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Animal Welfare in Veterinary Medicine Education

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**Introduction**

The learning benefits of teaching animal welfare in veterinary education are determined by a number of factors. Content alone is insufficient to guarantee a good understanding of animal welfare - pedagogic and assessment strategies are fundamental.

University lecturers are not necessarily trained in the art of teaching and learning psychology. The research of those teaching animal welfare normally focuses on a subject expertise such as dairy cow welfare, and may overlook developments in pedagogy. Lecturers therefore commonly adopt a traditional didactic format characterised by lectures and tutorials, which may fail to achieve learning outcomes such as a developing a deep understanding of animal welfare by the student.

**What is Animal Welfare?**

There has been an ongoing debate about the definition of animal welfare for at least 30 years. The definitions range from ‘the welfare of an animal is its state as regards its attempts to cope with its environment’ (Fraser & Broom, 1990), to ‘an animal's capacity to avoid suffering and sustain fitness’ (Webster, 1995). In contrast Duncan (1993) contends that ‘neither health nor lack of stress nor fitness is necessary and/or sufficient to conclude that an animal has good welfare. Welfare is dependant on what animals feel.

Instead of getting caught up in the confusion of definitions, Webster (1995, 2005) has suggested that we should operate on first principles, to assess the animals’ needs, such as the Five Freedoms (FAWC, 1993) or Welfare Inputs and Outputs more recently developed by WSPA and the University of Bristol (see Whay et al., 2003). Both systems provide a framework to assess the welfare state of an animal, providing a practical approach.
Course Content of an Animal Welfare Programme

The relevance of material that should be covered in an animal welfare course is partly determined by the country and culture. A recent review of animal welfare teaching in 13 veterinary schools in Europe, North America and South America (Hewson et al., 2006) demonstrates the broad range of topics covered.

With the growth in research in veterinary sciences, curriculum overload is becoming a problem. In recent years the veterinary curriculum at UCD has undergone a major overhaul, resulting in a 10-15% decrease in time allocation to each subject, in order to create a lecture-free final year. If time is a consideration, instead of trying to deliver the same content in less time, which is overwhelming for the students, the course material needs to be prioritised, so that not every issue is addressed.

In the veterinary programme at UCD, students are provided with both the principles and applications of animal welfare. Time constraints preclude all topics from being covered in lectures. Instead applied topics such as ritual slaughter, animal welfare legislation, and the needs of less common farmed species such as deer are contained in problem-based learning (PBL) tutorials. A description of PBL is provided below. In brief, the underlying concept is to develop critical thinking in students. In the PBL tutorials of the animal welfare module, students are provided with real life case histories and, under supervision, they discuss their learning needs relevant to each case, conduct research and present their findings to the class (Hanlon 2005). In addition to gaining new knowledge about applied animal welfare issues, another important learning outcome is that students are provided with the skills to conduct research and critically evaluate relevant literature thus ‘future-proofing’ their knowledge, and enabling them to keep up-to-date with developments in animal welfare.

Incorporate Animal Ethics into Animal Welfare

Animal Welfare defines the boundary of humane treatment of animals, but it does not help the students to develop the necessary skills to debate the acceptability of animal use. Veterinarians like other professionals working with animals, are often criticised for their failure to contribute to public debates on animal use (Sandøe and Holtug, 1998). In the past this failure may have been due to the fact that veterinarians and animal scientists do not feel that it is their remit to debate such issues, however it may be because they have not been provided with the necessary skills.

Providing training on animal ethics in veterinary teaching is becoming increasingly necessary, as societal views on animal use become more polarised. In contrast to the science of animal welfare, animal ethics is a philosophical subject, and requires a forum to discuss a multitude of views towards the human interactions with animals. In so doing it helps to increase the moral imagination of the students, giving explanations to the justification of varying perspectives.

European research suggests that those teaching animal welfare will also be expected to teach animal ethics (Edwards, 2002; Gandini & Monaghé, 2002; Marie, 2002). For an animal or veterinary scientist without formal training in animal ethics, this can be a daunting task. Increasingly new teaching materials are becoming available to complement animal ethics' teaching such as www.animaleeticsdilemma.net, and www.ethicalmatrix.net, both of which are free of charge, when used in a teaching context.

Pedagogic and Assessment Strategies

Traditional didactic teaching such as the conventional lecture format is an efficient method of delivering facts to large numbers of students. The teaching strategy should however be appropriate to attaining the learning objectives and outcomes. In veterinary training, it is commonly desirable for students to develop a deep understanding of the material. For example, if we use Bloom’s Taxonomy (1984), we not only want students to gain knowledge, but also to
develop a comprehension of the material, to be able to apply their understanding, to be analytical, hypothesise and appraise ideas. Overall, it is desirable to train them to develop critical thinking skills. A conventional lecture format may be able to provide the student with knowledge, but is inadequate in facilitating critical thinking.

Instead, a range of teaching strategies can be used. For example, PBL, role-play and journal clubs. Problem-based learning has been part of the veterinary programme at UCD for 6 years. Its general aims are to develop critical thinking and communication skills, as well as knowledge acquisition, in a problem-solving context. It is a student-centred mode of teaching, where the students determine the learning objectives within the context of a problem. It is problem-based and not necessarily subject based, demonstrating the interdisciplinary nature of most real-life problems; the teacher acts as a facilitator and not as a provider of facts, thus supporting learner autonomy.

There are different PBL models, and, as with other forms of teaching and learning, there are guidelines that need to be adhered to in order to maximise learning potential and prevent shortfalls in PBL.

PBL offers the opportunity to increase the students’ awareness of animal welfare and animal ethics in a dynamic learning environment and to provide essential training to deal with animal welfare cases, as part of the professional development of veterinary undergraduates. At UCD, animal welfare cases are presented to second year undergraduates (Hanlon 2005). The cases are presented as single documents. They encompass clinical problems, animal husbandry, legislation as well as an important ethical dimension. Students are invited to adopt the role of a government veterinarian who is called to the scene of the animal welfare case. Using the Barrow’s (1988) four headings (facts, ideas, learning issues and plans), the students analyse each case under the guidance of a facilitator. At the end of the tutorial, learning issues (i.e. facts or theories that need to be researched) are assigned to each student. In the second tutorial, each group has to present their case to the rest of the class. This is followed by a question and answer session directed by the students, and a brief summary of the ‘experts’ actions’ presented by the facilitator (all cases used are based on real life events). Since 2006, the government veterinarian who authored the cases was also present in the second tutorial, and was able to provide the students with expert opinion on each case after each case presentation.

The resource implications of PBL depend on the model used. One of the greatest costs is associated with the requirement for small group sizes, which has repercussions for room allocations and facilitators. At an anecdotal level this cost is considered by teaching staff to be worthwhile, because of the apparent learning benefits to the students.

In addition to the teaching format, the type of assessment can determine the students’ approach to study (Biggs, 2003; Entwistle et al., 1992). Research of veterinary undergraduates at UCD has shown that traditional examination formats encourage strategic learning approach (Ryan et al 2004).

**Learning Styles**

Using a variety of pedagogic and assessment strategies not only facilitates critical thinking skills, but will also help to stimulate students with different learning styles. Traditionally, conventional lectures support students who have a good aptitude for text-based information, however Fleming (2001) has reported that there are in total four types of instructional preferences: Visual, aural, read/write and kinaesthetic.

Presenting material to cater for different learning styles is simple and with no resource implications. Instead of presenting course material as only text-based, relevant pictures and graphics should also be used, as well as creating a level of interactions in the class, to stimulate
those with a kinaesthetic learning style. Most lecturers may already do so, but maybe unaware of the learning benefits.

**Conclusion**

Research in teaching and learning has shown that University lecturers must consider more than the content of their courses. In the fast pace of animal and veterinary sciences, students need to be equipped with critical thinking skills, to be able to research emerging issues related to their work after they have qualified.

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