ENHANCING COMMUNICATION AND LIFE SKILLS IN VETERINARY STUDENTS

Curriculum Development and Assessment of Methods (PP7-340)

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Murdoch University Dr Jennifer N Mills BVSc, Dip Clin Path, PG Dip Ed (Tertiary & Adult), MSc, PhD
The University of Sydney Dr John Baguley BVSc(Hons), MACVSc, MBA, PhD
The University of Queensland Dr Glen Coleman BVSc, GradDipBiotech, PhD and
Dr Michael Meehan BVSc, B Psych (Hons)

http://www.tlc.murdoch.edu.au/project/ecals/
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Project Associates

**Dr Jane R. Shaw**, DVM, PhD  
Assistant Professor, Veterinary Communication  
Director, Argus Institute  
Dr James L. Voss  
Veterinary Teaching Hospital  
College of Veterinary Medicine and Biomedical Sciences  
Colorado State University

**Dr Trish Clark BVSc**, Grad Cert Ed  
School of Veterinary Science  
The University of Queensland

**Dr Christine Hawke** BVSc, BVSc (Vet) PhD MACVSc  
Lecturer in Professional Practice  
Faculty of Veterinary Science  
The University of Sydney

**A/Prof Nancy Pachana** AB, MA, PhD  
School of Psychology  
The University of Queensland

**Dr Susan Matthew** BVSc, BVSc (Vet), PhD  
Lecturer in Professional Practice  
Faculty of Veterinary Science  
The University of Sydney

**Dr Martin Cake** BSc BVMS, PhD  
Program Chair and Senior Lecturer-Vet.  
Anatomy  
Murdoch University

**Dr Imke Tammen** DVM, Dr MedVet, MEd  
The University of Sydney

**Dr Dan Schull** BVSc, Grad Cert Ed, PhD  
School of Veterinary Science  
The University of Queensland

**Dr Melinda Bell** BSc, BVMS  
Small Animal Medicine  
Murdoch University

Reference Group Members

**Assoc Professor Rob Phillips**  
Educational Design  
Murdoch University

**Emeritus Professor William T Clark** PhD BVMS FRCVS

Evaluator

**Emeritus Professor Trevor Heath** OAM, BVSc, MA(Ed), MHPed, PhD, FACVSc, FAIBiol
Table of Contents

Table of Contents ........................................................................................................... 4
Acknowledgements ........................................................................................................ 5
Executive Summary ....................................................................................................... 6
Introduction .................................................................................................................... 7
Project Framework: approach and methodology ......................................................... 10
Outcomes and key findings .......................................................................................... 13
Discussion: ..................................................................................................................... 16
  Critical success factors and lessons learnt ................................................................. 16
  Challenges and limitations ......................................................................................... 16
  Positive outcomes and recommendations ................................................................. 17
  Recommendations .................................................................................................... 21
Transerability ................................................................................................................ 23
Dissemination ................................................................................................................ 23
  Linkages to other ALTC projects and priorities ....................................................... 23
References .................................................................................................................... 24
Appendices ................................................................................................................... 26
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Executive Summary

Communication skills have been identified by new veterinary graduates as lacking in their education, but are also recognised as crucial to overall success in veterinary professional life. As interpersonal communication is closely linked to an individual’s sense of identity and levels of confidence, educational instruction in this topic involves risks and differs substantially from traditional medical sciences. The approach requires an understanding of emotional intelligence. Emotional intelligence is believed to be both measurable and teachable and involves awareness of emotional states in oneself and others and the ability to use this awareness to manage relationships.

This collaborative study sought to inform the emerging veterinary communication curriculum through developing clinical consultations using simulated client scenarios, addressing the human-animal bond, assessing the needs of clients, students and their attitudes to animals, and developing strategies to enhance and report competencies in professional life skills (using e-portfolio).

The study found that experiential tasks help first year students identify the importance of communication for success in veterinary life. Client simulations were effectively scaffolded into the curriculum at various levels compatible with students’ level of medical knowledge. As few as two client simulations increased confidence in communication for 75% to 79% of final year students in 2008 and 2009, respectively. Many students selected specific communication tasks not previously experienced, such as breaking bad news. A workshop introducing simulated client consultations and clinical examination was successfully introduced into 3rd year.

Empathy is recognised as an important communication skill. Confidence in expressing empathy was significantly lower in males than females. Proportionally more males worked on this skill; despite this effort, the level of increase in confidence in males was lower than that of females. This suggests empathy should be introduced early in the curriculum to develop greater proficiency.

The human-animal bond is recognized as a key component in veterinary consultations. This study demonstrated a successful method to incorporate training for students to recognize, acknowledge and support the human-animal bond in client consultations. A specific training module was developed and is available on the Bayer Animal Health website.

A survey of students’ attitudes to animal welfare demonstrated gender differences to various situations and animal species. Age, university, nationality, and location of childhood development also explained some differences in perception of animal sentience. Gender, age and year of study also affected empathy scores. This information may assist students develop greater awareness of the impact of attitudes to animal welfare on relational competence. Gender differences were identified in other aspects of consultation (confidence to handle multiple problems; clients’ perception of competency and conflict in clients’ attitudes to euthanasia).

Evidence of a student’s communication and professional life skills can be incorporated into an e-portfolio. Technical difficulties were discovered in the trial with the Blackboard module, and only one student completed a showcase portfolio. However, this trial demonstrated the benefits of e-portfolio to student learning and led the way for a more extensive trial using another product.

The study has enhanced educator collaboration and progressed learning in veterinary communication and life skills, with some positive unexpected outcomes which will extend these attributes into the wider veterinary community.
Introduction

Background: Poor communication is responsible for the majority of complaints to Veterinary Surgeons’ Boards; the Registrar of the WA Board has said this is... ‘essentially because the vet appeared to the client to be indifferent, arrogant, off-hand or dismissive of the client’s observations..’ (Registrar’s Reflections, Sept 2004)

The need for veterinary education to include a wider human perspective was recognized by the Canadian Veterinary Medical Association Taskforce on the Future of the Veterinary Profession. ‘Opportunity for Renewal’ (June 1998)

‘Perhaps the profession has focused too much on animals when in reality veterinary medicine is a human-driven business in which animals are merely the recipient of our care and attention. ‘Only if we accept the concept that our mandate involves human health, are we likely to fulfil the needs of society in the 21st century.’

Rationale: The development of communication skills during the undergraduate veterinary curriculum is an essential component of preparing graduates for veterinary practice and specifically responds to feedback from both veterinary registering boards and employers of veterinary graduates.

‘Communication’ and ‘people skills’ are the first items listed by the Royal Veterinary College for day one competencies required by veterinary graduates (RCVS 2001). For RCVS accreditation, faculties need to demonstrate that students have these skills. Australian educators also listed ‘effective and empathic communication’ and ‘capacity for self-management and self-knowledge’ as desired graduate attributes within the veterinary professional life category (Collins and Taylor 2002).

In response to these needs, most veterinary schools in Australia have incorporated key aspects of professional life skills and communication skills development in programs which span all five (or six) years of the veterinary course. Defining the best approaches for teaching such skills is an area of intense activity in medical and nursing education, as well as in North American veterinary faculties. The successful development of new curricula involving professional life skills is a high priority for Australian veterinary schools. In doing this we are well placed to build on the work of our colleagues overseas and in the health science disciplines. For example, Kurtz et al (2005) warn that extramural visits alone are inappropriate techniques, as students can and do learn bad practice, and instead advocate a helical model of curriculum design for the development of communication skills for medical students.

Communication can be considered as containing both interpersonal and intrapersonal aspects, and hence involves emotional or social intelligence, as defined by Mayer and Salovey (1997), and Goleman (1995). Consequently, a complete program of communication development needs to integrate a theoretical framework with experiential learning and reflection to raise self-awareness of the impact of emotion on cognitive function and judgement, self-management and social skills. Such an educational program is in keeping with recent trends at overseas veterinary schools (Burns et al 2006; Kurtz 2006; Latham and Morris 2007). Differences in perceived importance of such skills within the veterinary profession may account for the slow development and acceptance of training in this area. The Veterinary Leadership Experience (VLE) introduced in March 2007 to most Australian veterinary schools is considered to be a key part of this training, by creating a paradigm shift in attitudes through a combination of experiential learning, reflection and theory.
The Calgary-Cambridge Guides model (CCG) is the most widely used model for teaching communication skills to medical graduates (Kurtz et al. 2005). The CCG model progresses in a step-like fashion and has two vital goals for the consultation: (a) providing structure to the consultation, and (b) building the relationship with the client. The unique situation in a veterinary consultation is the involvement of an animal. In a veterinary consultation relationships need to be fostered between the veterinarian, the client and the pet (i.e. triad, see figure 1). By comparison, a medical consultation usually involves a relationship between the patient and doctor (i.e. dyad).

![Figure 1: The Veterinary Consultation Triad](image)

Effective and empathic communication is an essential attribute of veterinary graduates and includes aspects of personal and social/emotional intelligence and team skills. Uniquely in veterinary science, it also includes an applied understanding of the human-animal bond.

Training and assessment of competency in medical communication skills can be developed and measured by a variety of activities in observed performance in client interviews with simulated or standardised clients, compilation of portfolios, case reports and clinical records (Hager 1995). Objective structured clinical examinations (OSCEs) are being used in veterinary medicine to assess clinical and communication skills (Bark and Shahar 2006; Davis et al. 2006). The use of a binary check list and performance assessment using a global ratings scales are also useful in skills training to consider not only what was done but how it was done (Hodges et al. 2002). The global ratings scale provides several levels of performance criteria which allow the student to assess and monitor their progress in a formative way. Such holistic measures have been used in family and psychiatric medicine (Hodges et al. 2002) and are being developed in veterinary medicine (Latham and Morris 2007). One other very important, but largely neglected tactic for evaluating the effectiveness of clinical communication skills is to explore clients’ reactions to veterinary consultations. These skills are important as the perception of ‘care’ has a major impact on client satisfaction.

In self-assessment of skills, the electronic portfolio provides a structure for a student to record professional and clinical experiences over time, with capacity for recording reflections and defining future goals. Such a database is now mandatory for recent British veterinary graduates to monitor their professional development against a list of required competencies. The introduction of a similar process for Australian undergraduates may provide more self-control of their learning and foster habits of life-long learning.

In this project, the three collaborating institutions, Murdoch University and the Universities of Queensland and Sydney, sought to develop a range of teaching and learning strategies that built on existing strengths at each institution. Through collaboration and effective dissemination of our findings, we believe our findings will substantially improve these fundamentally important skills in veterinary graduates across Australia.
This project specifically aimed to improve the development and assessment of student competencies in professional communication and life/leadership skills. This was to be achieved through the development of innovative learning and teaching strategies throughout the curricula of the collaborating institutions.

Assessment of both the curriculum and changes in student competencies were essential parts of the project, with a collaborative sharing of experiences and outcomes with staff at all Australasian veterinary schools. Whilst the initial focus is on the undergraduate curriculum, there is scope for this work to be extended to postgraduate awards for health professionals. These changes aim to better prepare graduates for success in the workplace.
Project Framework: approach and methodology

Overall, the project was designed to achieve the following outcomes:

1. Educational tools to develop clinical consultation and communication skills using electronic and live simulation client scenarios
2. Strategies to assess and apply Human (Client)-Animal bond in consultations
3. Strategies to enhance and assess competency in communication, emotional intelligence and selected life skills; and methods of reporting this (including electronic portfolio)

Each group of collaborators at each of the three universities worked to develop and evaluate learning strategies on separate aspects of communication and life skills, depending on their strengths, opportunities and special interests.

The project commenced with a stimulating face-to-face group discussion to collaborate, clarify project operations, roles, timelines, funds and strategies. Progress was reported 6-monthly and regular electronic contact was made throughout the two year study. Another group meeting was held after 10 months at the National Australian Veterinary Association (AVA) conference to share experience, findings and ideas, and a smaller gathering occurred again after 16 months at the International Conference on Communication in Veterinary Medicine (ICCVM ) in Canada. Collaborators presented papers and posters at each of these conferences. A final Australasian Veterinary Education Symposium (AVES) was organised to share findings with other veterinarians and for benchmarking of curricula in professional communication within Australasian veterinary schools.

The methods and strategies used to achieve the project outcomes included:

1. Consultation with veterinary practitioners on the construction of scenarios based on real cases
2. Development of training programs for simulated clients, actors and facilitators
3. Questionnaires on animal welfare and human-animal bond for use in ethics discussions and consultation process, respectively
4. Collaboration with technical services to develop electronic resources (e-portfolio)
5. Use of Calgary-Cambridge Guides (modified) and Global Ratings scale to assist competency training in consultation skills
6. Development and application of strategies to assess Human-Animal bond in clinical context
7. Development of a tutorial module to enhance reflective skills
8. Attendance at the ICCVM (Nth America) and discussions with specialist Dr Jane Shaw at the Argus Institute at Colorado State University

The specific outcomes and deliverables for each group of collaborators are described below, followed by evaluation strategies.

Murdoch University

Outcomes

1. Improved student communication skills using simulation clients and case scenarios of varying degrees of difficulty, scaffolded into the curriculum with particular learning objectives
2. Student-directed learning through the use of detailed rubrics as global ratings scales for formative, peer and self-assessment of skills.
3. Facilitate development of student skills through the creation of instructional material and learning tasks, such as critical incident analysis, expressions of empathy, condolence.
4. Develop an electronic portfolio facility for students to store reports, record evidence of professional skills and develop a reflective learning journal. The portfolios can be used for review and showcase purposes.
5. Improved facilitation of student's formative experiences in consultation training by veterinary colleagues in the development of a module to 'Train the Trainer', including ‘Offering and Receiving Feedback’.

**Deliverables**

1. A series of simulation case scenarios of veterinarian-client interactions; these will include simple and progressively complex situations based on authentic clinical cases.
3. Instructional material – notes, images, videos, lesson plans and focused tasks to develop specified life skills.
5. Prepare and present a 'Train the Trainer' instructional workshop.

**The University of Queensland**

**Outcomes**

An enhanced, clinically applicable understanding of the human-animal bond in veterinary students. This will be achieved by;

1. Investigating whether the strength of client-animal bonding influences client expectations of communication within a veterinary consultation.
2. Developing on-line modules and experiential learning tasks to enhance veterinary students’ knowledge, skills and aptitude in evaluating the human-animal bond, and how to use such knowledge clinically.
3. Evaluating the effects of teaching an elective human-animal bond and communication skills program/workshop to final year veterinary students.

**Deliverables**

1. Reliable and validated survey tools for monitoring client satisfaction and veterinarian satisfaction.
2. Novel teaching strategies for understanding the human-animal bond (including on-line and experiential learning activities)

**The University of Sydney**

**Outcomes**

1. Development of an educational tool that enhances communication and leadership skills through integration of emotional intelligence theory (Goleman 1998) into the professional practice curriculum
2. Development of online resources to provide veterinary students with an improved understanding of the structure and purpose of veterinary consultations in the preclinical years of the curriculum
3. Promotion of continuing professional development of communication skills by facilitating reflection upon clinical experiences during final year rotations.

**Deliverables**

1. A prototype module for integrating self awareness, self management, social awareness and relational competency attributes in the veterinary curriculum
2. Three online simulation veterinarian-client interactions with accompanying teaching resources for students to gain formative assessment
3. A prototype small group learning tutorial module for facilitating critical reflective skills and better integrating communication theory with clinical experience, supervisor feedback and self-assessment in the final year of the curriculum
Evaluation Strategies:
An Independent Evaluator was contracted to provide formative assessment of the overall process of the collaborative study, and summative assessment of the learning strategies and outcomes. Several evaluation approaches were used for the individual components; these included:

1. Student evaluations of workshops and activities, using Likert scales, specific and open questions, and self-reflective exercises

2. Evaluation of deliverables and their effect on development of communication skills was achieved through focus groups with colleagues and student assessment tasks designed to demonstrate self awareness, self management, social awareness and relational competency attributes.

3. Peer evaluation of the products developed and the progress made. This included evaluations by veterinary practitioners of the suitability and practicality of the products, for possible modification or clarification. At The University of Sydney this included the analysis of supervisor reports of final year student communication skills, and focus groups held in conjunction with the Partners in Veterinary Education (PIVE) conference.

4. A client satisfaction questionnaire was validated prior to the evaluation phase. This included a human-animal bond measure (previously validated by Meehan, 2004) and client expectations and perceptions measures of veterinary competencies in communication.

5. Evaluation of the electronic portfolio module and its use was made by independent IT evaluators, academic staff and students. A panel of veterinary practitioners was asked to describe the evidence they would use in selecting a new graduate for employment, and to judge the voluntary showcase portfolios by senior students.

6. A reference group of experts was available for consultation, review of our work and progress. This group included Emeritus Professor Trevor Heath (Qld), Emeritus Professor William Clark (Murdoch), Dr Rob Phillips (Murdoch).
Outcomes and key findings

In essence, the study has shown that:

a) Client simulations are a very valuable educational tool in enhancing student’s consultation skills and as few as two simulation exercises focused on tasks which the students have not undertaken previously, can significantly increase their confidence levels (p=0.01). Students will require more than two simulations to adequately prepare for this modality to be used for summative assessment in OSCEs.

Comments from students.....

My confidence increased because I was able to face two of my biggest concerns of a consult. In the first consult, learning how to deal with an emergency case and in the second consult, giving a very dark prognosis.

The opportunity to practice removes a lot of fear I had previously. It helps to clarify what my strengths and weaknesses are and an understanding of this hugely helps confidence.

I learnt where some of my weaknesses are, if I understand them it means I can work on them!!

b) The client simulations and other specific communication skills, can be successfully integrated into existing units in earlier years to structure this experience with their level of technical knowledge.

Satisfaction levels average 9.0 (scale 1-10) sd. 0.77

c) Males have a significantly lower level of confidence than females in expressing empathy as a professional skill (p<0.01), and are willing to work on developing this (73% males selected this skill option compared to 11% females). The degree of improvement in confidence with this skill after client simulation was also significantly lower in males (p<0.02). This suggests that males need more practice and as educators we need to be sensitive to this fact and manage it accordingly.

d) Male students were less confident about dealing with cases presenting with multiple problems (p=0.041) and female students were less confident that clients will have confidence in their professional abilities (p=0.040). Female students also appeared to be more anxious about dealing with a client who does not believe in euthanasia (p=0.024).

e) The communication skill for which students showed the least improvement in mean score (0.2) was reported for.. ‘use clear language, avoid jargon’: 49% reported no change and 20% showed a decrease in confidence.

f) Client simulations can be supported effectively by appropriate training programs for facilitators and simulated clients, and by exposing students to grading rubrics for the essential communication skills. (clients’ verbal feedback supported the latter conclusion). Client scenarios are enhanced by the inclusion of a brief description of personality styles and specific questions based on students defined learning task.

g) A focus on the human-animal bond is essential to the successful outcome of veterinary consultations and students can be assisted to learn to recognise, acknowledge and support the bond. A training program involving client simulations and designed to improve students’ ability to support the human-animal bond, was rated excellent by 13 of 14 participants.
h) A web based module on the human-animal bond was developed and can be accessed on-line at www.bayeraccelerate.com.au. This module is available for veterinarians, veterinary nurses, and veterinary students. Veterinary students who completed the module on-line rated the usefulness of the module as very good to excellent.

i) In a survey of 204 clients, the majority placed greater importance on their veterinarians’ ability to display good non-technical skills than technical skills; and a unique finding was that a display of poor non-technical competencies by veterinarians might potentially result in a loss of clientele.

j) The survey also showed that highly bonded clients require veterinarians to place greater emphasis on, in order of importance, their ability to understand and acknowledge the human-animal bond, to use effective verbal and non-verbal communication behaviours and to meet their needs, expectations and concerns.

k) Gender differences exist in students’ attitudes to sentience of animal welfare in a variety of situations and across various species. Animal welfare and human-animal bond are focal points in client consultations.

l) The development of students’ professional life skills can be achieved by a carefully guided combination of on- and off-campus exercises and tasks, practicums, workshops, discussions, reflective exercises and assignments. From these exercises, students are able to define the essential skills required for success in veterinary professional life and thereby become directors of their own learning. Reflective tasks are considered essential to support experiential learning and ensure effective learning has occurred.

m) A series of tutorials were developed to discuss challenging client consultations. Specifically, the focus was on how to develop empathy and employ an ethical, shared decision making approach to achieve the ‘right’ decision for all parties. Students rated a tutorial as very helpful (56%) or somewhat helpful (44%). Similarly, 85% and 15% rated the tutorial as very relevant or somewhat relevant respectively. Students particularly enjoyed the open discussion of situations that others found difficult, tips on handling difficult situations and the opportunity to discuss a number of scenarios.

n) Use of e-portfolio has been explored and is being developed as a means for students to record their progress, skills, reflections and evidence of abilities for the purposes of accreditation and showcase for application for employment.

o) The overall impact of all the changes introduced at Murdoch University was demonstrated in the survey of final year veterinary students in late 2008, and was compared with the survey of 2007. Significant differences were found for 7 of the key questions indicating an improvement in the level of confidence in communication skills. In particular, there was increased confidence in talking to clients about payment, dealing with client complaints (p<0.01), and in talking to clients about the loss of their pet (p<0.05). A significantly lower proportion of students (p<0.05) expressed the desire to have more practice talking to clients before they graduated, suggesting the curriculum changes were meeting needs of more students. In the free response section, no students mentioned encountering discrimination in the clinical learning environment, compared to 8% in 2007.
p) There have been a number of unanticipated benefits from this project, including the establishment of a ‘Scholarship of Teaching & Learning’ group within the UQ School of Veterinary Science. The work supported by this project generated a critical mass of people working in this general area, and these have now come together with monthly meetings about all matters relating to T&L scholarship. Similarly, staff working on this project have been approached by one of the largest veterinary clinic groups in Australia with a request to provide staff development opportunities in communication and life skills for veterinarians employed in these practices.

q) The outcomes from the final Australasian Veterinary Education Symposium (AVES) included enhanced collaboration and networking amongst veterinary educators; the promise of further engagement with the veterinary profession by Dr Jane Shaw and veterinary educators at the 2010 AVA Pan Pacific Conference and at other venues. Representatives from two Canadian veterinary schools attended AVES, giving it an international flavour.
Discussion:

Critical success factors and lessons learnt

A combination of supportive Deans and curriculum conveners and the recruitment of additional staff have been critical factors in fostering the success of the program at an institutional level, while contact with local and international experts involved with teaching communication skills and the coaching process has assisted the process of developing the specific teaching strategies. For simulated consultations, it is necessary to have simulated clients who are dedicated to assisting students refine these skills, and who are supported and trained in the simulation and feedback process. This helps provide the supportive environment students need when stretching their comfort zones in tackling these interpersonal skills. Resources which include recording of the simulated consultation are required to extend the learning value and allow for appropriate objective assessment by others, as in objective structured clinical examinations (OSCEs) using standardised clients.

In developing the life skills curriculum, the American Veterinary Leadership Experience (VLE) has led the way by demonstrating the value of offering many of these non-technical concepts off campus, where students can challenge their boundaries with the support of their team mates. Aspects of positive psychology are helpful in supporting students to accept the challenges involved in addressing personal strengths and weaknesses in interpersonal communication. A coaching process is appropriate to facilitate student learning in this less-technical area. Collaboration with psychologists is valuable as an understanding of aspects of personal and organisational psychology is helpful to the learning process; this includes awareness of personality types, Myers Briggs Type Indicator (MBTI) and its applications, conflict management and management styles as presented in the Thomas-Killmann instrument, counseling principles, an understanding of the tasks involved in the grief process and management of organisational change.

Setting specific experiential learning tasks and providing opportunities for students to discuss their findings before writing a reflective report, allows outcomes which support the learning objectives in professional life skills. For example, the first year students were asked to interview veterinarians and animal owners to determine what factors contribute to success as a veterinary practitioner. The findings were intended to help students perceive the bigger picture and define their own learning goals.

Challenges and limitations

Workloads by staff involved in the project have presented an ongoing challenge. We have been grateful to our colleagues who helped by understanding and providing support and teaching relief where possible. Attitudes of some staff to the new focus on communication and its emotional aspects were eased through staff development programs introducing positive psychology and a perspective on the new curriculum. Attitudes of a very small minority of students improved in the second year of the study as word spread about the benefits of client simulations. Competition for student time in shared rotations is also a challenge, interfering with students' preparation for the simulations.

Slow uptake of the e-portfolio tool by other academics and students was disappointing in the first year, but the initial trial led the way for a larger trial in the second year using a different product, sponsored by the university.

There were technical challenges with the virtual client simulations, which the collaborators believe may be overcome by using a module on WebCT.
Positive outcomes and recommendations

Client Simulations
The study found student confidence in communication skills can be significantly increased by client simulations, and most students ascribed this improvement to the positive feedback from peers and clients. Simulations helped students discover their strengths and weaknesses, and their peers said they learnt a lot from watching. Adequate preparation, opportunity for several rehearsals prior to the simulation and taking time to fully en-role appear critical to the success of the simulations, as well as having dedicated and specifically trained simulated clients. In this study, individual scenarios were tailored to students’ learning needs. It was found that simulation scenarios are improved by the addition of client personality styles and specific questions focused on the student’s defined task. Practical comments in feedback from experienced practitioners can also be helpful for group learning. Many students appreciated the opportunity to practice breaking bad news as they are unable legally to do this with real clients; guidelines based on the SPIKES approach (Buckman 2005; Shaw & Lagoni 2007) were made available. Grading rubrics for nine key communication skills used in consultation were developed, made available to students and were considered to enhance student performance in simulations. The rubrics were also appropriate for formal assessment of consultation skills. A modification of the Calgary Cambridge Observation Guide model was developed from this study to incorporate a focus on the human-animal bond, for application in the veterinary context. The minimal change in student confidence in using clear language and avoiding jargon, suggests this skill should be rehearsed from earlier years. It is proposed to trial a ‘bilingual’ approach to medical jargon from 3rd year.

The study found that simulation consultations can be successfully introduced into earlier years (3rd year) by combining the clinical examination of an animal and a wellness visit using particular focus on building rapport and closure of the consultation.

Empathy
Empathy is a basic communication skill that supports making connections with people (Halpern 2003), it helps demonstrate care, a key requirement of veterinarians by clients, and is also required in dealing effectively with challenging interactions such as conflict, anger, frustration of others, etc. This study found that many male veterinary students recognise a weakness in expressing empathy and are willing to work on it. It is suggested that these specific skills can be learnt. Some male students have said they fear their responses may be misinterpreted and others have said they have not had the role models to demonstrate empathy. To help meet the educational challenge, it is suggested that staff model empathic responses in the classroom and the topic of empathy be introduced as part of ‘building rapport and reflective listening’ early in the course and be reinforced through the curriculum as a functional aspect of professional life. Workshops (described in the Workbook) followed by group discussion and reflection assignments can assist in developing theoretical knowledge, while applying the skill in everyday life translates knowledge into a life skill.

Life Skill Tasks
The finding from the first year VPL student interview assignment, in which communication was identified most frequently (85% of students, weighted fraction 0.086; Cake, Mills & Bell 2009) as a skill required by successful veterinarians, is highly encouraging. The results validate the experiential educational method trialed as it helps students discover for themselves the learning goals required for success from an early stage.

Assignments and group discussions on effective listening and empathy are key activities in encouraging awareness of essential communication skills. The ‘Critical Incident Analysis’ assignment task appeared to foster awareness of the importance of this skill, along with the introductory theoretical perspective in a presentation by a social scientist, who had worked with farmers, on ‘dealing with difference’ and the ‘importance of building trust’. Workshops
involving lectures to large groups (the whole class) in this manner were found to work well and are most effective if additional small group discussions can be integrated into the session. More opportunities can be provided to build awareness of the application of ‘dealing with difference’ and ‘fostering trust’ through tasks assigned on practicum visits, with the ultimate goal that these skills become second nature.

**Electronic Portfolio**

Despite the technical and software limitations discovered with the Blackboard module, one student did produce a showcase portfolio which provided insights into the benefits and appropriate design of future learning exercises. An alternative e-portfolio product is now being sponsored and trialled by the university. A major challenge has been the slow uptake of e-portfolios by academics and students. This is addressed in the recommendations below.

E-portfolio use can be enhanced by:

a) Integrating e-portfolio use into core learning experience – eg reflections on specific aspects of extramural practical work; critical incident analysis, etc.
b) Encouraging staff to use e-portfolios in the curriculum design of each unit.
c) Including core competency check-lists for technical and non-technical skills on the portfolio tool, and requiring students to report on these skills.
d) Encouraging students to collect validated evidence of competencies; using audio, video, images, text, video of client simulations.
e) Encouraging residents and academic staff to use e-portfolios for professional development. This could be facilitated through the Learning and Teaching section.

**Train the Trainer**

The training programs developed for simulated clients and facilitators will be useful in recruiting and retaining suitable people for these important roles. Detailed training programs are reproduced in the Workbook. We believe the AVES and our graduates’ performance in the workplace will help to spread the concepts and attitudes appropriate for effective communication in the veterinary workplace.

The involvement of the Dean at Murdoch in sponsoring staff training programs in positive psychology life skills and Teaching on the Run workshops were an unexpected bonus which helped to change the culture of the organisation and involve both academic and general staff in role-modeling and fostering the life skills desired for the students.

**Attitudes towards Animals**

The online questionnaire was based on an existing instrument developed for assessing attitudes towards animals in a UK study. Its availability online enables it to be administered to students from veterinary schools throughout Australia (and potentially the world) and for longitudinal data to be collected relatively easily. The nature of the questionnaire provides an opportunity for students to reflect upon their own attitudes to animals in relation to emotional empathy and belief in animal sentience.

Presentation of the results of this Attitudes to Animals survey, additional information on attitudes to animals from more general surveys, and a systems model of human-animal interactions may assist students in developing greater self-awareness and social awareness of attitudes towards animals. When presented with further material on self-management, tools for giving and receiving feedback and stress management, it is hoped that this tool will assist the development of relational competence.
Veterinary Consultation Model and Virtual Client Simulation

Whilst there were significant technical difficulties encountered in transferring material to an existing online resource (Virtual Practitioner), using a traditional tutorial approach to deliver this material was considered successful.

Feedback from a tutorial, which applied the Veterinary Calgary Cambridge Consultation Model structure (Radford et al 2006) to a euthanasia consultation, was generally positive. The ideas provided on what to say in such a case were valued by students as a method of preparing them for the future and the open discussion and personal stories from the presenter were particularly appreciated. The main negatives were the lack of video support, no discussion of expenses, the reliance upon just one detailed scenario and one owner response rather than multiple options, the subjective nature of some advice (varied with perceptions of previous recommendations), and the reliving of personal memories of a pet created some discomfort for one student.

Challenging Communication Scenarios

Students completing their final year rotations at The University Veterinary Teaching Hospital Sydney, were provided with an opportunity to discuss difficult client interactions in small group tutorial sessions. These tutorials used a model for ethical decision making developed by the tutor and linked discussions to concepts of emotional intelligence. Specifically, the focus was on how to develop empathy in these difficult situations and how to employ an ethical, shared decision making approach to achieve the ‘right’ decision for all interested parties.

Prior to starting the tutorial, students completed a questionnaire regarding their current level of preparedness in managing consultations in relation to the Veterinary Calgary Cambridge Model stages and some specific difficult situations.

All students rated this tutorial as helpful and relevant. Students particularly enjoyed the open discussion of situations that others found difficult, tips on handling difficult situations and the opportunity to discuss a number of scenarios. The main suggestions for improvement were more scenarios, longer (and shorter), encouraging greater participation by some students in the group, more discussion of experiences by clinicians, adding variety by using re-enactments and videos, and not holding the tutorials after lunch.

Expectations of Highly Bonded Clients

The client expectation survey was sent to two hundred and four veterinary clients who completed the survey that comprised of open-ended questions and items that measured demographics, the human-animal bond, pet ownership and client perceptions of interpersonal communication behaviours. The study had two main aims, first to describe client expectations of veterinary communication competencies in the clinical consultation, and second, to investigate how the human-animal bond influences these expectations.

The results for the first main aim indicated that when given a choice between technical skills and non-technical skills the majority of clients place greater importance on their veterinarians’ ability to display good non-technical skills than technical skills. In particular, most clients choose to see veterinarians because they have good communication skills and an understanding of the human-animal bond and they believe that veterinarians should improve these non-technical competencies. A unique finding from this study was that a display of poor non-technical competencies by veterinarians might potentially result in a loss of clientele.

The results for the second main aim indicated that highly bonded clients have a greater expectation of veterinarians to use effective communication strategies that take into account the relationships clients have with their pets (i.e. the human-animal bond) and their needs, concerns and expectations (i.e. a client-centred care approach) when compared with clients who are less bonded. In other words, highly bonded clients require veterinarians to place
greater emphasis on, in order of importance, their ability to understand and acknowledge the human-animal bond, to use effective verbal and non-verbal communication behaviours and to meet their needs, expectations and concerns. This finding supports and extends on previous research by Coe et al (2008) who found that pet owners expect veterinarians to recognise and acknowledge the owner’s individual needs and expectations, specifically in regard to the relationship they have with their pet.

The major implications of this study are that veterinarians need to develop and improve their non-technical competencies (i.e. communication skills and understanding of the human-animal bond) in the same way they focus on their technical skills. Veterinarians are often concerned about losing clients or malpractice claims because of poor technical skills. However the present study suggests that at the very least, veterinarians should be equally concerned about the display of poor non-technical competencies. Furthermore, veterinarians need to adopt a ‘client-centred care approach’ that explores the relationship that a client has with their pet. This approach will therefore allow the veterinarian to determine how bonded a client is and adjust their communication strategies appropriately. We believe that with the continued support of veterinary educators and professional veterinary practitioners, veterinary non-technical competencies can be improved.

**Human-Animal Bond On-Line Learning Module**

The human-animal bond web based module can be accessed online at [www.bayeraccelerate.com.au](http://www.bayeraccelerate.com.au). This module is available for veterinarians, veterinary nurses, and veterinary students. All 14 veterinary students who participated in the communication skills workshop completed the module on-line and their feedback on the usefulness of the module was very good to excellent. However, the feedback from practising veterinarians has been limited. This is partly due to the fact that although veterinarians are accessing the module they are not completing the voluntary feedback form. At present there are plans to encourage veterinarians in Brisbane as well as project collaborators to complete the module and evaluation form. This will hopefully result in a greater sample size.

**Human-Animal Bond and Communication Skills Workshop**

A total of 14 final year veterinary students (50% of those contacted) from three elective small animal rotations (internal medicine, radiology and general practice) from The University of Queensland, voluntarily participated in the communication and human-animal bond workshop. There were 10 females and four males. The experiential communication skills workshop was delivered during a 3-week elective rotation. The workshop consisted of three sessions (Pre, Intervention, Post).

Week one, 2.5 hrs (Pre), started with a basic introduction about the purpose of the workshop (to improve their communication skills and understanding of the human-animal bond). Students conducted four videotaped consultations with simulated clients over two hours i.e. 30 minutes per consultation. All students’ consultations were audio-video recorded for later analysis, and all students and simulated clients completed questionnaires about how well they communicated after each consultation. At the end of the consultation process, each student completed further questionnaires and gave feedback on how the day went and their perceived strengths and weakness. All feedback was analysed by the senior author and collated and prepared for the next week’s session.

Week two, session two, 5 hrs (Intervention), involved an interactive lecture and experiential learning with simulated clients. Topics discussed were the human-animal bond, Communication Accommodation Theory, relationship-centred care and the consultation process according to the Calgary Cambridge Guides. Students completed two consultations with simulated clients, received immediate feedback and were allowed to ‘replay’ certain areas of the consultation that they believed could have been done better. This approach of
immediate feedback and rehearsal has been demonstrated to be an effective tool to improve communication skills (Silverman et al. 2005).

Week three, 2.5 hrs (Post), consisted of a further four videotaped consultations with simulated clients over two hours i.e. 30 minutes per consultation. The students and simulated clients completed questionnaires after each consultation. Students also completed a final post workshop survey.

The survey results suggest that overall the workshop improved students’ communication skills and their understanding of the human-animal bond. In particular, students’ ability to “structure the consultation”, “build rapport with the client” and “communicate in a manner that demonstrated they cared and understood my needs” were identified by clients as areas of significant improvement. The workshop was evaluated by students as very useful and beneficial to their learning. Thirteen of the 14 students rated the workshop as excellent (one student did not complete this question). The analysis of the videotapes is proceeding. Major difficulties have been the substantial cost of analysing the videotapes and lack of experienced coders in Australia. Fortunately we have negotiated with experienced staff at the Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA, to analyse the videotapes; and we look forward to further collaborative work with these leaders in clinical communication.

Recommendations

1. Experiential Learning is crucial for training in clinical communication. This involves Client Simulations as a critical tool in the development of clinical communication skills in veterinary students. Some key aspects for the teacher to consider in developing client consultations include:
   
   a) Adequate preparation in basic communication concepts. This may include workshops involving reflective listening, non-verbal communication, empathy, assertiveness, negotiation and conflict management. This sequential approach to communication skills training, along with practice, should help students develop confidence and not feel overwhelmed when attempting to use these skills in a medical setting.
   
   b) Using a theoretical approach to teaching. The use of at least one empirically supported model of communication that is suitable for health providers (e.g. the Calgary Cambridge Guides) is important to provide a sound framework for effective clinical communication which can be revisited at any stage during the teaching process. Other health care communication models (e.g. 4 Habits model, Kalamazoo etc...) may also be modified for use in the veterinary profession.
   
   c) Dedicated time (in a non-shared clinical rotation) so that students have adequate time to prepare and fully en-role. Many more than two client simulations are required to rehearse adequately more challenges faced in consultations.
   
   d) Adequate resources include facility to digitally record the simulation, to allow for review, reflection and evaluation.

2. The triadic model of the veterinary consultation needs to be reinforced. Student awareness and acknowledgement of the Human-Animal Bond is essential to the success of the consultation. Student learning can be enhanced by introducing discussion, didactic and experiential learning activities from first year that may involve:
   
   a) Information about the human-animal bond, attachment theory, the role and value of pets, ethics and morality, grief and euthanasia.
b) Experiential learning about the role of animals in society. e.g. visits to veterinary practices to experience first hand the interaction between veterinarian and client; and involvement in organisations that have animal-assisted therapy programs or visitations (e.g. Delta Society)

3. The veterinary curriculum can be improved in the Early Years by:

   c) Integrating empathy as a key professional skill no later than 2nd year. Introduce it in workshops which include effective listening and conflict management. Connect empathy to the importance of the human-animal bond, and build skills to recognise, acknowledge and support the bond.

   d) Applying the Calgary Cambridge Observation Guides in extramural practical work, to observe and reflect on the use of micro-skills by veterinarians in practice. This requires introducing detailed skills early in the program and findings ways to encourage students to apply some of these skills in every-day life.

   e) Using a helical curriculum to build consultation skills in parallel with developing technical knowledge and review major components at each year level.

   f) Introducing client simulations as Diagnostic Dilemmas into Diagnostic Pathology (3rd year) as a way to review material and to allow students to apply skills in context. Ask students to articulate pathological processes in layman’s terms concurrently with the learning of technical language to develop flexibility in use of medical jargon.

   g) Introducing oral examinations in each year to encourage students to articulate their knowledge. This will help to prepare for OSCEs and client communication in practice.

   h) Building the Wellness Visits into the earlier part of the curriculum (3rd year) to combine the concurrent tasks of building rapport with a client while undertaking a clinical examination of an animal.

4. The veterinary curriculum can be improved in the Later Years by:

   a) Encouraging reflection on practical experiences. This requires group discussion before assignments are written. There needs to be a chance for group discussion in final year in order to review workplace experiences. Large group discussion is enriching because of sharing a greater wealth of experiences; break-away sub-groups allow more students to articulate their personal thoughts. Consequently a workshop incorporating both techniques is appropriate and efficient of staff resources.

   b) Staff being aware that they constantly Role Model technical and non-technical skills for students, particularly in Rotations and in Clinical Practice.

   c) Separating undergraduate and postgraduate communication skills training. Core consultation skills including managing grief and euthanasia are essential for all undergraduates, while special situation skills are more suitable for elective & postgraduate training. Special situation skills could include components such as managing distraught, distressed or angry clients or staff, disclosure of adverse events, recognition & management of animal abuse, public health issues, managing exotic disease outbreaks and dealing with the media.

   d) Introducing OSCEs along with more coaching practice with client simulations

   e) Allowing students to practice ‘Gaining Informed Consent’ through surgery practical classes in 4th year, using staff as simulated clients.

   f) Similarly practice in 'Breaking Bad News' and 'Updating the Owner' on any unexpected outcomes could be rehearsed thorough 4th year Surgery practical classes.
g) Increasing Client Simulations in 5th year in more Rotations (eg Production Animal, Equine), using the Medical Visit model, and by offering Electives which include communication and client simulation components.

h) Building a special purpose facility or ‘fitting out’ veterinary teaching hospitals with recording devices or monitors to allow more client simulations to be conducted and recorded.

Transferability

The findings from the study are transferable to other veterinary schools with appropriate resources and interested staff. A key transferable finding by the collaborators is that as educators we can model in our classrooms the communication skills desirable in clinical practice. We can discuss with students the strategies and phrases used to foster collaboration, and give an opportunity for reflection on these strategies.

The project outcomes have been shared at the AVES and discussion with colleagues from veterinary schools in Australia and New Zealand. Cultural differences may modulate transferability of all aspects of interpersonal communication, particularly in regard to socially acceptable expressions of emotion. Further training is limited only by financial and human resources.

Dissemination

The findings have been shared amongst collaborators and key leaders at the AVES in July 2009. Key invited leaders at AVES represented the Australian Veterinary Association (AVA), the Australian Veterinary Business Association (AVBA), and the Veterinary Schools Accrediting Advisory Committee (VSAAC). Papers, presentations, posters and networking will enhance the dissemination of the findings from this collaborative study, both nationally and internationally. The International Conference on Communication in Veterinary Medicine (ICCVM) presents a most appropriate opportunity to share and exchange information in this developing area. Locally, the National AVA Conference and HERDSA Conferences are appropriate. Once several enthusiastic educators and practitioners are engaged with the educational concepts, the momentum will grow. As accrediting bodies are also moving in the direction of outcomes assessment, educators should find our results useful.

Linkages to other ALTC projects and priorities

Links with other ALTC projects which developed during the project provided valuable resource material and/or information on certain aspects of or study. These links and resources included:

- Team-skills Workbook ‘A Guide to Effective Student Project Teams in Higher Education’ by Lydia Kavanagh & John Harrison (engineering, UQ). This was of great benefit when developing team-skills resources and team self-evaluations for veterinary students. Students have been set tasks to apply some of the self-evaluations and reflect on these in assignments.

- Australian ePortfolio Project; discussions with Gilliam Hallam were helpful in maintaining a balanced perspective on the use of e-portfolio.

- National Graduate Attribute Project; Professor Clair Hughes spoke formally at AVES. Dr John Baguley presented our project poster at Sydney GAP symposium in October 2008.
References


Cake, M, Mills J, Bell M (2009). Student-identified factors for veterinary career success. Presentation at AVES


Latham CE and Morris A (2007). Effects of formal training in communication skills on the ability of veterinary students to communicate with clients. *Veterinary Record* 160, 181-186.


Appendices

Conference Papers


Introducing client simulation consultations into clinical rotations. Jennifer N Mills & William T Clark. ICCVM Nov 2008, Banff, Canada

Veterinary leadership experience (VLE) as a means of preparing students for life in the professional workplace. Jennifer N Mills AVA Conference, May 2008, Perth


Vertical integration of content in a professional practice curriculum. John Baguley, Christine Hawke and Susan Matthew. AVES July 2009

Embedding orientation and leadership activities in disciplinary teaching. Imke Tammin, AVES July 2009

Work integrated learning: opportunities for reflection. Christine Hawke, AVES July 2009

Incorporating simulated consultations and reflective practice into a first year professional practice program. Susan Matthew, AVES July 2009

Use of proprietary materials to teach veterinary communication skills. Susan Matthew, AVES July 2009

Student-identified factors for veterinary career success. Martin Cake, Jennifer Mills, Melinda Bell, AVES July 2009

Teaching on the Run. Melinda Bell, AVES July 2009

Imparting life skills to veterinary students; an embedded curriculum to enhance success in veterinary professional life skills. Martin Cake, AVA, May 2008, Perth

Professional life skills – a shared personal development framework engaging staff, students and mentors alike. Martin Cake, AVA Conference, May 2009, Darwin

Determining the effectiveness of an interactive communication skills and human-animal bond workshop for final year veterinary students. Michael Meehan, D Schull, N Pachana, B Watson, G Coleman. AVES July 2009
Curriculum development and assessment of methods to enhance communication and life skills – news from an ALTC project. Jennifer Mills, John Baguley, Michael Meehan. AVES July 2009

**Journal Articles**

**Posters at Conferences**

Perceptions of a professional studies lecture series delivered to final year veterinary students at The University of Queensland. Daniel Schull BVSc(Hons) PhD GradCertEd, Michael Meehan BVSc BSc(Hons-Psych) & Patricia Clarke. ICCVM Nov 2008


Enhancing Communication and Life Skills in Veterinary Students. Murdoch University, The University of Queensland and The University of Sydney Jenny Mills, Jarrad Chromow, Melinda Bell, Martin Cake, Glen Coleman, Michael Meehan, Nancy Pachana, Trish Clarke, Dan Schull, John Baguley, Susan Matthew, Christine Hawke and Imke Tammen GAP symposium, The University of Sydney, 27th Oct 2008.