

Faculty First Grant Report - 2017

Multimedia for Instruction in the Principles and Practices of Surgery
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Project Overview and Course Overview

The purpose of this projects was to develop a template for an online, multimedia laboratory manual for VM835 Principles and Practices of Surgery. This course provides instruction on basic and critical surgical skills to 2nd year professional students in the College of Veterinary Medicine. The same skills are required of medical students in general and of researchers performing aseptic and minor surgical techniques on laboratory animals, and an online manual would be perfect for enhancing their skills as well.

Semesters the course has been Semesters the course has been and/or will be taught

The developed material will be implemented in its current format in the 2018 Fall semester in VM835.

Number of students affected

Initially the material will be used by an average of 85 students per year through the VM835 course, 11 to 30 students per year in an advanced surgery laboratory elective, and approximately 110 clinical students. In the future, our hope is to have an online course that will be available nationwide to veterinary and medical students and lab animal researchers. In the United States, approximately 3,000 veterinary students and 18,700 medical students graduate annually.

Project outcomes and products

- Phase 2 of the project is almost complete. A template has been developed, a gmail account established, and videos uploaded to YouTube. Once the template is finalized by OIT personnel, they will be sending links to the materials and an instruction manual on how to add or edit materials. The author does not have access to those pages at this time but has links to draft material:
- <http://surgeryprinciples.utk.edu>
- <http://surgeryprinciples.utk.edu/preparation/folding-a-surgical-gown/>
- <http://surgeryprinciples.utk.edu/preparation/folding-towels/>
- <http://surgeryprinciples.utk.edu/preparation/folding-a-fenestrated-drape/>

Please see Meg Erlewine (merlewin@utk.edu) at OIT for examples of the final product.

Student Evaluation

The current iteration of the online manual is scheduled for use by VM 835 students in the 2018 Fall Semester, assuming the template and instructions become available to the author in time to make changes (e.g., by April 1). Once the manual is completed, our plan for assessment is to evaluate 2 groups of students- one using the traditional manual and the second using the online manual- and evaluate their ability to perform one specific set of skills described in both. Additionally, we will evaluate student satisfaction and interest in each modality.

Project benefits for the department and UT

As outlined in VolVision 2020, the University of Tennessee has a long term commitment to increasing the quality and value of education. Our millennial students are proficient in technology and prefer to receive information through digital means. They may not have the patience to sift through large volumes of material when learning tasks and expect to have immediate access to extra materials as needed. An online manual such as Principles and Practices of Surgery allows these students to tailor their learning based on their interest and training level and reaches them through text and figures. Its interactive nature appeals to those who prefer to be “doing” rather than listening. Addition of narrated video clips (particularly those using surgery models available for practice) makes this manual a true multimedia experience.

For the University of Tennessee College of Veterinary Medicine, the strategic plan emphasizes “Retooling for the 21st Century”, with the most important task (described as “Job One”) being teaching. UTCVM is known for its emphasis on education and is constantly exploring ways to produce the best veterinarians. Because of limitations in funding and the author’s technical skills, however, development of an interactive manual was not possible prior to receipt of this grant. With the help of OIT, our instructors (and the author in particular) have made excellent progress in using “21st Century Tools” to improve instruction.

Conclusion

Once the online manual is complete, we will have an excellent start in reaching our goal of providing an interactive, multimedia learning experience. Our hope is that the searchability, glossary, video and photographic images, and ease of use of the current version will encourage students to explore training sessions beyond what is required for the course and to become more competent before performing surgery on veterinary patients.

Our collaborators at OIT were extremely helpful. In particular, we appreciated Ms. Erlewine’s search for a program that was easy to use and visually attractive. We think these characteristics will allow us to finish adding content and to update the materials in a timely manner and will enhance the student learning experience and encourage use.