



Using information technologies to deliver learning objectives covering the competencies of new veterinary graduates relevant to veterinary public health and food safety

Dr Rodrigo Nova Assistant Professor of Veterinary Public Health and Food Safety
School of Veterinary Medicine and Science, Sutton Bonington Campus, University of Nottingham, LE12 5RD.
rodrigo.nova@nottingham.ac.uk

I. Introduction

Regardless of the career pathway that new veterinary graduates decide to follow, all veterinary professionals must be trained in veterinary public health (VPH) and food safety. However, students' training and engagement in these topics is not always easy, as VPH is not considered by students to be a relevant clinical skill.

The Royal College of Veterinary Surgeons (RCVS) set 37 minimum essential competences for day one veterinary graduates. These include some directly associated to VPH (notifiable, reportable and zoonotic diseases and ante and post-mortem controls for food safety and food security).

Additionally, the RCVS recognises that veterinarians must possess a solid knowledge of the biological, animal and social sciences and laws related to the animal industries, including aetiology, pathogenesis, clinical signs, diagnosis and treatment of the common diseases and disorders. Furthermore, they must have an awareness of other diseases of international importance that pose a risk to national and international biosecurity and legislation relating to animal care and welfare, animal movement, and notifiable and reportable diseases.

The teaching/learning experience when delivering sessions covering the aforementioned topics could be enhanced by using quality online resources, where active learning is encouraged. At the School of Veterinary Medicine and Science (SVMS) we have developed online resources which can aid student to acquire day one competences in VPH.

III. Activities

3.1. Twitter

Twitter sessions in VPH are part of an initiative to support final year students during their revision for their final exams (#vetfinals). The sessions are led by a member of the academic staff and normally run for an hour. The activity aims to clarify doubts while allowing time for students' networking and sharing of their knowledge (Figure 1). After the session is finished, a student who volunteers in advance prepares a summary of the session which is later published through Storify (a social network service that allows creating timelines using social media) (Figure 2).



Figure 1: Extract of the VPH revision session in Twitter for the final exams of the academic year 2013-2014, showing the use of images and the interaction that generated between the students.

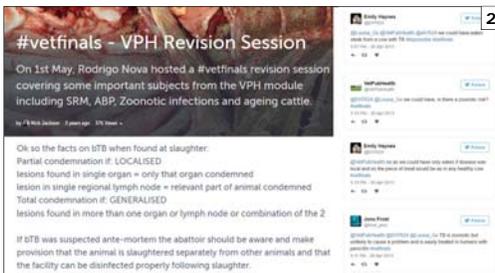


Figure 2: Extract of the summarised version of the VPH revision session on Twitter for the final exams of the academic year 2013-2014, produced by the students (https://storify.com/NickJackson21/vetfinals-vph-revision-session).



Figure 6: Screenshot of a section of the online poultry lectures for VPH. On the left side appears the navigation panel, which allows the user to move easily through the slides. On the right side appears the text, resources and instructions for the students.

3.3. Online course

The poultry material previously delivered as power point vodcast sessions was revised, updated and modified in order to be delivered in an online format. Due to logistics, Moodle was the chosen online platform. SVMS resources, such as pictures from previous practicals (on Flickr), YouTube videos and other relevant online resources were embedded in the sessions (Figure 6). Future work includes adding quizzes which should enhance student engagement and interaction. Student feedback on the new sessions shows this delivery method was well perceived, as students felt the online format provided them with a better learning experience.

IV. Conclusions

The use of information technologies for teaching day one competences in VPH have been shown to be extremely useful. However, to successfully deliver the learning objectives using this teaching format, a continuous input from the deliverers is required. Lack of staff time to produce material and getting involved in online activities can be a limitation. The quality of the online resources and the availability of interactive activities are essential to offer an engaging and useful online learning experience.

References

Miller et al. 2013. A comparison of traditional and engaging lecture methods in a large, professional-level course. *Adv Physiol Educ.* 37(4): 347-355.
RCVS. 2014. RCVS Day One Competences. Accessed on 1st June 2016. <http://www.rcvs.org.uk/document-library/day-one-competences/>
Schoenfeld-Tacher et al. 2003. Use of interactive online histopathology modules at different stages of a veterinary program. *J Vet Med Educ.* 30(4): 364-371.

II. Development

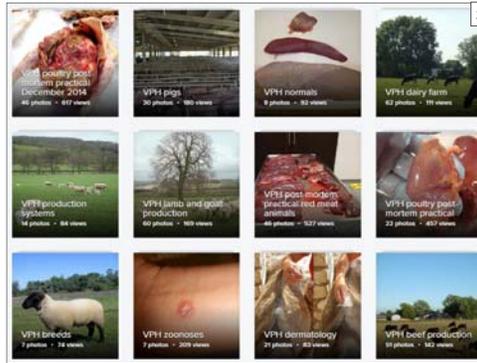
The process of creating online resources to deliver aspects covering day one competences on VPH and food safety followed the following stages of the teaching development cycle: Planning for Action, Teaching Activity and Reflecting.



Online teaching tools have been used for more than a decade in veterinary education. In order to decide what platforms we would use at the SVMS, we assessed:

- Which resources were already available online.
- Which platforms were available at the university and which ones were available on the net without requiring a licence.
- Which platforms would be familiar and easy to use for students and staff.
- Which activities needed monitoring of the student access.
- Which material would need to be password protected.

After designing, developing and releasing the material, feedback was collected and analysed. Changes that could enhance student learning experience and engagement are continuously implemented.



3.2. Flickr

The SVMS created an account in the image hosting and video hosting website Flickr (https://www.flickr.com/photos/nottinghamvets/albums/). The aim of this resource was to produce quality visual and audio visual material on different areas of the veterinary profession, which is freely available to veterinary students and colleagues.

The VPH "albums" in this resource cover a variety of topics covering production, animal health and welfare and zoonoses (Figure 3).

Since 2013, pictures from all the VPH post-mortem specimens used during practicals have been uploaded to the website (Figure 4). Additionally, in order to increase the photo database and to encourage student engagement, on 2014 an international photo competition on VPH topics aiming veterinary students was organised. Students submitted pictures and a brief description of how the picture was relevant for VPH (Figure 5).

This database continues expanding.



Figure 3: Screenshot of the SVMS Flickr page showing examples of the VPH albums already available online. Figure 4: Example of a pictures from specimens used during the post-mortem practical of red meat producing animals (https://www.flickr.com/photos/nottinghamvets/1132752964/in/album-7215763855890426/). Figure 5: One of the pictures submitted for the "International VPH photo competition for veterinary students" (https://www.flickr.com/photos/nottinghamvets/13421533414/in/album-72157639866550155/).

