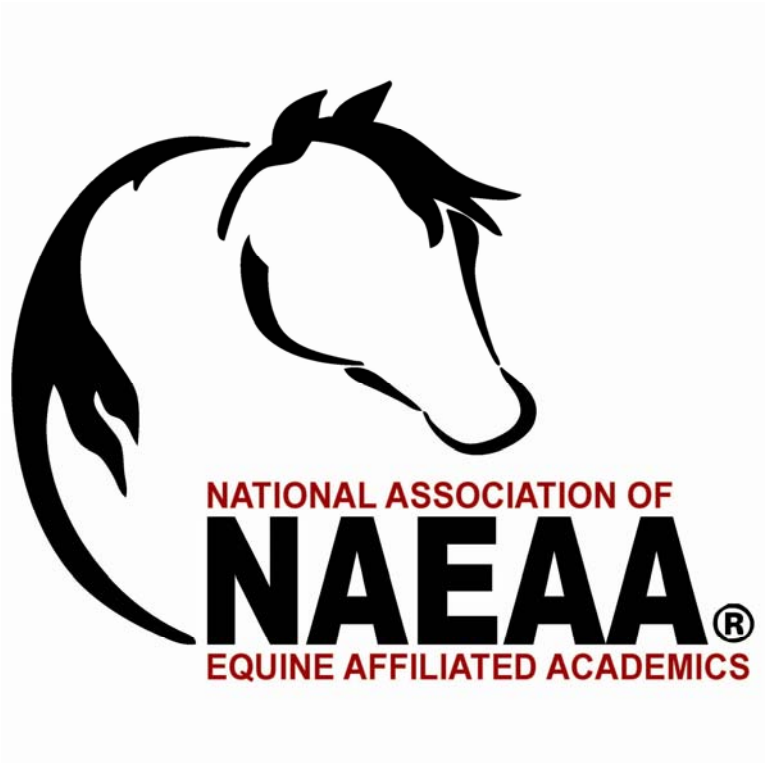

2011 Conference Proceedings

Murfreesboro, TN
May 30th & 31st

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NAEAA 2011 Agenda Overview

MONDAY, MAY 30TH

3:00 pm

Welcome including presentation on Excellence in Equine Undergraduate Education – results from the 2010 NAEAA conference workshops.

K. Bump, Cazenovia College

Session I: Excellence through Collaboration in Undergraduate Equine Education

Session moderators: B. Schurg, University of Arizona and L. Lawrence, University of Kentucky

3:30 – 4:30 pm

The Education and Networking Opportunities Relating to Industry at Texas Tech University (p. 9)

K. Guay and H. Brady, Texas Tech University

Creating Collaborations with Equine Science Programs (p. 11)

J. Pendergraft, Sul Ross State University

Collaborative Effort to Manage a Tribal Wild Horse Population in Oregon (p. 13)

D. Sherwood, Oregon State University

Exploring the Possibility of Creating an Equine Learning Community in 'Second Life' (p. 15)

S. Blevins, T. McDonald and B. Shank Virginia Polytechnic Institute and State University

4:30 – 4:45 pm

Break

4:45 – 5:30 pm

Presentations on possible collaborative evaluation tools that could be used across NAEAA schools for gathering data in a variety of areas including: horse donations and donation inquiries; patterns and trends in student interest, background; equine industry perception and involvement.

Discussion led by T. Williams, NAEAA and K. Bump, Cazenovia College

5:30 – 7:30 pm

Reception (Included in housing OR $18 for conference participants that are not staying at Embassy Suites)

TUESDAY, MAY 31TH

Session II: Horse Welfare – In the Class, in the Barn, and Beyond

Session moderators: K. Turner, University of Georgia and C. Buckhout, Cazenovia College

8:00 – 9:45 AM

Securing, Maintaining and Retiring the Donation Horse & A Veterinarian's Perspective on the 'School' Horse (p. 19)

K. Munz, M. Fugaro and S. Marchese, Centenary College

Worth Their Weight in Gold… (p. 23)

C. Heleski and P. Hitzler, Michigan State University

North Dakota State University Loaner Horse Program (p. 25)

C. Hammer, E. Berg, T. Eck, T. Swanson, North Dakota State University

The Role of Horses in the Undergraduate Equine Science Program at the University of Queensland (p. 27)

A.J. Cawdell-Smith, M. Hohenhaus, M. Coyle, N. Delzoppo, S. Anderson, W. Bryden, University of Queensland

The Equine Anatomy Project at North Dakota State University (p. 29)

E. Berg, C. Hammer, North Dakota State University

9:45 – 10:00 AM

Break

10:00 – 11:30 am

Presentations on Horse Welfare: Making a positive impact on unwanted horses through collaborative efforts in undergraduate equine programs.

D. Hennecke, Tarleton State University; S. King, Southern Illinois University; B. Day, Morrisville State College; P. Evans, Maricopa College

11:30 – 12:30 pm

Lunch and lunchtime dialogue (Included in conference registration)

Session III: Poster Presentations

12:30 – 1:30 pm

Topics and presenters are listed on page 7

Session IV: Culminating Experiences in the Undergraduate Equine Discipline

Session moderators: A. Burk, University of Maryland and T. Capps, University of Louisville

1:30 – 3:00 pm

Information Literacy Skills in the Senior Seminar Capstone (p. 67)
L. Taylor, Centenary College

Midstream Capstone Experiences (p. 69)
K. Merkies, University of Guelph

Leadership Portfolios as a Method to Document Experiences and Competencies in Equine Education (p. 71)
J. Holland, Midway College

Utilizing Culminating Experiences to Improve Undergraduate Development and Strengthen an Equine Program in Times of Declining Budgets (p. 73)
K. Duberstein, University of Georgia

The Kentucky Equine Management Internship as a Capstone Course for College Students (p. 75)
L. Janecka, KEMI

Session V: Indicators of Excellence in Equine Undergraduate Education

3:00 – 4:00 pm

Discussion on the ways in which 2011 presentations and posters link to the Indicators of Excellence generated at 2010 NAEAA meeting along with dialogue on 'next steps' for ongoing development of Indicators of Excellence.
L. Lawrence, University of Kentucky and K. Bump, Cazenovia College

4:00 – 5:00 pm

Conference wrap-up and planning for NAEAA 2012

5:30 – 6:30 pm

NAEAA closing reception*

** The ESS welcome reception is being held from 5:00 – 7:00 pm followed by the 'Squires Lecture.' Both events are held at the Embassy Suites.*

POSTER SESSION

Collaboration and Excellence in Undergraduate Equine Education

The School Horse

Culminating Experiences in Undergraduate Equine Education

The Educational and Networking Opportunities Relating to Industry at Texas Tech University

Kimberly Guay and Heidi Brady
Texas Tech University

Hands on, life experience is not only an excellent way to learn, but is also packed with networking opportunities that will last a lifetime. In an extremely competitive job market, collaboration with industry gives students a 'foot in the door' as well as experience with what kind of employees employers are looking for. Many students are unaware of the variety of job opportunities available in the equine industry. Often, when polled, students are aware of a limited number of careers in the equine industry. The Texas Tech University Ranch Horse Program strives to give students a variable choice of opportunities to fit their personal goals as well as gives them some insight and first-hand knowledge about the equine industry. Variety, from therapeutic riding classes and certification, event production, breed association internships, management internships and collaborative research, give students many different avenues to pursue and apply knowledge.

While enrolled in an internal internship, students are still able to experience industry while assisting in the production of sanctioned shows with National Reining Horse Association (NRHA), American Stock Horse Association (ASHA), American Quarter Horse Association (AQHA), Ranch Horse Association of America (RHAA) and National Reined Cow Horse Association (NRCHA). They also are involved with productions of barrel races, field days, judging contest, open shows and intercollegiate rodeo.

Students who are able to take a semester away from campus have enjoyed working at the 6666's, The RA Brown Ranch, the Babcock Ranch and JB Quarter horses as well as internships involved with programs associated with major stock shows and breed associations such as AQHA, APHA, FWSSR, and SALE.

The Therapeutic Riding Program at Texas Tech promotes a great collaboration between the animal science department and the medical school's physical, speech and occupational therapy department. The Brukhart Center for Autism collaborates with research in the benefits of therapeutic riding. This program also collaborates with the North American Riding for the Handicapped Association (NARHA) as a riding and certification center for NARHA instructors. Texas Tech is one of the first universities in the higher education institutions program. The therapeutic program at Tech has also recently opened collaboration with the school of nursing, and the counseling graduate program. Affiliations with AHA and EFMH are also in place.

Because the Equine Program is so diverse, we are able to expose students to a comprehensive list of opportunities involving research and internships that give students experience and contacts in industry which is important in job placement of students upon graduation.

Creating Collaborations with Equine Science Programs

Jeff S. Pendergraft
Sul Ross State University

Most Colleges and Universities are feeling the strain of the economic pressures being placed on higher education. It is now more important than ever to be able to develop new innovative approaches and collaborative efforts to help equine science programs cut costs while at the same time enhance educational opportunities for their equine students. Focusing efforts on working with industry leaders and other universities across the United States as well as internationally will allow schools to utilize joint resources and prepare students for a more global equine industry. The equine science program at Sul Ross State University created many opportunities for its students by developing collaborative relationships with the University of Arizona, Kansas State University, New Mexico State University, The Ohio State University, Texas A&M, the University of Puerto Rico, Eastern New Mexico University and with the Facultad de Medicina Veterinaria y Zootecnia de la Universidad Nacional Autonoma de Mexico (UNAM) in Mexico. These collaborations have led to many joint research projects, publications, grant partnerships, and educational activities.

One of the key challenges the equine science program faced at Sul Ross in creating collaborations to optimize learning was to encourage a kind of thinking and dialogue among a range of stakeholders that would make innovation possible. There are several ways to overcome higher education challenges while bridging cooperation among equine programs. First, focus all communications and promotional efforts on the team approach and how it will allow each participant the ability to maximize the use of limited resources, unite expertise, increase cost effectiveness, and strengthen each universities' visibility to attract outstanding students. Second, don't focus on what has been tried in the past or what your school can not do but what your rules and regulations will allow you to do. Finally, don't be afraid to initiate new policy recommendations or ideas to your administration. If you do not take the first step you can be assured that no progress or collaboration will ever be made successful.

In addition, a lot of schools are recognizing the increasingly global marketplace and how international understanding and competence is becoming a requirement for agricultural students in higher education. Therefore, equine science programs need to begin thinking about or even start focusing on developing successful international collaborations. Sul Ross' equine science program focused on the following strategies when developing their international collaborations: 1) will the partnership prepare students to be competitive in international markets; 2) will the opportunity to work together enhance faculty and staff to internationalize their curriculum, research, and outreach activities; and 3) will the collaboration strengthen the cultural competence and global competitiveness of the universities' community in general.

The development and implementation of a collaborative global equine program will have an unsurpassed learning impact on the students, faculty, and staff that participate. Short term intended benefits would include: (1) immersive cultural experience, (2) academic credit for experiential learning, (3) international student-peer interaction, and (4) joint international research/outreach projects.

Long-term intended benefits for participants would include: (1) developing an understanding of the importance of establishing personal relationships within an international business culture; (2) gaining an appreciation of the different cultural practices that contribute to successful international equine marketing and management; (3) increased knowledge and appreciation of international agricultural and economic impact on the U.S.; (4) gaining a level of maturity and savoir faire through a learning environment that is nearly impossible to duplicate in the traditional classroom setting; and (5) cross-cultural experience equips participants for productive and rewarding careers in the global equine marketplace.

Collaborative Effort to Manage a Tribal Wild Horse Population in Oregon

Dawn M. Sherwood
Oregon State University, Corvallis, OR

In 2008, the Extension Agent from the Warm Springs Indian Reservation in Oregon approached the Department of Animal Sciences and the College of Veterinary Medicine at Oregon State University (OSU) to determine if there was any interest in assisting the Tribes with their horse population management practices.

The Warm Springs Indian Reservation had seen a 52.8% increase in their wild horse numbers from 2000 to 2008. The Tribes were exploring new methods or outlets to reduce horse numbers. In May, 2008, collaboration developed among the Confederated Tribes of Warm Springs, Oregon, OSU Extension Service, Department of Animal Sciences, College of Veterinary Medicine and the USDA. This collaboration emerged as the "wild horse mass castration day." For the last three years the mass castration day has taken place mid-May in central Oregon on the Warm Springs Indian Reservation at a rodeo grounds. An average of 35 stallions have been castrated each year on that one day.

The 650,000 acre Warm Springs Indian Reservation, established in 1855, is home to three different nations; the Warm Springs, Wasco and Paiute. Horses have always been a part of tribal culture. They are considered livestock and a source of income for the families; however, the Tribes were also affected by the downturn of the horse market which began during the early part of the last decade, resulting in an increasing population. Working with the collaborative groups has provided the Tribes with a new option and method of horse population management with the castration of undesirable stallions. The Tribal members participate in the castration day alongside OSU students and faculty. The hands-on learning environment is beneficial for the Tribal members because they learn how to use the Henderson Castration tool, observe reproductive anomalies and learn health practices, such as deworming, which they can use on their privately owned horses.

The OSU Extension Agent based in Warm Springs, Fara Brummer, was the main initiator of this project. The extension agent serves as a coordinator between the northern tribal district grazing managers and the Department of Animal Sciences and the College of Veterinary Medicine to establish the date for the mass castration. She also coordinates with the USDA-APHIS veterinarian to make sure they are in attendance. The Extension Service has been active in providing the Tribes with educational information on livestock practices and facilitating activities that involve the University. This partnership between the Tribes and the University is further strengthened with the mass castration project.

The Department of Animal Sciences students have greatly benefited from this project as it has provided them with a unique learning experience and environment. During the castration day students are mainly involved with immobilization of the sedated stallions. If they would like they are also allowed to castrate or administer the tetanus antitoxin injection. The students immobilizing the horses have a front row seat in learning how to determine the age of the horses via dental dentition. A College of Veterinary Medicine veterinarian ages the horse, and once the students have 'guesstimated' the age, the veterinarian will tell them the age. This experience enables the Animal Science students to apply their knowledge gained in the classroom to a real-life setting.

The College of Veterinary Medicine brings a group of their graduating seniors and one to two faculty veterinarians. Many of the past veterinary students have had little or no horse experience so this is a unique day for them. The stallions are individually moved into the bucking chute boxes where a student is responsible for sedating them. Once the stallions are immobilized in the arena, veterinary students prepare the area for extraction of the testes and then castration. The day's events help to prepare the veterinary students for potential problems they may encounter on the job such as cryptorchidism or a horse that is resistant to sedation.

The USDA-APHIS veterinarian attends to collect blood samples to test the herd for Equine Infectious Anemia. The federal veterinarian's participation provides the opportunity for interaction by all attendees to discuss such things as the reason for performing a Coggins test (sampling for Equine Infectious Anemia) and to discuss potential job availabilities with the agency.

For all involved this project provides a multitude of learning experiences. The future is bright for continued collaboration between the five organizations and the assistance that is given to the Tribes in helping them to attain their wild horse management goals.

Exploring the Possibility of Creating an Equine Learning Community in 'Second Life'

Samantha J. Blevins, Teresa L. McDonald and Brittany Shank
Virginia Polytechnic Institute and State University, Blacksburg, VA

Second Life (SL) is a free, three-dimensional, multi-user, avatar-based virtual world that can be used as a platform for online learning and collaboration. Through this virtual world that simulates real life, users have the ability to interact with each other through chatting, networking, and developing friendships. The use of experiential learning theory, which is based on the idea that student experiences directly influence knowledge and understanding of a topic, can allow the student to have a safe place to explore, experience, and test new topics (Dewey, 1913).

The utilization of SL as a supplemental activity in classrooms can provide students learning situations where they are safe to explore a topic, location, or problem. Implementation of SL in the classroom has been successful in many other academic areas, including: virtually exploring a hurricane; studying art and architecture through a virtual Sistine Chapel; traveling to the bottom of the ocean to discover sea life; simulating an operating room to teach complex medical procedures (Gerald & Antonacci, 2009); or experiencing different psychological disorders, such as schizophrenia. All scenarios mentioned provide a setting that is physically safe for exploration by the student, while allowing the student to expand upon knowledge they have gained from classroom-based instruction.

Due to the technology affordances that are provided by SL, students can also feel more connected through this technology when used for group collaboration projects (Leonard, Withers, & Sherblom, 2011). The use of a virtual world such as SL can also offer students the ability to engage in interactive learning, regardless of location (Hargis & Wilcox, 2008). Equitation programs can leverage SL for various supplemental activities in order to avoid issues such as excessive horse usage in order to comply with the Animal Welfare Act, while giving students the ability to repeat activities as many times as necessary in order to master the skill set. Amaretto Ranch, an existing island and open community found within SL, allows visitors to explore many aspects of the equine world that they might not otherwise be afforded. The use of a virtual world can also allow students to become comfortable around horses virtually before stepping into a face-to-face equine classroom.

Possibilities for the use of SL in equine education will be presented, including: teaching basic horse knowledge, such as horse breeds, colors, herd health practices, equine diseases, etc.; allowing groups of students who are separated by distance to interact with each other and collaborate on projects; breeding, foaling and caring for their own horses virtually; and allowing students to practice pattern memorization necessary for mastery of equitation activities and horse shows.

The purpose of this poster is to convey supplemental SL educational possibilities that are available and could be built through a collaborative effort for educators within equine education and sciences. The presenters will cover implementation concerns, successes in other fields of academia, and possible weaknesses of using SL in equestrian education and equine science programs. In addition, the presenters will welcome open discussion on the use of SL in order to identify other possible applications in equestrian education and equine science.

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DISCUSSION

Possible Collaborative Evaluation Tools

T. Williams, NAEAA
K. Bump, Cazenovia College

NOTES:

Securing, Maintaining, and Retiring the Donation Horse

Kelly Martin Munz, Michael N. Fugaro and Sarah Marchese
Department of Equine Studies, Centenary College, Hackettstown, NJ

As with many equine programs, securing a healthy and sound donation horse, maintaining their health and soundness over the years, and finding a suitable retirement home can be a challenge. With the increase in the cost of maintenance, horse owners are turning to equine programs that accept charitable donation horses as a way to cut the expense of caring for their horse in these difficult financial times.

Equine programs are dependent upon having quality animals that allow for excellence in teaching in the ring, as well as the barn, and classroom. At Centenary, we are fortunate to be able to consistently secure quality donation horses. Industry professionals see our horses at horse shows, whether it is at "A" rated shows, such as the Garden State Horse Show or HITS Saugerties, or at a home IHSA show. Through these events, they see the quality of horse that we secure through a charitable donation, as well as the level of care we provide to our horses. This in turn keeps Centenary foremost in their minds the next time they consider donating a horse to a college program.

We receive about three donation inquiry calls per week throughout the year, with October through December being our busiest time. The preliminary conversation obtains general information such as sex, age, height, breed, USEF/ USDF number, and whether or not the horse is sound and in work. The diversity of our riding curriculum spans from beginners through advanced riders in hunt seat equation, dressage, and hunter/jumpers lessons. Consequently, our decision to invite a horse for a three-week trial is predicated on the current riding level need, available space, and occupational specialty of the horse.

During the three-week trial, all of the faculty are encouraged to evaluate the horse. In addition, our resident veterinarian provides a basic health and soundness exam. The goal is to accept a serviceably sound horse that will be useful in the program, ideally for a minimum of three years, as required by the IRS. At the end of the three week trial, the riding coordinator, the veterinarian, and the other faculty report on their observations of the horse, our facility manager reports on the horse's behavior in the barn, and the faculty then vote on whether the horse is accepted or not. Once accepted, the necessary tax forms are sent to the donor to finalize the donation process.

All equine programs provide second careers for donation horses. Horses are donated for a variety of reasons such as soundness issues that might limit a horse's sale, financial limitations by the owner, and/or the owner that prefers donation over the preparation required in

marketing and selling their horse. The challenge of the program is to accept a quality animal that will be useful for our needs for three or more years. While the IRS states that a horse can be dispersed prior to the end of three years, the ultimate goal is to keep the donation for as long as possible.

Retirement of the donated horse is the final challenge for college programs. If the time period is within the first three years of acceptance, Form 8282 must be filed with the IRS. The donor often has an interest in taking the horse back for retirement (right of first refusal), or students may have an interest in retiring their favorite horse with them or family members, which is always explored first. We also advertise in local papers, the College's "Equine Newsletter", as well as word of mouth. In some cases, due to quality of life issues, we must decide to humanely euthanize the horse if, after careful consideration, we feel they cannot live a quality retirement life.

From a fiscal standpoint we need to find caring homes for our horses, as it is not economically feasible to keep caring for a horse that is not working in the program. A successful program can put their reputation at risk if even one horse ends up at an auction, or at a facility with poor care. This can make future donors leery of donating to your college. We give great thought to this final stage of a school horse's life, and have successfully placed many horses in quality retirement homes through hard work, good industry contacts, and determination.

A Resident Veterinarian's Perspective on the 'School' Horse

Michael N. Fugaro, Kelly Martin Munz, Sarah Marchese and Rebecca Huestis
Department of Equine Studies, Centenary College, Hackettstown, NJ

The ability to maintain the health and overall well being of the horse in an educational institution remains a challenge. This is particularly true when the horses are donated to a program and are utilized for high levels of performance in a riding lesson function. Veterinarians are trained to provide the optimal level of medical care for all their patients. However, the academic institution provides additional constraints that might not be encountered in the non-academic performance facility. Many donated horses arrive with pre-existing conditions that might limit the horse's abilities. Orthopedic injuries such as osteoarthritis, tendonitis, and desmitis remain the most common ailments experienced. While many of these conditions may limit the horse's abilities, they do not render the animal non-useful to the program. The veterinarian is faced with the complexities of assisting the horse in their athletic career, providing an adequate rehabilitation, ensuring the safety of the rider, and remaining within the institution's curricular and budgetary constraints.

It is no surprise that veterinary medical costs have increased exponentially over the years. Many of the current diagnostic modalities and treatments have advance technologies substantiating some of these costs. The emergence of regenerative medical therapies such as stem cell and platelet rich plasma injections are demonstrating significant promise in the realm of osteoarthritis management. Diagnostic modalities such as Magnetic Resonance Imaging (MRI) have provided impressive visualization of soft tissue injuries as well as bony abnormalities. While every veterinarian would like to prescribe an MRI to aid in the diagnostics process and treat with stem cells for lameness related injuries, this may not be the most cost effective utilization of financial resources in a 'school' horse program. Therefore, it is imperative that the budget is considered in all situations while simultaneously considering the medical welfare of the horse. While this may be frustrating for veterinarian and staff alike, working within the confines of the institution will ensure the economic success of a program.

It is also essential that a "value" be given to a horse in a 'school' program. This is particularly important when economic decisions must be made regarding the veterinary diagnostics and therapies. For instance, colic is one of the more common emergencies experienced by an equine veterinarian. Diagnosing and treating an episode of colic can vary from $300 - $15,000 in medical costs. Having a veterinarian on staff at Centenary College provides the ability to treat most all medical colics at the farm, which has saved the college thousands of dollars by not referring the horse to a hospital. Additionally it provides an educational opportunity for the matriculating students. In rare circumstances, the need to consider an abdominal exploratory (colic surgery) may arise. Again, financial constraints may dictate the extent to which an academic institution may proceed when considering a surgical endeavor. It is recommended

that an institution determined which horse's are "valuable" enough to warrant the upper limit of expenditures for medical therapies prior to the incident occurring.

At Centenary College, collaborative decisions are made among staff and faculty members involving the health and use of the horses. The Department Chair has the ultimate authority in decisions relating to curriculum, horses, and the facility. The Resident Veterinarian is responsible for the diagnostics, therapeutics, rehabilitation, and prevention of the diseases. The Riding Coordinator is responsible for the riding levels of horses and students, the suitability of donations, and the withdrawal of the horse from the program. The Facility Manager has the responsibility of managing the grounds, arenas, barn staff, the husbandry and medication administration of the animals. The Resident Veterinarian, Riding Coordinator and Facility Manager convene for at least 4 hours each week to evaluate the medical health and soundness of the horses. During these sessions, horses are evaluated for soundness, suitability for the program, and treated for medical conditions that warrant attention. Also during these times, it is determined whether horses should be removed from lessons, placed on the rehabilitation list, and treated accordingly. The entire department is consulted for decisions involving retirement, a suitable adoption home, and elective euthanasia. While this collective judgment process can be daunting, inefficient, and time consuming, it has ensured the suitable decisions tailored for this institution.

Worth Their Weight in Gold…

Camie Heleski and Paula Hitzler
Department of Animal Science, Michigan State University

There are 10 “someones” at MSU whose jobs are far more important than mine; they are our horsemanship lesson horses. Over the last 15 years, we have carefully developed a program for cultivating lesson horses. MSU raises Arabian horses. From the time our foals are born, they are handled by many different people, from very advanced to extremely novice handlers. We feel this is a critical piece in developing our lesson horses. We have tried accepting donated lesson horses over the years and the success rate has been low (of 10 accepted donations, 1 worked very well, 3 worked tolerably well, 6 did not work well at all).

By the time the horses are late 2-yr-olds and about to undergo initial training, our farm manager (P. Hitzler) is already developing an idea about which horses are more tolerant to stimuli and calmer in the face of confusion than others. These are not necessarily the horses that would be identified as the best show candidates. By the end of their 3-yr-old spring, Paula has an even better idea of which might be worthwhile to save back for horsemanship. If budgets allow, we save back 2 potential horsemanship candidates annually. These will continue through at least 2 more semesters of training classes. After that we begin using them in our “fairly advanced” horsemanship sections. Some horses may stay in that category for several years before we deem them steady enough to move into “intermediate” sections. Very few lesson horses are ever deemed appropriate for our “fairly novice” sections, and these are “worth their weight in gold.” They are hard to come by and hard to replace. They must be patient and tolerant; they need to be able to ignore riders’ mistakes, and need to help us know when riders are ready, for example, to begin cantering.

While we want tolerant, steady lesson horses, we’ve also found it very valuable to have well trained lesson horses. We want these horses trained to the point that with a little “tuning up” they could compete in shows. We don’t feel we can train students to ride horses “on the bit” if the horses don’t know how to do that. We don’t feel we can train our students to recognize leads if our lesson horses do not take leads based on riders’ cues. The best lesson horses we have “rise” to the level of their rider; they are “packers” for novice riders, but can show finesse when ridden by reasonably advanced riders. We ride our lesson horses their entire career as if they are “babies”; i.e., we ride them in snaffles, use loosely fitted nosebands and loosely fitted running martingales.

Five of our lesson horses are > 18 years of age and the group’s average is 14. One management practice we engage in to enhance longevity is providing pasture turnout when possible so freedom of movement, social and foraging opportunities are optimized. Every horse at MSU

must have at least 2 jobs so most of these horses are also engaged in research projects. When those projects are ongoing, horses are often kept in box stalls for several months at a time, but typically still have daily turnout. None of our farm-raised lesson horses has ever shown evidence of stereotypic behavior. All routine vaccines, deworming, hoof care and dental care are based on consultations between the farm manager and the farm veterinarian. Within the constraints of our budget, we have worked hard to enhance tack fit and have found that this is tremendously beneficial.

Somewhere around the age of 20 yrs, we try to sell our lesson horses to families looking for a "starter" horse. Purchasers are given all information about any potential soundness limitations. Our horses end up with good retirement homes and these families end up with great starter horses. Our average lesson horse has a consistent, but not excessive, workload. They typically are used twice/day Monday – Thursday. Each class session is 1 ½ hrs long but only about 45 min of that is used for riding.

Over the last 15 years, an average of 23 students have been involved each fall semester, an average of 17 students have been involved each spring semester, with an additional 8 summers of dressage showing involving 5 students per summer. This totals 600 students having experienced a semester of horsemanship. Horsemanship classes are a fundamental part of both our 2-year Horse Management and 4-year Animal Science programs. Our lesson horses are a cornerstone of both curricula.

North Dakota State University Loaner Horse Program

Carrie Hammer, Erika Berg, Tate Eck, and Tara Swanson
North Dakota State University, Fargo, ND

Procuring reliable, healthy horses to utilize in equine education courses can be a difficult and expensive endeavor. Furthermore, the yearly costs to maintain these animals are great and can be complicated when the horses are no longer sound or no longer meet the needs of the educational program. North Dakota State University's (NDSU) Loaner Horse Program was developed to minimize expenses while maximizing horse quality. The objective of the Loaner Horse Program is to provide quality lesson horses for student education, and this is achieved through a no-cost lease of privately owned horses to the university for the fall and spring semesters.

The NDSU Equine Studies program offers 14 equine specific classes, 10 of which utilize live horses for all or a portion of the class. The number of horses owned by the university varies from 3-5 yearly, and an additional 35-40 privately owned horses are utilized to fulfill class requirements. Owners who elect to lease their horses to NDSU sign a contract approved by the NDSU General Counsel releasing NDSU from liability and stating that NDSU will cover routine management and basic veterinary costs while the horse is at the university.

To be eligible for the Loaner Horse Program, horses must meet a variety of criteria in the categories of health, training, and disposition. First and foremost, the horses must be sound and healthy for daily riding. They must meet basic training requirements including the ability to walk, trot, and canter on a loose rein in both directions as well as the ability to stop willingly, pick up correct leads, and be easily guided by a novice rider. If the criteria are met, the horse enters the program on a 30 day trial period. During this initial trial period, the horse's reaction to riders of varying abilities and overall disposition is evaluated. The job of a lesson horse is a stressful one, and many well-trained horses do not possess the disposition to be successful in this type of work. Each year 1-2 horses are returned to their owners because the horse's needs and program needs do not align.

Horses are utilized daily for horsemanship classes as well as for Western and Hunt Seat intercollegiate horse show team practices. In addition, horses are used for a variety of different labs that include conformation and colors, basic management and veterinary care, as well as restraint and handling demonstrations. A horse use chart is maintained to record daily activities and to ensure distribution of riding throughout the lesson herd. At the end of each year horses are reviewed by faculty and a list of horses that will be invited to return the next year is developed.

The Loaner Horse Program has evolved to be a beneficial program for both the university and for horse owners in the region. The advantage to horse owners is that no costs are incurred for horse ownership from September through the first part of May. The benefits to NDSU include no horse maintenance costs during the summer months when classes are not in session, and the ability to change the lesson horse group each year to fit the needs of the equine program.

Furthermore, the university incurs no costs for equine with chronic illness or unsoundness issues, nor does it bear the costs of horses that no longer fit into the program's needs. In summary, the use of a no-cost lease program has enabled NDSU to provide high quality horses for the undergraduate educational experience while working within the constraints of a limited university budget.

The Role of Horses in the Undergraduate Equine Science Program at the University of Queensland

A. Judith Cawdell-Smith, Mark A. Hohenhaus, Mitchell P. Coyle, Nina S. Delzoppo
Stephen T. Anderson and Wayne L. Bryden
University of Queensland, School of Agriculture and Food Sciences, Gatton, Australia

Introduction

Horses are an integral component of any world-class equine science program and access to animals greatly enhances student learning. There are many components of equine science that can only be fully understood by interacting with horses, for example, the skills that are essential to the safe performance of horse husbandry and management procedures. Such skills are required to maintain animal performance, and help assimilate student learning in the underpinning sciences (e.g. biochemistry, anatomy, and physiology) with a thorough appreciation of animal behaviour and welfare. The key goal of any equine program is to produce graduates who not only have the necessary knowledge and practical skills, but also are confident and capable equine scientists.

The Equine Program and Equine Resourses at UQ

The Equine Program at The University of Queensland (UQ) is a major stream within a larger integrated animal science program. There are dedicated equine courses, namely: Equine Husbandry and Equitation 1 & 2; Horse Behaviour and Handling; Equine Exercise and Rehabilitation; Equine Stud Management; Equine Nutrition and Health; Equestrian Coach Education, together with a range of courses from basic to applied animal science.

The Equine program is taught on the Gatton Campus of UQ and this location has a number of distinctive features that facilitates teaching equine science, including: a large consolidated land area, excellent horse infrastructure and facilities, dedicated and competent equine unit staff and, importantly, the Equine Unit is within walking distance of lecture theatres; thus allowing easy access for students. This provides a unique opportunity for integrated learning. Student feedback indicates that courses with a significant equine practicum indeed enhance learning outcomes. The Unit provides riding ('school') horses for students, agistment for privately owned student horses and maintains a breeding herd of Australian Stock Horses.

Assessment of Horse Suitability for Teaching

Horses used in teaching should reflect industry standards. When selecting a School equitation horse, or for a student seeking to acquire their own horse, it is suggested as a guide, that the ideal horse should:

- have some performance experience or basic dressage and jumping training, e.g. to preliminary dressage and jumping up to 45 cm
- be 15 - 16hh
- gelding or mare (preference for geldings)
- be 5 - 15 years old
- have a quiet temperament going forward under control with a responsive mouth

- have sound conformation so that it can work 6 days per week
- be able to be shod, rugged and floated
- be any breed including colour (most suitable are Thoroughbred, Warmblood, Australian Stock Horse (ASH), Quarter Horse, Anglo Arab)

The following horses are NOT permitted:

- those with stable or paddock vices, e.g. windsuckers, stable weavers, bolters, buckers, kickers
- rigs, colts/stallions and pregnant mares
- generally ex-racehorses are not suitable unless they have had substantial re-schooling; Standardbreds are not recommended
- any horse which, in the opinion of the Equine Programs Academic staff and the Equine Unit Manager, is for any reason found to be unsuitable, unsound, unsafe or dangerous

Due to the increase in students coming from an urban background and often starting at a lower practical skills level, extra attention must be paid to occupational health and safety (OH&S) obligations. In addition, animal numbers must be sufficient to meet animal ethics (AE) requirements.

Maintaining Horse Resourses at UQ

As indicated, horse numbers must be sufficient to meet AE and OH&S requirements and, in our experience, this is best achieved by maintaining a number of 'school' horses and a reasonable sized breeding herd. This has a number of distinct advantages in that:

- if managed correctly, animals can be used in both semesters and in the summer semester
- animals can be used in successive years at different stages of the breeding/growth cycle
- retention of quality breeding stock provides continuity of supply of quality offspring of known genetic merit including temperament and can subsequently be used as replacements or sold
- 'known' animals reduce the risk of OH&S incidents
- student 'ownership' of the horses increases student motivation for learning as they breed mares and follow the foals through growth and development, handling and sale
- it allows greater control of biosecurity
- horses are available for small research projects, e.g. Honours and Coursework Masters projects
- horses can be sold and produce a monetary return.
- registration of the horses enhances contact with industry organizations including Equestrian Australia and the ASH Society.

Summary

Quality equitation horses maintained on campus along with a viable breeding herd and excellent horse facilities form the basis for the development of a world-class equine science undergraduate program at UQ.

The Equine Anatomy Project at North Dakota State University

Erika Berg and Carrie Hammer
North Dakota State University

North Dakota State University (NDSU) added Equine Anatomy and Physiology to its undergraduate Equine Studies curriculum in 2009. This 300-level course is offered each spring semester and focuses on a practical understanding of equine anatomy and physiology as related to management, conditioning, and reproduction. One of the primary course goals is to provide students with the opportunity to gain a meaningful appreciation and thorough understanding of internal equine anatomy and physiology. During the course development process, the issue of the unwanted horse became apparent, and the culmination of these factors was The Equine Anatomy Project.

The NDSU program was modeled after The Willed Body Program at the University of Florida's College of Veterinary Medicine. Equine who meet certain criteria may be donated to the NDSU Department of Animal Sciences for euthanasia and subsequent use for teaching purposes. Donated equine may not have strangles, colic, a neurologic condition, or require immediate euthanasia (within 24 to 48 hours). Additionally, equine must have a medically untreatable condition or be living with a condition that does not allow the owner to provide necessary care for the equine to live a comfortable life. Horse owners are required to sign a Donation and Euthanasia Release Form that has been reviewed and approved by the NDSU general counsel. By signing this form, owners acknowledge that they understand the equine is to be euthanized for teaching purposes. Approval from the NDSU Institutional Animal Care and Use Committee currently allows for up to 12 horses over a three year period to be donated for euthanasia and subsequent teaching use. To date, nine equine have been donated to the project.

During the 2010 and 2011 semesters, students were shown a necropsy DVD [produced by the Royal (Dick) School of Veterinary Studies at the University of Edinburgh, Scotland] prior to the whole horse necropsy lab to prepare them for the experience. In order to measure both the utility of the DVD, as well as the necropsy experience from the students' perspective, brief surveys approved by the NDSU Institutional Review Board were administered after the dissection DVD was shown in class and after the whole horse necropsy lab was complete. A 5-point Likert scale was utilized to measure student responses and included the following choices to each of three questions presented: strongly agree, somewhat agree, no opinion, somewhat disagree and strongly disagree. Results include responses from 39 of 50 students (78% response rate) enrolled in the course over two semesters (2010 and 2011). Data from students who chose not to participate, did not watch the DVD prior to lab and/or did not participate in the whole horse necropsy lab were excluded.

Results revealed that 92% of the students agreed that watching the dissection DVD prior to the necropsy lab better prepared them for the experience. Eighty-seven per cent of students disagreed that the DVD could replace the necropsy lab; however 90% of the students agreed that time should be taken in future classes to watch the DVD prior to the lab. Thus far, the

NDSU Equine Anatomy Project has been a beneficial program for students, horse owners, and equine. While the survey does not offer a measure of student learning, the results do provide insight into the impact the lab has on students. End of semester student course assessments consistently cite the necropsy lab as the highlight of the course. In addition, horse owners who donate their equine to the project frequently express feelings of comfort knowing that even after death, their horse is providing a learning experience for students. Finally, the authors believe equine who are donated to this project experience improved welfare as a result of their timely euthanasia, and that the Equine Anatomy Project provides an option for unserviceable and unwanted equine in the North Dakota/Minnesota region of the U.S.

DISCUSSION

Horse Welfare

Discussion led by D. Hennecke, Tarleton State University; S. King, Southern Illinois University; B. Day, Morrisville State College; P. Evans, Maricopa College

NOTES:

Building Collaborative Relationships between Equine Academics and Veterinary Medicine

Carissa Wickens[1], Meagan Smith[2], Julia Wolfe[2], Regina Turner[2], Hannah Galantino-Homer[2], Ashley Boyle[2], and Sue McDonnell[2]
[1]University of Delaware and [2]University of Pennsylvania

Interest in equine science and equine management among undergraduate students enrolled in the Animal and Food Sciences and Pre-veterinary and Animal Biosciences majors at the University of Delaware is high. Currently, the University of Delaware (UD) has one equine science faculty member responsible for developing and teaching courses focused on the horse and delivering equine education programs for the state of Delaware. The development of collaborative relationships with other university equine science educators and researchers has greatly enhanced the educational opportunities for UD students interested in pursuing careers in the equine industry. The purpose of this abstract is to describe a successful model of collaboration between the equine science faculty at the University of Delaware and veterinary faculty and professionals at the University of Pennsylvania (UPenn), New Bolton Center, and some of the benefits this collaboration has afforded both institutions.

UD has a strong agricultural science school but no veterinary school, while UPenn has a strong veterinary school but no agricultural science school. The close proximity of the two institutions and the positive working relationship established between the UD farm units and UPenn veterinary professionals provide a strong foundation from which to build further cooperation in undergraduate and graduate equine education.

Since joining the faculty at the University of Delaware in July of 2009, the Assistant Professor in Equine Science has worked to establish contacts with veterinary professionals at UPenn in order to expand upon existing cooperation between the two institutions. New Bolton Field Service veterinarians are intimately involved in the health care of UD's teaching horses, thus giving veterinary students and residents at New Bolton experience with UD-owned animals in a 'teaching friendly' clinical environment. Veterinary faculty and clinicians from UPenn have served as guest lecturers and have assisted in the organization and implementation of hands-on laboratories in UD's Introduction to Equine Science and Equine Management courses. Specifically, UPenn veterinarians have delivered presentations on equine behavior, laminitis, equine reproduction, and also have been instrumental in orchestrating laboratory activities focused on equine dental care, pre-purchase examinations, breeding soundness evaluations, stallion handling, and semen evaluation. UPenn veterinary residents gain valuable teaching experience by accompanying UPenn faculty and clinicians to the UD farm and assisting in the planning and execution of New Bolton Center hosted field trips.

Many lab sessions and live horse demonstrations are held in the equine teaching barn on UD's campus. However, since there are currently no stallions on site, field trips to the Hofmann Research Center for Animal Reproduction at the New Bolton Center provide students with a unique opportunity to learn about reproductive management of the mare and stallion.

In addition to UPenn's contributions to equine undergraduate teaching at UD, their assistance with the equine courses has presented the undergraduate students with excellent networking opportunities. Students are able to experience first-hand the type of work equine veterinarians perform and are introduced to leading experts in the field of equine veterinary medicine. Although admission to veterinary school remains a highly competitive process, applications for admission to even the top schools have declined of late, causing competition among schools for the best students to increase. The opportunity to engage and interact with undergraduate animal science students at UD allows UPenn to attract and support a number of these outstanding students into its program.

The collaboration between UD and UPenn resulted in a joint equine reproductive behavior study supported by the Dorothy Russell Havemeyer Foundation, which provided a summer research experience for a UD undergraduate student. The project utilized mares in the UD teaching herd and combined the expertise of equine faculty and the use of the facilities and resources at both institutions. The UD teaching herd has also been valuable in providing New Bolton Field Service with data on parasite resistance.

Cooperation between the two institutions has been, and may continue to be highly complementary in the ability to deliver quality, science-based information to undergraduate and veterinary students as well as extension clientele. The relationship between UD and UPenn has enriched the educational opportunities for undergraduate students in the Department of Animal and Food Sciences at the University of Delaware and has created reciprocal benefits for the University of Pennsylvania, School of Veterinary Medicine. There is potential to broaden this collaboration to include additional undergraduate classroom and research experiences for students with equine interest. Future endeavors may include the cooperative development of educational programs and resources for horse owners and industry professionals, as well as the development of Master's and Doctoral degree programs in equine science.

Pasture Management Course for Canada's First Equine Management Degree

Paul Sharpe and Katrina Merkies
University of Guelph, Kemptville Campus

A Pasture Management course was proposed as part of a new degree program in Equine Management. The mission of the program includes, "Producing knowledgeable individuals with a solid background in business and biological science, a broad and current knowledge of equine industries and management, and an objective, numerate approach supported by hands-on experiences and an in-depth understanding of the economic, environmental and mutual impacts of all equine disciplines." University of Guelph initiated an Equine Management degree to serve the needs of the Canadian equine industry utilizing the existing resources in equine education at the Kemptville Campus thus creating a unique opportunity to pursue degree level studies of horses and the horse industry.

The first two years of this degree take place at the Kemptville Campus with practical exposure to horses and horse topics in a small, rural setting. The third and fourth years are spent on the Guelph Campus. The Bachelor of Bio-Resource Management degree with a major in Equine Management, or BBRM, focuses on forage and weed identification; establishing, maintaining and improving pasture for grazing or cropping; and environmental and conservation stewardship approaches to pasturelands.

The degree is called a Bachelor of Bio-Resource Management BBRM with a major in Equine Management. The first collaborations involving the BBRM program were among instructors in existing diploma programs, who volunteered to teach Biology, Business, Chemistry, Soil Principles and Pasture Management. The Pasture Management course instructor's background includes research in forage systems and grazing management of sheep and cattle plus teaching Feeds and Feeding to students in Agriculture and Equine diploma programs and Biology to the BBRM Equine Management students. Lecture or lab support is provided by collaborators, including a: Soil Scientist, Agronomist, Agronomy technician, Weed scientist, Manager of National Equestrian Park, local owners of horse boarding and riding instruction businesses, Provincial Government Pasture Specialist, Veterinarian and Registered Nuisance Wildlife Control consultant. The Stable Management course runs concurrently, allowing collaboration on some farm tours. Collaborations are needed because there is no single person available with sufficient expertise to cover all aspects of the course and there is so little application of scientific methods of pasture management for horses in eastern Ontario, that model farms are difficult to find and visit.

The course became compulsory and was offered in the autumn semesters of 2008 through 2010. This 12-week course has two lectures and one lab per week. Students were informed that there are no other degree courses in pasture management for horses in Canada and very

few published research reports on pasture management for horses. Reports on grazing research with horses were used where available and appropriate and supplemented with several research reports on grazing behaviour and grazing management of cattle and sheep to present generalizations about grazing mammals.

The number of students in the course was 17, 23 and 27 in 2008, 2009 and 2010, respectively. From the forms for student evaluation of instructors, two questions (and their answers) were examined to reveal what students liked best about the course and what they suggested for improvements in the course. The instructor evaluations indicated some appreciation for attempts to educate, expand knowledge, use field trips and bring in guest speakers. In spite of explanations about a scarcity of people who have a combination of significant experiences in horse management and pasture management, one or two students in each year stated that someone with a greater interest and background in horses, delivering “actual examples” and providing less information about other grazing animals would be a better instructor. One student praised the field trips and one student suggested fewer field trips that overlapped the Stable Management course. The majority of students in each year chose not to make comments and among those who did, there were more students making suggestions for improvement than stating what they liked. To satisfy the suggestions for improvement, the instructor should obtain more experience working with horses on pasture and perform research in pasture management for horses or make way for a replacement who meets these criteria.

Collaboration in Action: Equine Business Meets Science

Tim Capps and Elizabeth LaBonty
University of Louisville and University of Kentucky

The equine industry and equine higher education programs have a lot in common. Both are diverse and complicated, yet completely intertwined. Just as the industry is at its best when different disciplines and niches work together; so too is higher education strongest when complementary programs unite. The University of Louisville's Equine Industry program and the University of Kentucky's Equine Science and Management degree have been working together over the past year through teaching, industry activities and undergraduate research to enhance students' educational opportunities. This collaboration has benefited students, challenged and enhanced faculty, and opened doors for more joint efforts in the future.

Teaching is at the heart of both programs and each has different strengths. U of L focuses on the business side of the industry while UK emphasizes the science behind equine management. Together they offer the complete package. By offering core classes at each institution, students have access to the best of both worlds. This past two semesters Dr. Coleman has taught an introduction to Equine Science at U of L. Dr. Capps participated as a mock interviewer in UK's equine career prep class and offered his business background and insight into career opportunities. Plans to start teaching an Equine Business class at UK in the next year are underway and while this is a great start, there is still much more possible moving forward. More joint classes could be offered, ideally faculty will guest lecture with each other more in module type settings, and students could even be invited to visit both schools at different times throughout the year. However, the classroom is not the only place that collaboration is taking place.

Because UK and U of L are located just 75 miles apart, there are also many opportunities for shared activities outside the classroom. Both programs actively send students to internships at the same sites and graduate job placements often overlap. The Kentucky International Equine Summit was organized and supported by both schools jointly in 2008 and again in 2010. Furthermore, students and faculty from both programs traveled abroad together in 2009 when they toured the equine industry in England. Moving forward shared industry activities could be enhanced by offering opportunities for students to socialize together and build personal relationships. The ultimate goal of the collaboration between UK and U of L is for students to learn together and from each other, as well as establish relationships that will help unite the next generation of horse men and women.

Working together to solve industry issues is another avenue of collaboration between U of L and UK. Currently, students at U of L can participate in undergraduate research studying optimal broodmare band sizes, evaluating macroeconomic influences on the equine breeding

industry, and comparing the positives and negatives of artificial insemination. Students at UK, on the other hand, have opportunities to work in the lab at the Gluck Center on genetics and disease diagnostics or help care for and collect data for research projects related to equine nutrition, pasture management, and parasitology at the Maine Chance farm. Both programs' current undergraduate research opportunities are strong and collaboration in this area would only strengthen them. In the future students from both programs could work together in partnerships or teams to investigate both the business and science sides of important industry issues like the unwanted horse or comparing track surfaces. The students would learn both sides of the issues together. They would also learn the benefits of an integrated approach to solve problems that face the industry and most importantly, they themselves would learn the value of collaboration early on.

Building the bridge of collaboration between UK and U of L has only just begun and many opportunities to better both programs are ahead. While collaboration between two schools that are rivals on various fields of play can sometimes seem daunting, the efforts to accomplish this have led to more faculty interaction. This increased interaction has helped ease the administrative barriers that often exist between colleges and universities, and is beginning to facilitate more student interaction as well, which furthers our respective goals to help students gain a broader knowledge and more sophisticated understanding of the horse industry worldwide. As the respective faculties become better acquainted and work collaboratively in the classroom and research projects, we believe the students will follow.

Equine Assisted Therapy and Learning the Third Level?

Barbara Murphy
University College, Dublin

Equine Assisted Therapy (EAT) and Equine Assisted Learning (EAL) are progressive newly emerging mental health fields that offer an innovative, holistic approach whereby the horse acts as a medium in the support of clients with special needs and/or learning goals. As highly social prey animals, equine sensitivity to nonverbal stimuli permits acute reflection of an individual's emotions and behaviour through observable and physical feedback, which can in turn be used by the client to glean new personal insights. The experiential component of being present with a large animal that reflects in its behaviour any internalized emotions of the client provides a very powerful stimulus that rapidly brings to the surface issues that often remain hidden in conventional 'talk-therapy'. Educational goals for students engaging in EATL activities include the exploration of self-awareness, non-verbal communication, creative thinking, problem solving, relationship building, leadership skills and responsibility; all highly desirable graduate attributes today.

Recent events in the global economy have had significant impacts on all aspects of our society. Worldwide recession has resulted in widespread job loss, funding cuts within national health services, and an increase in the prevalence of mental health disorders such as depression. The economic climate has also negatively impacted the equine industry with falling horse prices, a reduction in luxury spending, and with it, thoroughbred ownership, pleasure riding and the means to maintain horses. This has resulted in a significant rise in equine welfare issues as many horse owners can no longer afford their animals and choose abandonment in rural and urban locations over the cost of euthanization. This welfare issue has been further fuelled by closing of slaughterhouses across North America.

Development and incorporation of third level courses covering the emerging disciplines of equine assisted therapy and learning (EATL) into equine science degree programmes represent new opportunities for our horses, our students and the wider public. EATL activities simply require that horses be themselves without any specific training. In fact, horses that have suffered neglect or abuse can become powerfully effective therapeutic animals in certain situations. As activities are primarily ground based there is no requirement for the riding component, thus permitting new roles for horses that are unsound under saddle. There has been a recent explosion of EATL programmes across Europe and North America without a matching rise in comprehensive training courses that provide academic rigour and scientific support for this emerging discipline.

There has been accumulating anecdotal evidence and studies describing the positive effects of therapeutic equine interventions. However, research demonstrating empirical support for psychosocial improvements is still lacking. The introduction of EATL disciplines within equine curricula would further validate the efficacy of these alternative treatment modalities by incorporating research components that require students to design and assess new methods of quantifying the effectiveness of EATL in specific therapeutic or learning settings. Simultaneously, raising awareness of a new therapeutic modality that offers a powerful alternative intervention for clients with psychological needs will open the door to new career options for our equine science graduates and create an important new functional niche for our many unwanted horses. It is proposed that the option to develop and incorporate EATL components into our degree programmes should be a topic for discussion and collaboration among NAEAA members.

Therapeutic Horsemanship at North Dakota State University and NARHA Higher Education

Erika Berg[1], Bette Shipley[2], and Jama Rice[3]
North Dakota State University[1], Riding on Angel's Wings Therapeutic Riding Center[2], NARHA[3]

North Dakota State University (NDSU) recently approved curriculum for a minor in Therapeutic Horsemanship offered through the Department of Animal Sciences. This minor program is made possible through a cooperative effort among NDSU Equine Studies, the College of Education and Human Services at Minnesota State University-Moorhead, and Riding on Angels Wings Therapeutic Horseback Riding Program. The curriculum includes courses in equine management, horsemanship, instruction, anatomy, and special education, preparing students to teach horsemanship skills to individuals with physical, cognitive, emotional and/or behavioral disabilities.

NARHA (founded in 1969 as the North American Riding for the Handicapped Association) is an international organization whose mission is to "change and enrich lives by promoting excellence in equine assisted activities and therapies (EAAT)." As the global authority in the EAAT industry, NARHA recognized the need to support institutions of higher education that were developing curricula in this rapidly growing field. In 2010, NARHA introduced three levels of membership for colleges and universities, enabling individual institutions to choose a membership level that best fit their needs. Level One is designed for institutions providing curriculum related to EAAT, but does not offer instructor certification. Level Two is designed for institutions preparing students for NARHA certification, but the instructor certification is completed at a separate NARHA center event. Level Three is designed to both prepare students for instructor certification, as well as offer a certification opportunity for students. Additional benefits accompany each level and can be found in detail at the NARHA website (www.narha.org).

North Dakota State University (NDSU) has a Level Three membership and is one of only eight NARHA Higher Education Members thus far (other institutions include Azabu University in Japan, West Virginia University, Truman State University in Missouri, Waubonsee Community College in Illinois, Texas Tech University, University of New Hampshire, and Ohio University). The NARHA Higher Education Membership complements the minor in Therapeutic Horsemanship offered through NDSU superbly. As a Level Three Higher Education Member, NARHA instructor training materials and on-line courses are available to both students and instructors. Having these materials available enables course instructors to supplement their existing curriculum, ensuring that students are optimally prepared for the NARHA instructor certification process. Five NDSU students will be testing for instructor certification in May 2011. Intended outcomes for graduates who have completed the Therapeutic Horsemanship Minor are earning their NARHA Instructor Certification, understanding and effectively communicating the impacts of EAAT for all individuals, promoting excellence and

professionalism in the EAAT field, and serving as ambassadors of EAAT to society at large. Combining the established curriculum of the Therapeutic Horsemanship Minor with the NARHA Higher Education Membership, truly gives NDSU graduates an edge in their search for a career in field of EAAT.

A Collaborative Relationship for Undergraduate Research: Cazenovia College and Equine Land Conservation Resource.

Karin Bump and Deb Balliet
Cazenovia College and the Equine Land Conservation Resource

The use of undergraduate research has expanded across the US educational landscape over the past 20 years and has become recognized as a way to engage students in "inquiry-based learning, scholarship and creative accomplishments that can and do foster effective, high levels of student learning" (About NCUR). While undergraduate research has well documented benefits to student learning, it does come with a host of challenges for the faculty mentor. One of these challenges is identifying ways that undergraduate research can make meaningful contributions to an area of study.

At Cazenovia College, all students completing a BPS Degree in Management with a specialization in Equine Business Management must complete a year-long capstone experience involving undergraduate research. The students begin in the Fall with a gateway course in either Market Research or Business Research Methods. They continue in a Spring term Senior Capstone course where they consider the ways in which their research findings could be used for policy improvements within their area of study. This process is front-loaded with a summer literature review assignment on a current problem within their professional area of interest. While many students chose to focus on a previous area of interest, several students reviewed a wide scope of literature and then selected a research topic based on the importance they felt it held to the future success of the equine industry. Three students independently identified an interest in land conservation; a topic that prior to the literature review was not in the forefront of their professional interests. These students formed a research team to investigate the topic of equine land conservation.

To combat the challenge of finding ways for these undergraduate students to make a meaningful contribution to the equine land conservation efforts, the faculty mentor contacted the Equine Land Conservation Resource (ELCR) to determine if the students could structure their research project to provide benefit to ELCR's organizational mission and goals. This developed into an overwhelmingly positive relationship between the students and the ELCR. The result was a research environment that aligned with the four-step learning process identified by the National Conferences on Undergraduate Research:

1. The identification of, and acquisition of, a disciplinary or interdisciplinary methodology
2. The setting out of a concrete investigative problem
3. The carrying out of the actual project
4. Finally, the dispersing/sharing of a new scholar's discoveries with his or her peers – a step traditionally missing in most undergraduate educational programs (CUR and NCUR 2005)

The collaborative relationship between ELCR and Cazenovia College provided a win-win opportunity for student learning and industry benefit. Alicia Benben, Elysia Lash, and Ellen Ricker formulated the following problem for investigation during the Fall term research course: *There is a lack of awareness among the equestrian population concerning the issue of equine land loss and a lack of insight into the ways one can motivate a person to participate in this cause*. The corresponding research question was: *What is the current perception of equine land loss among the equestrian population and how can we use this perception to motivate involvement?* The students utilized a quantitative research design for a Cazenovia College IRB approved study that was completed by 469 respondents. Their research findings led to three separate policy papers completed during the spring term Senior Capstone course:

- A Disappearing Frontier: Increasing the Awareness of the Equine Land Conservation Resources – Alicia Benben
- Grass Roots Marketing: Today Only Some, Tomorrow The World – Elysia Lash
- No Land, No Horse! - *An action plan to increase the donation of Equine Land Conservation Easements* – Ellen Ricker

The ELCR is in the process of using the findings from the collaborative undergraduate research project for their strategic planning as well as with their Marketing & Communications Committee and their Fund-raising Committee. Aspects of the research may also be used in an ELCR White Paper on Land and Land Stewardship.

The ELCR, Cazenovia College, and the students involved with this project urge other institutions and industry organizations to find ways to collaborate on undergraduate research. The results of such collaboration have a multitude of benefits for all involved and provide meaningful ways for undergraduate students and faculty to contribute to the ongoing improvements and advancements in the industry.

References:

About NCUR – National Conference on Undergraduate Research [http://www.ncur.org/ugresearch.htm]

Council on Undergraduate Research and the National Conference on Undergraduate Research (2005). "Joint Statement of Principles in Support of Undergraduate Research, Scholarship, and Creative Activities" [Internet: Http://www.ncur.org/ugresarch.htm]

Expanding Student's Abilities to Apply Critical Thinking and Logical Thought Processes to Real World Situations through "Learn, Demonstrate, Do" Methodologies.

Dr. Betsy Greene
University of Vermont

Each year many students are entering Animal Science programs with less practical, hands on experience from the barn or farm. Many have never fixed a fence, driven or operated farm machinery, or even been responsible for the health and caretaking of their own horses. Their skills and knowledge base are often limited to equestrian activities in a single discipline. Their knowledge and personal views on equine care and welfare may be based on exposure to targeted media with underlying agendas (e.g. animal rights as opposed to animal welfare) and their interactions through chat rooms and social media avenues.

At the University of Vermont, we have worked to develop several courses and activities within our curriculum to build skills that will have practical application in their future career and life. The opportunities range from structured course work to design and implementation of community service projects, to participation and/or presentations at equine extension events. Some examples include

ASCI 108: Equine Enterprise Management: At the beginning of the semester, students participate in an industry related field trip. In January of 2011, the class attended a portion of the Alltech Lecture Tour, and had a pre-event lecture from Dr. Pearse Lyons on equine marketing and the World Equestrian Games.

ASCI 097/098: Horse Barn Cooperative: Students apply to bring their horses to the university facility, and they share responsibility of the equine facility care and management. There is student barn manager and an executive committee who work with the equine faculty members to address horse, chore, and/or personnel related issues. There is academic credit associated with this course, and in addition to presentations in class, the students plan and host an annual "Horse Barn Trick or Treat" Community event in the fall, as well as an "Equine Fair" or, more recently, a "Healthy Horse" workshop for the community in the spring.

ASCI 121: Equus: This 4-credit course allows 15 students with varying levels of experience to gain hands on skills as they share the care and management responsibilities (with riding opportunities) of the 5-6 horses used for equine courses and laboratories.

ASCI 191/192: Special Topics: Students take on projects ranging from "Teaching a Horse to Drive" to assisting with organizing and running the two-day educational event and consumer trade show "Everything Equine" in the spring. Undergraduate applied research projects have also been designed, completed, presented, and published for credit.

ASCI 208: Equine Industry Issues: This Junior/Senior level course focuses on strengthening evaluative and critical thinking skills, as well as engaging students in "real life" equine issues. One project began with identifying key state agriculture leaders and legislators, researching the Vermont Current Use program, how equine land was allowed, but horse barns were being unfairly excluded from this agricultural tax benefit, and hearing from a prominent equine trainer that had been fighting to receive equal treatment for her facility. The project concluded with attendance at the Annual Vermont Farm Bureau Legislative Luncheon, where the group of students had an audience with the Governor, the Lieutenant Governor, the VT Secretary of Agriculture, and the President of VT Farm Bureau to discuss the issues. They also engaged in discussions (in pairs) at tables with the state legislators and farmers, and ended the day with a tour of the Vermont State House. One student joined me to discuss the Current Use issue on the agricultural show "Across the Fence" which airs on the local WCAX television station.

Students have also been involved with all aspects of the Everything Equine event mentioned previously, with jobs ranging from booth assistance, seminar venue monitor (a.v. equipment, speaker introductions, evaluation, etc.), demonstration riders, Drill Team participants in the "Horsin' Around" equine variety show, to presenting research or educational presentations in the seminar rooms.

Although we do not have an equestrian riding program at the University of Vermont, we provide multiple avenues and opportunities for our students to become actively engaged in their educational process, industry, and community.

Perceptions of the Impact of an Equine Program on Student Satisfaction and Retention

Lee G. Wood, Chad L. Gasser, Dean L. Winward
Southern Utah University

The objective of this study was to assess the personal and educational impact of an equine program on students at Southern Utah University (SUU). A survey was developed with statements to be evaluated on a Likert-type scale with 5 response levels. The survey was distributed to students enrolled in equine courses during three consecutive semesters. A total of 163 students voluntarily completed the survey, which included students of various horse experience, majors, and class standing. Students expressed their strongest agreement with items related to gaining new knowledge ($P < 0.01$), followed by items related to providing personal benefits. Students also agreed equine courses helped them develop skills and had a favorable impact on their education at SUU. Almost one-half (47.1%) of the students indicated the horse program had influenced their decision to attend or remain at SUU, and 98.8% of students agreed or strongly agreed they would recommend the courses to others. More than one-third of students also expressed interest in an equine science degree or minor. It has been concluded from the survey results that equine courses have a favorable impact on students through personal and educational value, and they strengthen the educational experience at SUU.

Integrative horse performance:
Promoting physical and behavioral wellness

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Advancement of equine academics necessitates management of physically and behaviorally sound horses. Clearly, equine programs value a sound, well trained horse; however, how can programs ensure longevity in these horses? Are there management methods to identify underlying pain or chronic stress? Are these methods easy to apply and financially effective? Within the program at Midway College, the importance of a holistic approach to equine healthcare is infused throughout the curriculum. In general, integrative horse performance is a strategic approach to identifying physical and behavioral patterns of the performance horse. Assessment is incorporated with training or management goals, physical mobilization and development of exercise plans. Further, effectiveness of manual techniques are documented, reassessed and modified to enhance performance. This approach is integrated with nutritional, veterinary, and general horse management methods. Integrative horse performance is both a preventative and routine healthcare management strategy; however, unlike conventional methods there exists a need for validating if this systematic approach is beneficial.

Horse longevity and soundness are often dependent on recognition of subtle alterations in performance and behavior. Within the last 10 years, there has been an increase in publication on equine pain identification and mechanisms for detecting subtle alterations. The fact remains, however, that pain assessment is highly subjective. Simply, objective measurements are impeded by a lack of verbal validations from horses! In addition to identifying factors in the horse, there exists a need to balance horse management with institutional goals. Budgetary constraints found in many collegiate equine programs may contraindicate traditional soundness management strategies, thus confounding how horse performance healthcare is approached.

Appropriate documentation is the foundation for communication between farm management, administration, students, and attending veterinarians. Additionally, detailed documentation can aid in defining the line between ethical treatments and financial splurges. Traditional methods of measuring stress responses in horses include heart rate monitoring and measuring serum cortisol levels. Besides traditional objective and subjective assessments of equine health, the approach to integrative horse performance requires assessment tools. For this reason, performance and locomotion assessment, range of motion, reactivity scales and grading rubrics have been developed for use at Midway College. The intent of these tools is to quantify pre- and post-characteristics and to document changes in the collegiate lesson horse, regardless of approach to maintaining soundness.

Over 5 years of development and use of rubrics, scales and objective measures such as heart rate and cortisol, several recommendations for an integrative performance management system are encouraged. First, the collegiate lesson horse requires an acclimation period, and may require acclimation to specific individuals. Data indicate that horses at Midway College demonstrate increased cortisol production in a cyclical pattern based on the academic schedule. Cortisol increases at the beginning of the semesters and drops dramatically when students are on academic break (greater than 3 days). Heart rates drop over time as horses acclimate to individuals performing tasks such as grooming, handling and manual integration. These physiological indicators combined with subjective grading rubrics indicate the need for assessing horse/student suitability. A second recommendation is the regular use of integrative techniques to decrease cortisol levels and resting heart rates. Serum cortisol was reduced with repeated use of integrative techniques such as sports massage and myofascial release when applied by moderately experienced professionals. When compared to regular grooming, application of effleurage strokes resulted in a lower resting rate of horses receiving regular treatments. Although grooming also resulted in decreased heart rates, data indicate that student confidence in applying the hands-on skills also impacts benefits to the horse. Less change was noted in those horses from pre- to post- assessments when student confidence was rated as less than 25% confident. As a third recommendation, monitoring sensitivity and horse reactivity is important to integrating performance. Repeated body wrapping lowers reactivity to novel stimuli in behaviorally sensitive horses. Implementing a stretching program may also enhance range of motion and decrease physical sensitivity. Furthermore, discipline and horse use affects physical sensitivity, with hunter or jumping horses experiencing greater restriction in propulsive musculature.

These data were compiled over the course of multiple years and with various samples of horses. In order for this performance system to be effective and promote longevity of the collegiate horse, facility management must embrace a holistic approach to teaching, learning and horse management. Implementing physical integrative measures may be highly beneficial for promoting physical and behavioral wellness of the lesson horse. Finally, characterizing horse personality is being researched as a means for determining horse suitability in collegiate programs.

Using Equine Pictures as a Learning Tool

Brittany Shank and Teresa McDonald
Virginia Polytechnic Institute and State University

At a large university with a constantly changing working group of school horses, identifying a horse is not always a simple task. In a student-staffed barn overseen by a faculty barn manager and a riding instructor, the opportunity arises for horses to be misidentified. The students need to be able to learn all of the horses quickly so that they get the most out of their lessons and properly care for the horses.

Some issues that commonly arise from horses being incorrectly identified include horses being turned out into the wrong field which can lead to injuries when the herd dynamics are changed (Wilson & Martinson, 2009). Horses can also be used in the wrong riding class with an inexperienced rider leading to injury of the horse or rider. The potential also arises for the horse to be given the wrong feed or medication. All are situations that can be avoided if the rider is made aware of the horse's identifying markings.

Students can be given a verbal description of a horse's identifying characteristics but most people college age and older are visual learners (Felder & Silverman, 1988). By providing the students with images they are able to visually compare horses. Two school horses could be described similarly but by studying the images, students are able to learn the subtle differences. The images also allow students to learn all of the horses in a short period of time.

As part of a classroom project, students created images of the horses displaying their side with the face overlaid into the picture along with a name. The images were uploaded onto Scholar, the open source online learning platform used by the university, allowing the students to study the images outside of class time. A set of the images was also laminated and placed in the tack room for students to look at during the class period when preparing to ride. Both ensure that when a student is asked to catch a particular horse, they know the size of the horse, its color, and all distinguishing marks that can be used to separate the horses from each other.

Before the project was completed, three students were used for a trial run. All three of the students had little to no horse experience and had never been to the Virginia Tech riding center or seen any of the school horses. The students were given a sample of images and sent to find the horses. They were able to look at the whiteboard which listed the horses in each field and determine their locations. With about forty horses in five different fields, the students were able to correctly identify all of the horses in a relatively short time when compared to the amount of time they would have taken without the images.

The purpose of this poster is to convey the importance of using images as aids for equine identification using the learning platforms available and the advantages of correctly identifying a horse. The presenter will cover implementation concerns, as well as the opportunities for the project to be used in a social networking application such as Facebook. In addition, the presenter will welcome open discussion on the use of visual aids in order to identify additional applications in equestrian education.

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Evaluation of Potential Horse Donations

Daniel Weber and Don Henneke
Tarleton State University

The recent increase of unwanted horses has resulted in more horses being offered for donation to Universities, therapeutic riding centers, and rescue facilities. It is not feasible for facilities to accept every donation that is offered and still maintain the same level of quality of service. Due to increased costs and suitability issues, each facility should develop a means of evaluating potential horses. This assessment tool should be based on the needs, expectations, and limitations of the facility. Utilization of this tool will enable the facility to focus their resources and efforts on horses that best meet their needs. Rubrics have been developed at Tarleton State University to access potential donated horses for three programs, breeding, training, and therapeutic riding.

A rubric has been defined as an objective evaluation of a performance using subjective comparison of objective criteria. Originally developed as an assessment tool for evaluating student performance, rubrics have been applied to other fields. The rubrics developed for assessing potential donated horses were based on using subjective comparisons to determine an objective overall evaluation. These rubrics have also been utilized to help determine when a horse is no longer an asset.

Broodmare Rubric

Acceptance of mares and stallions into a breeding program required specific criteria and subjective evaluation of each criterion. Criteria included Reproductive Soundness, Reproductive History, Age, Pedigree and Performance, Manners, and Other. Within each criterion, the horse was evaluated as Excellent, Good, Fair, or Poor. Evaluation for Reproductive Soundness included reproductive conformation, palpation and ultrasound evaluation of the reproductive tract for both mares and stallions, and a semen evaluation for stallions. While Evaluation for Reproductive History included number of foals produced, frequency of foaling, dystocia, and cycles per conception for mares and conception history for stallions. Age was divided onto 4-6 years, 6-12, 12-15, and over 15 years old. Pedigree and Performance evaluation included suitability of pedigree, individual performance, and offspring performance. The evaluation of Manners included ground manners, vices, and attitude. The Other criterion included ridability, training level, and any other considerations relating to the value of the donation.

Training/ Riding Rubric

Consideration of horses to be used in a riding or training program required a different set of criteria and subjective evaluations. The criteria selected were Marketability, Soundness and Conformation, Age, Training, and Attitude. Within each criterion, the horse was evaluated as Excellent, Good, Fair, or Poor. Evaluation for Marketability included pedigree, potential for a

marketable discipline, eye-appeal, and sex. Soundness and Conformation evaluations included level of soundness and quality of conformation. Age was divided into yearling, weanling, older than 5, and 2-4 year olds. Evaluation of Training included previous training, level of training, and performance record. Attitude was evaluated on confidence with humans, flightiness, vices, and demeanor.

Therapeutic Riding

Horses that are to be considered for therapeutic riding require a unique set of criteria and subjective evaluations. The criteria selected included General Health, Soundness, Age, Attitude, Manners, and Other. Within each criterion, the horse was evaluated as Excellent, Good, Fair, or Poor. General Health included the overall physical evaluation of the horse which included body condition score, hair coat, eyes, teeth and any previous or current problems noted by the owner. Soundness was evaluated on the level of soundness as well as style of gait at the walk, trot and canter. Evaluation of Age was divided into four categories 4-8 years old, 8-12, 12-15 and older than 15. Attitude evaluation included willingness to learn, vices, level of confidence and trustworthiness. Manners were evaluated on the basis of ground manners, herd mentality, and reactivity to their environment. The Other criterion evaluation included training level, riding experience, and any other factors that might influence the acceptability of the horse.

Outcomes Assessment of an Equine Management Capstone Course

Carissa Wickens
University of Delaware

Undergraduate students enrolled in the Animal and Food Sciences (ANFS) curriculum at the University of Delaware must complete a capstone course and Discovery Learning Experience (DLE) credits to fulfill their graduation requirements. In response to the tremendous interest in equine studies among ANFS students, and in an effort to help meet the increasing demand for trained equine professionals, a capstone course selection focused on equine management was developed. The new equine capstone was offered for the first time during the fall 2010 semester. The development and inaugural offering of the course were supported by funding received through an instructional grant (University of Delaware, Center for Educational Effectiveness). The goal of the equine management capstone course was to provide students with a comprehensive understanding of the horse industry. Students were required to synthesize and apply concepts in horse nutrition, behavior, training, selection, health care, reproduction, and farm management to the efficient operation of equine enterprises. The course allowed students to explore and evaluate the latest research related to equine production and management and to develop skills relevant to the management of the horse and to careers within the horse industry. The existing 400 level ANFS production courses (e.g. Dairy Production, Beef/Sheep Production, Poultry Production, and the Food Science Capstone course) served as models for the development and implementation of specific learning goals, assessment criteria, and learning activities in order to provide ANFS students with a more unified capstone experience and to facilitate communication and collaboration between the new equine science faculty member and the more senior ANFS faculty.

The new Equine Management course (ANFS 467) is a 4 credit course consisting of both a lecture and laboratory component. Students are required to work effectively both individually and in a group environment to successfully meet course objectives helping to build leadership, communication and problem solving skills invaluable to their future career paths. The course is centered on the goals of developing an equine enterprise and demonstrating proficiency in hands-on care and management of horses. Drawing upon previous course work in ANFS, topics presented in lecture, readings from the required text, equine extension publications, the scientific literature and interactions with industry “mentors” (experts in the field), students identified and investigated multiple equine management factors, including details related to generation of revenue and anticipated expenses, in order to create a plan for an equine enterprise (e.g. an equine veterinary facility, breeding/training facility, boarding/lessons facility, therapeutic riding center). Students worked as a team to present a final enterprise proposal to the class using Microsoft PowerPoint. During the semester, students were responsible for the handling, care, and associated record keeping of an assigned teaching horse and presented periodic progress reports to the rest of the class. Specifically, students used body weight data, hay analysis reports and an equine nutrition software program to determine whether their assigned horse’s nutritional needs were being satisfied. Students kept an

individual lab journal to document and reflect upon the work they performed with their horse during each lab session, and the students worked together with the instructor, farm staff, New Bolton Field Service veterinarians, and their peers to address specific problems as they arose (e.g. horse health concerns and/or behavior/training issues). Students were given the opportunity to assess their individual and their group members' contributions to the course project and to the management of their assigned horse by completing a mid-semester and a final course evaluation as well as a final reflective essay.

The pilot offering of the equine capstone course was perceived favorably by the students. They demonstrated outstanding effort and creativity in their assignments, especially in the equine enterprise projects. Based on final course evaluations, the course received positive ratings and several important and encouraging themes were noted in the students' responses about the strengths of the course. Listed below are some of the comments received from the students.

"Very hands-on experience, great lab"
"I liked the lab portion of the course, it allowed me to apply what I learned in lecture"
"Very interactive, each student's experience is unique; learn through self-discovery"
"Encourages independent study working with horses"
"Gives students with less horse experience a chance to learn about them, and gives more experienced students the opportunity to use and enhance their knowledge and skills"

The students' reflective essays also provided valuable feedback related to their experiences in and enjoyment of the course. Many indicated that the equine capstone course gave them a greater understanding of the equine industry and helped focus both their career goals and personal aspirations.

Does an Introductory Course Prepare Students for an Advanced Horsemanship Course?

Molly C Nicodemus
Mississippi State University

Horsemanship courses are a popular part of a University equine curriculum. Mississippi State University has offered an introductory horsemanship course for over a decade and is the only equine course offered both in the fall and spring semesters due to the popularity of the course. The demand for additional horsemanship courses from those students that completed the introductory course initiated the development of an advanced horsemanship course that was first offered in the fall of 2002. While both courses have been open to all students with no prerequisites required for enrollment, many of the students completing the introductory course have not taken the advanced course citing the horses and activities associated with the advanced course are "above their skill level". Objectives of this study were to determine whether the confidence level in horsemanship skills found in those students that have completed the introductory course matches that of those students enrolling in the advanced course.

Researcher-developed 19 forced-choice question survey instrument focused on horse riding and handling was given to students completing an introductory horsemanship course (n=28) and to students starting the semester in an advanced horsemanship course (n=21). Each question on the survey described a horsemanship activity that students were to rate 1 to 5 for their confidence level in performing with 1 indicating "no confidence" and 5 indicating "extremely confident". Means $\pm$ standard deviation (SD) were determined for each question for the introductory (I) and the advanced (A) students and differences between means of the two groups were tested for significance using a 2-sample Student's t-test ($p=0.05$).

The majority of the questions demonstrated similar confidence levels between the two groups suggesting I students should have the confidence to perform most of the activities required in the advanced course. Areas where I students lacked the confidence found in the A students were in working with untrained horses, riding breeds other than stock-type breeds, and performing advanced English maneuvers (Table 1, $p<0.05$). While inclusion of other breeds and other disciplines in the introductory course may increase confidence levels in the I students, the introduction of untrained horses into an introductory horsemanship course would create safety issues and may decrease confidence levels in other areas. In addition, dividing up the course to include instruction in other riding disciplines may weaken the confidence the I students have in western disciplines, and thus, these areas where differences were found between the two groups may be best addressed in additional, intermediate horsemanship courses.

Survey results are currently being applied in the development of additional horsemanship courses at Mississippi State University. Surveys recording the confidence levels of students participating in equine courses are being utilized for assessing other equine courses at Mississippi State University to determine the effectiveness of each course in producing confident horsemen and women.

Table 1. Means (SD) of survey question results where confidence levels were significantly different between introductory horsemanship (I) students and advanced (A) students ($p<0.05$).

Questions	I Students	A Students
Adv ground handling: untrained horses	3.3±0.2	4.5±0.4
Basic riding: untrained horses	2.4±0.1	3.6±0.2
Adv riding: English disciplines	3.3±0.2	4.4±0.3
Basic riding: society-type breeds	3.5±0.3	4.6±0.4
Basic riding: European breeds	3.1±0.1	4.3±0.2
Adv riding: society-type breeds	3.3±0.3	4.5±0.4
Adv riding: European breeds	3.1±0.1	4.3±0.2

The Special Training Project

Susan T. White and Cory H. Kieschnick
Delaware Valley College, Doylestown, PA

Students at Delaware Valley College working toward a Bachelor of Science Degree in Equine Training and Instruction (ET) are required to take eight riding skills courses, one per semester. Riding skills courses include a required text book, written assignments and evaluations, as well as ridden performance examinations which are judged by an outside examiner in a competition setting. Riding skills courses meet twice weekly and riders ride in groups of 4-8 riders, alternating semesters between jumping and dressage courses. Students ride a variety of horses, switching at the instructor's discretion between the horses assigned to the class for the semester.

ET students complete several culminating experiences prior to graduation. In addition to required courses and completion of free electives, students must also complete at least 500 hours of documented employment in their field of study and present a "capstone project" presentation of their work experiences. These presentations include a reflective evaluation of their experiences, how their experiences related to their course work, as well as short and long term career goals.

Perhaps the most directly beneficial requirement for graduation is the course the students take their last semester at Delaware Valley College as their final riding skills course, "Special Training Project." Each senior enrolled in this course is assigned a horse leased or owned by Delaware Valley College as a training project and the care of this horse will be theirs for approximately 15 weeks. The horses in the project will continue to be fed and have their stalls cleaned by regularly scheduled students, either paid staff or those enrolled in other management courses; however, all training and management oversight will be done by the assigned student. Students typically work with their horses five to seven days per week and training includes not only riding, but re-training any abnormal behavior on the ground and other work complimentary to the ridden work. The training progress students make with their horse is evaluated through an extensive portfolio, monthly inspections, a final riding test in front of an external evaluator, and a final presentation given to faculty and students within the department. The portfolio contains an extensive history, photo and video evidence of before, during, and final condition and training, management history, including feed ration evaluation, medications given, and lameness reports, and finally an extensive training log which includes daily journal entries and referenced literature supporting their training plan.

Portfolios are evaluated mid-semester as well as at the culmination of the training program. Monthly inspections include oral questions and the physical presentation of the horse in

competition ready turnout and condition. The final presentation is completed after the final ridden performance test. Students gather with equine faculty for formal presentations of their semester-long journeys and each student shares facts, pictures, videos, and anecdotal stories to share her/his experience, as well as persuade the group that their training techniques were effective, based on results and empirical evidence supported by research she/he has found throughout the process.

We began requiring all ET students to take this final course three years ago and since that time the feedback has been very positive. The original goal in creating this course was not only to give each student the opportunity to be the sole trainer for a horse with outcome goals and the responsibility of meeting these goals, but also to re-train school horses who are misbehaving in other courses, give some of our well-seasoned school horses an easy semester with one rider, or add additional training to our school horses. The unexpected outcome has been an overflow of community horse owners contacting us and wanting our students to train their horses. At this time we do not have the room to develop an extensive horse training program, but we happily refer our students and link students with community members for additional horse training experience.

In conclusion, Equine Training and Instruction students complete a variety of culminating experiences including documented employment in the industry and a final capstone project, but perhaps the experience which gives our students direct horse training experience while requiring them to critically evaluate every step along the way is the “Special Training Project” course.

Transforming Student Perceptions:
Infusing Critical Reflection and Fostering Student Expression in Equine Studies

Kimberly I. Tumlin and Janice L. Holland
Midway College, Midway, KY

At Midway College, critical thinking and leadership skills are infused across all curricular programs. Although students understand theory and definitions of critical thinking following successful completion of a compulsory 100-level course, application of such skills are variable. Thus, critical reflection and expression in the classroom warrants enhanced teaching approaches for successive classes. In course discussions regarding sensitive issues, equine students often expressed difficulty balancing emotional considerations with critical analysis skills, especially if these experiences were negative in nature.

Passion and individualistic expression about controversial topics should be fostered in Equine Studies; however, how should curriculum support learning that infuses both critical reflection and student expression? Is an applied learning model appropriate for transformative experiences in Equine Studies? Are students able to objectively listen to opposing views and critically reflect within an accelerated course format? Are student perceptions regarding hot-topic issues transformed with alternative teaching approaches?

Previously, a sequential course cascade was developed to move students through clearly delineated learning objectives in a culminating course titled “Animal Ethics, Welfare, Rights, and Law”. Several objectives were developed as curricular framework. These student-oriented objectives included: to enhance global view points; to foster interest in controversial topics; and to guide experiences for expansion of foundational critical reflection skills. Core to this approach was that students were introduced to reflection strategies that combine written, oral, and collaborative learning mechanisms. One example of how multiple mechanisms are introduced was through a debate exercise. Students were individually required to identify a topic of interest and decide as a group to pursue that topic. Foundational skills for topic identification included application of internet research, individuals sharing prior experiences, and a lecture-based review of current industry trends. Once a topic was identified, individually, students were required to perform an in-depth review of literature and prepare both sides to an issue for oral presentation. In the classroom, students were provided time to discuss research findings and share resources. Finally, on debate day students were assigned a pro- or con- viewpoint and then asked to debate, in groups, with their peers. Post-debate reflections regarding individual performance, topic key points and understanding of peer perspectives were completed.

A survey based on current topics was developed to determine if student attitude and perception towards issues were altered using this sequential curricular approach. The survey

included 40 questions/statements that addressed several modern issues in the equine industry. The survey also addressed student demographics. A line scale on which students placed a mark between endpoints was utilized instead of discrete choices for statement agreement. This permitted investigation of changes between pre- and post-test values, and minimized respondent recall of discrete pre-test responses. Topics covered on the survey included use of performance enhancing medications, ethical questions for healthcare, breeding strategies and regulation, welfare in terms of healthcare issues, horse slaughter, immigration, and laws and tax considerations as they relate to the industry. Student attitudes towards these topics were assessed at weeks 2 and 8 in an accelerated 8- wk course. Changes in agreement values were analyzed using a Student's T-test. Trends were noted at $0.05 < p < 0.10$ and significances at $p < 0.05$.

Based on student responses, significant differences or trends in differences were notable when applied learning activities were utilized to introduce sensitive subjects. Clearly, those topics for which students had to prepare a pro- and con- viewpoint for oral debate resulted in the greatest alteration of agreement. The most significant changes were in the topics of horse slaughter for meat ($p=0.0096$) and government regulation of breeding ($p = 0.042$). Initially students reflected that they were "set in their attitudes" towards these issues, although post-debate reflections indicated an openness to new experiences. Additionally, student viewpoint on how to classify horses changed from predominantly companion animal to both livestock and companion animal. These differences indicate that the students were able to move through the curriculum while applying critical reflection strategies, instead of emphasizing only knowledge.

In this approach, student motivation to reach beyond individual comfort zones was evaluated. Multiple assessments characterized and documented student growth and learning. The use of holistic debate is an effective means to provide transformative learning. Finally, key to making this approach effective is that students collaboratively reflect on the issues and experiences to develop empathy for conflicting viewpoints. More research is warranted on correlations between curricular approaches, motivation, participation, expression and student attitudes regarding sensitive subjects in Equine Studies.

Demographic Profile of Students Majoring in Horse Science and Horse Production: Implications on Course Reconstruction to Meet Changing Needs of Incoming Students

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Ohio State University Agricultural Technical Institute

Much research has been done to identify certain characteristics and factors of students that pursue a degree in an animal related field. A study by Skofield [1] found that parents have the most influence on the student's choice of program. Others have indicated that the choice of program was influenced by the reputation of the program [2]. Those involved in the teaching of equine courses are aware of the many changes that have occurred and are occurring in the student make-up of the class and the program. Meeting these changes must allow for the presentation of the new materials to be related or made relevant to the experiences or interests of the students. It has been suggested that students who lack an equine related background or have a significant amount of agricultural experience are disadvantaged as students. Therefore in order to develop an accurate profile of the current population of students to be served in by the equine curriculum, the objective of this study was to develop a demographic profile of the students entering the Horse Science and Horse Production Management Programs at The Ohio State Agricultural Technical Institute (OSU ATI).

Data was collected over three consecutive autumn quarters beginning Autumn 2008 and continuing through Autumn 2010. Student responses were obtained by distributing a questionnaire to the students enrolled in the entry level horse science course (Introduction to Horse Science). Student participation was voluntary and responses were anonymous. Analysis was done by frequency counts and percentages. The year to year variation in data was analyzed by ANOVA procedures. Experience and interests indexes were computed using total positive responses/total responses x 100. The relationship between experience and interest was determined by least squares linear regression.

Over the three year period that this survey was conducted, a total of 121 students or 93% of the students entering the Horse Science and Horse Production Programs at ATI volunteered to complete this questionnaire.

It was not surprising that over 90% of entering students were female. Females were also found to enter ATI from a community college or another university. Information on career objectives of the students found that an average of 58.9% was interested in equine-related fields such as barn manager, trainer, riding instructor, etc. There was an 18.5% decline (2008 – 2009) in students interested in going on to professional school. It was suspected that there was an increasing number of non-equine background students entering the program, but the 34.7% increase (2008 – 2009) in the number of students entering without previous equine experience

was larger than expected. In addition, there was a correlation between the students from non-farm (urban) communities and the amount of equine experience ($r=.83$, $p=0.05$). It should also be noted that there was a 53% increase (2008 – 2009) in the number of students that reported having no experience in 4-H, Future Farmers of America (FFA) or Pony Club. The results of this survey suggest that there exist potentially two distinct groups of students entering into the Horse Program at ATI: one group having considerable equine experience and the other having very little to none. If this trend continues, it could have a significant impact upon the retention of those students lacking basic hands-on equine skills. Because ATI is a school that awards Associate (Two-Year) degrees, time is an important consideration when designing curriculum. In order to retain those students entering the program without the necessary basic horse experience, faculty are going to have to employ different methods within current introductory courses, modify and/or expand laboratory sessions or develop additional courses to bring those students "up to" a certain skill level. The questionnaire will be continued to be administered to our entering equine students in an effort to keep in touch with our student population.

Developing Undergraduate Capstone Projects as 'Publishable' Submissions for Peer-Reviewed Journals.

C. Jill Stowe
University of Kentucky

In many capstone-type courses, undergraduate students conduct original research and submit a paper to the instructor which showcases the utilization of an array of tools learned during the course of study. In some instances, the finished product has potential to be developed into a publishable, co-authored paper in a peer-reviewed journal; however, taking this step requires the expertise of a faculty member. There are two criteria that can maximize the benefits of this opportunity. First, the topic should be of joint interest to the student and the faculty member. Second, if at all possible, the topic should fit within the faculty member's current research program, as this minimizes start-up costs. If these two criteria are met, both the undergraduate student and the faculty member benefit. Undergraduate students learn how to refine and frame the research question, they read journal articles and begin to become familiar with finding and then preparing and submitting a paper to an appropriate journal, and they learn the importance of precisely communicating how the research fits into existing literature and what contribution the research makes. Ultimately, students begin to gain a better understanding for the discipline. Even for students that may not pursue graduate school or academia, it helps them stand out to employers. The faculty member benefits not only from another publication, but also from the mentoring process and disseminating his/her expertise.

A successful example of this idea is illustrated by a project which culminated with a co-authored publication in 2010. The student, an undergraduate in the University of Kentucky's Department of Agricultural Economics, submitted a capstone project focused on an econometric analysis of freshman sire stud fees. This was also an interest of mine. The student, who was a student in the prestigious Darley Flying Start program during some of this process, agreed to collaborate on the project. His industry experience was invaluable in tailoring the study to the industry's interest, while my academic experience was necessary in following the proper scientific method for the study. The paper, titled "A Hedonic Price Analysis of Differentiated Products of Unknown Quality: Freshman Sire Stud Fees in the Thoroughbred Breeding Industry," was published in the Spring 2010 issue of the *Journal of Agribusiness*, pp. 19-30.

Information Literacy Skills in the Senior Seminar Capstone Course

Lynn Taylor
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Centenary College as a whole has implemented a Learning Outcomes Assessment Plan to help determine if students were meeting the outcomes and goals set for each major. The Centenary College Greater Expectations (CGE), which is our liberal arts outcomes for all of the students were adopted with the College's Updated Strategic Plan in 2004 and includes the following expectation for Information Literacy:

3) Interpreting, evaluating, and using information discerningly from a variety of sources

According to the American Library Association (ALA), Information Literacy is a set of skills that requires students to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information." The sheer volume of information and the number of sources of information available to any student in college today is, at times, overwhelming. Poor quality reference materials, particularly web sources, result in a sub-par term paper, and many of the students at Centenary College today have a difficult time sorting through information in order to identify what a quality source is, as well as how to cite or reference the sources properly in the text of a paper, and as a bibliography. The Equine Studies Senior Seminar is the capstone course for all of our majors, and requires a major term paper and oral report, which together comprise 50% of the final grade in the course. Over the past two years, students have struggled with the identification of appropriate, quality sources of information, as well as the best way to construct a bibliography that will benefit them in writing their term paper. A systematic, step-wise approach and assessment plan has been put in place to better equip the students with the skills necessary to develop a quality bibliography and therefore, a high quality term paper and presentation.

There are five national standards for assessing Information Literacy:

1. The information literate student determines the nature and extent of the information needed.
2. The information literate student accesses needed information effectively and efficiently.
3. The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.
4. The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.
5. The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

The Senior Capstone course structure has gone through many changes in our attempt to emphasize the complete process of writing and the importance of this skill for all students. One of the primary stumbling blocks seen over the past two years has been the inability of the senior level students to discern between quality and poor information sources, even before the writing process begins. Steps taken to insure that the students are fully equipped to proceed with the term paper after a topic is approved include the following: meeting with the research librarian as a class, reviewing the process in place at the college for determining source quality, understanding how to access and search all of the databases available to the students free of charge, understanding interlibrary loan procedures, setting up a Really Simple Syndication (RSS) aggregate feed via Google Reader, proper review of journal articles, and how to write an annotated bibliography.

Students must also meet with the professor and review their copies of each source intended for use in the paper, as well as a review of their annotated bibliography, which must go through at least two revisions before they begin the paper. Students are required to write a rough and final draft of their term paper outline, and the final term paper is also submitted first as a rough draft. Each draft is reviewed, with feedback on source quality, content, flow, structure, and grammar via a rubric, and is returned to the student with comments and suggestions for improvement. The college as a whole has also focused on information literacy and writing across the curriculum, with the formation of a peer tutor writing program and a new writing center for all students, scheduled to open on campus in the Fall of 2011.

Midstream Capstone Experience

Katrina Merkie
University of Guelph, Kemptville ON

Introduction

Numerous programs of study offer a senior capstone course as a culmination of the undergraduate experience. Students summarize, evaluate and integrate the sum of their knowledge with the goal of promoting connections between general education, their academic major and career experiences; developing important competencies and perspectives; enhancing awareness of personal adjustments for the transition from academic to professional world; enhancing prospects for postgraduate careers; and promoting effective life planning and decision-making skills[1].

The capstone course provides self-directed learning opportunities; no new skills are learned – rather students assimilate the various goals of the total educational experience and display a broad mastery of learning across the curriculum. The value of capstone courses has been demonstrated repeatedly through student evaluations[2,3], employer questionnaires and industry feedback[4].

The Bachelor of Bio-Resource Management (BBRM) degree in Equine Management at the University of Guelph provides a unique opportunity for a mid-stream capstone course. Students spend their first two years of study at the Kemptville Campus, with the availability and opportunity to work directly with horses, followed by the exposure to a broad range of courses and specializations in the last two years at the Guelph Campus. In preparation for the students' transition from Kemptville to Guelph, a mid-stream second year capstone course has been developed.

Methods

Students register in the core "Integrated Project" course in their fourth semester. However, preparation for this course begins in the first semester as students form teams and select an existing commercial equine business. A suite of core courses over their first four semesters enables students to compile information on their chosen equine enterprise:

- Stable management – daily working routine; emergency action plan; record keeping; herd health program
- Facility management – construction and layout of buildings; nutrient management strategy; environmental farm plan
- Pasture management – soil testing and classification; forage analysis
- Equine nutrition – feeding program; formulation of rations
- Issues in the equine industry – what is new, what is hot, what is cutting edge research
- Business – marketing plan; product pricing
- Economics - inventory control
- Accounting – bookkeeping; cash flow analysis

- Occupational health and safety – equipment training and maintenance
- Human resource management – personnel; professional development; staff motivation

In semester four, teams work under the supervision of a faculty advisor with regular meetings for direction and guidance. Following an extensive evaluation of all facets of the business, teams develop a comprehensive review and provide recommendations for improving or increasing the business productivity. Teams deliver formal presentations to a panel of equine faculty and industry experts, and a professional written report is made available to the business owner.

Discussion

This midstream capstone course provides a venue for students to amalgamate information, and it effectively unites all the courses in the major, thus providing relevance to all aspects of learning. Through studying real-life situations, students connect theory with experience while they apply their acquired knowledge. Additionally, this course will facilitate education, communication and an exchange of ideas between students, the university and equine businesses to enhance the development of the equine industry and its leaders. Students learn to exercise a fact-based approach to critical evaluation of a business that puts long-term planning ahead of short-term goals. As a result, students are better prepared for careers in the equine industry.

The advantage of a midstream offering fast-tracks the students' personal involvement in learning through independent application of knowledge, enhances the love of learning while simultaneously stimulating foundational skills in team work, critical thinking, project management, problem-solving, information retrieval, wisdom and common sense. Rather than waiting until fourth year to become intimately involved in the practical applications of their learning, a sense of ownership and contribution may stimulate and engage students more and prevent unnecessary attrition as students transition to another campus to complete their degree.

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Leadership Portfolios as a Method to Document Experiences and Competencies in Equine Education

Janice L. Holland and Kimberly I. Tumlin
Midway College, Midway, KY

Introduction

With the mission of "empowering students as leaders," Midway College requires all students to develop a leadership portfolio, as a portion of their capstone courses. The purpose of a portfolio is to summarize student growth in leadership skills throughout their academic tenure. Students must earn a set number of points for the portfolio, based on the merit of activities completed. Academic divisions decide what activities are required and recommended, and offer options for other areas of the portfolio.

Requirements of the Leadership Portfolio

The following are the sections within the Leadership Portfolio, which are consistent across programs. Students must receive a minimum number of points in each section:

- Professional and Career Leadership
- Community Leadership
- College Leadership
- Program Leadership
- Self-Assessment of Portfolio through a Personal Reflection

Examples of Assignments

Students in Equine Studies are required to develop a professional resume and a list of career goals. They also must complete a self-assessment of their portfolio, and write a personal reflection of what they accomplished during their academic tenure. Students are encouraged to use the critical thinking skills taught in the 100-level critical thinking course. Students are also required to attend a minimal number of college-sponsored events held on campus.

Activities require written documentation as proof of participation. Students that participate in on-campus activities receive certificates with the date and activity listed. Thank you notes from organizations that students have helped are also common documentation. Examples of leadership and community service include activities such as attending and presenting at conferences, holding officer positions in campus or regional organizations, research and publication, coordinating and/or participating in community service projects, and service to and within the campus community.

But is it "Useful"?

Since the concept of leadership portfolios is novel for majors in agriculture, it has been difficult to instill the benefits of such documentation to students in Equine Studies. To encourage participation the concept is introduced in the introductory equine course that all incoming students take, and leadership opportunities are constantly discussed in other courses. Course

sequencing within the curriculum is a key to success, as students that either skip the introductory course or take the capstone prematurely are at a disadvantage.

Additional incentives to produce positive work are also given:

1. The student with the most outstanding portfolio during an academic year, as voted on by the equine faculty, is recognized with an award at the Joy Edwards Hembree Honors Program in April.
2. Students are encouraged to do assignments for the portfolio that will provide framework for future activities, for example, developing pamphlets on local boarding and training facilities and feed and equipment supply stores for new students, or making a detailed list of scholarship opportunities, including application deadlines and documentation necessary. The goal is for students to focus on accomplishment rather than being grade-oriented.

Further Refinement

A question arising within the department is whether or not a traditional Leadership Portfolio appropriately documents experiences of a student in Equine Studies. Discussion has also involved whether or not a "leadership project" or "service learning project" could be done to earn points in lieu of other activities. This project would need to be an activity where the student was engaged in the equine community, possibly by working on a specific project with an organization, such as organizing a horse show to benefit a non-profit organization, or educating the community on the results of a research project through either publication or presentation.

Education of students on how a leadership portfolio can be used in enhancing employment opportunities is also key. A recent study conducted by AgrowKnowledge and AgCareers.com (*Agriculture Food and Natural Resources Enrollment and Employment Outlook: Looking Back & Planning for Emerging Careers*, http://www.agcareers.com/us-job-outlook.cfm?year=2010_Enrollment_Employment) found that the following skills were perceived to be attributed to graduates in agriculture receiving employment: internships (25%), communication skills (24%), networking (21%), and leadership skills (17%). A properly designed series of leadership experiences could easily achieve all of these skills, and better prepare students for careers within the industry.

Conclusions

Refinement of the leadership portfolio concept is a continuous process to reflect needs of the industry and skills required of graduates. A survey is being developed to assess annual endpoints, and determine the types of activities in which students participate most willingly. This survey will be completed for the first time this spring, since May 2011 graduates are the first to have the portfolio requirement. Development of additional leadership projects, which are applicable to career opportunities in the equine industry, is essential.

Utilizing Culminating Experiences to Improve Undergraduate Development and Strengthen an Equine Program in Times of Declining Budgets

Kylee Jo Duberstein
Department of Animal and Dairy Science, University of Georgia

Culminating experiences within an undergraduate major often involve a senior capstone class or project that requires the student to be able to assimilate and incorporate knowledge learned throughout their undergraduate career. These experiences should ideally help the student assess their knowledge and gain experience that would be useful for future careers. In the current economical crisis, departments are being forced to downsize programs due to lack of personnel (faculty and staff) available to implement teaching, research, and extension missions. This downsizing of programs affects all students within a major by limiting classes that are taught, eliminating smaller hands-on courses, and limiting outside experiences that are available to students that would ideally enhance their employability following graduation.

Equine courses on management and handling would optimally be taught in a laboratory setting where students could gain hands on exposure to practices taught in lecture. These classes must be kept smaller for practicality and safety reasons, requiring more sections to be taught and thus taking up more time of faculty and staff. From a research standpoint, some universities (such as the University of Georgia) have downsized or almost eliminated equine research due to a decrease in the ability to fund such projects. This leads to an absence of graduate students available to help in teaching and extension capacities, as well as reducing the opportunity for undergraduate students to become involved in scientific research in some capacity. Therefore, in order to better serve the needs of the student body as a whole, offering capstone experiences in teaching, extension, and research to upper level undergraduates is a way to continue to have a thriving equine program while offering experiences that are beneficial to the career paths of near-graduating students.

By offering upper level elective credit to students involved in teaching, research, and extension programs, students are given the opportunity to expand upon their skills and utilize knowledge learned in a way that is positive for future career growth as well as beneficial to the academic equine program as a whole. Utilizing undergraduate teaching assistants in hands on laboratory classes allows for larger class sizes while still maintaining one on one attention. It also allows the undergraduate teaching assistants to assimilate and impart knowledge learned throughout their courses while enhancing communication skills. Incorporating undergraduate research either into classes or into small group projects for elective credit gives students an opportunity to experience equine research while still being affordable to the department. Additionally, this allows a department to maintain a thriving and scholarly approach to teaching despite dwindling resources. Undergraduate research opportunities allow students interested in veterinary or graduate school the chance to learn appropriate scientific research protocol that

may be beneficial to future careers as well as help direct them in determining a suitable career path. Multiple students can work in groups to review literature, design project protocols, provide labor, analyze data, and write abstracts and manuscripts. Students can enroll in undergraduate research for upper level degree credit, which helps to complete their degree program while providing invaluable skills for professional development. Similarly, undergraduate students can also help conduct extension programs for upper level elective credit, and can assist in numerous capacities including conducting presentations for 4-H events or serving in official knowledge capacities for events requiring judges specific to the equine discipline. By working in this capacity, students disseminate knowledge learned in courses and develop leadership and communication skills critical for career development.

These types of capstone opportunities in teaching, research, and extension serve as a means for students to gain unique and advanced experiences in the equine field while strengthening a collegiate equine program in all areas.

The Kentucky Equine Management Internship as a Capstone Course for College Students

Leslie A. Janecka
KEMI

The Capstone Course currently implemented by many colleges and universities is an opportunity for students to demonstrate that they have achieved the goals for learning that have been established by their educational institution and major department. In addition to the major-specific knowledge that should have been learned by the student, the Capstone Course should also encompass other specific life skills such as critical thinking, communication, ethics, leadership and motivation, among others, so that the student is best prepared to enter the workforce and their chosen career. The Kentucky Equine Management Internship (KEMI), established in 2000, can be a means of facilitating these opportunities for equine students.

Interns in the KEMI program spend twenty-two weeks living and working on a Central Kentucky Thoroughbred horse farm. On the farm, they are given the opportunity to demonstrate the equine-specific knowledge gained through their college curriculum by caring for broodmares and foals (during the Spring course) or working with sales weanlings, yearlings and mares or young horses in early race training (during the Fall course). The interns are viewed by their sponsoring host farm as a regular farm employee (with some special privileges) which helps transition the intern from a college student to a "regular" employee.

As an employee of the host farm, the interns must not only care for the horses, but learn to communicate with and interact with a workforce of which they may not be familiar with. With supervision, they must make decisions that can and do affect the horses and their fellow employees. In addition to the work on the farm, the interns must also balance their time on a weekly basis as they are required to attend weekly lectures and/or laboratory demonstrations that will enhance their knowledge of the equine industry. They are also required to prepare weekly reflections of these lectures and write six referenced papers, which require the interns to ask questions of their managers, fellow workers and seek information from other sources.

As a culmination of the course, the interns form groups with their fellow interns and present to invited members of the Lexington, Kentucky, equine community, an oral report on a controversial equine topic of concern to the industry. This enables the interns to show leadership skills, perform critical thinking and motivate each other to seek out solutions to problems or controversies within the industry. The interns are also required to prepare a portfolio of their internship experience.

Assessment of the intern's on-the-farm work skills and interpersonal skills is made by their farm manager or supervisor. Grading of the weekly summaries, referenced papers and portfolio is done by the KEMI Coordinator and evaluation of the oral presentation is made by members of the local equine community (farm managers, horse owners, equine industry personnel and graduates of the KEMI course). Since the KEMI program was established, more than 450 interns have attended the course. With a completion rate exceeding 85% and a very high placement rate in equine specific careers, the KEMI course has established itself as an ideal Capstone Course for equine students.

DISCUSSION

Indicators of Excellence

Laurie Lawrence, University of Kentucky
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