaluated performance. They will also be asked to appraise the effectiveness of the interventions and make recommendations on how the student experience during these high stakes assessments could be improved. The results of this intervention will be available at the VetEd conference in July 2017.



## **INVESTIGATING THE EMOTIONAL STATE OF TEACHING DOGS AT SCHOOL OF VETERINARY MEDICINE AND SCIENCE, UNIVERSITY OF NOTTINGHAM**

***GOODWIN Bethany, CRIPPS Sarah, ROSHIER Amanda, EWERS Richard***  
**University of Nottingham**

The staff owned teaching dogs are used by students of all years for practising techniques that they will need once qualified, including physical examination and ultrasound. This study investigated the use of physiological and behavioural measures in order to test the null hypothesis that there would be no difference in the dogs' emotional states whether they were in kennels or student practicals. Both good and bad experiences can produce similar physiological outcomes, so this project incorporated behavioural measurements to aid assessment of the dogs' emotional state.

Heart rate data and video recordings were made simultaneously for two 10 minute sessions for each dog; one in a student practical and one in the kennels. Statistical analysis of the heart rate data and analysis of video footage using a behavioural algorithm was performed. A paired t-test showed no statistically significant difference in behavioural data between the two environments ( $p=1329$ ) and dogs remained in positive emotional states for the majority of time in both. There was a statistically significant difference in heart rate variability ( $p<0.0001$ ) however it was concluded due technical issues with collecting data that the behavioural measures were more representative.

These preliminary findings suggest that teaching dogs experience positive emotional states in both environments.

## **A MIXED METHODS STUDY OF MENTAL HEALTH AND WELLBEING IN DIFFERENT UK UNDERGRADUATE STUDENT POPULATIONS**

***LEWIS Elisa, CARDWELL Jacqueline***

**Royal Veterinary College / London South Bank University**

Research has identified poor mental health and an increased suicide-risk in medical occupational groups. However, there has been less research involving students destined for careers in these fields, and few comparative studies. This research aimed to address this omission by estimating and comparing the prevalence of mental ill-health in undergraduate students of medicine, veterinary medicine, dentistry, and pharmacy. Law students were also included who, although arguably subject to similar stressors, do not go on to share a heightened risk of suicide as professionals. A mixed-methods approach was used. First, a questionnaire was used to estimate the prevalence of psychological distress, assess the distribution of personality traits and occurrence of suicide in each student population. Next, in-depth interviews with students studying veterinary medicine and law were analysed using Interpretative Phenomenological Analysis. Quantitative results indicated that law students experienced the poorest mental health, while wellbeing was highest among veterinary and medical students. Veterinary students were less perfectionistic than law and pharmacy students. Qualitative findings suggested that the university environment plays an important role in shaping students' experiences. Expectations about future careers and a desire to appear invulnerable to illness are also pivotal. As the first study to compare the mental health of these populations it was possible to establish key differences. Relatively high wellbeing among medical and veterinary students compared with law students contrasts with observations in the professions. Qualitative interviews provided key insights into what it is like to be a veterinary or law student, and how this impacts upon wellbeing.

## **INTRODUCING A MINDFULNESS-BASED INTERVENTION TO THIRD YEAR VETERINARY STUDENTS; A PILOT STUDY**

**PONTIN Ellie, HANNA Julie, SHEEHAN Karen, SENIOR Avril  
University of Liverpool**

Feedback from staff, students, peer supporters, university counselling services and minutes from our staff-student liaison committees suggested our students are becoming increasingly anxious and stressed as they progress through the course.

Research both internationally and in the UK, shows veterinary students suffer from increased levels of psychological distress including high levels of anxiety, stress, perceived stress and depression.

Using a mixed methods approach we investigated whether a mindfulness-based intervention was a possible approach to tackling some of these issues.

Aims of study

- To examine the profile of the third year veterinary cohort (2015-16) at the University of Liverpool with regard to stress, depression, perceived stress and well-being
- To explore the perceptions of third year veterinary students of well-being within the veterinary profession and veterinary curriculum
- To gain feedback on the experiences of taking part in a Mindfulness-Based Intervention (MBI) for a group of third year students
- To explore the challenges of introducing a MBI into the veterinary curriculum in order to learn and reflect for future practice.

Post study

Mindfulness and well-being has been introduced as 'performance training' in 1st yr curriculum.

This involves a combination of compulsory face to face lectures/ interactive sessions with online resources. A number of voluntary Mindfulness trainer-led sessions. And an option of drop-in sessions to discuss stress, anxiety and workload.

## **PSYCHOLOGICAL WELL-BEING IN THE VETERINARY TEAM: DO VETERINARY CLINICIANS, NURSES AND STUDENTS DIFFER FROM OTHER PROFESSIONS?**

**ROSE H, MAYS C, CARDWELL J, RODER C, WELLER R**

**Royal Veterinary College**

Problems with stress, anxiety and mental well-being within the veterinary profession has received more and more attention over the last few years. The factors contributing to this situation are not only affecting the clinician but also nurses and also veterinary students. The aim of this study was to assess psychological well-being, work-life balance in the veterinary team and compare it to other professions. It was hypothesised that the findings in our cohort would be similar to the human medical world. In this study we used a validated questionnaire "A Shortened Stress Evaluation Tool (ASSET, Faragher et al. 2004), that has been used in a series of other professions, including medics (<http://www.surveygizmo.com/s3/3222602/Stress-Exercise-Questionnaire>). This allowed us to compare the veterinary data to data from other professions

Preliminary results based on 680 responses showed that veterinary clinicians, nurses and students all score significantly more negatively than those in the medical profession in the area of psychological well-being. Nurses have scored drastically more negatively compared to veterinary clinicians and students. Work-life balance has also been assessed and rendered similar results and is correlated with psychological well-being.

We believe that this study is crucial into not only understanding the causes of stress within the veterinary profession, but also hope that it may help influence businesses and practices understand what is necessary to maintain their employees' psychological well-being. In the second part of this study we will investigate the relationship between psychological well-being and exercise.

## **EMBEDDING RESILIENCE TRAINING INTO THE VETERINARY CURRICULUM: A PILOT STUDY**

***SPIELMAN Stacy, WHITTINGTON Rachel, HUGHES Kirsty, RHIND Susan, WARD Rob, MACKLIN Victoria, MATHER Brian***

**University of Edinburgh**

In order to trial embedding resilience training into the curriculum, we at the R(D)SVS ran a pilot trialling an online self-study course (Vet Sorted) for the second year of the BVM&S programme. The course was immediately preceded by a two-hour introductory workshop, the aim of which was to set veterinary relevance and importance for the students.

The Vet Sorted introductory workshop was mandatory for the students, and a short 100-300 word reflection on the course was required of the students upon its completion. A room was booked each week for the students to complete the online course, so time and space were protected in the timetable for the students, which we felt would help reinforce the inherent value of the course.

The workshop consisted of group exercises looking at the concepts of failure/success, and two bespoke videos, which were made by vet staff on campus to demonstrate the direct veterinary relevance. One video showed the frustration of trying to learn to place an IV cannula, and the other showed a busy night on call for a young vet. The Brief Resilience Scales were used on volunteers at the introduction workshop, and the volunteers will again be tested approximately three months after the finish of the online course, to see if there has been a measureable change in the participants' resilience scores.

Some general feedback and a mandatory reflection has been collected from the students at this point (info will be analysed in time for VetEd).

## **HOW ACTIVE IS A VET SCHOOL? ON-THE-JOB PHYSICAL ACTIVITY OF STAFF AND STUDENTS AT A UK VETERINARY SCHOOL.**

***WELLER Renate, HAMMOND Emma, CARDWELL Jacqueline, RODER Carrie***  
**Royal Veterinary College**

The modern working population is increasingly engaged in sedentary work and with the veterinary profession having shifted from large animal to a predominantly small animal focus the physical demands of the veterinary profession have also changed. The aim of this study was to investigate the relationship between job description and activity level (daily steps and daily sitting down time) in the veterinary work place. Employees and students (n=8) at the Royal Veterinary College participated in this study. We examined age, gender, job role, seniority of position, specialty and species the participants worked with and also activity outside of work. There was significant variation in activity between job roles, workplaces, species and specialities. Those working with large animals took more daily steps than those in small animal referral ( $P < 0.0001$ ) clinics. Interns were more active than residents and senior clinicians, but senior clinicians were more active than residents. Services that care for inpatients were more active than others. Steps and sitting time varied with age, with older participants being less active ( $P < 0.05$ ), but not with gender ( $P = 280$ ). 67% of participants stated that they compensate for inactivity in the workplace by exercising outside of work. 86% aspire to be more active, but have limited free time due to work constraints. The results of this study may inform work place policies that influence the physical demands and hence the well-being of veterinary employees and students.

**\* I CAN GET THROUGH THIS: BUILDING RESILIENCE IN VETERINARY NURSING UNDERGRADUATES**

**HOTSTON MOORE Paula**  
**University of Bristol**

All of us experience situations of stress in our lives and in order to enjoy life and be successful we need to be able to cope in a variety of situations, reflect upon them and move forwards. Enabling students to do this is a vital part of an undergraduate education. This academic year, at the University of Bristol we have introduced 'personal and professional resilience' into the curriculum for all years of our Veterinary Nursing and Bioveterinary Science programme. We are discussing areas such as how to keep both mentally and physically fit and healthy, how we tend to cope in times of stress, how we feel we could cope better and discussing situations we could find ourselves in of a professional nature and what challenges we face in our professional lives. We have used personal experiences, role models, case scenarios, team work and peer to peer discussions to explore both personal and professional resilience and how to cope with a variety of situations and face the challenges both in a university environment and in our personal lives. A trained counsellor who is also a graduate of our veterinary nursing course is also giving students' sessions on building resilience and coping mechanisms, based on her own experiences as an undergraduate.

### **3.1 FROM COMPASSION FATIGUE TO COMPASSION RESILIENCE**

***PRICE Sally***

**The Donkey Sanctuary**

“Life is not merely to be alive but to be well.” Marcus Aurelius

Purpose of the Workshop: To provide participants with the awareness and practical skills to be able to better develop compassion resilience within their field of work. Objectives: By the end of the workshop participants will have:

- Learnt what is Compassion Fatigue and how it can affect them.
- Learnt what is happening in the brain from a neuroscience perspective.
- Recognised the signs and symptoms of Compassion Fatigue
- Identified their own coping mechanisms both positive and negative
- Recognised what their own inner resources are to help build their compassion resilience
- Have drawn their own: “wheel of life,” to assess the resources they have in their life
- Developed a sustainable and authentic self-care plan
- Participated in some somatic exercises
- Participated in some practical exercises taken from the latest research in applied neuroscience to help develop their own resilience and inner resources.

This workshop will be a combination of learning, self- reflection, group work and practical exercises taken from NLP (neuro linguistic programming,) and applied neuroscience.

“Compassion Fatigue is a state experienced by those helping people or animals in distress: it is an extreme state of tension and preoccupation with the suffering of those being helped to the degree that it can create a secondary traumatic stress for the helper.”

Dr. Charles Figley Compassion Fatigue (CF) is now a condition that is being more openly talked about. In the past many people in the helping professions have suffered silently, struggling on in the name of being professional, with often devastating and long term effects on their lives.

The aim of this workshop is to learn how to get people engaged in animal welfare to understand what this is, how it can affect them, and give them the knowledge, resources and skills to equip them to be able to look after themselves in a way that gives them more resilience. This is particularly important in the field of animal welfare where professionals need to cope with both the suffering and trauma of animals and owners. Those working overseas also need to cope with cultures and communities that may hold different beliefs and practises towards animals that contradict their own beliefs and practises of animal welfare.

The workshop Facilitator, Sally Price, has personally suffered from Compassion Fatigue after working for twenty-three years in Humanitarian Development and ten years for an international animal welfare organisation. She has studied Compassion Fatigue both from a personal and professional perspective, and is now passionate about getting compassion fatigue into the open and talked about, and helping others so that they do not have to suffer and go through this.

### **3.2 DISCUSSING VETERINARY EDUCATION/PROFESSION POSTGRADUATE QUALIFICATIONS (MASTERS, PHDS)**

***KINNISON Tierney, PERRIN Hannah***  
**Royal Veterinary College**

This session is designed to bring together current, past and prospective postgraduate students. Specifically, the session will reinforce the community of current, past and prospective PhD students in the areas of veterinary education/the veterinary profession(s). For the last three years, VetEd has hosted the annual meeting of the community. All events attracted between 10-20 people.

The proposal for 2017 is to reinforce this community and to attract new individuals who have just started PhDs or are interested in doing so. In addition, for the first time, the session will include Masters students. Any individual interested in, currently studying, or having previously studied an Masters degree with a research focus on veterinary education/professions would be most welcome.

The session is designed to allow potential students of postgraduate research degrees relating to veterinary education/the veterinary professions to ask questions to current students, and for current and past students to share their experiences. Veterinary students, Masters students, practitioners and educationalists are all welcome to join this community of individuals involved researching veterinary education

The session will make use of break out groups so that those interested in different degree levels will be able to contribute and learn. Potential and current research students will be invited to discuss their project or potential ideas with their peers, if they wish. The session is designed to be friendly, relaxed and flexible to the attendee's needs. The facilitators have completed veterinary education/profession PhDs in the UK and would welcome you to this interactive talk.



### **3.3 GAMIFICATION- CAN WE MAKE LEARNING FUN?**

***KREKELER Natali***

**University of Melbourne**

The integration of gaming elements (gamification) into veterinary teaching has not yet been widely applied.

The main objective of this workshop is to provide a platform for educators to share existing “Games in Veterinary Medicine” and to enable collaboration on various projects of gamification. Participants are encouraged to showcase their games and to present ideas they have.

At The University of Melbourne we have developed “WhizQuiz”, an iOS quiz application that encourages students to answer questions in competition with each other. Players can challenge other users for a game choosing, from several clinical and pre-clinical topics. Questions need to be answered in a certain time frame that can be easily adapted by the administrator. A single player option is also available.

The uploading of questions is straightforward and players are encouraged to contribute questions in order to expand the database. The question format is currently limited to multiple choice questions but has the potential to include other formats, such as short-answer questions. Media files can be readily incorporated into the current version.

Workshop participants can download the app and play against an opponent or in a single player mode. Feedback is sought from conference participants before the app is being launched in the app store later in the year. The extraction of learning analytics is planned for a follow-up version and input from participants focussing on this aspect is especially appreciated.

More information can be found on the website: [www.whizquiz.com.au](http://www.whizquiz.com.au)

### **3.4 CURRICULUM MAPPING WITH GOOGLE SHEETS**

***TRACE Chris***

**University of Surrey**

Mapping your curriculum's teaching and assessment is becoming increasingly necessary as curricula become more complicated and evolve rapidly. Curriculum mapping enables you to meaningfully capture and analyse data about your curriculum. This hands-on workshop will show you a quick and (relatively) easy way to get started with Curriculum Mapping that worked at Surrey using Google Sheets.

### **3.5 TEACHING STUDENTS TO WORK WITH VISUALLY IMPAIRED CLIENTS**

***FRASER Mary***

**Vets Now / Girling & Fraser Ltd**

There are almost 4800 guide dog owners in the UK. All of these owners and their dogs will need to visit a veterinary practice at least twice a year for routine or emergency treatment. If veterinary staff are not used to working with visually impaired clients, their responses can be awkward and lack confidence.

On this basis, a research programme was developed to identify factors that any member of staff working with a client with a sight problem should be aware of (Fraser & Girling, 2016). Based on this, theoretical and practical training was delivered on a small scale to veterinary and veterinary nursing students and has received positive feedback.

Moving forward it is hoped to raise awareness of this training and allow more undergraduate and postgraduate staff to undertake some form of training and improve the experiences of guide dog owners visiting their local vet practice.

Format of delivery:

1. Findings from the research – what should vets / vet nurses / receptionists consider when their client is visually impaired?
2. Practical – attendees can experience carrying out daily tasks with various sight problems
3. Consider waiting room layout – could anything be changed to help clients with sight problems?
4. Guiding – practicalities of supporting a client who has to leave their dog in the practice.

### **3.6 BUILDING THE VETERINARY NURSE-CLIENT COMMUNICATION MODEL: UNBLOCKED MINDS, THINKING ALLOWED**

**MACDONALD Jill (1), GRAY Carol (2)**

**(1) ONCORE Online Learning, (2) School of Law, University of Birmingham**

Learning Objectives:

- (a) To compare the initial results from the Veterinary Nurse-Client Communication Model project with the experiences of the participants
- (b) To identify the model's strengths and weaknesses regarding its relevance and applicability to practice and teaching
- (c) To provide participants with considered options for the development of their communication skills
- (d) To inform the project about options for further development of the model.

Rationale/Background:

The Veterinary Nurse-Client Communication Model (VNCCM) project began in October 2015 with the aim of developing a communication model focussed on the interactions between the veterinary nurse, client and companion animal. Project membership includes the three presenters, other veterinary professionals and educators using Delphi (Lindeman, 1975) and Nominal Group methodologies (Fink et al, 1984). The workshop will provide opportunities for professional development whilst also informing the VNCCM project.

Methods:

Cycles of plenary and small group discussions based on each learning objective will be facilitated with active participation through sharing experiences in a constructive learning environment. Specific guidance will be provided for the small groups.

Discussion:

Communication skills have become a core part of veterinary practice and teaching (Mossop et al., 2015). There is no veterinary nurse-specific communication framework for practice or teaching yet there is a need for a framework due to the differences in the roles of the veterinary nurse and veterinarian. The VNCCM project is seeking to promote best practices in communications for the benefits of the companion animal, client, nurse and healthcare team based on research evidence and professionals' experiences.

## **Retention of Graduates in the Profession**

### **Professor the Lord Sandy Trees BVM&S PhD MRCVS**

Professor the Lord Trees graduated as a veterinary surgeon in 1969 from Edinburgh University. Following a year in mixed general practice, he completed a PhD on bovine babesiosis, and then worked in the pharmaceutical industry.

In 1980 Lord Trees was appointed Lecturer in Veterinary Parasitology at the University of Liverpool, was appointed Professor of Veterinary Parasitology in 1994 and went on to become Dean of the Faculty of Veterinary Science from 2001-2008. His research has been funded by over £15m of external grants and produced over 170 scientific papers. He retired from the University of Liverpool in 2011.

He was a council member of the Royal College of Veterinary Surgeons (RCVS) from 2000-2015 and president of the RCVS in 2009-2010. He is also Chairman of the Board of the Moredun Research Institute and Veterinary Editor in Chief of the Veterinary Record and In Practice.

In 2012 Lord Trees was appointed to the Crossbenches through the Appointments Commission and is only the second veterinary surgeon to be appointed to the House of Lords.

## **Transition into the workplace - Is it the job of Vet Schools or the Profession?**

**Chair: Professor the Lord Sandy Trees**

**Debating: P-J Noble, Rob Pettitt and you, the audience**

For the first time at Vet Ed we will be running a debate entitled "Transition into the workplace - Is it the job of Vet Schools or the Profession?"

The 2 opposing sides are:

- This house believes that the VET SCHOOLS should be doing more to help students make the transition into the workplace
- This house believes that the PROFESSION should be doing more to help students make the transition into the workplace

The debate is designed to stimulate a lively but friendly discussion.

## **DEVELOPMENT OF A LOW-COST, LOW-FIDELITY OVARIOHYSTERECTOMY MODEL**

***BRISSON Brigitte, KUMAGAI Miyuki, JOY Andria, BELANGER Catherine***  
**Ontario Veterinary College**

Our goal was to develop an inexpensive Ovariohysterectomy (OHE) model that would allow students to practice the main steps of OHE (breaking the suspensory ligament, clamp application and vessel ligation) and could be inserted in a DASIE™ suture model. The OHE model was created using inexpensive materials such as craft cording, beads and recycled cardboard. Friable craft cording was found to be the ideal material to mimic the experience of breaking the suspensory ligament in a live patient. A beard cover was used to simulate a broad ligament allowing students to make a window prior to clamping and ligating ovarian vessels, and break it to expose the uterine body. Total cost of each model was less than \$0.70 CDN.

Students made their own OHE models prior to returning to the laboratory to perform a simulated OHE using aseptic technique. 60% (73/120) of students then completed a voluntary survey. 100% of students agreed that making the model solidified their knowledge of anatomy. 90% believed the simulator was easy to use. 97% and 96% of students reported the simulation increased their confidence in the steps and their skill to perform an OHE respectively. Finally, 89% of students believed the simulated OHE would reduce their stress when having to perform their first live OHE.

This OHE model is inexpensive, simple to make and use, and was assessed by students as providing an excellent first OHE experience. Further studies to compare the effects of its use prior to live animal surgery are in progress.

## **EVALUATION OF THREE TRAINING RESOURCES FOR LEARNING TO PLACE A SIMPLE INTERRUPTED SUTURE**

***CATTERALL Alison, CHRISTOPHER Rachel, WARMAN Sheena, KRUYDENBERG Adam, WONHAM Katie, LAWRENSON Karen, BAILLIE Sarah***

**University of Bristol**

As part of a recent curriculum review, a new Clinical Skills Laboratory was opened and a range of innovative models, simulators and supporting learning resources developed. Although it seems intuitive that models will benefit student learning, there is an increasing call for evidence to demonstrate that simulation-based teaching is an effective precursor to performing clinical procedures.

A study was undertaken to evaluate three resources for learning to place a simple interrupted suture: a silicon skin pad, a modified tea-towel and a video. The two models were evaluated for face validity by seven experts who considered that both were suitable for teaching students, with silicon rated as more realistic. Thirty-two second year students were then randomly assigned to three training groups: silicon or tea-towel model (self-directed with an instruction booklet), or video. Following training, all students undertook an OSCE placing a simple interrupted suture in piglet cadaver skin.

There were significant differences in the OSCE pass rates of the 3 groups (Chi-squared test;  $P < 0.001$ ): 10/11 of the silicon group and 9/10 of the tea-towel group passed, compared to 1/11 of the video group. There was no significant difference between the performances of the two model groups.

In conclusion, not surprisingly 'learning by doing' on a model was more effective than watching a video. Interestingly, the tea-towel was as effective as the more realistic, but more expensive, silicon pad. Both models were used effectively with an instruction booklet illustrating the value of self-directed learning to complement formal practical classes.

## **SMALL ANIMAL DOPPLER PROBE AND WELLNESS SIMULATOR**

**CLARKSON Eoghan, WARD Rob**  
**University of Edinburgh**

Doppler flow measurement is a cheap technique for non-invasive measurement of systolic blood pressure commonly used in small animal practices, and as such is a skill we require our students to master. The technique can be practised on live animals or students themselves, but at Edinburgh we are reducing our use of live animals and have safety concerns about self-experimentation. Also, practising on a live subject does not produce consistent and repeatable results that can be later checked for accuracy.

As a result of collaboration between our Clinical Skills Team and Digital Education Unit, we created a prototype Doppler flow measurement simulator using a Raspberry Pi and Arduino together (low-cost computers, about the size of a credit card, which can be extended by adding environmental sensors). This prototype was later refined to require only the Raspberry Pi, and both versions have since been used by students during Clinical Skills practicals.

The simulator consists of a dummy dog paw, a probe, and an air tube attached to a sphygmomanometer and cuff. The student attaches the cuff to the paw, and when they place the probe over the correct spot they will hear the normal Doppler sound of blood flowing back and forth through the vein. The student then pumps the cuff up until the sound goes quiet indicating all blood flow has been stopped, and slowly releases the pressure until they can hear sounds of the forward flow of blood, at which point they can read off the systolic blood pressure.

## **VALIDATION OF A NEW MODEL DESIGNED TO HELP FIRST YEAR STUDENTS LEARN HOW TO PALPATE PERIPHERAL CANINE LYMPH NODES ON CLINICAL EXAMINATION**

**CRIPPS Sarah**  
**University of Nottingham**

Lymph node palpation is hard to master, especially when palpation skills are just developing, and palpation by many inexperienced students throughout a long practical can potentially harm the animals. It is not always possible to palpate all the palpable lymph nodes in all live dogs and increased student numbers mean less time per student with the existing live animals.

A cuddly toy dog was modified to include models of the submandibular salivary gland and lymph node, the prescapular lymph node and the popliteal lymph node, made from Sculpey Mold® maker modelling clay and bubble wrap. The model was introduced to all students in year 1 as part of a structured taught session on lymph node palpation and ultrasound of the spleen on live dogs. Every student had the same time for the tasks, and were then asked to fill out a nine item questionnaire detailing how useful they found the model in the context of the teaching session. Results and ongoing impact will be discussed at the presentation.



## **DEVELOPMENT OF A SILICONE MODEL FOR INCISIONAL BIOPSY IN VETERINARY TEACHING**

***MALIK Katherine, OBLAK Michelle, JOY Andria***  
**Ontario Veterinary College**

Models for teaching surgical oncology are important as naturally occurring models are infrequent and difficult to obtain. This silicone mass model was developed to help veterinary students improve their self-efficacy for the art of incisional biopsies. This model has been designed to allow students to visualize the important anatomic layers considered in surgical practice and to help them to learn these techniques while not compromise healthy surrounding tissue during incisional biopsy.

Models allow students to develop skills and techniques required to perform the procedure on a live patient. Models have the ability to illustrate the theory of a concept in 3D while giving students the opportunity to touch, manipulate and practice performing diagnostic sample collection procedures in a calm, low pressure environment. Currently there are no synthetic bench models available for veterinary students for teaching surgical oncology principles and biopsy techniques.

This model is constructed using low viscosity silicone of varying flexibility to mimic the different layers; muscle, subcutaneous, and skin. The model additionally includes a fascial plane between the muscle and subcutaneous layers. There are two masses located within the model, one is on the fascial plane within the subcutaneous layer to mimic a subcutaneous mass and the other more superficial to model a cutaneous mass. This model allows students to practice 2 common incisional biopsy techniques, punch and wedge. These models are affordable and require minimal materials, which allows models to be created for individual students with limited investment required.

## **SPAYING CATS - GOING THROUGH THE MOTIONS VIA A LOW COST SIMULATION MODEL**

**SALMON Kieron**

**University of Liverpool**

Neutering surgery is the procedure most likely performed by new veterinary graduates, with the cat spay being classified by the Royal College of Veterinary Surgeons as a day-one competence. However the opportunity for students to practise this procedure on cadavers is limited.

In the University of Liverpool vet school's neutering clinic, the main thing lacking in clinical students is an awareness of the steps required to perform the procedure. They can also be lacking in the art of delicate tissue handling and the ability to perform secure ligatures.

The author, having run the neutering clinic since 2003, decided that students should practise on models prior to attending the neutering clinic, however at that time there were no models available. Since then a bitch spay model is now commercially available, however the cost of this is prohibitively expensive.

This poster describes the creation of a low cost simulation cat spay model that teaches students the procedure of the cat spay. It also enables them to practice delicate tissue handling, instrument handling and the tying of secure ligatures.

The model can be easily adapted to allow a flank surgical approach for left or right-handed surgeons, and a ventral mid-line approach. The model can be created using easily available items and includes relevant additional anatomy, such as the small intestine, colon and bladder. The total cost of the model is around 1 pound sterling, and the cost of replacing the uterus is approximately 7 pence.

This model allows students to go through the motions of the cat spay, develop confident handling of delicate tissues and instruments, and ensure they are competent in tying secure ligatures, without having to worry about the cost of repeated attempts.

## **DEVELOPMENT OF A RABBIT ENDOTRACHEAL INTUBATION MODEL**

**SMITH N, WAGER C, ALLEN M, PEARSON G**  
**University of Cambridge**

Placement of endotracheal tubes (ETTs) in rabbits is made technically difficult due to the small gape, large incisors, fleshy tongue and long and narrow dental arcade (Bateman et al. 2005), resulting in high failure rates. Repeated attempts can lead to significant tracheal trauma (Phaneuf et al. 2006). It was therefore determined to build a model which would allow users to practice placing an ETT using the blind intubation method. Task analysis allowed identification of the key steps of this process, with the aim of the model being able to simulate each of these steps. CT scans of a rabbit were taken to get an accurate 3D representation of the skull; these were then manipulated to separate the mandible. A 3D printer was used to create a resin print of the skull, and a screw was introduced to create an articulating jaw. To make the soft tissues of the oral cavity, the tongue, soft palate and hard palate were dissected from a cadaver. These were then placed in a sealed container and covered in silicone to create a mould of these structures. The mould was then filled with another silicone to create the soft tissues for the model, and fitted this into the resin skull. The epiglottis, oesophagus and trachea were fashioned using silicone tubing. The face and content validity of the model will be assessed using a questionnaire, which will be given to experienced clinicians when they trial the model.

References: Bateman, Leigh, John W Ludders, Robin D Gleed, and Hollis N Erb. 2005. 'Comparison between Facemask and Laryngeal Mask Airway in Rabbits during Isoflurane Anesthesia'. *Veterinary Anaesthesia and Analgesia* 32 (5): 280–88. doi:10.1111/j.1467-2995.2005.00169.x. Phaneuf, Lise R, Stephen Barker, Michelle A Groleau, and Patricia V Turner. 2006. 'Tracheal Injury after Endotracheal Intubation and Anesthesia in Rabbits'. *Journal of the American Association for Laboratory Animal Science* 45 (6): 67–72.

## **DEVELOPMENT AND TESTING OF A SIMULATOR MODEL TO ALLOW STUDENTS TO PRACTICE CAUDAL VENEPUNCTURE IN CATTLE**

**SYKES Amy, WELLER Renate**  
**Royal Veterinary College**

Practical teaching in veterinary schools has been under additional pressure in recent years from increasing class sizes and public scrutiny. In some instances, live animal teaching is becoming a welfare issue, and ethically sourcing enough cadavers is also a challenge. Simulator models are becoming a popular choice for teaching both surgical and clinical skills, however equine and farm animal models are still relatively underrepresented. For this study, a low fidelity simulator for the teaching of caudal vein blood sampling from cattle was created. Blood sampling is an invaluable diagnostic tool, and yet obtaining a sample from farm animals is not commonly taught in some UK veterinary schools. To assess its value as a teaching tool, 6 farm clinicians at the RVC, London, first evaluated the model, and then 67 clinical year students were invited to test and leave feedback in the form of a questionnaire. Students demonstrated a significant increase in confidence ( $P < 0.001$ ) about blood sampling the live animal after using the model compared to before. Staff and students also reported positive experiences with the use of models in general; 72.4% of staff and 94% of students believed models to be generally or always useful. Practical teaching using models has many benefits to veterinary institutions and it is hoped that the model created for this study will not only enhance students' confidence in this specific task but also encourage the invention of more farm animal models in the future.

## **VALIDATION OF LOW FIDELITY EQUINE NOSE TWITCH MODEL IN VETERINARY NURSING EDUCATION**

**WALSH Celine, DUNNE Karen**  
**Dundalk Institute of Technology**

Equine nose twitch application training enables students to practice this important day-one skill in a controlled environment, without the use of live animals. This study was undertaken to evaluate a low fidelity teaching model designed to enhance the current method of teaching, by providing students with tactile practice and rehearsal of the technique. The model was made from memory foam; shaped and placed over the muzzle of a model horse, secured with a compression stocking to mimic a malleable upper lip. The model was validated by eight veterinary nursing educators with equine experience and described as appropriate and suitable for the teaching of this skill prior to performing it on a live horse. A group of 30 students who were taught the technique in class were then invited to attend a voluntary training session using the model, of which 16 attended and 14 did not; rendering the latter group our control group. The performance of the technique was examined during a Directly Observed Procedural Skills assessment. The students that attended the practice session performed significantly better (47% pass rate) than those that attended the lecture alone (27% pass rate). The training model proved to be an effective tool in teaching safe application of an equine nose twitch in a non-pressurised environment, without the use of live animals or associated risk of injury. 56% of the students that used the model for practice agreed that they felt more confident about their ability to apply a twitch to a real horse.

**\* DESIGN OF A LOW COST, LOW FIDELITY FABRIC MODEL (NCSU SIMSI) FOR SIMULATING CANINE SMALL INTESTINAL RESECTION AND ANASTOMOSIS**

**TAYLOR Abi, DRULEY Gail, HARDIE Lizette, RISSELADA Marije, ADIN Chris**  
**North Carolina State University (NCSU)**

Training the fundamentals of small intestinal surgery currently involves the use of live animals, cadaveric preparations or commercially produced simulated small intestine with a variety of special handling requirements. At the NCSU Simulation Lab, we were unable to locate a simulator with sufficient content validity including intestinal wall layering, to facilitate teaching mesenteric vessel ligation, bowel resection and anastomosis incorporating the appropriate layers, and delicate tissue handling, while simultaneously being low cost and easy to handle.

We designed a fabric model to fit our criteria. Contrasting colours, thicknesses and textures were used to highlight the individual layers of the intestinal wall structure; fabric-backed neoprene and batting were layered and adhered. Silicone vessels were piped onto cheesecloth approximating the canine mesenteric vascular pattern. Materials were stitched together at the mesenteric border and cut into 30 cm lengths. Model cost (materials and labour) was 6.00 USD per unit.

Fifty simulated small intestinal models were produced for teaching students in the advanced principles of surgery course in professional year 3 of the NCSU DVM program. Students worked in pairs and performed an enterotomy and a resection and anastomosis with mesenteric vessel ligation during the instructed labs. Student feedback suggests that this model provides an increased understanding of intestinal layering, suture placement and vascular supply preservation in a low stakes environment.

Conclusions: A new low cost, low fidelity small intestinal model allows for hands on training of fundamental small intestinal surgical principles to a large number of students in a low stakes environment.

## **A REVIEW OF TEACHING AND LEARNING OF EQUINE HANDLING SKILLS FOR PRE-CLINICAL STUDENTS**

**ALLEN L, STEVENS S, WAGER C**  
**University of Cambridge**

Equine handling is taught to first year pre-clinical students to ensure that they are competent in safe techniques prior to undertaking pre-clinical extra mural studies. In their first term of study, students receive one timetabled equine handling session lasting three hours, with a 1:5 staff to student ratio. Additional handling opportunities are available on both a sign-up session and individual request basis. Practical teaching is supported by a library of skills demonstration videos. For the last two academic years, students' competencies have been assessed in their second term of studies, following which they may be deemed as needing further development, competent, or excellent. As part of a teaching and learning review, the assessment results from the two cohorts were examined; a thematic analysis of assessor comments to students was also performed. This showed that the percentage of students receiving a pass grade – competent or excellent – decreased nine per cent between 2016 and 2017. In both cohorts, the key issues identified by assessors were difficulties with fitting a bridle and lack of confidence around the horse. As a result of this review, innovations regarding the teaching of rehearsal of bridling are planned, in conjunction with the Department's Clinical Skills Centre. Additionally, methods to improve the confidence of students will be explored.

## **HOLOVET: THE POTENTIAL USE OF MIXED REALITY WITHIN VETERINARY UNDERGRADUATE TEACHING**

**CHADWICK Anthony, BLEASE Stacey**  
**HoloVet**

The Webinar Vet revolutionised continuing professional development (CPD) by bringing world-renowned experts to vets and nurses into their own homes or practices via webinars. The team at The Webinar Vet is expanding into mixed reality (MR) with the use of the first self-contained holographic computer by Microsoft known as the HoloLens. Mixed reality incorporates both virtual and augmented reality therefore combining the advantages of both technologies. The HoloLens enables users to engage with digital content and interact with holograms. Sheba, the first holographic German Shepherd was created using the 3D gaming engine, 'Unity'. Currently, a development group is being formed consisting of representatives from academia, practice and industry, operating under the name HoloVet.

HoloVet is aiming to create 3D models of the major domestic species with the view to be used as a teaching aid for veterinary students or vets in practice who would like to revise the relevant anatomy prior to undertaking a new procedure. HoloVet will enhance the learning experience of students by bringing the understanding of anatomy to life, for example, by walking around Sheba's beating heart and walking towards the heart to view inside the heart chambers. There are several advantages of using the HoloVet software including; reducing the requirement to source and store cadavers, and minimising exposure to hazardous chemicals. HoloVet has the potential to incorporate the VARK learning styles and therefore would appeal to all students. The HoloVet software is being updated regularly and will be available for demonstration during the VetEd International Symposium.

## **LIVERPOOL VETERINARY ANATOMY SOCIETY**

**HARDY Lizzy, DEAKINS Chris, PEAT Katy, BUCKENHAM Sinéad**  
**University of Liverpool**

Founded in November of 2016, the Liverpool Veterinary Anatomy Society (LVAS) is the first student-led educational anatomy society for a UK vet school. Its aim is to think 'outside of the box' when it comes to learning veterinary anatomy, making it more varied, interactive and creative. With continued support from teaching staff, this innovative society strives to develop appealing learning resources for the students alongside creating opportunities for anatomy to be revised through less traditional methods. LVAS has developed rapidly within a matter of months, and is now comprised of four dedicated committee members alongside supporting student members. Society concepts have been contributed by staff, the committee and from the student body, with the general mission to diversify anatomy education. To date, the society has chosen a committee and was launched with an 'Anatomy Bake-Off', judged by lecturers on both taste and anatomical correctness. It was a huge success, with the number of entries and spectators far exceeding expectations, boosting the status of the society within the vet school. This poster will describe the process of setting up the society, and highlight some of the successes and limitations that have been encountered, as well as explaining the plans for the society's development.

## **FIRST YEAR STUDENT PERCEPTION ON THE USE OF ANIMAL CADAVERS IN VETERINARY TEACHING**

**HARRISON Rebecca, COBB Kate, GUMMERY Erica**  
**University of Nottingham**

Cadaveric teaching resides as a central component in the veterinary curriculum. Despite this, little research focuses on its contribution to learning and how students perceive associated ethical complications. This longitudinal study investigated the student perception of cadaveric teaching at the University of Nottingham's School of Veterinary Medicine and Science. Two surveys – composed of Likert scales and free-text boxes - were administered to the 2016 cohort of first year students. The first was distributed before students' first cadaveric teaching session (response rate 97.32%, n=5/149) whilst the second was circulated a few weeks later (response rate 82.96%, n=2/135). Free-text responses were manually coded, whilst Likert scales responses underwent comparative analysis using the non-parametric Mann Whitney-U test (significance level:  $P < 0.05$ ). With students viewing it as an enjoyable aspect of the course that aids learning, the overall response to cadaveric teaching was overwhelmingly positive. However, some notable concerns were apparent in the data. Examples include worries over ethical sourcing and strong physical and emotional reactions experienced both in the anticipation of and during sessions. Overall, this study emphasises the importance of cadaveric teaching in veterinary teaching and, additionally, highlights the value of student feedback.

## **INTEGRATING BEHAVIOURAL MEDICINE INTO THE UNDERGRADUATE CURRICULUM**

**HEATH Sarah**

**Behavioural Referrals Veterinary Practice / University of Liverpool**

This poster will highlight the importance of teaching undergraduate veterinary students how to handle patients using techniques which not only keep veterinary personnel safe but also reduce negative emotional responses and resulting stress for patients, owners and practice staff. Behavioural medicine is an important branch of internal medicine and impacts the veterinary practitioner on a daily basis. Understanding how to assess the emotional state of patients, and use handling techniques which minimise negative emotions, is a vital day one skill and one that warrants structured integration into the undergraduate curriculum.

## **PUMPING MUSCLE TO PUMP KNOWLEDGE! DOES WEIGHT TRAINING AT THE GYM ENHANCE LEARNING MUSCULOSKELETAL ANATOMY IN VETERINARY STUDENTS?**

**HOOK Christine, WELLER Renate, CHANNON Sarah**  
**Royal Veterinary College**

The purpose of this study was to investigate whether weight training at the gym is an effective way to teach musculoskeletal anatomy to Year 3 veterinary students at the Royal Veterinary College, London, UK. The study recruited a total 35 students who were randomly allocated to 3 study groups: a gym group, lecture note group, or textbook group. The gym group were asked to attend a 60-minute weight training class that included demonstration exercises, instructional posters, lecture notes, and the ability to practice the taught exercises. Students from the other two groups (controls) were asked to study musculoskeletal anatomy for 60 minutes through either reading an anatomy textbook or the same lecture notes that were provided to those that attended the gym group. Students' anatomy knowledge was tested before and after they attended the teaching session. Students were also asked to complete a feedback survey to gauge their perceptions of the learning session. We found no significant difference in the pre and post learning quiz scores for any study group ( $pG=0.8$ ,  $pT=10$ ,  $pL=19$ ). Yet findings from the feedback surveys showed the weight training lessons did have a positive impact on student learning in which students from the gym and lecture note group report a heightened confidence in their anatomy comprehension and increased self-awareness. This suggests that weight training exercises could be used to supplement anatomy teaching in veterinary students by promoting fun, active, and deep level learning all within a familiar and relevant context.



## **STUDENT-LED COLLABORATIVE LEARNING ENHANCES ENGAGEMENT IN VETERINARY NEUROPHYSIOLOGY LECTURES**

**KILROY David, KUMAR Arun**  
**University College Dublin**

Student engagement is essential for effective learning. Although several approaches to improve student engagement are reported in the educational literature, specific studies focusing on veterinary preclinical subjects are lacking. In this study we aimed to test the efficacy of a student-led collaborative learning approach; this was done in order to stimulate an increased engagement with the learning process, specifically in veterinary neurobiology lectures. Students were asked to identify real world/clinical cases as part of the collaborative learning process. These cases were evaluated by the faculty member involved in the module and were further discussed in the lecture sessions. This gave an opportunity for linking the selected cases to the basic neuroscience principles covered in this part of the veterinary curriculum. This exercise involved 85 second year veterinary students enrolled on the module dealing with neurobiology and the anatomy of the head. The new approach led to improved student engagement which was objectively assessed by quantifying the number of questions asked by students. We conclude that using examples of real world/clinical cases and correlating them with basic science concepts improves student engagement and hence should be considered in pre-clinical curriculum design.

## **PHOTOGRAMMETRY FOR THE VIRTUAL VET**

**MATHER Brian**  
**University of Edinburgh**

The movement towards virtual environments and teaching simulation puts an ever increasing demand and expectation on production of 'virtual resources'. User exposure to high quality/hyper real graphics often from the gaming or movie industries have led to high expectations. Exposure to Virtual Reality has become more common and opportunity to develop and work within these tools has become more achievable. The use of photogrammetry, the process of developing digital 3D models from still photographs, to capture and process resources with reduced reliance on specialist modelling skills, is ideal. This poster demonstrates the steps to achieve best results and to examine the possibilities for its use in further educational applications.

## **ONLINE ANATOMY INFORMATION SEEKING APPROACHES IN VETERINARY UNDERGRADUATES. WHERE DO THEY GO AND WHY?**

**ROOTS L, MOSSOP L, COBB K**  
**University of Nottingham**

Undergraduates entering higher education in the UK and abroad are increasingly familiar with the Internet and Smart phones, and are often referred to as 'digital natives' (Prensky 2001; Dale 2011). Recent developments in technology and online learning resources have resulted in a plethora of available online veterinary anatomy resources for these technologically competent students to access. This study aimed to evaluate what anatomy resources veterinary students accessed and why; and how best, educators might support the development of online resource finding skills. A voluntary online survey was developed, following a pilot with year 2 and 3 students, which revealed that Google and textbooks/lecture notes were the primary resources Nottingham veterinary students used to seek answers to specific anatomy questions. The majority of students from both years preferred to use books or lecture notes in preference to online anatomy resources. Focus group discussions with the students revealed that online anatomy resources are valued and accessed in support of their studies, particularly to aid understanding of difficult anatomical concepts, but there are concerns about source reliability and alignment with course content. Students were more likely to access online resources that had been endorsed by members of staff and commented that signposting to these resources is often lacking. These findings suggest that veterinary educators have an active role to play in the integration of online resources into their teaching to meet rising student expectations.

## **\* TESTING ANATOMY: DISSECTING SPATIAL AND NON-SPATIAL KNOWLEDGE IN MCQ ASSESSMENT**

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In recent years much research has been conducted in the medical field on the relationship between the cognitive ability of spatial ability and anatomy education. Although many studies have shown that spatial ability is linked to anatomy learning, other studies have shown no link (Lischka & Gittler 1997 and Sweeney 2014). Recently Langlois et al (2016) completed a systematic review of the literature on spatial abilities and the assessment of anatomy knowledge. They concluded that anatomy knowledge could be assessed both spatially and non-spatially, but that 'the relationship between spatial ability tests and anatomy knowledge assessment using spatial MCQs was unclear.' In the study reported here an anatomy MCQ test was designed to test the anatomy knowledge of 1st year veterinary students on the canine hindlimb, pelvis and the theory of ultrasonography both spatially and non-spatially. The MCQ test consisted of 30 MCQs with an equal 50:50 split of non-spatial and spatial anatomy questions. Three cohorts of 1st year vet students completed the MCQ test (cohort 1 academic year 2014-15, cohort 2 academic year 2015-16 & cohort 3 academic year 2016-17). Additionally the spatial ability of students in cohorts 1 and 2 was tested along with collection of anatomy examination results and compared to the MCQ test. Initial preliminary findings suggest the MCQ test could assess anatomy knowledge both spatially and non-spatially, the full results of this study and links to future work will be presented.

## **USING A CUSTOM BUILT SOFTWARE TO ANALYSE AND EVALUATE EXAM QUESTIONS BASED ON STUDENT PERFORMANCE**

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In 2014, the Department and Clinic of Internal Medicine of the University of Veterinary Medicine, Budapest switched the format of the final exam in the subject of internal medicine from a paper based MCQ test series to an electronic, online test.

The software, developed locally, allows anonymous data collection from students participating in the exam. This is used to assess the exam questions themselves, via a post exam-period reevaluation, where data is analyzed on each question. During this analysis, we examine the percentage of correct answers on each question, and select those, where this percentage is below 25%. We then re-evaluate these questions, by checking its format, comparing it to lecture notes, and checking out if there are any answers that are outliers in terms of student preference.

During the course of this evaluation we examined 714 questions, with a 20.5 average submitted answers for each question. In the end, we found 17 questions that were Marked by 'problematic' and investigated, and corrected.

## **THE USE OF SNAPIS, REUSABLE LEARNING OBJECTS, AS A METHOD FOR PRACTICAL, ACHIEVABLE FORMATIVE FEEDBACK FOR ADULT LEARNERS**

**CARTY M, GALLAGHER M, O'NEILL E**  
**University College Dublin**

Background: The provision of tailored formative feedback is key to good teaching practice but can be hard to achieve with available resources. This study looked at the use of reusable learning objects (RLOs) as a method of promoting active, self-directed learning with formative feedback.

Approach: The RLOs developed were SNAPIs (small nuggets applied practically to inform), short clinical vignettes combining clinical commentary with a combination of structured, formative single best answer or true / false questions and feedback. The material was created using Articulate Storyline authoring software, allowing the construction of reusable, stand-alone resources. The SNAPIs were integrated into the Blackboard (VLE) and released on a weekly basis over the course of an online graduate certificate programme to supplement more formal content. Student feedback was then sought using a basic 10-question survey administered on-line using Survey Monkey (Palo Alto, CA).

Findings: The SNAPIs have been very successful for use within the small animal medicine post-graduate programme. They proved to be a versatile tool that can be adapted to generate varied material that appeals to range of learners with broad learning backgrounds and abilities. Students found this delivery method for clinical material both engaging and valuable, particularly liking the authenticity of clinical cases and their function as a revision aid in advance of summative assessments.

Summary: SNAPIs provide a highly flexible and practical mechanism for the delivery of clinical content and formative feedback to students.

## **WHAT IS THE IMPACT OF USING AN E-PORTFOLIO ON THE VALUE OF REFLECTIVE PRACTICE AMONGST VETERINARY STUDENTS**

**DURET Denis, HANNIGAN Margaret, SENIOR Avril**  
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A portfolio, with a good reflective content, can play a large role in learning and setting up the lifelong learning practice required by a vet in practice or in research. The aim of this project is to acquire qualitative and quantitative data on students' experience with their reflective diaries within an e-portfolio (PebblePad). It will enable us to carry out an in-depth analysis on their experience and provide future pedagogical research points into the main advantages and potential drawbacks of the use of an E-Portfolio.

## **EVALUATION OF VIRTUAL MICROSCOPY AND TEAM BASED LEARNING (TBL) APPROACHES OF TEACHING PRACTICAL HISTOLOGY**

**DURRANI Zeeshan, PICKAVANCE Lucy, NOBLE Karen, DURET Denis**  
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Teaching veterinary histology at Liverpool University is primarily based on lectures, access to light microscopes and glass slides, and reference textbooks. This method has suffered from restricted access to resources, poor student engagement, and little development of problem-solving skills. The advancement of digital technologies, and available facilities within the university, led to opportunities to change teaching methods. We have created a digitalised library of all glass slides used for teaching histology, and is currently available to all students. Several advantages and disadvantages have been previously highlighted using each method, however the majority of these reports generally focused on technology's practicality and acceptance rather than its pedagogical benefits.

In this pilot project, we aim to explore the pedagogical benefits of a digital histology resource with special emphasis on the first year BVMSc students' learning and engagement with the course material.

Furthermore, in our new curriculum, we have successfully introduced an innovative team based learning (TBL) approach as a part of integrated learning strategy. In this project, we have utilised the TBL approach in one of our histology teaching sessions. This poster highlights students' views on the different delivery style and results obtained from all participants through a questionnaire and one-to-one semi-structured interviews.

## **IT CAN'T ALL BE STETHOSCOPES AND ULTRASOUND SCANNING: IMPROVING STUDENT ENGAGEMENT WITH AN EARLY CONCEPTUAL MODULE IN THE COURSE.**

**KIRKWOOD Rosanna, TOTEMEYER Sabine**

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Lymphoreticular cell biology (LCB) is a conceptual module with self-directed elements (SDLs), which year one veterinary students often have difficulty with. In the past, engagement and attitude of the students towards the module have been quite poor and this has been reflected in both, module feedback and exam performance. Our aim was to improve student engagement through supporting their development towards independent learning rather than 'making it easier'. An initial focus group was run with year two students to identify key issues and gather ideas for improvement. Using these data multiple additional resources were developed: wrap-up sessions were changed to a more structured format; lectures and pod-casts for SDLs were focused more on concepts and with some details removed; interactive multiple choice quizzes were included in many lecture sessions and the structure of practical classes were changed to allow more live animal time per student. Shortly after completion of the module and their first summative assessments a second focus group was run with the year one students. Feedback was considerably better and the general attitude towards LCB seemed totally different than the year before. A lower percentage of students failed the module compared with the previous year and the SEM score also improved. These are good indicators that the changes made had a positive effect and that engaging students in essential early modules, which aren't as 'hands-on' as others, is possible with the right implementation.

## **LECTURE CAPTURE - INVESTIGATING THE IMPACT ON STUDENT LEARNING**

**MARSHALL Zamantha**

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In veterinary education, students are presented with a large amount of material which they are expected to understand at an accelerated pace. To assist in our students mastering the course content, the University of Glasgow School of Veterinary Medicine currently records all live lectures using the lecture capture system Echo360. The recording equipment is in all the large lecture theatres and the recording links are then placed on Moodle. The Echo360 recordings show the PowerPoint Presentation, the video of the speaker and plays the audio recording.

Literature published thus far concerning lecture capture has mainly focused on staff perceptions and concerns and very little literature exists specifically concerning veterinary students. The primary aim of this project was to gain a better understanding of how our students are using the lecture capture system in their learning and how it has impacted their study habits.

This project looked at students in year 2 of the 5 year BVMS course, using questionnaires to investigate several aspects of their use of lecture capture. Results from the questionnaire will be presented.

## **CAN YOU TEXT-MINE MY DATA? CAN WE TEACH THE MAN TO FISH INSTEAD?**

**NEWMAN Jenny, NOBLE P-J, JONES Phil**  
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With the advent of the electronic health record, researchers can accumulate datasets of clinical records where the majority of pertinent information is stored as unstructured free-text narrative. Text-mining provides a means to extract information from narrative data, rendering it interrogable in the same manner as numeric and binary data.

Clinical experience confers key assets to the text-miner; an understanding of the clinical language, its clinical and research relevance, and an ability to apply a holistic approach to the meaning of data. Thus, if the technicalities of text-mining techniques can be made accessible for learning, a clinician is ideally placed to apply them.

Clinical Text-Mining Bootcamps aim to address the lack of experience of text mining among clinicians, providing an opportunity to gain hands on experience of key techniques, whilst building a collaborative network stronger than the sum of its parts.

The initial bootcamp was held around a kitchen table early in summer 2016. The second event was sponsored by the Python Software Foundation, and attended by researchers from teams in six universities and industry. Similar techniques have been used over the past three years in working with undergraduate students during their dissertation projects.

Work is undertaken in a problem oriented manner. Most participants are programming naive at the outset, the group work 'under the hood' in a terminal window from their first line of code, building and running more complex script as time passes. This converts an alien concept to a comfortable principle of pattern recognition and language manipulation.

## **LEARNING APPROACH AND ACHIEVEMENT**

**REID Alison, NOBLE Karen, DURET Denis**  
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It is no surprise that a successful learning approach is linked to good academic performance. Intelligent and efficient use of resources is key to academic success in the BVSc course, and to a manageable workload. Staff at The University of Liverpool Institute of Veterinary Science have long suspected that students who perceive their workload to be excessive are also those who struggle to achieve – a suspicion supported by the literature (Laakonen & Nevgi, 2014).

In a course which already delivers a heavy workload to students, we were concerned that the provision of additional supporting resources, such as recorded lectures, may be viewed by some students as a source of additional pressure and thereby impact negatively on students' perceived workload, wellbeing and academic performance. A mixed-methods research project was undertaken to interrogate the experiences of first- and second-year students in using recorded lectures, with the aim of answering the question "Is more always better?".

Results yielded some surprising insights into the relationships between academic achievement and learning approach. This poster will outline these findings and make suggestions as to how these relationships can be utilised to improve the student experience and academic achievement.

## **USING STUDENT RESPONSE SYSTEMS TO FACILITATE LARGE-GROUP, CASE-BASED LEARNING AND DEVELOP PROBLEM-SOLVING SKILLS**

**TISDALL David, CRABB Nick**

**University of Surrey / University of Bristol**

Clinical reasoning (CR) is an essential veterinary skill that is a challenge for undergraduates to develop and for their teachers to train. Though the start- (i.e. the clinical problem) and end-points (i.e. the diagnosis and plan) are clear to students, the process, which in an expert-practitioner's hands becomes increasingly subconscious and automatic, is not.

The 4th year Cattle Medicine course at the University of Bristol, aims to train students how to approach farm animal clinical cases and develop problem-solving skills. Conventional didactic, large-group teaching does not naturally support CR development, due to the emphasis on knowledge-transfer, rather than its integration and application. Thus, transition to final year becomes more difficult, with students required to adopt a new way of thinking alongside adapting to the clinical environment.

School of Veterinary Sciences staff have found that TurningPoint (Turning Technologies), a Student Response System (SRS), in combination with peer-to-peer discussion, helps facilitate large-group, interactive case-based learning (CBL). Students simultaneously learn to reason whilst expanding their knowledge, and are more engaged by the combination of theory anchored in real-life and application rather than information-delivery.

This necessitated changes in staff and student mindsets about lecture purpose and scope. Significant staff time, training, effort and enthusiasm, alongside careful, creative lecture restructuring is required to satisfy learning outcomes. Managing student expectations about the proportion of the handout that will be covered is key. Student feedback is consistently positive, appreciating the combination of CBL and greater interactivity.

**\* PRECLINICAL RESEARCH PROJECTS CAN CONTRIBUTE TO THE TEACHING OF EVIDENCE-BASED CLINICAL MEDICINE**

**AUNGIER Sandra, ORTIZ Roberto, HASSENFORDER Axel, KILROY David, KUMAR Arun**

**University College Dublin**

In line with other similar institutions, UCD veterinary school offers summer research projects to interested students, who conduct research work under academic supervision. Project topics are selected by members of faculty and students conduct a literature review, data collection and analysis and a variety of practical activities.

This student project was part of the One Health initiative and selected feline obesity as its focus.

As Body Condition Scoring (BCS) is used to determine feline body mass, the project undertook measurements of body condition in feline cadavers so as to correlate their findings with the current guidelines. To further substantiate their data, dissections of cadavers were conducted to determine the sites of fat deposition in male and in female specimens.

The principal aim of these projects is to develop research skills in students, especially experimental design and data analysis. In this case, the project results produced some interesting data, notably that the inguinal region is the first predilection site for the deposition or the last site for removal of subcutaneous fat. In addition, current BCS measurement relies on palpation of the thoracic region of the cat. However, this study has shown that it is more reliable to also include both the sternal and inguinal regions when determining feline body condition score.

In light of these experimental results, the authors conclude that student research projects of this nature can enhance the evidence base that underpins clinical teaching.



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