

Veterinary Science Career Development Online Study Guide Improves Student Performance

Abstract

The Online FFA Veterinary Science Career Development Event (CDE) Study Website was created to better prepare FFA members for the Veterinary Science CDE but is useful to Extension educators as well. The website provides resources for students who may not have access to hands-on study materials for the CDE. These resources include (a) instructional videos of clinical and handling and restraint practicums, (b) photographic identification examples, and (c) practice examinations. Students indicated that they felt more prepared for the CDE after using the online study guide. Because of the types of materials on the website, the site can be used in various ways by Extension educators working with youths interested in animal sciences.

Keywords: [FFA](#), [career development event](#), [online review](#), [state FFA preparation](#)

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Introduction

FFA Career Development Events (CDEs) are competitive events for youths enrolled in agricultural education programs. CDEs allow students to demonstrate knowledge related to specific career fields. In 2012, a veterinary science (VETSCI) CDE was added to the National FFA Convention to allow students to demonstrate knowledge and skills required in the field of veterinary medicine (National FFA, 2016). At the National FFA VETSCI CDE, students complete a written exam, a mathematical exam, an identification activity, a current event activity, a clinical procedure practicum, and a handling and restraint practicum individually as well as in teams of four according to guidelines set forth by the National FFA CDE handbook (National FFA, 2016). The CDE tests students' knowledge of animal anatomy and physiology, diseases, parasites, equipment, procedures for veterinary examination, and proper animal handling of both large and small animals.

To help Nebraska FFA students learn proper veterinary techniques, the Online FFA Veterinary Science CDE Study Website was developed. This resource provides educators and students with learning materials that might not otherwise be available. Additionally, the online tutorials provide materials for students without access to physical resources, as many high schools do not offer a veterinary science course. These materials also can be used by Extension educators working with youths interested in animal sciences. Many youths consider veterinary science

and the veterinary technician field as career options. Educators can use the material on the website to help youths prepare for these careers.

Study Website Design and Evaluation

The Online VETSCI CDE Study Website is accessed via the University of Nebraska–Lincoln Animal Science Department website. The Online VETSCI CDE Study Website contains instructional videos for both the clinical procedure and handling and restraint practicums. The website provides or links to educational materials that help students prepare for the written exam, and students may take an online practice exam. The website includes photographs of veterinary equipment, parasites, and breeds of large and small animals to help students prepare for the identification activity. For the equipment identification information, a brief description of use is provided with the applicable picture.

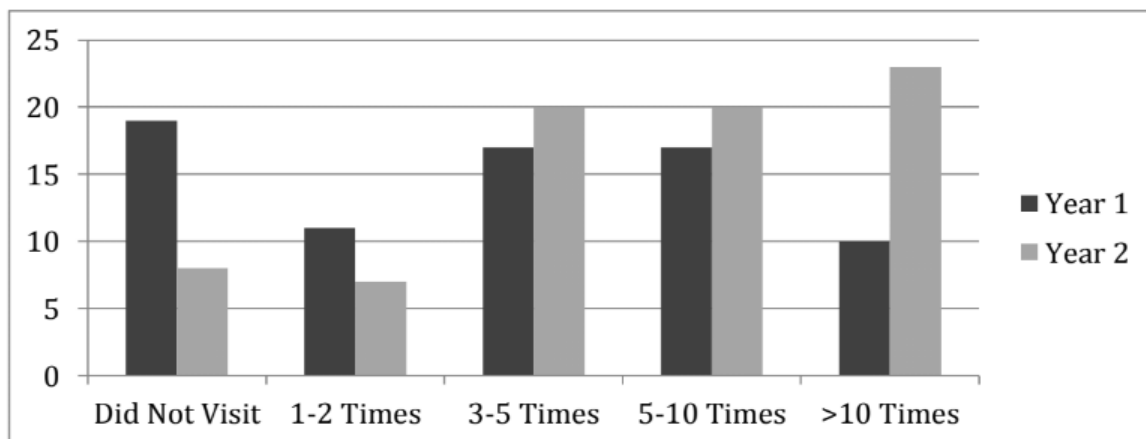
For 2 years, upon conclusion of the Nebraska FFA VETSCI CDE, students were asked to voluntarily complete a short survey. The postcompetition survey included open-ended and Likert-type questions about the CDE and how students prepared and about their use of the study website. The intent of the survey was to obtain student insights about their preferred contest preparation strategies and their opinions of the Online FFA VETSCI CDE Study Website. The survey was considered a program evaluation by the university's institutional review board.

Results and Discussion

Each year, 96 students participated in the Nebraska State FFA VETSCI CDE. Overall, 80.7% of participants returned the survey, with 76 (79%) completing it in year 1 and 79 (82%) completing it in year 2. In general, students' responses to the overall design of the Online FFA VETSCI CDE Study Website were favorable. The number of times students visited the online study resources increased between years (Figure 1). Over half of the students who completed the survey indicated that they visited the online study website at least five times.

Figure 1.

Number of Times Students Reported Visiting the Online FFA Veterinary Science Career Development Events (CDE) Study Website Prior to the Nebraska State FFA Veterinary Science CDE



Overall, 77% of students agreed that the website helped them feel more prepared. Combined, 92% of students listed the clinical procedure practicum and/or the handling and restraint practicum as the section of the CDE they felt least prepared for. Students demonstrated veterinary procedures such as administering medication to eyes or

ears, administering an injection, and removing or applying bandages for the clinical procedure practicum and proper ways to handle or restrain animals in veterinary situations such as blood draws, removal from a cage, or application of a muzzle for the handling and restraint practicum. Overall, 61% of students agreed that viewing the videos helped them prepare. Additionally, students felt better prepared for all sections. Participants commented that the website was easy to follow and understand.

Over 60% of students indicated that the study website provided additional information that was not covered in the classroom to prepare for the CDE. Agriculture educators need to cover a variety of topics and may not be subject area experts on all of the material. Having an educational resource to prepare students specifically interested in veterinary medicine can allow educators to provide materials created by content experts.

The materials provided on the website are easily used for Extension and 4-H program development as well. For example, materials on the website can be used to help students in skill-a-thons for livestock, horses, or dogs prepare for equipment and breed identification sections; videos can be used to help teach proper handling procedures to 4-H animal science project members; and exams and educational materials can be used to help prepare for horse hippology, quiz bowls, educational demonstrations, or veterinary science static exhibits.

Conclusions

Students using the VETSCI CDE Study Website felt well prepared for the Nebraska FFA CDE. Competition teams who spend additional time preparing for contests frequently score higher (Rayfield, Frazee, Brashears, & Lawver, 2009). Agriculture educators and students spend 1–5 hr a week preparing for CDEs outside of their normal class meetings (Croom, Moore, & Armbruster, 2009). Using the website, students can study beyond the time spent with an instructor. For animal science CDEs, students are most likely to use some combination of videos/DVDs, coach-created materials, websites, and other contests to prepare (Lancaster, Knobloch, Jones, & Brady, 2013).

Development of preparatory materials by Extension educators can increase students' exposure to college and careers and help them prepare for their future goals. Students agreed (97%) that they planned to attend college after high school. Students indicated that they could see how competing in the CDE helped prepare them for college (74%) or a career (79%). Although only 49% were interested in a career in veterinary medicine, 77% wanted a career with animals. Youths participating in other animal science CDEs had a high interest in animal-related careers (Lancaster et al., 2013).

The online VETSCI CDE study guides can be used by Extension educators as part of their programming. The study guides can be used in a face-to-face or an online setting and can be modified to better meet the needs of the Extension educator using the materials.

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