Do self-assessments reflect actual skill level of the student in an introductory equine laboratory course?

S.Lee[1], K. Cagle-Holtcamp[1], M. Nicodemus[1], H. Evans[2], A. Walters[1], and A. Gilmore[1]
[1]Animal & Dairy Sciences, Mississippi State University; Animal Sciences, [2]Iowa State University

Introduction

In the hiring process, employers look for confidence in a potential employee, and this confidence is particularly important in the equine industry when a lack of confidence can create safety issues for both the handler and the horse.[1,2,3] Earlier studies report previous exposure to horses gives students an advantage in the understanding of equine behavior and self-reported equine handling ability, but does this understanding and perceived ability reflect actual equine handling skills?[4,5] Course assessments by instructors in determining student learning and abilities often defers to self-reporting by the student, but the exposure to the horse may only develop a perceived confidence and not an actual skill set. Therefore, the objective of the study was to compare students' perceived confidence in equine handling to actual physical skill level directly working with the horse.

Students learning hoof handling skills in an equine laboratory

Materials & Methods

The study was conducted over the fall semesters of 2018 and 2019. A survey instrument was given at the beginning (pre-) and end (post-) of each semester for an equine course with a weekly 2 hour traditional equine laboratory (N = 83). Laboratories consisted of basic equine ground handling activities that were covered over 30 contact hours throughout the semester. Students worked with horses on a weekly basis for 2 hours each week for 10 weeks. The self-reporting survey consisted of 15 questions evaluating the student's confidence in their perceived equine horsemanship skills with students ranking their confidence from 1-5 in performing skill (Max total score = 75). A skill assessment was completed by course instructors at the same time as the pre- and post- student self-reporting surveys. The skill assessment consisted of 10 questions with instructors ranking skills from 1-4 (Max total score = 40). Total scores for each student for each assessment was determined pre- and post- course, and then, means of these totals were determined. T-tests were performed to compare pre- and post- means and a correlation coefficient was determined between the two assessments (P = 0.05).

References

1. Gronqvist, G., Rogers, C., Gee, E., Bolwell, C., & Gordon, S. (2016). The challenges of using horses for practical teaching purposes in veterinary programmes. Animals, 6(11), 69.
2. Lawrence, L. M. (1987). The effect of prior experience and level of interest on student performance in light horse management.NACTA Journal, 25-27.
3. Vogelsang, M., Webb, S., & Potter, G. (1989). A Hands-On Method of Teaching Horse Training Skills To Students of Varying Levels of Experience. NACTA Journal, 33(2), 45-47. Retrieved February 2, 2020.
4. Mbarika, V. W., Sankar, C. S., Raju, P. K., & Raymond, J. (2000). Importance of Learning-driven constructs on perceived skill development when using multimedia instructional materials. Journal of Educational Technology Systems, 29(1), 67-87.
5. Tumlin, K. I., Linares, R., & Schilling, M. W. (2009). Student Motivation and Assessment of Applied Skills in an Equine Studies Program. Journal of Applied Learning in Higher Education, 1, 93-108.

Results

All students enrolled in the course completed the required coursework participating in the 30 laboratory hours either during the scheduled weekly laboratory time or during make-up laboratory times set-up for student absences. After completion of the 30 laboratory hours, students improved both in their self-assessed confidence of equine handling skills (P = 0.036) and in their instructor-assessed skill level (P = 0.0001) (Table 1). Mean increase in total score for the self-reporting confidence assessment was 7.0, while the mean increase in total score for the instructor skill assessment was 5.7. A positive correlation (r = 0.58) was seen between the two assessment methods.

Students learning to measure height in an equine laboratory.

Table 1. Pre- & Post- Assessments of Equine Students.

Scores	Means	SD
Pre-Skill Level	24.3[A]	7.2
Post-Skill Level	29.9[A]	7.3
Pre-Confidence Level	49.1[B]	25.8
Post-Confidence Level	56.1[B]	25.3

Similar superscripts between rows indicate significant differences (P < 0.05).

Conclusions

Assessments are essential in the University setting as these are measures that help to determine the impact of University courses and what is being taught within those courses. The question is whether these assessments truly reflect what a student is learning? Poor assessments can give inaccurate measures and lead to a lack of improvement in educating students, and in the horse industry, poor education can lead to safety risks to the student and the horse. [4,5] Particularly in the horse industry, the ability to correctly and confidently handle horses is a priority to employers, and thus, equine instructors need to ensure that they are reaching this goal. [1,2,3] Often instructors refer to self-reporting assessments at the end of the year to determine effectiveness of their course, but does perceived confidence reflect actual ability?. In the end, as determined through this study, instructors unable to perform in person assessments at the end of the course can defer to self-assessments when evaluating course impact in an introductory equine laboratory course.