

THE RELATIONSHIP OF TEXAS A&M AGRILIFE EXTENSION SUMMER  
HORSEMANSHIP SCHOOL INSTRUCTORS' EVALUATED COMPETENCIES TO  
THE SELF-PERCEIVED COMPETENCIES OF YOUTH AND ADULT  
PARTICIPANTS

A Dissertation

by

TERI JILL ANTILLEY

Submitted to the Office of Graduate and Professional Studies of  
Texas A&M University  
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Chair of Committee,	Scott Cummings
Committee Members,	Gary Briers
	Jeffrey Ripley
	Dennis Sigler
Head of Department,	Jack Elliot

August 2015

Major Subject: Agricultural Leadership, Education, and Communications

Copyright 2015 Teri Jill Antilley

## ABSTRACT

The purpose of this study was to determine if participants of the Texas A&M AgriLife Extension Summer Horsemanship School Program, from 2006 through 2014, perceived increases in learning and competency. In addition, the relationship of the horsemanship school instructors' evaluated competencies with the self-perceived learning and competency of youth and adult participants was tested. A non-random, purposive sample of 37 different instructor teams, comprised of 58 different, individual instructors (53 female, 5 male), were evaluated, along with participants at 202 of the 239 horsemanship schools, resulting in a non-random, purposive sample of 2,701 completed questionnaires. Evaluations were grouped by county and year and compared to the scores of instructor teams who taught those groups. Questionnaires were analyzed for both all ages of participants and 4-H age (8-19) only.

Analysis of data revealed that all participants perceived an increase in learning ( $M = 3.89$ ,  $SD = 0.54$ ) and competency ( $M = 3.90$ ,  $SD = 0.50$ ) after completing the horsemanship school. When analyzed separately, data with only 4-H ages indicated that participant learning and competency increased as rider age increased ( $p < 0.01$ ). Data showed no significant relationships among instructor teams' competency (pattern and speaking scores) and participants' learning and competency, either of all ages or 4-H ages only; however, significant positive relationships ( $p < 0.01$ ) were found between instructors' pattern and speaking scores, as well as between participants' learning and competency. No significant relationship was seen between instructor teams' scores on a

specific horsemanship maneuver and the degree of perceived learning in the participants they taught on that same horsemanship maneuver. When participants of all ages were analyzed, data indicated that learning declined ( $p < 0.05$ ) as instructors taught more schools. Additionally, analysis of data pointed to a decline in learning ( $p < 0.05$ ) of participants of all ages, as the instructor got older, and when reviewing participants of 4-H age only, data revealed that both learning ( $p < 0.01$ ) and competency ( $p < 0.05$ ) were negatively related to instructor age. These results could be a starting point for future studies of the Texas A&M AgriLife Extension Summer Horsemanship School Program.

## DEDICATION

To my family and friends for their love and support

## ACKNOWLEDGEMENTS

I would like to thank my committee chair, Dr. Cummings, and my committee members, Dr. Briers, Dr. Ripley, and Dr. Sigler, for their guidance and help throughout the course of my education and research.

I would also like to thank my friends and colleagues for their encouragement to continue my education and for their support through it all.

Finally, thanks to my family for believing in me and cheering me on each step of the way. I appreciate and love you.

## TABLE OF CONTENTS

	Page
ABSTRACT.....	ii
DEDICATION.....	iv
ACKNOWLEDGEMENTS.....	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES.....	viii
CHAPTER I INTRODUCTION.....	1
Background.....	1
Evidence of Needed Training.....	4
Statement of the Problem.....	6
Benefits of the Study.....	6
Purpose of the Study.....	8
Research Questions.....	8
Definitions.....	9
Limitations.....	13
IRB Approval.....	14
CHAPTER II LITERATURE REVIEW.....	15
Technical and Life Skills Gained Through Various Activities.....	15
Motivational Patterns.....	23
Relationship of Leader or Instructor Competencies and Student Learning.....	28
Effective Learning Strategies.....	29
Teacher Credibility.....	30
Summary.....	30
CHAPTER III METHODS.....	32
Design.....	32
Population.....	32
Instructor Training and Evaluation.....	33
Horsemanship Schools and Evaluation.....	34

	Page
Data Collection.....	35
Data Analysis.....	36
CHAPTER IV RESULTS.....	40
Participant Learning and Competency.....	40
Participant Learning and Competency Relative to Rider Age.....	41
Participant Learning and Competency Relative to Instructor Teams’ Competency.....	44
Participant Learning Relative to Instructor Teams’ Competency Per Maneuver.....	45
Participant Learning and Competency Relative to Instructor Teams’ Teaching Sequence.....	48
Participant Learning and Competency Relative to Instructor Teams’ Experience.....	49
Instructor Teams’ Scores Relative to Their Experience.....	51
CHAPTER V DISCUSSION AND CONCLUSIONS.....	52
Participant Learning and Competency.....	52
Summary of Correlations.....	52
Participant Learning and Competency Relative to Rider Age.....	54
Participant Learning and Competency Relative to Instructor Teams’ Competency.....	54
Participant Learning Relative to Instructor Teams’ Competency Per Maneuver.....	55
Participant Learning and Competency Relative to Instructor Teams’ Teaching Sequence.....	55
Participant Learning and Competency Relative to Instructor Teams’ Experience.....	56
Instructor Teams’ Scores Relative to Their Experience.....	56
Program Evaluation.....	57
Post-Then-Pretest Evaluation Method.....	57
Recommendations.....	58
REFERENCES.....	62
APPENDIX A.....	70
APPENDIX B.....	74
APPENDIX C.....	76

## LIST OF TABLES

		Page
Table 1	Summer Horsemanship School Program Pattern Evaluation.....	37
Table 2	Summer Horsemanship School Program Instructor Speaking Evaluation.....	37
Table 3	Summer Horsemanship School Program Participant Questionnaire....	38
Table 4	Descriptive Statistics of Participant Questionnaire.....	42
Table 5	Descriptive Statistics of Learning and Competency Constructs.....	43
Table 6	Descriptive Statistics of Age Groups and Learning and Competency Constructs.....	43
Table 7	One-way ANOVA for Age Groups and Participant Learning and Competency.....	43
Table 8	Correlation of Participants (Ages 8-19) and Learning and Competency.....	44
Table 9	Correlation Between Instructor Pattern and Speaking Scores and Participant Learning and Competency (All Ages).....	46
Table 10	Correlation Between Instructor Pattern and Speaking Scores and Participant Learning and Competency (Ages 8-19).....	46
Table 11	Correlation of Specific Maneuver Scores of Instructors and Participants (Ages 8-19).....	47
Table 12	Correlation of Instructor Teaching Sequence and Participant Learning and Competency (All Ages).....	48
Table 13	Correlation of Instructor Teaching Sequence and Participant Learning and Competency (Ages 8-19).....	48
Table 14	One-way ANOVA for Instructor Teaching Sequence and Participant Learning and Competency (Ages 8-19).....	49

	Page
Table 15 Correlation of Instructor Years of Experience and Participant Learning and Competency (All Ages).....	50
Table 16 Correlation of Instructor Years of Experience and Participant Learning and Competency (Ages 8-19).....	50
Table 17 Correlation of Instructor Teams' Average Age and Pattern and Speaking Scores (All Ages).....	51
Table 18 Correlation of Instructor Teams' Average Age and Pattern and Speaking Scores (Ages 8-19).....	51

CHAPTER I  
INTRODUCTION\*

***Background***

The Texas A&M AgriLife Extension Summer Horsemanship School Program was started in 1973, under the leadership of B. F. Yeates, Extension Horse Specialist. Over the past 42 consecutive years, a total of 1,383 schools reaching approximately 48,009 youth, parents, and volunteers have been conducted in various counties across Texas. The primary focus of the schools is to help youth and adults of all skill levels improve their horsemanship abilities by providing short lectures and demonstrations, followed by lengthy riding sessions to practice the maneuvers and help solve problems encountered (Antilley & Sigler, 2014).

When the program initially started, college-aged instructors were hand-picked by Mr. Yeates from across the state of Texas, and training consisted of gathering these students together a few days before they were sent out on the road and providing them with an overview of what to teach. Over the years, the selection and training process has evolved into a more formal and structured process. Each spring semester, interested college students have the opportunity to try out for the instructor positions at Texas A&M University. Bi-weekly riding sessions, under the leadership of Extension

---

\*Reprinted in part with permission from “Educational value of horsemanship clinics to youth and adult riders” by Cavinder, C. A., Antilley, T. J., Briers, G., Sigler, D., Davidson, D., & Gibbs, P. G., 2010. *Journal of Extension*, 48(6), 1–8, Copyright 2010 by Journal of Extension.

specialists, provide students with instruction on the format of the program, serve to improve the horsemanship skills and abilities of the students, and offer opportunities for students to improve communication and teaching skills, as well as problem solving abilities. Prospective instructors are evaluated mid-semester to determine which riders will be hired as instructors for the summer. Each student performs a pattern that includes all the maneuvers learned, and they also teach and demonstrate one of the maneuvers or skills. Maneuvers include the following: four types of rein aids, teaching the horse to follow its nose (basic I), move away from pressure (basic II – lateral movements including hip-in, side-pass, and two-track), and bridle-up (basic III - collection), stop, back up, rollbacks, turnarounds (spins), leads, speed control, simple lead changes, and flying lead changes, as well as going over or around ground poles or other obstacles. Students are scored on riding ability and precision of pattern, as well as on proficiency in communicating and teaching. Students selected to become instructors continue riding the remainder of the semester to further improve their expertise. After a final week of training at the end of the semester, instructors travel in teams of two or three across the state of Texas teaching horsemanship skills to youth and adults in various counties that requested a school. Since 1973, a total of 244 different college students (193 female, 51 male) have been trained as instructors. Many of these students taught more than one summer in the program (Antilley & Sigler, 2014).

Also in the spring semester, interested Texas counties register for and submit dates to host a horsemanship school in their area. Counties are responsible for the school fee, securing a facility, advertisement to invite participation, and providing

housing for instructor teams' horses. Horsemanship schools typically occur sometime from late May to early July. Riders at the schools, youth and adult, are provided instruction and assistance with the same maneuvers and skills the college-age instructors learned over the course of a semester; however, the information is presented to the school participants in either two or three days, so the amount of time to practice each new skill is limited, especially if there is a large number of riders participating. A maximum of 30 riders is suggested, to ensure participants receive adequate one-on-one instruction; however, a few schools exceed that amount. Near the end of each school, riders are given an evaluation to complete anonymously and to return. Questions on the evaluation are related to self-perceived, horse-related learning and competencies of the rider after participating in the horsemanship school (Antilley & Sigler, 2014).

Although instructors are evaluated mid-semester and informally report back to headquarters about what they learned as they went through the training process and taught different groups of riders throughout their travels, no formal research has been conducted specific to the Texas A&M AgriLife Extension Summer Horsemanship School Program in the area of instructor competency, but one study did focus on the area of self-perceived participant competency. In 2010, researchers reviewed the horsemanship school rider evaluations gathered from the summers of 2006 through 2009, in an effort to look at the educational value of the program. Results of the study indicated significant learning occurred in the areas of awareness, training ability, and competency and ability (Cavinder et al., 2010).

### ***Evidence of Needed Training***

Horsemanship trainings, such as these, are needed and are of interest to both youth and adult horsemen, as evident in several studies conducted in multiple states. In 2004, researchers identified the strengths and weaknesses of 100 4-H horse project youth, ranging from 13 to 19 years of age, from six New England states, by administering a 100 question, general knowledge exam at the Eastern States Exposition 4-H Horse Show. No significant differences were found due to gender; however, average general knowledge scores based on age ( $p < 0.01$ ), riding discipline ( $p < 0.01$ ), years of participation ( $p < 0.01$ ), state ( $p < 0.01$ ), and category ( $p < 0.01$ ) were significantly different. Results showed the following rank in categories of general knowledge (highest to lowest means): health and disease, breeds, colors and markings, anatomy and physiology, tack and equipment, training, nutrition, reproduction, conformation, and history and evolution (Nadeau, McCabe Alger, Hoagland, & Chameroy, 2004). Similar results in the ranking of general knowledge categories were found when researchers tracked the exam results over three years (Nadeau, McCabe Alger, & Hoagland, 2007).

Additionally, in 2006, researchers surveyed 1,008 horse owners to obtain information on their need for an Extension horse program in Minnesota. Questions asked included preference of learning topics, informational venues, suitable technical level of resources, potential partnerships, horse owner demographics, and achievability and success for new equine programs. Six hundred fifty-nine respondents, representing 86 of the 87 counties in Minnesota, perceived themselves as very knowledgeable in the

area of general horse care and somewhat knowledgeable in the areas of horse facilities, horse health, horse nutrition, and pasture management. These horse owners identified their top 10 desired learning topics as follows: basic training, vaccinations, hoof care, horse nutrition, colic, equine behavior, proper tack fitting, fly and pest control, when to call a veterinarian, and poisonous plants (Martinson et al., 2006).

Moreover, Rusk, Kerr, Talbert, and Russell (2001) evaluated 405 4-H horse and pony leaders in Indiana to determine their demographics, motivations for leadership, and confidence level in teaching youth various horse-related topics. Results from a questionnaire indicated that the majority (>70%) of leaders were white, married women ranging in age from 31 to 50, and their motivation for leadership was primarily due to the fact that their children were 4-H horse and pony members (68%). Their top two reasons for remaining leaders also included their children being members (47%), as well as enjoying working with youth (41%). Most leaders strongly agreed to statements of liability awareness (179/389) and making meetings interesting and interactive (188/388), and most agreed to statements of clear vision of objectives (201/390), recruiting volunteers for shows (203/392), controlling negative parental involvement (192/387), making scholarship and award information available (167/383), and ability to teach members about horse judging (136/380). On the other hand, most leaders disagreed with statements of ability to improve oral reasons scores in judging (139/376) and comfortableness with hippology content and resources (164/370), while most strongly disagreed with statements of familiarity with horse bowl references (152/376) and preparing horse bowl teams for competition (160/379). Less than 25% of these leaders

indicated they had gone to trainings at the state and regional level, stating distance and cost as the primary reasons. Even with evidence of weakness in horse judging reasons, hippology, and horse bowl competitions, 54% stated training was needed in the area of how to conduct showmanship and horsemanship clinics for youth. Although these research projects were not conducted in Texas, it is apparent that increased general knowledge of training, tack, and equipment is desired by youth and adult horse owners, and the Texas A&M AgriLife Extension Summer Horsemanship School Program provides the opportunity for such gains.

### ***Statement of the Problem***

To date, no studies have examined the relationship of the horsemanship school instructors' competencies, as evaluated by faculty at tryouts, with the self-perceived competencies of school participants, as expressed on the end-of-school questionnaires. With very little research specific to the Texas A&M AgriLife Extension Summer Horsemanship School Program, there is merit to developing more studies on this topic.

### ***Benefits of the Study***

Further study of the summer horsemanship school program has numerous, potential benefits. First, it might provide further insight into a better selection process for instructors and/or different evaluation techniques or tools, thus, strengthening the program overall. In addition, future studies focusing on a better understanding of what college students gain from the semester-long training program would provide more insight into the value of the Texas A&M AgriLife Extension Summer Horsemanship School Program. Gains in horsemanship and life skill competency, as a result of training

to become an instructor, would enable the program to be promoted as an avenue for students interested in horses to obtain valuable experience that will assist them throughout their lives, such as in relationships and the workplace. According to a study conducted by Barkley in 1991, oral communication, people skills, problem solving, and management skills were the top four skills of importance for graduates of the College of Agriculture at Kansas State University in their current jobs. In the Texas A&M AgriLife Extension Summer Horsemanship School Program, instructors have the opportunity to learn various horsemanship maneuvers and skills and then explain and teach those same skills and maneuvers to youth and adult horsemanship school participants across the state. Instructors work with groups of riders of various size, age, and skill level, work as a team with other instructors, help riders understand how to correct problem horses and improve their own abilities, and manage people, horses, time, and conflict.

Similarly, benefits gained could be used as a recruiting tool for youth attending the schools to try out for instructor positions when they reach college age. Not only would this provide Texas A&M AgriLife Extension with potential instructors who have a sense of pride and ownership in the program and who have the foundational riding skills needed for teaching others, but it would allow for these students to gain the needed work-related experience and skills previously mentioned. This would be a step in the process of Extension leading the way in preparing youth for the workforce (Cochran, Catchpole, Arnett, & Ferrari, 2010).

Furthermore, a knowledge base of advantages of the horsemanship program has the potential to encourage financial backing from key stakeholders, expanding the efforts

of Extension and allowing for continued success. As a final point, this information will be useful for accountability purposes, as well as for overall program improvement.

### ***Purpose of the Study***

The purpose of this study is to determine if learning and competency increases were perceived by horsemanship school riders who participated in the Texas A&M AgriLife Extension Summer Horsemanship School Program from 2006 through 2014. Additionally, researchers intend to determine the relationship of the horsemanship school instructors' evaluated competencies to the self-perceived learning and competency of youth and adult participants.

### ***Research Questions***

This study will answer the following research questions:

1. Did Texas A&M AgriLife Extension Summer Horsemanship School Program youth and adult participants, evaluated from 2006 through 2014, perceive to have gains in learning and competency, relative to the topics covered at the horsemanship school?
2. Is there a relationship between Texas A&M AgriLife Extension Summer Horsemanship School Program instructor teams' horsemanship pattern and speaking skill scores, as assessed by faculty at tryouts, and the degrees of self-perceived learning and competency in youth and adult horsemanship school participants?
  - a. Is there a relationship between instructor teams' pattern and speaking scores and participants' learning and competency scores?

- b. Do instructor teams' scores on a particular horsemanship maneuver/skill relate to the degree of perceived learning in the participants they taught on that same particular horsemanship maneuver/skill?
- c. Do evaluations of participants show differences in learning and competency gains over time, as instructor teams taught their first to last clinic over the summer?
- d. Do evaluations of participants show differences in learning gains when taught by instructor teams with various years of combined experience?

### *Definitions*

The following definitions are included for the purpose of this study:

1. **4-H** - the nation's largest positive youth development and youth mentoring organization, empowering six million young people in the U.S. It is the youth development program of our nation's Cooperative Extension System and USDA. 4-H empowers youth to reach their full potential, working and learning in partnership with caring adults. Head, Heart, Hands, and Health are the four Hs in 4-H, and they are the four values members work on through fun and engaging programs (<http://www.4-h.org/>)
2. **4-H age** - 8 (and in the third grade) or 9 years of age and have not reached 19 years of age on or before August 31 of the current 4-H year (Texas 4-H Rules and Guidelines, 2014).
3. **4-H animal science projects** – projects including beef and dairy cattle, dogs, goats, horses, poultry, rabbits, sheep, and swine (<http://texas4-h.tamu.edu/>).

4. **County** - a political and administrative division of a state, providing certain local governmental services. There are 254 counties in Texas (<http://www.google.com>).
5. **Evaluator** – faculty, staff, graduate student, or horse industry professional who evaluated the horsemanship and speaking ability of prospective horsemanship school instructors.
6. **Horse or livestock judging** – an art where a person expresses his/ her opinion of a class, by his/her order of placement. The ability of a judge to express his/her opinion orally reinforces his/her order of placement (<http://www.google.com>).
7. **Horsemanship** – the rider’s ability to execute, in concert with their horse, a set of maneuvers with precision and smoothness while exhibiting poise and confidence, and maintaining a balanced, functional, and fundamentally correct body position (<http://aqha.com/handbook>).
8. **Horsemanship school** – a 2-day or 3-day school for youth and/or adult riders requested by horse groups or county offices across Texas. Riders are taught basic, intermediate, and advanced horsemanship maneuvers/skills by instructors.
9. **Instructor** – a college-aged student involved in the Texas A&M AgriLife Extension Summer Horsemanship School Program who was hired to travel the state of Texas as a member of a team to teach youth and adults in various counties more about basic, intermediate, and advanced horsemanship maneuvers/skills.
10. **Instructor teams** – a group of two or three horsemanship school instructors.

11. **Knowledge of subject matter** – the understanding and ability to accurately convey the description of a particular horsemanship skill, maneuver, or training method.
12. **Life skills** - skills required by adults for everyday living and are often called leadership life skills (Boyd, Herring, & Briers, 1992)
13. **Maneuver** - a movement or series of moves requiring skill and care (<http://www.google.com>); examples include: four types of rein aids, teaching the horse to follow its nose (basic I), move away from pressure (basic II – lateral movements including hip-in, side-pass, and two-track), and bridle-up (basic III - collection), stop, back up, rollbacks, turnarounds (spins), leads, speed control, simple lead changes, and flying lead changes, as well as going over or around ground poles or other obstacles.
14. **Participant** – a youth or adult rider who attended and participated in one of the Texas A&M AgriLife Extension Summer Horsemanship Schools.
15. **Pattern score** – a composite score for instructor teams consisting of the following 20 components: trot logs, trot a right circle, stop, walk logs, arc right circle and hip-in, counter arc left circle, lope (right lead) right circle, simple lead change and lope (left lead) left circle, trot, stop and 360° left and walk, lope (right lead) 1¼ circles right and left rollback, lope (left lead) 1¼ circles left and right rollback, lope logs, trot or walk, two-track or side-pass right, two-track or side-pass left, long trot or lope and stop and back, and flying lead change.

16. **Showmanship** – the exhibitor’s ability to execute, in concert with a well-groomed and conditioned horse, a set of maneuvers prescribed by the judge with precision and smoothness while exhibiting poise and confidence, and maintaining a balanced, functional and fundamentally correct body position (<http://aqha.com/handbook>).
17. **Speaking score** – a composite score for instructor teams consisting of the following three components: horsemanship ability and riding skills, speaking ability and knowledge of subject matter, and degree of difficulty performed.
18. **Stakeholder** – a person, group, or organization that has interest or concern in an organization (<http://www.businessdictionary.com/>).
19. **Summers taught** – the combined number of summers that instructor teams were hired to teach. Each team had a minimum of two summers of experience (one from each instructor).
20. **Teaching sequence** – the order of horsemanship schools taught by an instructor team in one summer.
21. **Technical skill** – a skill that is required for the accomplishment of a specific task (<http://www.businessdictionary.com/>).
22. **Texas 4-H Livestock Ambassador Program** – a program developed in 2007 that strives to provide high school aged 4-H members the opportunity to develop and practice advanced leadership skills related to mentoring other youth and to become advocates for animal agriculture (<http://texasyouthlivestock.com/livestock-ambassadors/>).

23. **Texas A&M AgriLife Extension Service** – a unique agency with a statewide network of professional educators, trained volunteers, and county offices. It reaches into every Texas county to address local priority needs (<http://agrilifeextension.tamu.edu/>).

24. **Tryouts** – a process where college-age students in the Texas A&M AgriLife Extension Summer Horsemanship School Program are evaluated on their horsemanship and speaking ability to determine their official hiring as a summer horsemanship school instructor.

### *Limitations*

As with every study, there are several limitations associated with the current research. First, this study is specific to the Texas A&M AgriLife Extension Summer Horsemanship School Program; therefore, the ability to generalize the findings and recommendations of this research to other programs is very limited. Additionally, the instructors and participants evaluated were not randomly selected, further limiting generalization. Also, instructors in the study were those who had the highest scores in tryouts, primarily based on horsemanship ability. Instructor teams were composed of two or three students who had similar tryout scores, so there was little variability among instructor teams, since matching relatively stronger instructors with relatively weaker instructors canceled differences. Furthermore, instructors' speaking ability and knowledge of subject matter only constituted one-third of the total speaking score, so the rubric used might not have fully captured the qualities of the best teachers. Additionally, the three most consistent evaluators' scores were used in the study to create composite

pattern and speaking scores for instructor teams, but only one evaluator was able to score instructors every year. Along with the stress and anxiety of competing for an instructor position, only having one chance to prove their horsemanship and speaking ability might not have provided the most accurate reflection of the instructors. Moreover, some participants of the program might not have fully read and/or understood the questionnaire and provided the most truthful representation of their learning and/or competency.

***IRB Approval***

All methods in this study were approved by the Institutional Review Board (IRB).

## CHAPTER II

### LITERATURE REVIEW\*

#### *Technical and Life Skills Gained Through Various Activities*

Growth is essential to life. Technical skills, as well as life skills, are necessary for fostering growth and maturity in both youth and adults. The Search Institute (2007) has pinpointed 40 developmental assets that strongly impact youth (ages 12-18) and grouped them into the following eight categories: support, empowerment, boundaries and expectations, constructive use of time, commitment to learning, positive values, social competencies, and positive identity. Extension programs, camps, and activities, provide many opportunities for youth to grow not only in subject-matter knowledge but also in life skills, such as building positive relationships with adult and peer role models, which fosters development of many of the previously listed assets that impact youth (Schlink, 2000).

#### *Participation in General 4-H Activities*

Life skills, as defined by Boyd, Herring, and Briers (1992), are skills “required by adults for everyday living and are often called leadership life skills” (p. 1). Research has been conducted to determine life skills gained through various activities, and many of the studies are related to youth activities. It has been well documented that

---

\*Reprinted in part with permission from “Educational value of horsemanship clinics to youth and adult riders” by Cavinder, C. A., Antilley, T. J., Briers, G., Sigler, D., Davidson, D., & Gibbs, P. G., 2010. *Journal of Extension*, 48(6), 1–8, Copyright 2010 by Journal of Extension.

participation in 4-H leads to perceived development of life skills in youth. In 1986, Collins reported that teenagers in Nebraska perceived to have learned very much about relationship skills and much about communication, problem solving, decision making, and inquiry skills through participation in 4-H. Cantrell, Heinsohn, and Doebler (1989) expressed the value and worth of 4-H programs, as over 760 Pennsylvania teens perceived to have gained life skills by being in 4-H, especially those in leadership roles beyond the county level. Similarly, Seevers and Dormody (1995) found that 4-H members in Arizona, Colorado, and New Mexico indicated that holding office in 4-H contributed toward development of leadership life skills.

Comparable perceptions have been documented in alumni of 4-H activities. In a study conducted by Fox, Schroeder, and Lodl (2003), 196 respondents from 17 southeast Nebraska counties indicated that 4-H involvement had primary influence on their life skill development, ranking responsibility, product production skills, ability to handle competition, and ability to meet new people as the top four skills gained. Decision making, developing relationships, learning and gaining knowledge, understanding of self, management, working in and understanding group processes, and communication were leadership life skills that former State 4-H Council members reported to have gained as a part of the 4-H experience (Bruce, Boyd, & Dooley, 2004). When comparing 4-H to other youth organizations, Radhakrishna and Doamekpor (2009) found that 57% of 156 former members of both 4-H and other groups perceived 4-H to be most helpful in developing skills in leadership, communication, and learning responsibilities.

### *Participation in 4-H Animal Science Projects*

Research relating specifically to participation in 4-H animal science projects has also suggested perceived growth in life skill development. In an investigation conducted by Ward (1996), 52 alumni of 4-H in New Jersey indicated the ability to accept responsibility and the ability to relate to others as the top two life skills influenced by being in the program, with shows or exhibitions being the primary activity that effectively helped develop these skills. Boleman, Cummings, and Briers (2005) studied life skill gain in youth exhibiting beef, swine, sheep, or goat projects in Texas through the perceptions of their parents. The study suggested that parents did perceive life skill development in their children, as a result of participation in the animal projects, with accepting responsibility as the top skill denoted across all four projects.

### *Participation in 4-H Judging*

Judging is another 4-H activity involved in youth life skill gain. When surveyed, alumni indicated the Indiana 4-H livestock judging program was highly influential in the development of the following top five life skills: decision making, problem solving, oral communication, self-confidence, and verbally defending a decision (Rusk, Martin, Talbert, & Balschweid, 2002). Nash and Sant (2005) found alumni to rank participation in 4-H judging programs in Idaho as extremely influential in developing the life skill of animal industry knowledge and as highly influential in maturing skills of decision making, verbally defending a decision, oral communication, and problem solving.

### *Participation with Horses*

Although numerous studies have been conducted to determine life skills related to 4-H activities, there is limited information related specifically to 4-H youth and life skill gains influenced by working with horses. Other entities have conducted research in this area. In 2005, Cole found that at-risk, urban youth in New Jersey involved in the Horses and Youth (H.A.Y.) project demonstrated significant increases in the life skills of anger management, leadership, self-awareness, problem solving, interpersonal skills, and workplace skills ( $p < 0.05$ ), while a comparison group not involved with horses only demonstrated significant increases in anger management and leadership. Smith, Swinker, Comerford, Radhakrishna, and Hoover (2006) surveyed 982 youth that were members of various horse organizations and found a positive relationship ( $r = 0.501$ ,  $p < 0.01$ ) between total horsemanship and total life skills development. Additionally, Ferguson, Barnett, Culen, and TenBroeck (2008) detected a significant increase ( $p = 0.008$ ) in self-esteem in 122 youth that participated in a six-day Florida 4-H Horsemanship School in 2005. In 2011, Anderson and Karr-Lilienthal surveyed Nebraska youth who competed at the 4-H Horse Stampede in horse demonstrations, public speaking, horse bowl, and art contests, to gain insight into the impact of the 4-H horse project on youth life skills, horse knowledge, and upcoming educational plans. With a response rate of 44 out of 90 youth, 86% strongly to moderately agreed to gaining life skills. Average responses to the top six answers included the following: handling pressure ( $M = 4.64$ ,  $SD = 0.78$ ), respecting officials ( $M = 4.56$ ,  $SD = 0.96$ ), sportsmanship ( $M = 4.53$ ,  $SD = 0.88$ ), goal setting ( $M = 4.52$ ,  $SD = 0.86$ ), self-

motivation ( $M = 4.51, SD = 0.88$ ), and leadership ( $M = 4.51, SD = 0.88$ ). In addition to life skill gains, general horse knowledge was also increased, as indicated by 83% of youth who strongly to moderately agreed to statements. Average responses to the top two answers included: increased horsemanship skills ( $M = 4.62, SD = 0.78$ ) and better understanding of better horse care procedures ( $M = 4.61, SD = 0.99$ ). Eighty percent of youth also strongly to moderately agreed that there is a relationship between participation in the 4-H horse project and future college plans.

#### *Participation in Collegiate Sports*

In addition to youth-related activities, life skill gains have also been researched in activities of college students. Sports are one avenue for increased life skills. Niendorf (2007) observed life skill development in 21 college women involved in soccer, field hockey, volleyball, or basketball. Skills learned as a result of participation in these sports included: to be competitive, to work hard, to be a leader, to be self-motivated, to work as a team, to develop time management, to develop relationships, to communicate with others, to be confident, to respect others, to be supportive, to maintain composure, and to be a role model.

#### *Participation in Collegiate Horse Judging*

Collegiate horse judging, similar to youth judging, provides another opportunity to gain life skills. Potter and Mulroy (1994) developed a tool to evaluate students enrolled in a college-level horse judging course on their perceived gains in critical thinking and life skills. Increases in judging ability, decision making, public speaking, self-evaluation, and teammanship were found to be significant.

### *Participation in Collegiate Horse Programs*

Although few researchers have investigated the area of college students' involvement in horse programs resulting in life skill development, a study by Evans et al. (2009) explored the subject. After surveying students from six universities enrolled in a semester-long equine training course, researchers did not find statistically significant data that showed increases in life skills. However, there was a trend of perceived improvements, which warrants further investigation. With no known research specific to the Texas A&M AgriLife Extension Summer Horsemanship School Program and the benefits it provides to college-student instructors in the areas of horsemanship and life skill competency, there is value in future studies on these topics, in addition to studies on the benefits gained by youth and adult horsemanship school participants.

### *Participation in Short-term Workshops*

Long-term participation in projects and activities or on teams is not the only successful means to producing gains in both technical and life skills in youth and adults. Short-term participation in intensive workshops has also been documented to be effective. In an effort to educate youth about scientific principles of Animal Science, animal industry issues, and careers in animal agriculture, as well as to develop and foster life skills, faculty at Purdue University have hosted intensive, 3-day, 4-H Animal Science Workshops, since 1972. Rusk and Machtmes (2002) evaluated this program and found that the 225 youth in attendance at the 2000 Animal Sciences Workshop for Youth indicated a positive outcome. Specifically, 94% thought the workshop was a positive learning experience, 92% would encourage others to attend, 91% improved

skills in communication and teamwork, 88% had an increased opinion of Purdue University after the workshop, 85% learned how to better manage their animal project, 85% better understood technology used in Animal Sciences, 85% became more interested in attending college, and 78% were motivated to share what they learned with others.

Similarly, Zanolini, Rayfield, and Ripley (2013) analyzed the perceptions of youth who participated in a concentrated 3-day Texas 4-H Livestock Ambassador Program during 2010 and 2011. Forty-three of 45 participants finished and returned the online questionnaire. After participating in the program, livestock ambassadors' perceptions specified strong agreement with statements on the questionnaire related to increased skills, support, and value for careers, higher education, and leadership, indicating the program was effective in meeting its objectives.

#### *Participation in the Summer Horsemanship School Program*

In 2010, a study was conducted to determine the effectiveness of horsemanship schools in increasing and strengthening the horse-related knowledge, training ability, and competency of the participants. Researchers reviewed and analyzed questionnaires collected from the summers of 2006 through 2009, which were given to riders to anonymously fill out and return near the end of their two-day or three-day school. Over the four summers, 37 different college-aged instructors taught a total of 131 horsemanship schools, which reached 2,298 riders. A total of 102 of the schools were surveyed, resulting in 1,366 questionnaires for review. The 30 questions were broken into the following three categories: Awareness (A), Training (T), and Competency and

Ability (C). Participants could answer questions with the choices of *No*, *Undecided*, *Probably*, *Definitely*, and *Already knew how to*. Data were analyzed with and without the answer of *Already knew how to*, in order to achieve a better understanding of the actual gains of participants. With all answers included, the answer choice with the highest percentage was *Definitely* for three of the four awareness questions, for 14 of the 15 training questions, and for 11 of the 11 competency and ability questions, indicating participants did perceive learning gains in each of the three categories. Excluding answers of *Already knew how to* resulted in even higher percentages for the answer choice *Definitely* for every question across all categories. Average responses of participants included the following: Awareness ( $M = 3.67$ ,  $SD = 0.54$ ), Training ( $M = 3.44$ ,  $SD = 0.59$ ), and Competency and Ability ( $M = 3.63$ ,  $SD = 0.85$ ). Internal consistency, as measured by Cronbach's alpha, was 0.61, 0.89, and 0.85, respectively. Overall, results indicated the horsemanship school program was effective in developing and improving riders' horse-related awareness of safety, equipment, effective use of hands, and theft protection, as well as their ability to train horses to perform specific maneuvers and their competency and ability to recognize and solve problems, ride with more confidence, and enjoy their horse more (Cavinder et al., 2010). This is the only known study specific to the Texas A&M AgriLife Extension Summer Horsemanship School Program, and its framework will be expanded for the proposed research project.

## ***Motivational Patterns***

### *Youth*

When developing, conducting, and evaluating Extension programs, it is important to examine factors influencing youth and adult motivation and learning. In an effort to provide further insight into motivational patterns that affect learning in children, Dweck (1986) summarized past research and proposed a model that outlined how success or failure of a child was dependent upon one of two patterns. When presented with cognitive tasks involving the acquiring and use of skills, children who displayed adaptive motivational patterns were more focused on learning goals, which afforded them the mindset of concentrating on persistence to develop strategies to increase competence, regardless of confidence level, and of seeking and being energized by challenging scenarios that foster intellectual growth. On the other hand, children who exhibited maladaptive motivational patterns placed more emphasis on performance goals, causing their success and persistence to fluctuate in the face of difficulty, based on the confidence they had in their ability. These learners often avoided challenges, choosing the safety of performing tasks they knew they could do over the risk of failure, in order to avoid negative judgments of competence. Surprisingly, when students were grouped by sex (male and female) and by grade achievement (A, B, C, and D), bright girls (A students) with performance goal orientation were the most inhibited by failure, while bright boys (A students) with performance goal orientation were more inclined to embrace the challenge (Licht, Linden, Brown, & Sexton, 1984). This trend was also mentioned in a case study conducted by Gonzalez-Thompson (1984). One teacher in the

study noticed junior high school girls, in general, to be less motivated than boys in seeking out and persisting in math-related challenges; however, the teacher believed the girls' attentiveness to their school work led to better performance overall. Leggett (1985) also reported that bright girls had a greater predisposition to believe intelligence was a fixed trait, as opposed to an impressionable trait. Dweck's (1986) summary suggested that retraining learners to view failure as an opportunity to work on their strategy, instead of as an attack on their ability, would result in changes in competence and persistence in the face of adversity.

Similarly, Anderson and Jennings (1980) proposed that people who credited initial failure in task results to lack of good strategy, as opposed to lack of ability, expected higher levels of success with future practice. Moreover, Bandura and Schunk (1981) indicated that children with severe deficits in math skills who approached self-directed learning with a series of short-term goals, a form of strategy, significantly increased competence, self-efficacy, and intrinsic interest in the subject, compared to children who had long-term goals, no goals, or experienced no treatment. It was also noted by Anderson and Jennings (1980) that performance is affected by many factors, strategy being just one example. For instance, in addition to strategy, horsemanship school participants and instructors' performance might also be influenced by their horse's level of training and attitude or responsiveness.

### *Teachers*

Moving from students to teachers, Westerman (1991) studied the differences in decision making of expert and novice teachers and found their cognitive approaches to

be different in areas of integrating knowledge, handling student behavior, and decision making in the stages of planning, teaching, and reflection. Five expert teachers, those with more than five years of teaching experience and other selected criteria, and their five undergraduate student teachers, considered novice teachers, each taught two lessons to first through sixth grade children. Teachers were interviewed prior to teaching and questioned on decision making in lesson plans. Lessons taught were videotaped and immediately reviewed with each teacher, to discuss decision making that occurred while teaching. Then teachers were asked to reflect on the success of the lesson taught and explain their basis of success. Finally, a follow-up session was conducted a few months later, to review the videotaped lessons without sound, in order to report any previously undisclosed decision making that happened while teaching. Expert teachers behaved with motivational patterns much like that of children with learning goal orientation (strategy), mentioned previously, while novice teachers behaved with motivational patterns similar to children with performance goal orientation (ability). Expert teachers viewed preparing lesson plans as a process with previously learned lessons providing the base of support for current and future lessons. Novice teachers relied heavily on required or established learning objectives and viewed lessons as individual, unrelated units. Expert teachers reviewed older material to provide context and connection to newer material, while novice teachers did not. When dealing with problematic behavior in students, expert teachers used well-practiced management strategies to minimize disruption and re-engage the child. Novice teachers ignored the bad behavior until it became disruptive enough to stop the lesson and punish the child. Additionally, expert

teachers were able to connect all stages of decision making, envisioning lesson plans and alternatives, monitoring and adapting accordingly, using an interactive approach in teaching, and evaluating success by how well the lesson met the students' needs. In contrast, novice teachers saw the three stages of decision making as independent and were unsure how to connect current lesson plans to future ones. They focused on strictly sticking to the lesson plan at all costs and minimized interactive lessons, out of fear of not knowing what to do or how to answer questions that were not in the original lesson plan objectives. Thus, the primary factors influencing success to the novice teachers included how well the lesson plan objectives were met and how well students behaved. A summary of this study suggested emphasis on providing knowledge and practice of needed teaching skills throughout the course of teacher education, to help teachers begin to view learning as a process of building on interrelated skills instead of as an outcome.

Similar results were found in a case study of three junior high school mathematics teachers conducted by Gonzalez-Thompson (1984). Teachers were observed daily over a four-week period, with the researcher focused solely on observation the first two weeks and on observation and interviews the last two weeks. Two of the teachers had at least five years of teaching experience and resembled the expert teachers previously mentioned. Both had an integrated view of mathematics and sought to help the students make connections of the concepts taught in the daily lesson to those taught in the past and future, and they viewed learning as a process, similar to those with learning goal orientation. Both teachers expressed a desire for a positive teacher to student relationship where students were encouraged to participate and lessons

were adjusted to meet the needs of the student. Only one of these teachers, the one with less experience, actually implemented this practice, with possible explanation lying in her much more frequent reflection of how her actions affected students. Both teachers, however, thoroughly prepared lesson plans to ensure high quality instruction. In contrast, the teacher with less than five years of teaching experience resembled the novice teachers, seeing concepts as unrelated and merely a series of steps to follow to arrive at the one right answer through memorizing exact procedures. This also mirrored the performance goal orientation previously mentioned. This teacher had low expectations of the students, and her focus was to get through each lesson with minimal behavioral problems from them, which resulted in less student interaction and more independent problem solving. In addition, this teacher rarely reflected on how her actions affected students and saw no benefit to preparing lesson plans that were any different from the printed list of objectives and worksheets provided. The objective for this case study was to detect the main factors playing a role in teacher effectiveness, with a focus on the relationship between teachers' conceptions and instructional practices. Results indicated that beliefs, views, and preferences held by the teachers about mathematics and in general, as well as conceptions about their students, played a significant role in the instructional practices they actually implemented. Differences seen in expert and novice teachers in prior research could provide insight, when comparing competencies of horsemanship school instructors who taught one, two, or three summers in a row, especially in light of the fact that adult leader/instructor competencies relate to the gain of technical and life skills in youth.

### ***Relationship of Leader or Instructor Competencies and Student Learning***

A significant relationship between 4-H volunteer leader competencies and life skills learned by youth in 4-H has been established. In 2006, Singletary, Smith, and Evans reported the most important skill leaders in Nevada indicated possessing was the ability to ensure the physical and psychological safety of youth, including managing youth relationships and conflict and providing a safe place for meetings. Providing support for efficacy and mattering, including challenging and engaging 4-H members, was second. Researchers suggested additional studies to expand on necessary trainings to improve leader competencies in other areas. Similarly, Radhakrishna and Ewing (2011) found skills and belonging to describe 28.1% of the variance in youth life skills, indicating the impact Pennsylvania volunteer leaders had on youth learning life skills, such as communication, decision making, goal setting, and relationship building, by demonstrating life skills and making youth feel welcome and important. Proper training of 4-H leaders has been shown to increase leader knowledge and preparedness and is important in strengthening programs overall (VanWinkle, Busler, Bowman, & Manoogian, 2002).

Further demonstrating the relationship among teacher knowledge, teacher practice, and student learning, McCutchen et al. (2002) studied 44 kindergarten and first grade teachers over the course of the school year, along with 779 of their students. The 24 teachers in the experimental group were exposed to an intensive, 2-week training, where they learned more about the importance of phonological awareness, learning disabilities, and effective instruction. Results of the study indicated teacher knowledge

can be deepened, that knowledge can then be applied in the form of new classroom practices, and student learning can be improved by the new knowledge and practices of the teacher.

### *Effective Learning Strategies*

While seeking strategies to maximize deeper learning in college students, Biggs (1999) proposed that lessons should be primarily centered on the learning activities that the student does, so that objectives, learning assignments, and performance assessments all align in a common goal. This focus encompasses the whole of learning, instead of being solely student-focused, where only the student's ability, attitude, skills, and motivation are blamed for poor learning, or being solely teacher-focused, where only the teaching curriculum, teaching method, and assessment methods are blamed for poor learning. This holistic approach suggested teachers be more intentional in considering the intended meaning of the concept to be taught, what it looks like for students to grasp that meaning, and the kinds of teaching/learning activities that would foster that level of understanding. Problem-based learning and learning portfolios were two examples used to illustrate the point. In problem-based learning, students are given a problem they might realistically encounter in their professional careers and assessed on their process of solution. In doing so, students seek out knowledge, gain understanding, and synthesize key concepts, which may include the same material as in a traditional program but with a deeper scope and outcome. Using learning portfolios, students record their teaching practices, for example, reflect on and evaluate those practices, and adjust the practices accordingly. Students learn to create a learning portfolio and then

use that portfolio to learn, so it becomes both an assignment and an assessment relating directly to the objectives. The primary objective in teaching should be to teach all students in the class, not weeding out the good learners from the poor learners, helping them engage effectively with the content by aligning learning activities and assessments with objectives.

### ***Teacher Credibility***

A study conducted by Teven and Hanson (2004) resulted in several insights into student perceptions of teacher credibility. Teachers who displayed high levels of both verbal caring, in the form of praise and encouragement, and immediacy, in the form of showing enthusiasm, engagement, and eye contact, were perceived by students as being the most competent. Teachers who showed high levels of verbal caring but low levels of immediacy were seen as less competent than those previously mentioned but more competent than teachers who displayed low levels of verbal caring, regardless of their level of immediacy. Due to these outcomes, the researchers encouraged teachers to develop the skills and behaviors necessary to portray high levels of both verbal caring and immediacy to students, in order to become more effective in the classroom.

### ***Summary***

Research mentioned above, along with others, sheds light on the path to future studies related to the Texas A&M AgriLife Extension Summer Horsemanship School Program. The need for education in areas of horsemanship and horse training, the opportunity to gain technical and life skills in 4-H horse activities, the different motivational patterns seen in youth and adults, the relationship of student learning to the

varying degrees of experience, knowledge, and teaching practices of instructors (teacher competency), and the credibility of teachers as perceived by students all relate to the horsemanship school program in some way. With a starting point of the self-perceived participant competencies obtained and studied from 2006 through 2009, the research for the proposed project will expand that effort through the summer of 2014 and also determine the relationship of the horsemanship school instructors' evaluated competencies to the self-perceived competencies of the youth and adult horsemanship school participants.

## CHAPTER III

### METHODS\*

#### *Design*

The purpose of this study was to determine if horsemanship school participants perceived gains in learning and competency and to determine if there was a relationship between instructor teams' competency and participant learning and competency. All data had been previously collected and recorded. Thus, this research project was explanatory descriptive and correlational in design, using an ex post facto approach.

#### *Population*

A non-random, purposive sample of 37 different instructor teams, comprised of 58 different, individual instructors (53 female, 5 male), who taught during the summers of 2006 through 2014, was taken from the target population of 244 former instructors (193 female, 51 male) of the Texas A&M AgriLife Extension Summer Horsemanship School Program from the years of 1973 through 2014. These instructors were selected due to 2006 through 2014 being the only years with participant evaluations needed for comparison. Instructors ranged in age from 19 to 24, with an average age of 20.52 ( $SD = 1.27$ ), and the number of summers taught by instructors included one (42), two (12), or three (4) summers (Antilley & Sigler, 2014).

---

\*Reprinted in part with permission from "Educational value of horsemanship clinics to youth and adult riders" by Cavinder, C. A., Antilley, T. J., Briers, G., Sigler, D., Davidson, D., & Gibbs, P. G., 2010. *Journal of Extension*, 48(6), 1-8, Copyright 2010 by Journal of Extension.

A non-random, purposive sample of 2,701 youth and adult horsemanship school participants anonymously completed questionnaires given at 202 of the 239 horsemanship schools conducted from 2006 through 2014 and returned them to instructor teams near the end of each of the two-day or three-day schools. Of the 2,701 participants who completed the questionnaire, only 2,554 indicated their age, which ranged from 4 to 72, with an average age of 15.62 ( $SD = 11.67$ ). Thirty-seven horsemanship schools from 2006 through 2014 were not evaluated, due to instructors' failure to hand out and collect the questionnaires. Additionally, there were participants at evaluated schools who left before the evaluation was conducted and did not get the chance to complete the questionnaire. Since the questionnaires were anonymous, there was no way to determine and track down those participants at a later date. Furthermore, not everyone who was evaluated answered every question on the questionnaire. This could have been due to several factors, including not knowing the answer, not understanding the question, not being present during a particular time frame in which a topic was taught and practiced, etc. (Antilley & Sigler, 2014).

### ***Instructor Training and Evaluation***

Each spring semester, interested college students had the opportunity to try out for the instructor positions at Texas A&M University. Bi-weekly riding sessions, under the leadership of Extension specialists, provided students with instruction on the format of the program, served to improve the horsemanship skills and abilities of the students, and offered opportunities for students to improve communication and teaching skills, as well as problem solving abilities. Prospective instructors were evaluated mid-semester

to determine which riders would be hired as instructors for the summer. Each student performed a pattern that included all the maneuvers learned, and they also taught and demonstrated one of the maneuvers or skills. Maneuvers included the following: four types of rein aids, teaching the horse to follow its nose (basic I), move away from pressure (basic II – lateral movements including hip-in, side-pass, and two-track), and bridle-up (basic III - collection), stop, back up, rollbacks, turnarounds (spins), leads, speed control, simple lead changes, and flying lead changes, as well as going over or around ground poles or other obstacles. Students were scored on riding ability and precision of pattern, as well as on proficiency in communicating and teaching. Students selected to become instructors continued riding the remainder of the semester to further improve their expertise. After a final week of training at the end of the semester, instructors traveled in teams of two or three across the state of Texas teaching horsemanship skills to youth and adults in various counties that requested a school. (Antilley & Sigler, 2014).

### ***Horsemanship Schools and Evaluation***

Also in the spring semester, interested Texas counties registered for and submitted dates to host a horsemanship school in their area. Counties were responsible for the school fee, securing a facility, advertisement to invite participation, and providing housing for instructor teams' horses. Horsemanship schools typically occurred sometime from late May to early July. Riders at the schools, youth and adult, were provided instruction and assistance with the same maneuvers and skills the college-age instructors learned over the course of a semester; however, the information was

presented to the school participants in either two or three days, so the amount of time to practice each new skill was limited, especially if there was a large number of riders participating. A maximum of 30 riders was suggested, to ensure participants received adequate one-on-one instruction; however, a few schools exceeded that amount. Near the end of each school, riders were given an evaluation to complete anonymously and to return. Questions on the evaluation were related to self-perceived, horse-related learning and competencies of the rider after participating in the horsemanship school (Antilley & Sigler, 2014).

### ***Data Collection***

Instructors were evaluated mid-semester each spring by two to five evaluators, to determine which riders would be hired as instructors for each summer. One evaluator remained constant from 2006 through 2014, while other evaluators varied from year to year. The three most frequent evaluators were utilized in analyzing data. Students were scored numerically (0 = *Very poor/no attempt*, 1 = *Poor*, 2 = *Fair*, 3 = *Average*, 4 = *Good*, and 5 = *Excellent*) by evaluators on riding ability and precision of pattern for each maneuver (Table 1), as well as on proficiency in communicating and teaching their selected topic (Table 2). Instructors and instructor teams' scores were coded to protect identity and confidentiality.

In 2006, a questionnaire (Table 3) was created to gather data on the horsemanship school program participants' perceptions of learning (L) and competency (C). Extension, horse professionals associated with the horsemanship school program developed the questionnaire, establishing face validity. Questionnaires were distributed

and collected by instructor teams at the end of the horsemanship schools and brought back to Extension specialists at the end of the summer. The questionnaire included 30 questions, with 19 questions associated with learning (L) and 11 questions associated with competency (C). Reliability for the learning and competency constructs was 0.89 and 0.84, respectively, using Cronbach's Alpha. Answer choices for the questions included the following: 1 = *No*, 2 = *Undecided*, 3 = *Probably*, 4 = *Definitely*, and 5 = *Already knew how to* (Antilley & Sigler, 2014).

### ***Data Analysis***

The instructors' tryout scores were combined and averaged with those of their teammate(s) and analyzed. Thirty-three teams were comprised of two instructors each, while four teams consisted of three instructors each, making 37 teams total (Antilley & Sigler, 2014). Composite scores were developed for constructs of pattern score, speaking score, and summers taught, as they related to instructor teams. Participant evaluations were grouped by county and year and compared to the scores of instructor teams who taught those groups. Composite scores were developed for constructs of learning and competency, as they pertained to participants. All questionnaires were utilized in the initial data analysis, and later, questionnaires of 4-H age (8-19) were analyzed separately, eliminating two schools where only adults indicated their age on questionnaires. Data were analyzed with the Statistical Program for Social Sciences (SPSS), and descriptive and inferential statistics were used to summarize data.

Table 1 Summer Horsemanship School Program Pattern Evaluation

<u>Instructor Name:</u>	
<u>Maneuver</u>	<u>Score (0-5)</u>
P01. Trot logs	
P02. Trot right circle	
P03. Long trot two left circles	
P04. Stop	
P05. Walk logs	
P06. Arc right circle and hip-in	
P07. Counter arc left circle	
P08. Lope (right lead) right circle	
P09. Simple lead change and lope (left lead) left circle	
P10. Trot	
P11. Stop, rollback right, trot	
P12. Stop, 360° left, walk	
P13. Lope (right lead) 1 ¼ circles right, left rollback	
P14. Lope (left lead) 1 ¼ circles left, right rollback	
P15. Lope logs	
P16. Trot or walk	
P17. Two-track or side-pass right	
P18. Two-track or side-pass left	
P19. Long trot or lope, stop and back	
P20. Flying lead change	

Table 2 Summer Horsemanship School Program Instructor Speaking Evaluation

<u>Instructor Name:</u>	
<u>Subject:</u>	<u>Score (0-5)</u>
S01. Horsemanship ability and riding skills	
S02. Speaking ability and knowledge of subject matter	
S03. Degree of difficulty performed	

Table 3 Summer Horsemanship School Program Participant Questionnaire

County:

Age:

Did you learn more about how to:	No (1)	Undecided (2)	Probably (3)	Definitely (4)	Already knew how to (5)
L01. Be safe on & around horses					
L02. Select & adjust bits & equipment					
L03. Ride more effectively using two hands					
L04. Recognize the proper time to pull & to release					
L05. Effectively guide your horse through, around, & over obstacles					
L06. Move the horse's hips & shoulders independently					
L07. Correctly side-pass your horse					
L08. Correctly two-track your horse					
L09. Correctly bridle-up your horse to gain flexion at the poll					
L10. Lope off in the correct lead					
L11. Go over logs at the walk, trot, & lope					
L12. Stop & back your horse					
L13. Rollback					
L14. Teach your horse to pivot/spin					
L15. Control the speed of your horse					
L16. Execute a simple lead change					
L17. Execute a flying lead change					
L18. Prepare for specialized events					
L19. Protect your horse & equipment from theft					

Table 3 Continued

Can you now:	No (1)	Undecided (2)	Probably (3)	Definitely (4)	Already knew how to (5)
C01. Recognize correct bit placement & action in your horse's mouth					
C02. Do one or more advanced maneuver(s) that you were previously unable to do					
C03. Better measure your daily riding progress					
C04. Make more informed decisions on when/how to ask your horse to perform a task					
C05. Recognize how to more correctly warm-up & cool-down your horse					
C06. Ride with more confidence					
C07. Solve a problem you were having before the clinic					
C08. Recognize how to avoid a potential problem					
C09. Recognize the relationship between basic & advanced maneuvers					
C10. Feel more competent in working your horse					
C11. Enjoy your horse more					

## CHAPTER IV

### RESULTS\*

The purpose of this study was to determine if participants of the Texas A&M AgriLife Extension Summer Horsemanship School Program, from 2006 through 2014, perceived increases in learning and competency. In addition, the relationship of the horsemanship school instructors' evaluated competencies to the self-perceived learning and competency of youth and adult participants was tested and further explained.

#### *Participant Learning and Competency*

The first research question proposed to determine if Texas A&M AgriLife Extension Summer Horsemanship School Program youth and adult participants, evaluated from 2006 through 2014, perceived to have gains in learning and competency, relative to the topics covered at the horsemanship school. Descriptive statistics for individual questions in the learning and competency categories of the participant questionnaire, as well as for the two constructs, are listed in Table 4 and Table 5. The average responses for the 30 questions were negatively skewed and ranged from 3.37 to 4.42, revealing responses were closer in proximity to the higher end of the scale. Standard deviations were small, signifying little variability among participant responses. Data indicated that participants did perceive an increase in learning ( $M = 3.89$ ,  $SD =$

---

\* Reprinted in part with permission from "Educational value of horsemanship clinics to youth and adult riders" by Cavinder, C. A., Antilley, T. J., Briers, G., Sigler, D., Davidson, D., & Gibbs, P. G., 2010. *Journal of Extension*, 48(6), 1-8, Copyright 2010 by Journal of Extension.

0.54) and competency ( $M = 3.90$ ,  $SD = 0.50$ ) after completing the horsemanship school. As previously mentioned, reliability for the learning and competency constructs was 0.89 and 0.84, respectively.

### ***Participant Learning and Competency Relative to Rider Age***

Upon further analysis, researchers investigated whether or not learning and competency of participants might be different depending upon their age. Participants were broken into age groups (1 = 7 years and less, 2 = 8-19 years, and 3 = 20 years and more) and analyzed. Data revealed differences in learning and competency among age groups (Tables 6 and 7). Participants of 4-H age (8-19 years) had the highest average for both learning ( $M = 3.91$ ,  $SD = 0.55$ ) and competency ( $M = 3.91$ ,  $SD = 0.51$ ), the youngest participants had the lowest average for both learning ( $M = 3.50$ ,  $SD = 0.54$ ) and competency ( $M = 3.71$ ,  $SD = 0.44$ ), and the oldest participants ranked in the middle for both learning ( $M = 3.87$ ,  $SD = 0.45$ ) and competency ( $M = 3.87$ ,  $SD = 0.42$ ). An ANOVA confirmed differences were significant between groups ( $p < 0.01$ ). As a result, researchers decided to present data both for all ages and 4-H ages (8-19 years).

Table 4 Descriptive Statistics of Participant Questionnaire

Question	<i>N</i>	<i>M</i>	<i>SD</i>	Range	Skew
L01	2654	4.36	0.71	4.00	-1.13
L02	2673	3.90	0.89	4.00	-1.20
L03	2649	4.00	0.85	4.00	-1.18
L04	2644	3.99	0.78	4.00	-0.97
L05	2640	3.95	0.92	4.00	-1.19
L06	2651	3.80	0.86	4.00	-1.44
L07	2665	3.79	1.02	4.00	-1.15
L08	2651	3.61	1.03	4.00	-1.15
L09	2638	3.81	1.03	4.00	-1.08
L10	2639	3.92	1.01	4.00	-1.23
L11	2608	3.78	1.27	4.00	-1.05
L12	2656	4.42	0.72	4.00	-1.60
L13	2653	3.87	0.92	4.00	-1.37
L14	2647	3.77	1.03	4.00	-0.59
L15	2645	4.12	0.84	4.00	-1.20
L16	2624	3.79	1.04	4.00	-1.16
L17	2599	3.37	1.22	4.00	-0.76
L18	2572	3.61	1.13	4.00	-0.94
L19	2622	4.01	0.80	4.00	-1.65
C01	2675	3.89	0.87	4.00	-1.11
C02	2676	3.81	0.71	4.00	-1.78
C03	2652	3.71	0.92	4.00	-1.18
C04	2654	3.90	0.71	4.00	-1.17
C05	2652	4.11	0.92	4.00	-1.37
C06	2644	4.09	0.71	4.00	-1.40
C07	2650	3.73	0.87	4.00	-1.65
C08	2637	3.78	0.85	4.00	-1.16
C09	2644	3.77	0.87	4.00	-1.27
C10	2671	3.98	0.67	4.00	-1.48
C11	2659	4.14	0.60	4.00	-1.32

Note. Answer choices for participant questionnaire included: *No* (1), *Undecided* (2), *Probably* (3), *Definitely* (4), and *Already knew how to* (5).

Table 5 Descriptive Statistics of Learning and Competency Constructs

Construct	<i>N</i>	<i>M</i>	<i>SD</i>	Skew	Cronbach's Alpha
Learning	2701	3.89	0.54	-0.56	0.89
Competency	2693	3.90	0.50	-0.90	0.84

Table 6 Descriptive Statistics of Age Groups and Learning and Competency Constructs

Measure	<i>N</i>	<i>M</i>	<i>SD</i>
Learning			
7 and less	115	3.50	0.54
8 to 19	2136	3.91	0.55
20 and more	303	3.87	0.45
Competency			
7 and less	114	3.71	0.44
8 to 19	2134	3.91	0.51
20 and more	302	3.87	0.42

Table 7 One-way ANOVA for Age Groups and Participant Learning and Competency

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	F-value	P-value
Learning					
Between Groups	2	18.56	9.28	32.34	0.00
Within Groups	2551	732.11	0.29		
Total	2553	750.67			
Competency					
Between Groups	2	4.34	2.17	8.72	0.00
Within Groups	2547	633.66	0.25		
Total	2549	638.00			

When responses of participants of 4-H age were analyzed separately, significant, positive correlations were revealed among learning ( $r = 0.29, p < 0.01$ ) and competency ( $r = 0.20, p < 0.01$ ) with rider age. Data, displayed in Table 8, indicated that older youth perceived to have both higher learning and competency, after completing the horsemanship school.

Table 8 Correlation of Participants (Ages 8-19) and Learning and Competency

Measure	Rider		<i>N</i>	<i>M</i>	<i>SD</i>
	Age				
Learning	0.29	**	2134	3.91	0.55
Competency	0.20	**	2134	3.91	0.51

Note. \*\*Correlation is significant at the 0.01 level (2-tailed).

### ***Participant Learning and Competency Relative to Instructor Teams' Competency***

The second research question intended to determine if there was a relationship between Texas A&M AgriLife Extension Summer Horsemanship School Program instructor teams' competency scores, as assessed by faculty at tryouts, and the degrees of self-perceived learning and competency in youth and adult horsemanship school participants. More specifically, was there a relationship between instructor teams' pattern and speaking scores and participants' learning and competency scores?

Upon further analysis, data showed no significant relationships between instructor teams' scores and participants' scores of all ages or 4-H ages only (Table 9 and 10); however, significant positive relationships were found between instructors'

pattern and speaking scores for all ages ( $r = 0.52, p < 0.01$ ) and 4-H ages ( $r = 0.52, p < 0.01$ ), as well as between participants' learning and competency for all ages ( $r = 0.72, p < 0.01$ ) and 4-H ages ( $r = 0.67, p < 0.01$ ). These were the two strongest relationships found among the data.

### ***Participant Learning Relative to Instructor Teams' Competency Per Maneuver***

Also specific to the second question was the examination of whether or not instructor teams' scores on a particular horsemanship maneuver/skill related to the degree of self-perceived learning in the participants they taught on that same particular horsemanship maneuver/skill. Table 11 displays each pattern component as it relates to each learning component for 4-H ages only at the 200 horsemanship schools.

Corresponding maneuvers included the following: side-pass (L07, P17, and P18), two-track (L08, P17, and P18), lope in the correct lead (L10, P08, and P09), walk, trot, and lope over logs (L11, P01, P05, and P15), stop and back up (L12 and P19), rollback (L13, P11, P13, and P14), pivot/spin (L14 and P12), simple lead change (L16 and P09), and flying lead change (L17 and P20). In 2006, the instructor pattern did not include walk over logs, trot over logs, or lope over logs, reducing comparison of instructors teams' scores with participant scores of 4-H age only to the 181 schools evaluated from 2007 through 2014. Instructor teams' scores utilized in this particular analysis were from the single evaluator who scored instructors every year (2006 through 2014), in order to be consistent. No significant relationships were seen in the data.

Table 9 Correlation Between Instructor Pattern and Speaking Scores and Participant Learning and Competency (All Ages)

Measure	Pattern score	Speaking score	Learning	Competency	<i>N</i>	<i>M</i>	<i>SD</i>
Pattern score	–	0.52 **	-0.08	-0.06	202	70.95	11.26
Speaking score	0.52 **	–	-0.08	-0.07	202	11.95	0.93
Learning	-0.08	-0.08	–	0.72 **	202	3.89	0.54
Competency	-0.06	-0.07	0.72 **	–	202	3.90	0.50

Note. \*\* Correlation is significant at the 0.01 level (2-tailed).

Table 10 Correlation Between Instructor Pattern and Speaking Scores and Participant Learning and Competency (Ages 8-19)

Measure	Pattern score	Speaking score	Learning	Competency	<i>N</i>	<i>M</i>	<i>SD</i>
Pattern score	–	0.52 **	-0.05	0.01	200	70.89	11.29
Speaking score	0.52 **	–	-0.08	-0.08	200	11.94	0.93
Learning	-0.05	-0.08	–	0.67 **	200	3.91	0.55
Competency	0.01	-0.08	0.67 **	–	200	3.91	0.51

Note. \*\* Correlation is significant at the 0.01 level (2-tailed).

Table 11 Correlation of Specific Maneuver Scores of Instructors and Participants (Ages 8-19)

Measure	L07	L08	L10	L11	L12	L13	L14	L16	L17	<i>N</i>	<i>M</i>	<i>SD</i>
P01				-0.10						181	3.90	0.49
P05				-0.13						181	3.98	0.55
P08			-0.09							200	3.69	0.92
P09			-0.06					-0.01		200	3.57	0.75
P11						0.02				181	3.17	0.61
P12							0.06			200	3.08	0.79
P13						0.04				200	3.46	0.62
P14						-0.03				200	3.33	0.68
P15				-0.12						200	3.29	0.58
P17	0.07	0.13								200	3.84	0.53
P18	0.08	0.12								200	3.55	0.56
P19					0.04					200	3.52	0.46
P20									0.11	200	3.30	1.02
<i>M</i>	3.79	3.60	3.94	3.80	4.47	3.87	3.78	3.82	3.37	200		
<i>SD</i>	0.42	0.44	0.42	0.71	0.29	0.40	0.39	0.45	0.52	200		

Note. L07 = Side-pass, L08 = Two-track, L10 = Lope in correct lead, L11 = Walk, trot, and lope over logs, L12 = Stop and back up, L13 = Rollback, L14 = Pivot/spin, L16 = Simple lead change, L17 = Flying lead change, P01 = Trot over logs, P05 = Walk over logs, P08 = Lope in correct lead, P09 = Simple lead change; Lope in the correct lead; P11 = Rollback, P12 = Pivot/spin, P13 = Rollback, P14 = Rollback, P15 = Lope over logs, P17 = Two-track; side-pass, P18 = Two track; side-pass, P19 = Stop and back up, P20 = Flying lead change

***Participant Learning and Competency Relative to Instructor Teams' Teaching Sequence***

Additionally, researchers desired to examine if evaluations of participants showed differences in learning and competency gains over time, as instructor teams taught their first to last clinic over the summer. The number of schools taught by instructor teams each summer ranged from one to ten. When participants of all ages were analyzed, data indicated a small but significant, negative relationship ( $r = -0.04, p < 0.05$ ) between participant learning and teaching sequence (Table 12). Learning declined, as instructors taught more schools through the summer. The relationship between participant competency and teaching sequence was comparable, among all ages, but it was not significant. While the data, with 4-H ages only, appeared similar, no significant relationships were detected (Table 13), and an ANOVA confirmed this conclusion (Table 14).

Table 12 Correlation of Instructor Teaching Sequence and Participant Learning and Competency (All Ages)

Measure	Sequence	<i>N</i>	<i>M</i>	<i>SD</i>
Learning	-0.04 *	2701	3.89	0.54
Competency	-0.03	2693	3.90	0.50

Note. \*Correlation is significant at the 0.05 level (2-tailed).

Table 13 Correlation of Instructor Teaching Sequence and Participant Learning and Competency (Ages 8-19)

Measure	Sequence	<i>N</i>	<i>M</i>	<i>SD</i>
Learning	-0.04	2134	3.91	0.55
Competency	-0.02	2134	3.91	0.51

Table 14 One-way ANOVA for Instructor Teaching Sequence and Participant Learning and Competency (Ages 8-19)

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	F-value	P-value
Learning					
Between Groups	9	3.49	0.39	1.30	0.23
Within Groups	2126	634.61	0.30		
Total	2135	638.10			
Competency					
Between Groups	9	2.74	0.30	1.16	0.32
Within Groups	2124	555.24	0.26		
Total	2133	557.97			

#### ***Participant Learning and Competency Relative to Instructor Teams' Experience***

Finally, researchers were interested in considering if evaluations of participants showed differences in learning gains, when taught by instructor teams with various years of combined experience. Number of summers taught, as used in data analysis, was a combined total for each instructor team, so each team had a minimum of two summers and a maximum of five. Average summers taught by teams was 1.35 ( $SD = 0.44$ ). No significant relationship was found between number of summers taught by instructors and participant learning and competency. When factoring in average age of the instructor teams, significant relationships were seen. Analysis of data, including participants of all ages, pointed to a small, significant, negative relationship of instructor age and participant learning ( $r = -0.16, p < 0.05$ ). Learning seemed to decline, as instructors got older. While the relationship of instructor age and participant competency looked similar, it was not significant (Table 15). When reviewing participants of 4-H age only,

data revealed that both learning ( $r = -0.19, p < 0.01$ ) and competency ( $r = -0.15, p < 0.05$ ) were negatively related to instructor age (Table 16). A significant, positive relationship of instructors teams who taught more summers getting older was an obvious relationship indicated ( $r = 0.31, p < 0.01$ ) but of little importance to the research.

Table 15 Correlation of Instructor Years of Experience and Participant Learning and Competency (All Ages)

Measure	Summers taught	Instructor age	<i>N</i>	<i>M</i>	<i>SD</i>
Learning	-0.06	-0.16 *	202	3.89	0.54
Competency	-0.03	-0.12	202	3.90	0.50
Summers taught	–	0.31 **	37	2.76	0.96
Instructor age	0.31 **	–	37	20.51	1.27

Note. \*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Table 16 Correlation of Instructor Years of Experience and Participant Learning and Competency (Ages 8-19)

Measure	Summers taught	Instructor age	<i>N</i>	<i>M</i>	<i>SD</i>
Learning	-0.12	-0.19 **	200	3.91	0.55
Competency	-0.10	-0.15 *	200	3.91	0.51
Summers taught	–	0.31 **	37	2.76	0.96
Instructor age	0.31 **	–	37	20.51	1.27

Note. \*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

***Instructor Teams' Scores Relative to Their Experience***

Upon further investigation of the data, it was revealed that as average instructor age increased, their pattern scores decreased significantly for data with all ages ( $r = -0.34, p < 0.01$ ) and 4-H ages ( $r = -0.33, p < 0.01$ ). However, data indicated that instructor teams' speaking scores improved the more summers they taught for all ages ( $r = 0.17, p < 0.05$ ) and 4-H ages ( $r = 0.18, p < 0.05$ ). No other significant relationships were seen. Results are displayed in Table 17 and Table 18.

Table 17 Correlation of Instructor Teams' Average Age and Pattern and Speaking Scores (All Ages)

Measure	Instructor age	Summers taught	<i>N</i>	<i>M</i>	<i>SD</i>
Pattern score	-0.34 **	0.02	202	70.95	11.26
Speaking score	-0.01	0.17 *	202	11.95	0.93
Summers taught	0.31 **	–	37	2.76	0.96

Note. \*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Table 18 Correlation of Instructor Teams' Average Age and Pattern and Speaking Scores (Ages 8-19)

Measure	Instructor age	Summers taught	<i>N</i>	<i>M</i>	<i>SD</i>
Pattern score	-0.33 **	0.02	200	70.89	11.29
Speaking score	-0.01	0.18 *	200	11.95	0.93
Summers taught	0.31 **	–	37	2.70	0.88

Note. \*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

## CHAPTER V

### DISCUSSION AND CONCLUSIONS\*

#### *Participant Learning and Competency*

The results of this study indicated that participants of the Texas A&M AgriLife Extension Summer Horsemanship School Program perceived increases in learning and competency over the years of 2006 through 2014. These results were similar to those found by Cavinder et al. (2010), who analyzed the same data from 2006 through 2009. This program continues to be effective in providing participants with the opportunity to benefit from receiving short lectures and demonstrations on basic, intermediate, and advanced horsemanship maneuvers and skills, along with time to actively practice them and receive constructive feedback and assistance.

#### *Summary of Correlations*

When discussing relationships in data, it is important to remember that correlation coefficients range from -1.00 to +1.00. According to Fraenkel and Wallen (2009), coefficients can signify no relationship (0.00), slight relationship (0.35 or below), relationships with possible practical value (0.40 to 0.60), relationships that allow for reasonably accurate predictions (0.65 or higher), and relationships that are very

---

\* Reprinted in part with permission from “Educational value of horsemanship clinics to youth and adult riders” by Cavinder, C. A., Antilley, T. J., Briers, G., Sigler, D., Davidson, D., & Gibbs, P. G., 2010. *Journal of Extension*, 48(6), 1–8, Copyright 2010 by Journal of Extension.

strong (0.85 or higher). A summary of the significant relationships seen in this study

(listed from strongest to weakest) is as follows:

- ❖ Participant learning and competency  
All ages ( $r = 0.72$ ), 4-H age ( $r = 0.67$ )
- ❖ Instructor teams' pattern and speaking  
All ages ( $r = 0.52$ ), 4-H age ( $r = 0.52$ )
- ❖ Instructor teams' average age and pattern score  
All ages ( $r = -0.34$ ), 4-H age ( $r = -0.33$ )
- ❖ Instructor teams' average age and summers taught  
All ages ( $r = 0.31$ ), 4-H age ( $r = 0.31$ )
- ❖ Rider age and participant learning  
4-H age ( $r = 0.29$ )
- ❖ Rider age and participant competency  
4-H age ( $r = 0.20$ )
- ❖ Instructor teams' average age and participant learning  
All ages ( $r = -0.16$ ), 4-H age ( $r = -0.19$ )
- ❖ Summers taught and speaking score  
All ages ( $r = 0.17$ ), 4-H age ( $r = 0.18$ )
- ❖ Instructor teams' average age and competency  
4-H age ( $r = -0.15$ )
- ❖ Teaching sequence and participant learning  
All ages ( $r = -0.04$ )

### ***Participant Learning and Competency Relative to Rider Age***

When participants of 4-H age were analyzed separately, data indicated a small, significant, positive relationship, with older youth having higher average responses for learning ( $r = 0.29$ ) and competency ( $r = 0.20$ ). A possible explanation for this could be that older youth had longer attention spans and were able to listen better and retain more information provided by the instructors. Also, older youth may have had a better understanding of the questions on the questionnaire and may have provided a more accurate view of their learning and competency.

### ***Participant Learning and Competency Relative to Instructor Teams' Competency***

Data revealed that learning and competency of the participants were strongly correlated for all ages ( $r = 0.72$ ) and 4-H ages ( $r = 0.67$ ), showing that as participants learned more they felt more competent. Likewise, instructor teams' pattern and speaking scores were strongly correlated ( $r = 0.52$ ), indicating that teams who rode well also spoke well. Horsemanship and riding ability did constitute one third of the speaking score, so it was not surprising. It was initially surprising to the researchers, however, that the instructor teams' pattern and speaking scores were not related to the participants' learning and competency. Although in a different context, this is contrary to findings of other studies involving a relationship of 4-H volunteer leader competencies and life skills learned by youth (Singletary, Smith, & Evans, 2006) and the relationship of teacher knowledge, teacher practice, and student learning (McCutchen et al., 2002).

### ***Participant Learning Relative to Instructor Teams' Competency Per Maneuver***

Along the same line, no significant relationship was found between instructor teams' competency of demonstrating individual maneuvers in the pattern and the perceived learning of those same maneuvers by the participants. Looking back, though, horsemanship school instructors in the study were those who had the highest scores in tryouts, so less skilled college students were eliminated from the potential instructor pool. Instructor teams were composed of two or three students who had similar tryout scores, so there was little variability among instructor teams, since matching relatively stronger instructors with relatively weaker instructors canceled differences. With little variability, significant differences would not be expected.

### ***Participant Learning and Competency Relative to Instructor Teams' Teaching Sequence***

When data were analyzed to determine if learning and competency gains of participants showed differences over time as instructor teams taught their first to last school, it was evident that learning in participants of all ages decreased ( $r = -0.04$ ) as instructor teams taught more schools; however, this relationship was the weakest one noted in the results, showing almost no relationship. A possible explanation for this could be that the instructor teams became more relaxed, complacent, and/or tired as the summer progressed, and they could have been less thorough in covering the material and/or providing constructive feedback. It also got hotter, as the summer progressed, and many of the arena locations were uncovered and without shade, while participants

and instructors rode, so environmental factors also may have influenced participant learning.

### ***Participant Learning and Competency Relative to Instructor Teams' Experience***

Similarly, analysis of data suggested a decline in learning ( $r = -0.16$ ) of participants of all ages and a decline in both learning ( $r = -0.19$ ) and competency ( $r = -0.15$ ) of participants of 4-H age, as the instructor teams' average age increased. The correlation coefficient was small, so the relationship may not be of practical value, but a possible explanation is that younger, less experienced instructor teams might have been more relatable to the participants, particularly with participants of 4-H age.

### ***Instructor Teams' Scores Relative to Their Experience***

Likewise, as instructor teams increased in average age, their pattern score decreased, with data including all ages ( $r = -0.34$ ) and 4-H age ( $r = -0.33$ ). This could be similar in effect to the suggested reason for the negative correlation of participant learning and teaching sequence. Instructors who taught more clinics were older and may have become more comfortable and at ease with the tryout process and put forth less effort than younger teams. On the contrary, instructor teams' speaking scores improved, with data including all ages ( $r = 0.17$ ) and 4-H ages ( $r = 0.18$ ), the more summers they taught, and this was as expected. Instructors have the opportunity to practice speaking to one another periodically throughout the training process, but the majority of their speaking practice is gained when they teach in the summer, so the more summers they taught, the better they should be in subsequent years.

### ***Program Evaluation***

In light of these results, it is important to review what is known about evaluation, to gain insight for future suggestions and potential changes to the program or evaluation methods. Three ideas essential to the concept of program evaluation should be kept in mind. First, the primary purpose of program evaluation should be to add to current or future programs, not just to appease administration or maintain accountability. Second, the elements of having specific criteria to obtain, evidence of meeting those criteria, and the ability to make good judgements about how the criteria were met are important to effective evaluation. Third, the focus of the evaluation needs to be directed by the decision(s) to be made. Additionally, evaluation should be ongoing, and many times, evaluation in the design stage of a program can be of much greater benefit to the program than waiting until the end, as meeting poor objectives does not constitute a good program (Steele, 1970). It is also important to keep in mind that program evaluation is an influential means of validating value to potential clientele/stakeholders (Stup, 2003).

### ***Post-Then-Pretest Evaluation Method***

There are several methods for evaluation, one of them being pretest-posttest comparison; however, for self-evaluations, program participants with limited understanding may provide inaccurate baseline data in the pretest which cannot be corrected. Participants may feel they know more than they actually do, until completing the program and realizing otherwise. A solution to this problem is to have the posttest with the pretest following it. This allows participants to account for gains in learning or

skill first and then provide a more accurate view of their initial level of understanding or skill (Rockwell & Kohn, 1989).

### ***Recommendations***

With this in mind, the following recommendations have been made:

1. Since learning and competency gains were perceived by participants after completing the Texas A&M AgriLife Extension Summer Horsemanship School Program, during the years of 2006 through 2014, these schools should continue to be offered. Instructors should continue providing participants with short lectures and demonstrations on basic, intermediate, and advanced horsemanship maneuvers and skills, along with time to actively practice them and receive constructive feedback and assistance.
2. Even with no significant relationship found between instructor competency and participant learning and competency, instructor training throughout the spring semester should continue and could be modified to include the following:
  - ❖ additional training on how to connect well with people
  - ❖ additional training on effective teaching methods
  - ❖ additional training on problem solving and conflict resolution
  - ❖ opportunities to working with youth and adults during the semester training
3. Although relationships were small between participant learning and competency and teaching sequence, it would be of benefit to support the instructors and participants by:

- ❖ securing covered arenas, if possible, to minimize sun exposure
  - ❖ providing plenty of drinking water for people and horses
  - ❖ gathering instructors together during breaks in their summer teaching schedule, to allow for sharing feedback, additional training, and/or encouragement and rejuvenation
4. Several modifications to the evaluation methods or rubrics could include the following:
- ❖ expanding the speaking component of the tryout process to include a broader scope of characteristics of an effective teacher, such as
    - verbal caring
    - immediacy
    - making connections of how lessons build on one another
    - focusing on learning goals and strategy
    - using an interactive approach to learning
    - monitoring situations and adapting accordingly
  - ❖ including a youth or adult rider at tryouts for instructors to teach, demonstrate to, and help practice the lesson, to assist in evaluating the effective teaching characteristics previously mentioned
  - ❖ including a self-evaluation for instructors to score their tryout pattern and speaking components, for comparison study
  - ❖ modifying the participant questionnaire to be a post-then-pretest and distributing to:

- participants
      - ❖ to evaluate and compare the baseline and final learning and competency of participation in the horsemanship schools
    - instructors
      - ❖ to evaluate and compare the baseline and final learning and competency of participation in the spring training
      - ❖ to evaluate and compare instructor and participant perceptions of participant learning and competency
  - ❖ developing a questionnaire for participants to evaluate the effectiveness of the instructor
  - ❖ enlisting past instructors to help mentor new instructors prior to teaching and/or observe new instructors during teaching and provide constructive feedback
  - ❖ having all instructors keep a learning portfolio throughout the semester and summer
5. The current study provides a platform for future research on this program. A few suggestions for future studies include:
- ❖ conducting a quantitative study to determine further relationships of
    - self-assessed, instructor tryout scores with scores from evaluators

- self-perceived, post-then-pretest learning and competency of participants with perceptions of participant learning and competency from instructors
- participant and evaluator perceptions of instructor effectiveness
- ❖ conducting a qualitative study to determine
  - life skills gained through instructor training
  - life skills gained as an instructor
  - life skills gained as a participant

## REFERENCES

- American Quarter Horse Association. (2015). *AQHA official handbook of rules and regulations*. Retrieved from <http://aqha.com/handbook>
- Anderson, C. A., & Jennings, D. L. (1980, September). When experiences of failure promote expectations of success: the impact of attributing failure to ineffective strategies. *Journal of Personality*, *48*(3), 393–407. Retrieved from <http://public.psych.iastate.edu/caa/abstracts/1979-1984/80AJ.PDF>
- Anderson, K. P., & Karr-Lilienthal, L. (2011). Influence of 4-H horse project involvement on development of life skills. *Journal of Extension*, *49*(5), 1–6. Retrieved from <http://www.joe.org/joe/2011october/iw2.php>
- Antilley, T. J., & Sigler, D. H. (2014). Report on the 42nd annual Texas A&M AgriLife Extension summer horsemanship school program. Unpublished manuscript, Department of Animal Science, Texas A&M University, College Station, TX.
- Bandura, A., & Schunk, D. H. (1981). Cultivating competence, self-efficacy, and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology*, *41*(3), 586–598. Retrieved from <http://www.uky.edu/~eushe2/Bandura/Bandura1981JPSP.pdf>
- Barkley, A. P. (1991, March). What skills do graduates need? *NACTA Journal*, *35*(1), 53–57. Retrieved from <http://nacta.fp.expressacademic.org>

- Biggs, J. (1999). What the student does: teaching for enhanced learning. *Higher Education Research & Development*, 18(1), 57–75. Retrieved from <http://dx.doi.org/10.1080/0729436990180105>
- Boleman, C., Cummings, S., & Briers, G. (2005). An assessment of life skills gained from youth exhibiting beef, swine, sheep, or goat 4-H projects. *Proceedings of the National AAAE Research Conference, USA*, 388–401. Retrieved from <http://aaae.okstate.edu/proceedings/2005/Articles/388.pdf>
- Boyd, B. L., Herring, D. R., & Briers, G. E. (1992, Winter). Developing life skills in youth. *Journal of Extension*, 30(4), 1–4. Retrieved from <http://www.joe.org/joe/1992winter/a4.php>
- Bruce, J. A., Boyd, B. L., & Dooley, K. E. (2004, October). Leadership life skills demonstrated by state 4-H council members. *Journal of Extension*, 42(5), 1–6. Retrieved from <http://www.joe.org/joe/2004october/a6.php>
- Cantrell, J., Heinsohn, A. L., & Doeblner, M. K. (1989, Spring) Is it worth the costs? *Journal of Extension*, 27(1), 1–4. Retrieved from <http://www.joe.org/joe/1989spring/a4.php>
- Cavinder, C. A., Antilley, T. J., Briers, G., Sigler, D., Davidson, D., & Gibbs, P. G. (2010). Educational value of horsemanship clinics to youth and adult riders. *Journal of Extension*, 48(6), 1–8.
- Cochran, G. R., Catchpole, K., Arnett, N., & Ferrari, T. M. (2010, August). Extension's role in preparing youth for the workforce: a challenge to Extension professionals.

- Journal of Extension*, 48(4), 1–6. Retrieved from  
[http://www.joe.org/joe/2010august/pdf/JOE\\_v48\\_4comm1.pdf](http://www.joe.org/joe/2010august/pdf/JOE_v48_4comm1.pdf)
- Cole, D. L. (2005, June). Horses and youth (H.A.Y): a not-so-typical approach to at-risk programming. *Journal of Extension*, 43(3), 1–8. Retrieved from  
<http://www.joe.org/joe/2005june/rb4p.shtml>
- Collins, O. P. (1986, Spring). Who's the real teacher. *Journal of Extension*, 24(1), 1–4. Retrieved from <http://www.joe.org/joe/1986spring/a3.php>
- Dweck, C. S. (1986, October). Motivational processes affecting learning. *American Psychologist*, 41(10), 1040–1048. Retrieved from  
<http://www.nisdx.org/cms/lib/TX21000351/Centricity/Domain/21/j%20carlisle/Motivational%20Processes.pdf>
- Evans, P. A., Jogan, K., Jack, N., Scott, A., Cavinder, C. A., McMillan, M., Gagnon, S., & Waite, K. (2009, September). University students may be better prepared for life after working with horses. *NACTA Journal*, 53(3), 37–43. Retrieved from  
<http://nacta.fp.expressacademic.org>
- Ferguson, K. S., Barnett, R.V., Culen, G., & TenBroeck, S. (2008, April). Self-esteem assessment of adolescents involved in horsemanship activities. *Journal of Extension*, 46(2), 1–10. Retrieved from  
<http://www.joe.org/joe/2008april/a6p.shtml>
- Fox, J., Schroeder, D., & Lodl, K. (2003, December). Life skill development through 4-H clubs: the perspective of 4-H alumni. *Journal of Extension*, 41(6), 1–7. Retrieved from <http://www.joe.org/joe/2003december/rb2.php>

- Fraenkel, J. R. & Wallen, N. E. (2009). *How to design and evaluate research in education* (7th ed.). New York, NY: McGraw-Hill Higher Education.
- Gonzalez-Thompson, A. (1984). The relationship of teachers' conceptions of mathematics and mathematics teaching to instructional practice. *Educational Studies in Mathematics*, 15, 105–127. Retrieved from <http://link.springer.com/article/10.1007/BF00305892>
- Heuristic. (n.d.). *4-H website*. Retrieved from <http://www.4-h.org/>
- Heuristic. (n.d.). *AgriLife Extension website*. Retrieved from <http://agrilifeextension.tamu.edu/>
- Heuristic. (n.d.). *Business Dictionary website*. Retrieved from <http://www.businessdictionary.com/>
- Heuristic. (n.d.). *Google website*. Retrieved from <http://www.google.com>
- Heuristic. (n.d.). *Texas 4-H Livestock Ambassador Program website*. Retrieved from <http://texasyouthlivestock.com/livestock-ambassadors/>
- Heuristic. (n.d.). *Texas 4-H website*. Retrieved from <http://texas4-h.tamu.edu/>
- Leggett, E. (1985, March). Children's entity and incremental theories of intelligence: relationships to achievement behavior. Paper presented at the meeting of the Eastern Psychological Association, Boston.
- Licht, B. G., Linden, T. A., Brown, D. A., & Sexton, M. A. (1984, August). Sex differences in achievement orientation: an "A" student phenomenon? Paper presented at the meeting of the American Psychological Association, Toronto, Canada.

- Martinson, K., Hathaway, M., Wilson, J. H., Gilkerson, B., Peterson, P. R., & Del Vecchio, R. (2006, December). University of Minnesota horse owner survey: building an equine Extension program. *Journal of Extension*, 44(6), 1–8. Retrieved from <http://www.joe.org/joe/2006december/rb4.php>
- McCutchen, D., Abbott, R. D., Green, L. B., Beretvas, S. N., Cox, S., Potter, N. S., Quiroga, T., & Gray, A. L. (2002, January). Beginning literacy: links among teacher knowledge, teacher practice, and student learning. *Journal of Learning Disabilities*, 35(1), 69–86. Retrieved from <http://ldx.sagepub.com/content/35/1/69>
- Nadeau, J., McCabe Alger, E., & Hoagland, T. (2007, October). Longitudinal study of the general knowledge of 4-H horse members. *Journal of Extension*, 45(5), 1–7. Retrieved from <http://www.joe.org/joe/2007october/rb6.php>
- Nadeau, J., McCabe Alger, E., Hoagland, T., & Chameroy, K. (2004, June). Use of a randomized, categorized exam to determine horse knowledge of 4-H horse show participants. *Journal of Extension*, 42(3), 1–5. Retrieved from <http://www.joe.org/joe/2004june/rb5.php>
- Nash, S., & Sant, L. (2005). Life-skill development found in 4-H animal judging. *Journal of Extension*, 43(2), 1–8. Retrieved from <http://www.joe.org/joe/2005april/rb5.shtml>
- Niendorf, K. M. (2007). *College women athletes and the life skills they learn from competition* (Doctoral dissertation). Retrieved from ProQuest. (3263945)

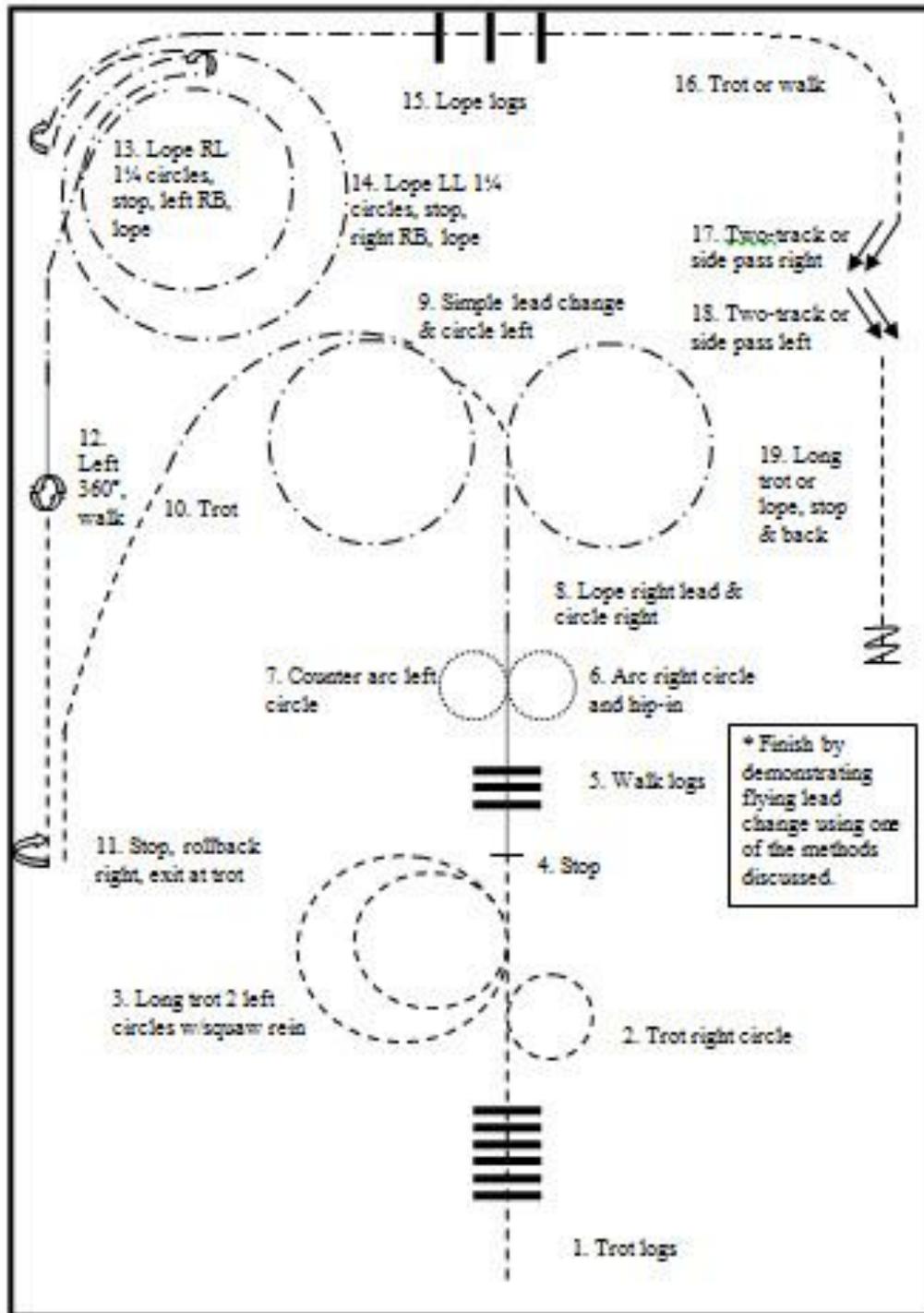
- Potter, J. T., & Mulroy, M. T. (1994, December). A tool to evaluate horse judging students perceptions of critical thinking and life skills development. *NACTA Journal*, 38(4), 42–43. Retrieved from <http://nacta.fp.expressacademic.org>
- Radhakrishna, R., & Doamekpor, P. (2009, April). Teaching leadership and communications skills and responsibilities: a comparison of 4-H and other youth organizations. *Journal of Extension*, 47(2), 1–9. Retrieved from <http://www.joe.org/joe/2009april/a6.php>
- Radhakrishna, R., & Ewing, J. C. (2011, August). Relationships between 4-H volunteer leader competencies and skills youth learn in 4-H programs. *Journal of Extension*, 49(4), 1–9. Retrieved from <http://www.joe.org/joe/2011august/rb2.php>
- Rockwell, S. K., & Kohn, H. (1989). Post-then-pre evaluation. *Journal of Extension*, 27(2), 1–4. Retrieved from <http://www.joe.org/joe/1989summer/a5.php>
- Rusk, C. P., Kerr, C. A., Talbert, B. A., & Russell, M. A. (2001, August). Profiling Indiana's 4-H horse and pony leaders. *Journal of Extension*, 39(4), 1–5. Retrieved from <http://www.joe.org/joe/2001august/rb3.php>
- Rusk, C. P., & Machtmes, K. (2002). Teaching youth through 4-H animal science workshops. *Journal of Extension*, 40(5), 1–3. Retrieved from <http://www.joe.org/joe/2002october/iw7.php>
- Rusk, C. P., Martin, C. A., Talbert, B. A., & Balschweid, M. A. (2002, April). Attributes of Indiana's 4-H livestock judging program. *Journal of Extension*, 40(2), 1–6. Retrieved from <http://www.joe.org/joe/2002april/rb5.php>

- Schlink, K. S. (2000). Addressing educational needs of youth in today's society. *Journal of Extension*, 38(4), 1–4. Retrieved from <http://www.joe.org/joe/2000august/comm1.php>
- Search Institute. (2007). 40 developmental assets for adolescents: discovering what kids need to succeed. Search Institute: Minneapolis, MN.
- Seevers, B. S., & Dormody, T. J. (1995). Leadership life skills development: perceptions of senior 4-H youth. *Journal of Extension*, 33(4), 1–3. Retrieved from <http://www.joe.org/joe/1995august/rb1.php>
- Singletary, L., Smith, M., & Evans, W. P. (2006, August). Self-perceived 4-H leader competencies and their relation to the skills youth learn through 4-H youth development programs. *Journal of Extension*, 44(4), 1–7. Retrieved from <http://www.joe.org/joe/2006august/rb2.php>
- Smith, C. E., Swinker, A. M., Comerford, P. M., Radhakrishna, R. B., & Hoover, T. S. (2006). Horsemanship and life skills of youth in horse programs. *The Professional Animal Scientist*, 22, 89–93.
- Steele, S. M. (1970). Program evaluation – a broader definition. *Journal of Extension*, 7, 5–17. Retrieved from <http://www.joe.org/joe/1970summer/1970-2-a1.pdf>
- Stup, R. (2003, August). Program evaluation: use it to demonstrate value to potential clients. *Journal of Extension*, 41(4), 1–4. Retrieved from <http://www.joe.org/joe/2003august/comm1.php>

- Texas 4-H Youth and Development Office. (2014). *Texas 4-H Roundup rules and guidelines*. Retrieved from [http://texas4-h.tamu.edu/files/2014/12/roundup\\_guide\\_2015.pdf](http://texas4-h.tamu.edu/files/2014/12/roundup_guide_2015.pdf)
- Teven, J. J., & Hanson, T. L. (2004). The impact of teacher immediacy and perceived caring on teacher competence and trustworthiness. *Communication Quarterly*, 52(1), 39–53. Retrieved from <http://dx.doi.org/10.1080/01463370409370177>
- VanWinkle, R., Busler, S., Bowman, S. R., & Manoogian, M. (2002, December). Adult volunteer development: addressing the effectiveness of training new 4-H leaders. *Journal of Extension*, 40(6), 1–8. Retrieved from <http://www.joe.org/joe/2002december/a4.php>
- Ward, C. K. (1996, April). Life skill development related to participation in 4-H animal science projects. *Journal of Extension*, 34(2), 1–3. Retrieved from <http://www.joe.org/joe/1996april/rb2.php>
- Westerman, D. A. (1991, September). Expert and novice teacher decision making. *Journal of Teacher Education*, 42(4), 292–305. Retrieved from <http://jte.sagepub.com/content/42/4/292>
- Zanolini, W. F., Rayfield, J., & Ripley, J. (2013). Perceptions of Texas 4-H livestock ambassadors on career development, higher education, and leadership development. *Journal of Extension*, 51(6), 1–8. Retrieved from <http://www.joe.org/joe/2013december/rb6.php>

APPENDIX A  
INSTRUCTOR TRYOUT PATTERN AND  
EVALUATION INSTRUMENTS

SUMMER HORSEMANSHIP SCHOOL PROGRAM EVALUATION PATTERN



<b>Name</b>			
<b>Score each maneuver 1-5</b>			
<b>Maneuvers</b>			
1. Trot logs			
2. Trot right circle			
3. Long trot 2 left circles			
4. Stop			
5. Walk logs			
6. Arc right circle & hip-in			
7. Counter arc left circle			
8. Lope RL, circle right			
9. SLC, left circle			
10. Trot			
11. Stop, RRB, trot			
12. Stop, 360 left, walk			
13. Lope RL 1/4 circles right, LRB			
14. Lope LL 1/4 circles left, RRB			
15. Lope logs			
16. Trot or walk			
17. Two-track or side-pass right			
18. Two-track or side-pass left			
19. Long trot or lope, S/Bk			
20. Flying lead change			
TOTAL			

Name	Subject Matter Discussed	Horsemanship Ability and Riding Skills	Speaking Ability	Knowledge of Subject Matter	Degree of Difficulty Performed	Total
Possible points		5	5	5	5	20

APPENDIX B  
PARTICIPANT QUESTIONNAIRE

Evaluation Form					
Texas A&M AgriLife Extension					
42nd Annual Summer Horsemanship School Program					
County: _____					
Age: _____					
Did you learn more about how to:	No	Undecided	Probably	Definitely	Already knew how to
Be safe on & around horses					
Select & adjust bits & equipment					
Ride more effectively using two hands					
Recognize the proper time to pull & to release					
Effectively guide your horse through, around, and over obstacles					
Move the horse's hips & shoulders independently					
Correctly sidepass your horse					
Correctly two-track your horse					
Correctly bridle-up your horse to gain flexion at the poll					
Lope off in the correct lead					
Go over logs at the walk, trot, & lope					
Stop and back your horse					
Rollback					
Teach your horse to pivot/spin					
Control the speed of your horse					
Execute a simple lead change					
Execute a flying lead change					
Prepare for specialized events					
Protect your horse & equipment from theft					
Can you now:	No	Undecided	Probably	Definitely	Already knew how to
Recognize correct bit placement and action in your horse's mouth					
Do one or more advanced maneuver(s) that you were previously unable to do					
Better measure your daily riding progress					
Make more informed decisions on when/how to ask your horse to perform a task					
Recognize how to more correctly warm-up and cool-down your horse					
Ride with more confidence					
Solve a problem you were having before the clinic					
Recognize how to avoid a potential problem					
Recognize the relationship between basic and advanced maneuvers					
Feel more competent in working your horse					
Enjoy your horse more					

APPENDIX C  
INSTITUTIONAL REVIEW BOARD  
DOCUMENTATION



**DATE:** December 11, 2014

**MEMORANDUM**

**TO:** Scott Cummings  
ALRSRCH - Agrilife Research - Ag Leadership, Education & Communication

**FROM:** Dr. James Fluckey  
Chair  
Institutional Review Board

**SUBJECT:** Initial Review Submission - Approval

---

**Study Number:** IRB2014-0744

**Title:** The Relationship of Texas A&M AgriLife Extension Summer  
Horsemanship School Instructors' Evaluated Competencies to the Self-  
Perceived Competencies of Youth and Adult Participants

**Review Type:** Expedite

**Approval Date:** 12/11/2014

**Continuing Review Due:** 11/01/2015

**Expiration Date:** 12/01/2015

**Documents  
Reviewed and  
Approved:**

Title	Version Number
PROGRAM OUTLINE	Version 1.0
evaluation - participants	Version 1.0
pattern with words on pattern	Version 1.0
presentation evaluation	Version 1.0
summer horsemanship school pattern score sheet	Version 1.0

**Waiver of Consent:** Waiver/alteration approved 46.116(c) or (d)

- This research project has been approved. As principal investigator, you assume the following responsibilities:
- Continuing Review:** The protocol must be renewed by the expiration date in order to continue with the research project. A Continuing Review application along with required documents must be submitted by the continuing review deadline. Failure to do so may result in processing delays, study termination, and/or loss of funding.
  - Completion Report:** Upon completion of the research project (including data analysis and final written papers), a Completion Report must be submitted to the IRB.
  - Unanticipated Problems and Adverse Events:** Unanticipated problems and adverse events must be reported to the IRB immediately.
  - Reports of Potential Non-compliance:** Potential non-compliance, including deviations from protocol

750 Agronomy Road, Suite 2701  
1186 TAMU  
College Station, TX 77843-1186  
Tel. 979.458.1467 Fax. 979.862.3176  
<http://rcb.tamu.edu>

- and violations, must be reported to the IRB office immediately.
5. **Amendments:** Changes to the protocol must be requested by submitting an Amendment to the IRB for review. The Amendment must be approved by the IRB before being implemented.
  6. **Consent Forms:** When using a consent form or information sheet, you must use the IRB stamped approved version. Please log into iRIS to download your stamped approved version of the consenting instruments. If you are unable to locate the stamped version in iRIS, please contact the office.
  7. **Audit:** Your protocol may be subject to audit by the Human Subjects Post Approval Monitor. During the life of the study please review and document study progress using the PI self-assessment found on the RCB website as a method of preparation for the potential audit. Investigators are responsible for maintaining complete and accurate study records and making them available for inspection. Investigators are encouraged to request a pre-initiation site visit with the Post Approval Monitor. These visits are designed to help ensure that all necessary documents are approved and in order prior to initiating the study and to help investigators maintain compliance.
  8. **Recruitment:** All approved recruitment materials will be stamped electronically by the HSPP staff and available for download from iRIS. These IRB-stamped approved documents from iRIS must be used for recruitment. For materials that are distributed to potential participants electronically and for which you can only feasibly use the approved text rather than the stamped document, the study's IRB Protocol number, approval date, and expiration dates must be included in the following format: TAMU IRB#20XX-XXXX Approved: XX/XX/XXXX Expiration Date: XX/XX/XXXX.
  9. **FERPA and PPRA:** Investigators conducting research with students must have appropriate approvals from the FERPA administrator at the institution where the research will be conducted in accordance with the Family Education Rights and Privacy Act (FERPA). The Protection of Pupil Rights Amendment (PPRA) protects the rights of parents in students ensuring that written parental consent is required for participation in surveys, analysis, or evaluation that ask questions falling into categories of protected information.
  10. **Food:** Any use of food in the conduct of human subjects research must follow Texas A&M University Standard Administrative Procedure 24.01.01.M4.02.
  11. **Payments:** Any use of payments to human subjects must follow Texas A&M University Standard Administrative Procedure 21.01.99.M0.03.

This electronic document provides notification of the review results by the Institutional Review Board.