

Field Trip to Racetrack Enhances Classroom Experience¹

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Abstract

Students enrolled in ASI 695 Equine Exercise Physiology at Kansas State University have participated in a field trip to a racetrack in three separate years. In 2007, students travelled to the Woodlands in Kansas City, KS, and in 2009 and 2010 students visited Remington Park in Oklahoma City, OK. Each trip involved watching morning workouts, visiting with local horse trainers, watching races, visiting with track veterinarians, meeting with the track manager, and touring the jockeys' room. In the fall of 2010, all past participants were asked to complete a survey regarding their perceptions of the experience. Twenty-four students completed the survey. One hundred percent of students indicated that they that they learned a lot, their knowledge of the racing industry was expanded, and they enjoyed the field trip. Of all categories included on the survey, students indicated that their chosen career paths were least impacted by the field trip. In order to impact career decisions, it may be more beneficial to offer such experiences to younger students, rather than the juniors and seniors enrolled in the course. This is one way to implement experiential learning into an exercise physiology course and enhance student comprehension of concepts taught in the classroom.

Introduction

The demographics of agricultural students in colleges and universities have changed over the past 20 to 25 years, with more students coming from non-rural backgrounds (Dyer et al., 1996; Mollett and Leslie, 1986; Scofield, 1995). Colleges also are experiencing growth in the number of students primarily interested in companion animals and horses (McNamara, 2009; Moore et al., 2008). Because many of these students lack practical and applied knowledge of animal husbandry and management, it becomes even more critical that college curricula include experiential learning opportunities. While previous equine experience does not impact students' performance in introductory equine classes (Pratt-Phillips and Schmitt, 2010), it will be necessary for these students to gain hands-on experience and technical skills prior to becoming equine professionals.

Experiential learning opportunities enhance traditional classroom instruction (Cantor, 1995).

College-wide experiential learning programs aid students in gaining technical skills, being able to apply coursework to practical situations, and in developing research skills (SWP). Study tours have been utilized in agricultural sciences to enhance students' exposure to related industries (Ockerman, 1974; Posler and Mugler, 1980), including the equine industry (Anderson, 2009). Such experiential learning experiences have been reported to provide students with insights they are unable to gain through traditional classroom modalities (Robbins and Orr, 2004).

Equine Exercise Physiology (ASI 695) is offered at Kansas State University and consists of twice weekly lectures and a laboratory once per week. In the first year the course was offered (2007), there were 27 students enrolled. Typically new equine classes in the department enjoy large enrollment in the first semester as students are eager to try new classes and to earn credit hours toward their equine certificates, but after the initial offering enrollment generally levels off to numbers that are more sustainable on an annual basis. This course is no exception, with enrollment since 2008 remaining fairly consistent with 10-13 students each semester. Students learn about the physiological systems involved in the exercising equine athlete during lecture, and then they have the opportunity to evaluate physiologic responses to exercise during laboratory experiments. They do not, however, have the opportunity to see academic principles put into practice in a commercial setting. To accomplish this, a racetrack tour was implemented into the course curriculum. Survey data was then collected to gauge how students felt about the experience, what they felt they learned, and how the trip might be improved for future classes.

Materials and Methods

Pre-Trip Preparation

Throughout the semester students learn about the systems involved in exercise and conditioning programs as they apply to racehorses. These classroom discussions aid in preparing students for the racetrack experience, thus it is more beneficial to take the trip later in the semester, as was done in 2009 and 2010. In the week preceding the field trip, students take part in an in-class debate where they discuss current topics related to the racing industry.

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Field Trip

By debating such issues, students are better prepared to carry on knowledgeable conversations with track personnel, and they tend to ask more relevant questions while at the track.

Field Trip

Most students enrolled in the class are from Kansas or neighboring states. The horse racing industry in Kansas is limited, with only two minor racetracks currently operating in the state. Most of the students have very little, if any, exposure to horse racing beyond watching it on television. Thus the objectives of the field trip were threefold:

1. Give students a better understanding of horse racing as an industry.
2. Provide a medium whereby students can see how the concepts they learn about in the classroom are applied in a real-world situation.
3. Educate students about the breadth of personnel involved in the racing industry, thus exposing them to a variety of career opportunities.

Field trip attendance is highly encouraged, but it is not required. Students prepare a report following the trip that counts as a laboratory assignment toward their final grade in the course. The lowest laboratory score for each student is dropped at the end of the semester, so if students have scheduling conflicts with the field trip, they can choose not to attend. In that case, the field trip assignment will be used as their “drop score” at the end of the semester.

A racetrack tour was first offered in the fall of 2007. The class went to The Woodlands in Kansas City, KS. Students met with a trainer for morning workouts where they learned about the mental and physical conditioning of race horses. The trainer then took students back to his barn to visit with the class about the nutrition and health care provided to his horses. Then a state-employed veterinarian visited with the class about lameness exams and tools used to evaluate a horse's gait. The track manager gave students a tour of the facility and students ate lunch at the track. They then went to the test barn to learn about drug testing procedures. Students were also allowed to go into the jockeys' room, where they were permitted to hold racing saddles and learn about handicapping and the weights carried during a race. The class was allowed to sit at the start gate for the Quarter Horse races and then watched Thoroughbred races from the finish line. Because Quarter Horses race for short distances, horses leave the start gate at a full sprint and students were able to sense the power generated as the horses departed, and they could watch the entire race from their vantage point at the gate.

The Woodlands was closed in 2008, so no field trip was offered. When The Woodlands did not reopen the following year, a field trip was planned to Remington Park in Oklahoma City, OK. Students enrolled in 2008 were invited to attend the field trip in 2009. In total, two students from the 2008 class and eight

students from 2009 participated, along with a graduate teaching assistant. Remington Park offered many of the same experiences that students enjoyed at the Woodlands: watching morning workouts, meeting with trainers in the stable area, visiting with track veterinarians, touring the jockeys' room, visiting with the track general manager, touring the facilities, and watching live races. Remington Park provided a complimentary meal to each student and welcomed the class over the public address system. One of the day's races was named for the class, and students were included in one of the photographs of a winning horse that day.

In 2010 the class again went to Remington Park. Because the race schedule had changed, this time the field trip was an overnight excursion. As such, the field trip also included a brief stop at Lazy E Ranch in Guthrie, OK, to learn about how racehorse prospects are prepared for yearling sales. The overnight format also enabled students to spend some time at the American Quarter Horse Association World Championship Show which was also being held in Oklahoma City at the time.

Each year the Kansas State University Department of Animal Sciences & Industry has provided van transportation to and from the racetrack. Remington Park provided complimentary meals in 2009 and 2010, but in 2007 and 2009 any other personal travel expenses were paid individually by the students. In 2010 funding was obtained through the Kansas State University Office of the Provost's Academic Excellence Fund to cover all expenses associated with the field trip, including hotel and meal expenses.

Survey

In the fall of 2010, a survey was electronically distributed to all students previously enrolled in ASI 695 Equine Exercise Physiology for which current contact information was available. The Kansas State University Institutional Review Board (IRB) determined that this survey was exempt from IRB review. A disclosure statement was included on the survey and students were informed that they could opt-out if they so desired, and the identity of respondents were kept anonymous. The survey used a Likert-type scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree) and questions were designed to assess three different areas: 1) learning objectives 2) the value of differing components of the racetrack experience (for example, meeting with a track veterinarian, watching morning workouts, etc.) and 3) general benefits and perceptions. As well, students were asked to rank various aspects of the field trip from most to least educational (1 = most educational, 8 = least educational) and from most to least enjoyable (1 = most enjoyable, 8 = least enjoyable).

Of those who took the course prior to 2010, 12 of the 37 students (32.43%) that received the survey completed it. According to student responses, nine

Table 1. Student Responses Regarding Learning Objectives During Racetrack Field Trip (n = 24)^y

	Mean ^z	Standard Deviation	Minimum	Maximum
My knowledge about the horse racing industry was expanded	4.76	0.44	4.00	5.00
I felt like I learned a lot on the field trip	4.71	0.46	4.00	5.00
The field trip provided additional knowledge, beyond what had been gained in the classroom	4.62	0.59	3.00	5.00
I learned a lot about the rules and regulations regarding horse racing	4.48	0.60	3.00	5.00
My knowledge about the physiology of the equine athlete and its relationship to athletic performance was enhanced	4.48	0.68	3.00	5.00
I learned a lot about the welfare considerations surrounding horse racing	4.43	0.60	3.00	5.00
The field trip helped me understand the concepts discussed in the classroom	4.43	0.75	3.00	5.00
I learned a lot about the management of a race track	4.43	0.75	2.00	5.00
My knowledge about equine-related careers was expanded	4.33	0.73	3.00	5.00
I learned a lot about the physical conditioning of a race horse	4.29	0.90	2.00	5.00
I learned a lot about the mental training of a race horse	4.10	0.94	2.00	5.00
I learned a lot about drugs and their use in the racing industry	4.10	1.04	2.00	5.00
I learned a lot about the basic management and care of horses	3.81	1.12	2.00	5.00

^ySurvey responses listed in descending order of mean score

^zScale used: 1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree

Table 2. Student Responses Regarding Value of Different Components of Racetrack Field Trip (n = 24)^y

	Mean ^z	Standard Deviation	Minimum	Maximum
I learned a lot by visiting with the local horse trainers	4.57	0.60	3.00	5.00
Watching morning workouts was a valuable experience	4.33	0.73	3.00	5.00
I learned a lot by visiting the jockeys' room	4.29	0.72	3.00	5.00
Visiting with the track veterinarian was definitely worthwhile	4.29	1.10	1.00	5.00

^ySurvey responses listed in descending order of mean score

^zScale used: 1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree

who were enrolled in 2007, 0 who were enrolled in 2008, and three who were enrolled in 2009 completed the survey. In 2010, 12 of the 13 students enrolled in the course attended the field trip and all initiated the survey. One student, however, chose to answer only the first two questions. Six respondents had taken the trip to The Woodlands, three had not attended a field trip, and 16 had visited Remington Park. Two students began the survey but did not complete it.

Statistical Analysis

Means and standard deviations were calculated for responses to all survey questions. A General Linear Model was used to determine differences in student responses between those attending prior to 2010 and those attending the field trip in 2010. A paired t-test was used to determine the differences between students' educational and enjoyment ranking for each item. All data were analyzed by SAS version 9.2 (SAS Institute, 2007).

Results and Discussion

Learning Objectives

There was unanimous agreement among the students that their knowledge about the horse racing industry was expanded and they felt like they learned a lot by participating in the field trip, with 100% of respondents agreeing or strongly agreeing with these statements on the survey instrument (Table 1). Students felt as though they gained additional knowledge beyond what they learned in the classroom. They had an increased understanding of the rules regulating the horse racing industry. They had an increased understanding of how the physiological systems impact athletic performance. They learned more about welfare issues related to the racing industry, and they better understood the concepts taught during class, and that their knowledge of equine-related careers was expanded, with none of the respondents disagreeing (ranking 1 or 2) with any of these statements. These results are similar to those reported by Anderson (2009), who found that students reported a greatly expanded appreciation for all aspects of the horse industry following a horse industry study tour.

Field Trip

The lowest mean scores were obtained; indicating students felt they learned the least, on statements regarding the mental preparation of race horses, drug usage in the racing industry, and basic management and care of horses. Because students were primarily juniors and seniors that had previously taken a number of equine-management courses and some owned horses themselves, the students had a reasonably strong understanding of equine management practices prior to their participation in the field trip, so it was not surprising that they did not feel they increased their knowledge basis as dramatically in this category. The veterinarians that met with students during the first two years spent more time discussing drug testing than did the veterinarian in 2010, and there was variability from year to year regarding how much the mental health of the race horses was discussed. In general, the students' responses provided evidence that they felt as though they gained considerable knowledge and increased comprehension as a result of participating in the field trip.

Field trip Components

When the individual components of the field trip were broken down, students felt they got the most value from visiting with local horse trainers (Table 2). The trainers who participated each year were willing to spend considerable time with the students, went into great detail about their training programs, and were willing to answer all of the students' questions.

None of the students disagreed with (ranked a 1 or 2) any of the statements regarding the educational value of differing activities, but the highest standard deviation (1.10) was noted when students ranked the value of meeting with a track veterinarian. In the first two years students met with a veterinarian employed by the state, and most verbal comments students made on the trip home regarded how much they enjoyed and learned from the track veterinarian.

Both state-employed veterinarians spent considerable time talking about pre-race examinations, drug testing, and other regulatory issues. On the third year, students met with a private veterinarian that worked at the track. He focused on topics such as joint injections, X-rays, and preventative medicine. This particular veterinarian was distracted by personal events and spent less time and effort in discussing his role on the track. In fact, of those participating prior to 2010, 100% of students agreed or strongly agreed that meeting with the veterinarian was worthwhile and a mean score of 4.8 was generated by these students. Of those participating in 2010, eight students agreed or strongly agreed with the same statement, but three students (27.27%) provided lower rankings, generating a mean score of 3.82, which was significantly different ($P = 0.0378$). In fact, students attending prior to 2010 ranked this as their second most enjoyable experience at the track, while those attending in 2010 ranked it as the sixth most enjoyable experience ($P < 0.0001$). In terms of educational value, students attending prior to 2010 ranked meeting with the veterinarian as the most educational, while those attending in 2010 ranked it the fifth most educational component of the trip ($P < 0.0001$). The individual veterinarian chosen to meet with students appears to be very important, and those employed by the state may be seen as more interesting or relevant by the students.

Interestingly, when comparing the responses of students who attended the field trip in 2010 versus those participating prior to 2010, there was a significant difference in their perception of the value of the visit to the jockeys' room. In 2007 and 2009 jockeys were present and able to visit with students, and students gave this activity a mean rating of 3.80. In 2010, the Horseman's Liaison visited with students, and students ranked the activity significantly higher with a rating of 4.73 ($P = 0.0011$). Although students attending in 2010 were not able to visit with jockeys,

Table 3. Student Responses Regarding General Benefits and Perceptions of Racetrack Field Trip (n = 24)^y

	Mean ^z	Standard Deviation	Minimum	Maximum
I found the field trip to be an enjoyable experience	4.81	0.40	4.00	5.00
I learned about how the ideas discussed in the classroom can be applied to a real-world situation	4.62	0.67	3.00	5.00
The field trip allowed me to further develop connections and relationships with my classmates and/or instructor	4.57	0.75	3.00	5.00
The field trip helped me understand concepts discussed in my other classes	4.19	0.75	3.00	5.00
The field trip caused me to reconsider some of my pre-conceived ideas regarding the horse racing industry	4.00	0.95	2.00	5.00
The field trip stimulated an interest in horse racing that I did not previously have	3.95	1.02	2.00	5.00
The field trip influenced the way I will condition my own horses	3.24	1.04	1.00	5.00
The field trip influenced my career path	3.20	1.24	3.00	5.00

^ySurvey responses listed in descending order of mean score

^zScale used: 1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree

Table 4. Student Rankings of Activities at Racetrack (n = 24)

	Ranking Basis	Mean ^y	Standard Deviation	Minimum	Maximum	P-Value ^z
Morning workouts	Enjoyment	3.62	2.27	1.00	8.00	0.038
	Educational	4.52	1.83	1.00	8.00	
Visiting with horse trainers	Enjoyment	3.00	1.64	1.00	7.00	0.0013
	Educational	1.90	1.00	1.00	5.00	
Visiting with track veterinarian	Enjoyment	4.62	2.54	1.00	8.00	0.0009
	Educational	3.19	2.09	1.00	8.00	
Visiting the jockey's room	Enjoyment	4.19	1.60	1.00	7.00	0.76
	Educational	4.33	1.68	1.00	8.00	
Going to the saddling paddock	Enjoyment	4.43	1.91	1.00	7.00	0.023
	Educational	5.38	1.36	2.00	7.00	
Visiting with the track manager	Enjoyment	4.38	1.43	2.00	7.00	< 0.0001
	Educational	2.71	1.31	1.00	6.00	
Watching the races themselves	Enjoyment	3.86	2.35	1.00	7.00	< 0.0001
	Educational	6.33	1.11	4.00	8.00	

^yStudents ranked activities from most enjoyable or most educational (1) to least enjoyable or least educational (8). There was an "other" option, which, when included, allowed for a ranking of eight activities

^zp < 0.05 indicates a difference in the students' rankings of the educational value vs. enjoyment obtained within a given activity using a paired t-test

they felt as though they learned more. This may simply reflect the public speaking ability of the Horseman's Liaison, while the jockeys tended to be more quiet and reserved.

In fact, there were several components that were ranked higher by students attending in 2010 versus in previous years. These statements all had a higher mean ranking in 2010: I learned a lot by visiting with the local horse trainers (P = 0.0439); I learned a lot about the rules and regulations regarding horse racing (P = 0.0414); I learned a lot by visiting the jockeys' room (P = 0.0011); my knowledge about equine-related careers was expanded (P = 0.0427); my knowledge about the horse racing industry was expanded (P = 0.0052); the field trip stimulated an interest in horse racing that I did not previously have (P = 0.0026); and the field trip allowed me to further develop connections and relationships with my classmates and/or instructor (P = 0.0029). These increased rankings could be attributed to a variety of factors. Perhaps because the trip was in recent memory for these students, their feeling and emotions were stronger than those answering survey questions up to three years following their respective field trips. As well, it is possible that with experience, the instructor of the course had done a better job of preparing students for the trip. Finally, adding the overnight component and the stop at Lazy E could have enhanced the students' experience in 2010.

General Benefits

Aside from the course-related objectives addressed in Table 1, the students were also asked to rank a variety of statements regarding general benefits and perceptions related to the field trip (Table 3). All respondents enjoyed the experience, with 100% ranking this statement as a 4 or 5. Students felt that the field trip enhanced their ability

to understand the real-world application of concepts discussed in their exercise physiology class as well as other classes, and the experience enabled them to deepen their relationships with classmates and/or the instructor, as none of the students disagreed (ranked 1 or 2) with these statements. Interaction with other students and with the instructor has been shown by others to increase overall satisfaction in equine classes (Wood et al., 2010). While the field trip did not necessarily stimulate a great interest in the racing industry amongst all students, all indicated that it was a valuable experience.

The lowest rankings were in the area of whether the field trip influenced how the students will condition their own horses or their career paths. This would indicate that while the students felt they learned a lot, they did not necessarily feel that they would change their lives because of it. Only one student who participated in the field trip came from a racing background, but a few of the students competed in barrel racing. While the survey instrument did not link responses to individuals, it is probable that these were the students most likely to use the knowledge gained to condition their own horses. Many other students did not have horses of their own, and others were not necessarily concerned with conditioning their own horses to run. It was also apparent that the juniors and seniors enrolled in the course, who likely have already developed career plans, are not very likely to change their goals based on a field trip. Following a horse industry study tour, Anderson (2009) also reported a relatively low percentage of upperclassmen who reported that their chosen career path had been influenced by the experience. If career exposure is a major objective, this type of experience might be more useful if offered to students as freshmen or sophomores.

Educational Value versus Enjoyment

There was considerable variability in the students' rankings of various activities in terms of educational value and perceived enjoyment, with all activities receiving a number 1 ranking in at least one category or the other (Table 4). There were significant ($p < 0.05$) differences in student rankings of all but one activity when students were asked to shift their emphasis from most enjoyable to most educational. Students ranked watching morning workouts ($p = 0.03$), going to the saddling paddock ($p = 0.02$), and watching the races themselves ($p < 0.0001$) higher on the enjoyment scale, as compared to their rankings on the educational scale. These tended to be activities where the students had less interaction with the professionals working at the track. Conversely, students ranked these activities higher on the educational scale than they did the enjoyment scale: visiting with horse trainers ($p = 0.001$), visiting with the track veterinarian ($p = 0.0009$) and visiting with the track manager ($p < 0.0001$). It was quite apparent that students felt there was more educational value in listening to these professionals and in getting the opportunity to ask questions than there was in simply observing race day activities.

Summary

Overall the students reported having a very positive experience on their field trip to the racetrack. Those participating in this activity experienced strong support and gracious hospitality from both racetracks and from the professional horsemen and women involved. Student responses to the survey indicated that the objectives for the field trip were met: give students a better understanding of the racing industry, develop a further comprehension in the students about how principles discussed in class can be applied to a real-world setting, and expose students to the breadth of career opportunities available related to the racing industry. Students' responses would indicate that this particular experience met the first two objectives readily. While students were exposed to a variety of equine professionals and witnessed the array of jobs offered at a racetrack, they indicated that the experience did not cause them to change their chosen career paths. If instructors want to impact students' career choices, this type of activity might be better suited to freshmen and sophomore students. Students also gained other benefits from the class, such as developing closer relationships with their classmates and/or instructor. One hundred percent of students indicated that they that they learned a lot, their knowledge of the racing industry was expanded, and they enjoyed the field trip.

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