Teaching/Undergraduate and Graduate Education

T395   Student perceptions and moral conflict of animal use in society. M. Amstutz, K. Bennett-Wimbush,* and D. Willoughby, *Ohio State ATI, Wooster.*

Animal production practices have increasingly come under attack from emotion-driven animal rights groups. Therefore, it is imperative that animal science students be able to distinguish animal rights from animal welfare. To determine if students, particularly those majoring in animal sciences, could make this distinction, incoming freshman (n = 136) completed a 20-question survey (Likert scale 1–5; range 20–100, summed and reported as a composite score) regarding perceptions of animal use, rights and welfare. Survey format, scoring and some content was modified from Davey, 2006. Composite scores (CS) ranged from 54.8 to 81. Lower scores were consistent with animal rights positions and higher scores corresponded with animal use values. Composite scores were examined for correlation to varied student demographics. Major ($P < 0.001$); career objective ($P < 0.01$) and history of animal ownership ($P < 0.001$) significantly altered CS. Livestock science majors ($70.1 + 1.1$) scored higher than either equine ($57.7 + 1.3$) or horticulture majors ($57.9 + 1.4$). Students with livestock production career objectives scored higher ($69.5 + 1.6$) than students interested in either equine production ($61.5 + 2.5$) or veterinary medicine ($61.2 + 1.6$). Animal ownership (commercial livestock, show livestock, equine, pets and all possible combinations) were analyzed. Commercial livestock ownership, reported by 39.9% of students, dramatically increased ($P < 0.001$) CS compared with students reporting equine, pet or no animal ownership. Additionally, students from NE Ohio had lower CS than students from SE Ohio, likely due to the increased urban population of the region. As part of the survey, students were asked if they perceived a difference between animal rights and welfare. Sex ($P < 0.05$), age ($P < 0.05$), and home residence ($P < 0.01$) all significantly influenced responses. Males, non-traditional students (age >21), and urban dwellers were less likely to differentiate between animal rights and welfare than females, 17–20 year olds, and students from non-urban backgrounds (farm, rural, suburban), respectively. This study indicates most students CS are consistent with supporting animal welfare and use.

Key Words: animal rights, welfare, undergraduate

T396   Developing horsemanship skills through the understanding of equine behavior. M. Nicodemus* and S. Lindsey, *Mississippi State University, Mississippi State.*

As prey animals, horses are instinctively unique from their human handlers, and thus, these handlers need to understand the innate behaviors that dictate how the horse responds during the training process, and thus, University horsemanship programs are meeting this need with the introduction of behavioral sciences in their equine curriculum. Mississippi State University has offered a behavioral science course, ADS 2102 Equine Behavior & Training, for a decade, but only recently has introduced a lecture component to the laboratory where students study behavioral sciences principles and current research in equine behavioral sciences, and then, supplement their studies with the laboratories focused on these principles and research. Therefore, the study objectives were to determine how effective an equine behavioral science course was in building students' confidence in their potential horsemanship skills. A survey was given to students (n = 28) at the start and conclusion of the course with a 18 question survey focused on students′ evaluation of their horsemanship skills using a 5-point scale with a higher score indicating a stronger confidence in performing a skill. Scores were analyzed by a one-way ANOVA to determine the effectiveness of this course ($P < 0.05$). While 9 questions showed significant improvement in scores by the end of the semester ($P < 0.05$), only 2 questions showed 100% of the respondents scoring 5 by the final survey and these questions focused on the basic ground handling of horses, both trained (initial score = 3.6) and untrained horses (initial score = 3). Of those questions only 4 was focused on riding activities, and that may be due to the lack of riding activities during the laboratories. Only 1 question showed no change in the score, 2.6, and that was focused on riding a green broke horse. Greatest improvement associated with confidence in riding abilities was seen in students' abilities to ride a horse with behavioral problems (initial score = 2.6, final score = 4.2). While the course was not focused on horsemanship, results suggest students understanding of equine behavior strengthened their confidence in their horsemanship skills.

Key Words: equine behavior, horsemanship

T397   A web-based computer simulator to teach dairy farm management. S. Calsamiglia,* L. Castillejos, A. Ferret, G. Vera, and G. Espinosa, *Universidad Autonoma de Barcelona, Barcelona, Spain.*

A web-based software was developed to describe the life cycle of a dairy cow and used to simulate a dairy farm. This e-learning tool has 3 levels of control: the administrator that coordinates the system; the instructor that controls all events in his class, and the student that controls all actions in his farm. Within a class, each student has its own farm defined at random within limits determined by the instructor. Events and variables are defined by default but can be modified within each class by the instructor (i.e., heat detection rate, fertility, incidence of diseases, costs, dietary ingredients). Actions taken by students include: heat detection/synchronization, insemination, dry off, diet specifications, assignment of and transfer of animals between groups, diet formulation, colostrum and milk feeding, weaning, treatment of diseases, milk withdrawal if antibiotics are used, buying and culling of cows or calves, and so on. Modeled events are based on physiologic functions and work at random around a predefined average and ranges. The daily output provides information on milk production and composition, economic performance and counters for errors incurred by the student as a feedback for students and evaluation purposes. Instructors can evaluate student semi-automatically based on performance and error indicators, and may also develop exercises based on their own farm (i.e., calculate required space for cows, land for forages or manure spreading). This e-learning tool has been used by students of first and third year in the Veterinary School with excellent evaluations of the learning process by student's surveys. In a non-planned exam conducted 2 weeks before the final exam, students were 5 times more likely to respond correctly to the same type of questions about dairy cows than other species taught in the same semester. The e-learning program is written in Catalan, Spanish, and English. For information, connect to www.dairyfarm.com.

Key Words: e-learning program, dairy farm management, web-based simulator

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T398   Relationships between course schedule and student academic performance and attendance in undergraduate animal science courses. K. Stutts, M. Beverly,* S. Kelley, M. McMillan, A. Bullion, and L. McMillan, *Sam Houston State University, Huntsville, TX.*

The objective of this study was to evaluate the effect of course schedule (meeting time and day of the week) on academic performance and attendance in undergraduate animal science courses. Data were collected on 2,313 students enrolled during the 16-week fall and spring semesters of 2007 through 2011. Data collected included number of absences and final course grade for each student, and the time of day and day of the week that each course met. Least squares means for final course grades and number of absences were calculated using the mixed procedure of SAS. Significant differences existed for time of day and day of week for final course grades and attendance. Mean final course grade was lowest ($P < 0.01$) for courses that met early in the morning (before 10am; 76.94) compared with courses that met late morning (10am-12pm; 82.05), early (12–3pm; 82.27) afternoon, or late (after 3pm; 82.71) afternoon. Mean number of absences was also greatest ($P < 0.05$) for early morning (4.55) classes. Mean final course grade was greatest ($P < 0.01$) for courses that met once per week on Thursday-only for 3 h (86.21) and lowest for courses that met 3 times per week on Monday, Wednesday, and Friday (76.01). Mean number of absences was lowest ($P < 0.05$) for courses that met only once per week (<1.95), intermediate for courses that met twice per week (<3.75), and greatest for courses that met 3 times per week (6.29). These results indicate that a relationship exists between course schedules and student academic performance and attendance. In this study, student performance and attendance were lowest in courses that met early in the morning and in courses that met 3 times per week. If possible, courses should be scheduled to meet later in the morning or in the afternoon, and should meet no more than twice per week to encourage attendance and increase academic performance of students.

Key Words: undergraduate, course schedules, academic performance

T399   The effects of note-taking method on academic performance in undergraduate animal science courses. K. Stutts,* M. Beverly, S. Kelley, M. McMillan, A. Bullion, and L. McMillan, *Sam Houston State University, Huntsville, TX.*

Many books and articles on how to succeed in college emphasize the importance of taking good lecture notes. The objective of this study was to evaluate the effect of note-taking method on academic performance and attendance in undergraduate animal science courses. During the first year of the study, students were provided with an outline of material presented in lecture. In the second year, students were provided with a detailed set of notes. Final course grade and attendance data were collected on 814 students enrolled in the fall semesters of 2010 and 2011. Note-taking method data were collected on a subsample of 159 students. Least squares means for final course grades and number of absences were calculated using the mixed procedure of SAS. There was no difference in mean final course grade or mean number of absences for the general population of students between the 2 years. The authors hypothesized that there would be a greater number of absences for the students that were provided with a detailed set of notes since those students were given a complete copy of the material that was covered in class; however, there was no difference ($P = 0.68$) in mean number of absences between the 2 note-taking methods. A significant difference in mean final course grade did exist between the 2 note-taking methods. Students that were provided with only an outline of the material had a higher ($P < 0.05$) mean final course grade (83.70) than students that were provided a detailed set of notes (80.45). These results indicate that students provided with only an outline of course material, and presumably took a more active role in learning by taking additional notes, performed at a higher level than students that were provided with a detailed set of notes.

Key Words: undergraduate, note taking, academic performance

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