12-1-2010

Developing an Online Horseless Horse Learning Lesson: An Action Research Study

Jessica M. Bauman
University of Nebraska -Lincoln, Jbauman4@unl.edu

DEVELOPING AN ONLINE HORSELESS HORSE LEARNING LESSON:
AN ACTION RESEARCH STUDY

by

Jessica M. Bauman

A THESIS

Presented to the Faculty of

The Graduate College at the University of Nebraska

In Partial Fulfillment of Requirements

For the Degree of Master of Science

Major: Leadership Education

Under the Supervision of Professor Kathleen Lodl

Lincoln, Nebraska

December, 2010

DEVELOPING AN ONLINE HORSELESS HORSE LEARNING LESSON:
AN ACTION RESEARCH STUDY

Jessica M. Bauman, M.S.

University of Nebraska, 2010

Advisor: Kathleen Lodl

In today's society it is becoming ever so important to find creative and influential outlets to keep young people occupied in positive ways. High quality youth programs are shown to make a positive difference in the lives of many young people; therefore, it is important to continue the use of established youth programs as well as develop new programs. Equine science programs have proven to be a popular and beneficial outlet for many youth due to the ability to learn a variety of life skills, improve character, and increase positive youth development in those youth who participate.

Traditional equine programs revolve around physical and emotional interaction with a live horse. However, youth may not be able to participate in traditional horse programs due to financial, residential, and lifestyle limitations. Because not all young people have the opportunity to interact with a live animal, horseless horse programs are emerging as a popular alternative to traditional horse projects. The horseless horse program is similar to a traditional 4-H horse project, but physical interaction with a horse is not required.

With youth showing greater interest in horseless horse programs and a need for new curriculum, eXtension proposed the development of HorseXploration, an online horseless horse learning lesson. The purpose of this study is to develop HorseXploration Level 1 for youth ages 12-14. The participatory action research model was used to

discover equine topics of interest, clarify learning preferences, and allow the users voice

to be heard in development process.

        The findings of this study provided insight into the development of

HorseXploration Level 1. Many of the findings were congruent with the thoughts and

ideas horse specialists had regarding the needs and wants of horseless horse youth. The

result of this action research process was the creation of HorseXploration Level 1. The

online horseless horse learning lesson is a research-based, hands-on, learner-centered

program that can potentially affect the knowledge, attitudes, and behavior of youth

towards horses and the horse industry.

Acknowledgements

As I conclude my graduate school journey, I must thank the many people who provided guidance, support, and encouragement throughout this process. I could not have completed this task alone and am thankful to each of you.

First, I must sincerely thank my advisor, Dr. Kathleen Lodl. From the beginning, Kathleen provided tremendous support and guidance not only in graduate school, but life in general. Her ability to reassure me that I am on the right track and capable of completing any task set before me allowed me to push through the not so glamorous times. I reserve a great amount of trust and respect for Kathleen and am truly grateful for having had such a great advisor.

To my family and friends who served as an amazing support system, thank you for standing by me throughout this journey. I survived on the humor you provided when I was feeling stressed and your amazing ability to console me when you weren't even sure what was going on. I know I had my crabby moments when school was stressful, but I sincerely thank you for sticking by me and encouraging me all the way to the end!

I would also like to acknowledge my committee for their support and guidance, as well as the study participants, as without them this study would not have occurred. Special thanks are also in order for my co-workers and friends at the 4-H office. Their wisdom, stories, and support kept me on track and reminded me that it will all be worth it in the end.

Once again, thank you to those I mentioned above and to everyone else who helped me complete this chapter of my life. Your irreplaceable guidance, kind words, comforting smiles, and side-aching humor allowed me not only to complete graduate school, but to grow as a person.

Table of Contents

List of Figures and Tables

Chapter 1

Introduction

In today's society it is becoming ever so important to find creative and influential

outlets to keep young people occupied in positive ways. A common tendency of

adolescents is to become involved with high-risk behaviors (Center for Disease Control

Prevention [CDC], 2010). High-risk behaviors can potentially have a negative impact on

the overall development and well being of youth, or might prevent them from future

success and development (Chew, Osseck, Raygor, Eldrige-Houser, & Cox, 2010; De

Guzman & Bosch, 2007). In an effort to decrease the likelihood of an adolescent

partaking in high-risk behaviors such as violence, substance abuse, or risky sexual

behaviors, youth participation in positive activities is encouraged (De Guzman & Bosch,

2007). Programs like 4-H have been successful in developing youth who are productive,

self-directed members of society (National 4-H Headquarters, 2009). In 2008, nearly six

million youth participated in one or more 4-H projects, with enrollment in animal science

projects topping the list (National 4-H Headquarters, 2009).

Although there are a variety of animal science projects, 4-H youth horse programs

continue to rate among the most popular animal science projects available (Huff, 1990).

This popularity is a result of positive outcomes that occur after youth interact with horses.

The horse is a large, powerful animal that commands respect and, at times, elicits fear in

those around it. Overcoming this fear and building a relationship with the horse

promotes confidence, relationship skills, and problem solving skills in the person

interacting with the horse (Schultz, Remick-Barlow, & Robbins, 2007). Positive

outcomes such as an increase in life skill development, improvement in character, and an

increase in positive youth development are all results common with youth who participate in traditional 4-H horse programs (Arnold & Nott, 2010; Schultz, Remick-Barlow, & Robbins, 2007; Knowlton-Ward, 1996).

Unfortunately, not all youth can participate in traditional youth horse programs. Reasons for this include youth not residing in a location conducive to horses, youth's personal and family lifestyle not allowing horses to be a regular occurrence, or they do not financially have the means to own, lease, or interact with a horse (Lancaster County 4-H, 2005; Taciturn, 2009). To accommodate youth who are interested in participating in a horse program but do not have the means to access or own a horse, horseless horse programs were developed.

Horseless horse programs are very similar to traditional 4-H horse programs, but physical interaction with a horse is not required. Like traditional 4-H clubs, horseless horse clubs hold club meetings, partake in a variety of projects and activities within the community, participate in county and state fairs, and have fun (Lancaster County 4-H, 2005)! Horseless horse youth gain their equine knowledge and experiences through the use of books, curriculum, videos, Web sites and other resources. The only thing they do not have is access to a live horse.

Online learning environments such as www.eXtension.org, which partners with land-grant universities across the United States, strives to improve people's lives by providing access to objective and research based information on a variety of topics (eXtension, 2010). Topics covered range from horses to fire ants, and from landscaping to youth development (Long-Bailey & Wilson, 2009). Fact sheets, video clips, learning

lessons, and questions posed for experts are just some of the materials available through www.eXtension.org (Long-Bailey & Wilson, 2009). These types of learning environments are gaining in popularity as the use and dependency on internet increases. Over the last five years there has been a large increase in the amount of media use among young people (online, mobile, television, etc.) (Rideout, Foehr, & Roberts, 2010). "Today's 8-18-year-olds spend an average of an hour and a half (1:29) daily using the computer outside of school-work, an increase of almost half an hour over the past 5 years (when it was 1:02)" (Rideout et al., 2010, p. 3). These trends show an increase in media use by society's youth.

Although horseless horse programs have allowed youth who would not typically be able to partake in a horse program to participate, they present limitations. Existing horseless horse curricula do not provide equine information at higher levels of difficulty, therefore it is difficult to retain youth who master the introductory concepts and ideas (Huff, 1990). In addition, while in the United States there are horseless horse programs available in at least 45 states (Ouverson, 2007), there are still youth who can not become involved because they do not reside near existing horseless horse programs or the structure of the program does not fit into their lifestyle. Because of these limitations, eXtension proposed the development of HorseXploration, a multilevel online horseless horse learning lesson targeted for youth ages 12-14, that will promote interactive learning, life skill development, and increase equine knowledge in youth.

Statement of the Problem

Given these trends among young people and youth interest in horse programs, there is a clear need for the expansion of horseless horse curriculum. Through a partnership with www.eXtension.org, the creation of HorseXploration, an online horseless horse learning lesson, will allow for the expansion of horseless horse curriculum as well as allow a greater number of youth to participate in the program. The development of an online horseless horse learning lesson will allow youth to become a part of horse program regardless of if they own a horse, where they reside, or if they have any existing equine knowledge. The use of the World Wide Web will provide participants with up to date information, the ability to link to other online resources, as well as access the learning lesson at any time. Therefore, the development of the online horseless horse learning lesson, HorseXploration, through the use of www.eXtension.org presents great potential.

A common challenge for educators is creating curriculum that presents content in a way that stimulates creativity and promotes learning. When developing curriculum it is common for experts in the area to decide on the content that will be used and then tell educators how they will use it. Although the top-down method is commonly used, the effectiveness and quality of the curriculum that is developed is at times lacking (Potter, 2008). Rarely do the ideas and concerns of the participant and practitioner make a direct impact on the design and development of the curriculum, it tends to be an afterthought (Zani & Cicognani, 2010). By using an action research model, the user of the online learning lesson can be involved in the development process. This allows for stakeholders

involved with the learning lesson to contribute personal ideas, thoughts, experience and knowledge for the betterment of the learning lesson as well as increases stakeholders sense of belonging to their community, and feelings of being able to contribute to the common good (Zani & Cicognani, 2010). The method of action research is relatively new (Herr & Anderson, 2005) and is continually being explored as a method to be used in the development of curriculum (Potter, 2008).

With these thoughts in mind, the purpose of this study is to develop the content and design of HorseXploration Level 1, an online horseless horse learning lesson for the eXtension.org Web site. This online learning lesson will be developed with adolescents, age 12-14, in mind. This study will focus on the development of level one of the online horseless horse learning lesson HorseXploration.

Research Objective

The objective of this study is to develop and refine, based on user feedback, a high quality, experientially based, age appropriate online horseless horse learning lesson that addresses various equine topics and areas. An action research based approach will be used to guide the development of HorseXploration Level 1.

Research Questions

The research questions to be answered in this study include:

1. What do youth, ages 12-14, want to learn about horses and the horse industry?

2. How would youth, ages 12-14, like to learn about horses and the horse industry?

3. What do equine specialists believe youth, ages 12-14, need to know about horses and the horse industry?

Significance of Study

Today's youth hold the power to determine the success of their future. Therefore, it is the responsibility of today's American to provide outlets to engage and prepare our youth for what the future may hold. In a world where there are numerous variables (both positive and negative) influencing how our youth grow and develop, it is important to focus on positive youth development at a young age. Engaging youth in extracurricular activities, such as the horseless horse online learning lesson, will potentially prevent youth from becoming involved in high-risk activities by providing them an outlet for involvement with, as well as educate and prepare them for the future.

To convince youth to participate in the online horseless horse learning lesson they must first be interested and intrigued by the material being covered. If the youth are not excited by the material in front of them, the material is going to be ineffective at stimulating the youth to learn, and as a result, the desired outcomes will not be achieved. Bernard (1996) identified 11 different teaching styles that have a negative influence on educational achievement and motivation of students, with two of those 11 factors being the utilization of dull curriculum and lack of clearly outlined expectations for the youth. Therefore, it is important to develop clear, understandable, focused, and engaging curriculum youth will enjoy.

To avoid "dull curriculum" when developing the online horseless horse learning lesson, or any curriculum, it is crucial to take into account what youth really want to learn and how they would like to learn it. By incorporating their ideas, addressing their concerns, and listening to what they have to say, a much more applicable horseless horse

learning lesson can be developed. Thus, youth will be more interested in participating in the online horseless horse learning lesson and positive behavior change is more likely to occur. The user-based form of development will also allow the creators of the online learning lesson to provide the youth with valuable equine knowledge and potential extracurricular activities where the youth can improve their character, life skills, and overall, increase Positive Youth Development (PYD).

Through the development of a new and exciting online horseless horse learning lesson a greater number of youth interested in the horse industry will have access to equine educational materials. The online horseless horse learning lesson will remove barriers (such as owning a horse or residing near an existing club) created by prior horse and horseless horse programs. As a result, more youth will be provided with opportunities to increase their life skills, improve their character, and be more prepared for the future. These are all examples of PYD.

Definition of Terms

The following definitions have been provided to ensure consistency and understanding throughout the study.

- *Online Learning Lesson*: A self guided and self paced educational resource made available through the use of the World Wide Web. Within online learning lessons various levels are present that progress in difficulty and/or detail.
- *Horseless Horse Program*: An equine based program where participants need not own or have access to a horse to participate.

- *eXtension*: (Pronounced e-extension) An online, interactive learning environment that delivers research based knowledge from land-grant universities across America (eXtension, 2010).

- *Moodle:* A course management system (also known as a virtual learning environment) that educators can use to create effective online learning sites (Moodle, 2010). Moodle is the management system used throughout www.eXtension.org.

Limitations

The principle investigator of the study is part of the planning team for the online horseless horse learning lesson, *HorseXploration*. While this introduces a potential source of bias, it is inherent to action research designs. Another limitation of this study is eXtension's use of moodle, a learning management system that allows information to be presented in an interactive and engaging manner. All eXtension online learning lessons utilize moodle, therefore there is little flexibility with formatting of the online learning lesson.

Delimitations

A delimitation of this study is the unit of analysis will be confined to adolescent youth, ages 12-14; hence, this study will not account for input from other age groups regarding the development of an online horseless horse learning lesson. This age group was selected because of the need to develop horseless horse information at higher difficulty levels (Huff, 1990). It's important to note that what is considered important by this age group may vary when compared to older and younger age groups.

Assumptions

It is assumed during the study, all respondents will answer all survey/interview questions honestly and to the best of their ability. With the focus of this study revolving around horses, it is assumed that all participants are interested in horses to some degree. It is also assumed that participants will provide contributions in a positive manner towards the betterment of the online horseless horse learning lesson.

Organization of the Study

Each chapter of this study presents and explains the development process of HorseXploration Level 1, an online horseless horse learning lesson. Chapter 1 presents the introduction, statement of the problem, research questions, definition of terms, limitations, delimitations, and assumptions of the study. Chapter 2 addresses a review of related literature and research relevant to the action research method and the impact horses have on youth. Chapter 3 presents the methodology and procedures used to gather data. Results or analysis of the data and further findings from the study will be included in Chapter 4. The final chapter, Chapter 5, contains the summary and findings of the summary, conclusions drawn from the findings, discussion, and recommendations for future studies.

CHAPTER II

Literature Review

 Introduction.

  This review of literature will establish the need for a horseless horse online

learning lesson. To reveal this need the literature review will provide background

information on the role of horses in society, the impact horses have on youth and describe

current 4-H youth equine programs. Additionally, the literature review will depict

existing horseless horse programs, identify the need to diversify and create new ways of

reaching and educating horseless horse youth and present action research as the method

to accomplish this.

 The Role of the Horse in Society.

  For millions of years the horse has grazed this earth, evolving to become one of

man's most useful and beloved companions. As of 2005, there were at least 9.2 million

horses in just the United States (American Horse Council Foundation, 2005). There are

horses present in every single state, and 45 out of the 50 states have at least 20,000 horses

each (American Horse Council Foundation, 2005). Although rough economic times have

slowed the growth of the horse industry (Squires, 2009), horses are still a very prominent

figure in society and hold great potential to positively impact the lives of many, both

economically and emotionally.

  In the early 1900's approximately 50 percent of Americans lived on farms where

the use of a horse was essential not only to the economic success of their personal

operation, but to America in general (Kreitler, 2000). During this time the horse was a

necessity in the production of agriculture and transportation. Contrary to what is commonly believed, horses were not solely used for work; they also served as a source of entertainment and a companion to humans (McShane & Tarr, 2007). Overtime, the role of the horse has shifted away from work and transportation to a focus being placed on their ability to provide companionship and recreation to humans.

There are many levels of involvement within the horse industry. To be involved in the industry does not mean people must physically see or touch a horse on a daily basis. Being involved includes an endless list of activities ranging from owning a horse to drawing a picture of a horse. Today, there are nearly 4.6 million Americans who are involved in the horse industry as horse owners, service providers, employees, and volunteers (American Horse Council Foundation, 2005). With this being said, one out of every 63 Americans is somehow involved with the equine industry (American Horse Council Foundation, 2005) and that is not including the tens of millions of people who participate as spectators and horse enthusiasts throughout the United States.

In the United States, the horse industry also creates a significant number of jobs that contribute to the U.S. economy. The horse industry directly provides 460,000 full-time equivalent jobs; and an additional 1.4 million jobs are created indirectly through spending of suppliers and employees of horse related fields (American Horse Council Foundation, 2005). What is looked at as a primarily recreational industry is still proving to employ many Americans and contribute to society. The economic impact the industry provides is substantial and something to be noted. The equine industry has a direct

economic impact of $39 billion annually and a total of $102 billion economic impact

when indirect sources are considered (American Horse Council Foundation, 2005).

The data presented in this section provide compelling evidence on the size and

importance the horse industry has on the United States. To ignore this evidence would

provide great injustice to the industry and to the potential impact of the horse on society.

The Impact of Equine Activities on Youth.

As described previously, there are a wide variety of people involved with the

equine industry. Those involved can be young or old, they can be horse owners or non-

horse owners, and they can reside in rural or non-rural areas. There is no "cookie-cutter"

version or specific type of person who can be a part of the horse world, there is no limit.

The impact of the horse on all these categories is important; however, the impact on

youth is most notable.

Positive Youth Development.

Various studies have shown youth interaction with horses has improved many

characteristics of youth such as self esteem, confidence and responsibility; and life skills

such as critical thinking, communication, and interpersonal skills (Arnold & Nott, 2010;

Schultz, Remick-Barlow, & Robbins, 2007; Knowlton-Ward, 1996). Even Winston

Churchill described the impact of horses on humans when he stated "There is something

about the outside of a horse that is good for the inside of a man" (Price, 1999, p. 273).

Improvements in these characteristics and life skills result in youth who will be more

likely to make a positive contribution to society and the horse industry. The development

of strong, productive youth can be attributed to youth participation in projects and

programs that promote positive youth development (PYD) through various activities. This may include activities that involve interaction with horses.

Positive youth development (PYD) views young people as resources to be developed rather than as problems to be managed (Lerner, 2005; Damon, 2004). Instead of focusing on the negative issues associated with adolescence (drugs, alcohol, and teen pregnancy) PYD focuses on the positive attributes that mark a flourishing, healthy young person (Lerner, 2005). Examples of positive attributes PYD focuses on can be linked to the "Five Cs" of PYD – competence, confidence, character, connection, and caring (Eccles & Gootman, 2002; R. Lerner, J. Lerner, & Phelps, 2009). R. Lerner et al. (2009), defines the five Cs as listed below:

- *Competence*: Positive view of one's actions in specific areas, including social (interpersonal skills), academic (school performance, in part by school grades, attendance, and test scores), cognitive (e.g. decision making), health (using nutrition, exercise, and rest to keep oneself fit), and vocational (includes work habits and exploration of career choices).

- *Confidence*: An internal sense of overall positive self-worth and self-efficacy.

- *Connection*: Positive bonds with people and institutions that are reflected in exchanges between the individual and his or her peers, family, school, and community in which both parties contribute to the relationship.

- *Character*: Respect of societal and cultural norms, possession of standards for correct behaviors, a sense of right and wrong, and integrity.

- *Caring*: A sense of sympathy and empathy for others.

Researchers theorized young people whose lives incorporated these five Cs would be on a developmental path that demonstrates a sixth "C": Contributions to self, family, community and the institutions of a civil society (R. Lerner et al., 2009). Lerner also postulates, youth who demonstrate lower levels of the five Cs are at a higher risk to follow a developmental path that includes personal, social, and behavioral problems (Lerner, 2004).

Life Skills and Character.

The combination of youth and horses creates opportunities that can increase PYD, develop life skills, and build stronger character in the youth. The Oregon State 4-H Horse Program Evaluation found that 4-H horse programs aid in the development of life skills (Arnold & Nott, 2010). Life skills are abilities individuals learn to help them be successful in living a productive and satisfying life (Boyd, Herring, & Briers, 1992). In the Oregon State study, existing 4-H horse leaders were presented with a list of life skill items and asked to rate the extent to which participation in the 4-H horse program helps develop each skill (Arnold & Nott, 2010). Although all the life skills received high ratings, the highest mean ratings were given for the development of responsibility, confidence, passion, goal commitment, and empathy for animals (Arnold & Nott, 2010).

In another study researchers looked to determine whether measurable changes in mood occur when adolescent girls spend quiet time with a familiar horse. A total of 22 girls between the ages of 12 and 15 participated (Hecker-Jimmerson, Heleski, Kaiser, Shelle, & Waite, n.d.). The study provided evidence that quiet time with a familiar horse can decrease self-reported feelings of stress, anxiety, and depression in adolescent girls,

while increasing feelings of happiness, relaxation, and positive self-perception (Hecker-Jimmerson et al., n.d.).

Recent studies have also looked into the relationship between the participation in 4-H animal science projects and the development of valuable life skills. Knowlton-Ward (1996), found participation in 4-H animal science projects has a positive influence on the development of life skills such as accepting responsibility, ability to relate to others, public speaking, and decision making. It was also found that 4-H activities, such as animal judging and public speaking experiences, contributed to success later in life (Knowlton-Ward, 1996).

Equine assisted therapy (EAP) is a specialized form of psychotherapy that uses the horse as a therapeutic tool (Schultz et al., 2007). Researchers evaluated the effects of equine facilitated therapeutic learning method on youths with severe emotional disorders and found positive changes in the students after participating in the program (Ewing, MacDonald, Taylor, & Bowers, 2007). For example, a 13 year old male who was diagnosed with a severe case of Attention Deficit Hyperactivity Disorder (ADHD) participated and benefited from the program. This student typically dealt with problems by running away and avoiding his issues. After interacting with his horse "Dandy," the student began to slow down and learn about his horse (Ewing et al., 2007). In addition, the student was eventually able to build and establish trust between him, his horse, and the volunteer assisting him (Ewing et al., 2007). Towards the end of the program he was turning to his horse and volunteer for assistance when problems arose; he was no longer

running away from his issues and was taking the time to resolve them (Ewing et al., 2007). Other students in the study demonstrated similar results.

In a similar study done by Schultz et al. (2007), the efficacy of EAP in a cross-sectional group of children referred to a psychotherapist for various childhood behavioral and mental issues was evaluated. After completing EAP, all the children that participated showed signs of improvement in relation to self esteem and personal confidence, communication and interpersonal effectiveness, trust, group cohesion, and boundaries and limit-setting (Schultz et al., 2007). According to the research, horses have several characteristics similar to humans in their behavioral responses and social structures; thus, the horse serves as a "mirror" for the youth to gain insight about their own behaviors in a unique and non-threatening environment (Schultz et al., 2007).

From these findings it is apparent that horses can provide multiple opportunities to better the lives of youth through various equine related activities. Horses have repeatedly improved youth in areas such as responsibility, confidence, trust, communication, and decision making.

Although these studies have analyzed the interaction and influence of youth with a live horse, there is little research that documents these improvements in character, development of life skills and increase in PYD that could be simulated and carried over into an online setting where physical interaction with a horse isn't required. Hence, the purpose of this study.

The Role of Existing 4-H Horse Programs.

The 4-H organization is focused on the personal growth of its members. Developing life skills through activities and events help youth become contributing, productive, self-directed members of society is the primary concern of the 4-H organization (National 4-H Headquarters, 2009). High quality youth programs do make a positive difference in many young people's lives (Ferber, Gaines, & Goodman, 2005); therefore, it is important to continue the use of existing youth programs as well as develop new youth programs.

In 2008, almost six million youth participated in one or more 4-H programs in the United States (National 4-H Headquarters, 2008). One of the most popular 4-H projects is the horse project (Arnold & Nott, 2010; Huff, 1990). Although horse and equine projects vary from state to state, nearly all horse project members learn about horse management, care, and training. In traditional 4-H horse projects, youth are also provided the opportunities to ride and compete with their horse at 4-H fairs and other competitions.

The overall purpose of many animal science and horse project areas is to instill a high degree of appreciation and understanding of animals in addition to contributing to the personal growth of its members. Animal based projects involving both pets and livestock can offer anthrozoological (human-animal relationship) benefits such as helping children develop empathy and the ability to read nonverbal communication in others (Melson, 2001; Paul, 2000; Paul & Serpell, 1992).

In 2003, the most recent year which data are available, 411,202 youth were enrolled in the 4-H horse program (National 4-H Headquarters, 2003). 4-H horse programs have served as great outlets for youth to increase their equine knowledge, become active and involved in their community, and increase their personal growth. As youth horse programs gain in popularity new ways to incorporate interested youth are being created, such as online learning lessons.

Established Horseless Horse Programs and the Need for an Online Horseless Horse Learning Lesson.

Because not all young people have the opportunity to interact with a live animal, horseless horse programs have been emerging as a popular alternative to actual horse projects. The horseless horse program is similar to a traditional 4-H horse project, but physical interaction with a horse is not required (however, it is strongly recommended). The horseless horse project is designed to accommodate youth who have interest in horses, but know little or nothing about them and do not have access to a live horse (Antoniewicz & Kissel, n.d.). Horseless horse project members gain their equine knowledge through books, magazines, curriculum, videos, Web sites, and any other resource available to them. Just like traditional 4-H horse programs, horseless horse programs focus on developing youth to become productive members of society.

It's believed the first horseless horse project began in 1979 and was titled "Introduction to the Horse" (Huff, 1990). According to Huff (1990), in 1980 a Virginia horseless horse project, titled *Horses are Fun,* was copied and utilized throughout the nation with great success. Overtime, many variations of *Horses are Fun* have been

created to meet the needs of particular youth. Nationally, there are horseless horse programs in 45 states making it possible for an increased number of youth to become involved in horse related programs (Ouverson, 2007). Although there are many horseless horse clubs throughout the United States, a majority are lead by volunteers who have access to horses and the horse industry. Unfortunately, this doesn't address those youth who are working independently and do not have the opportunity to interact with a horse or someone involved in the equine industry.

Participants of horseless horse programs learn about a variety of topics depending on how their particular program is structured. Commonly covered topics include (but not limited to) horse breeds, anatomy, health, and nutrition, as well as equine behavior, management, training, and equipment. Many horseless horse programs also try to provide their members with opportunities to visit a horse farm, attend a horse show, or conduct an interview with someone in the equine profession, such as a veterinarian. These activities are used as a way to incorporate interaction with a live horse. They also work to educate their members about future opportunities and potential careers within the horse industry (Ouverson, 2007).

Horseless horse curriculum does exist, and variations of these curricula are used throughout the nation by those participating in horseless horse programs. The type of horseless horse curriculum available ranges from projects and lessons created by the local organization (in-house) to nationally produced books and lessons.

Although not directly targeted for the horseless horse 4-H member, the National 4-H organization offers a horse curriculum developed through collaboration of university

staff in Colorado, Indiana, Maryland, Ohio, Virginia, Washington, and Wisconsin that is used by some horseless horse members and clubs. This curriculum, titled Giddy Up & Go, is the first book in a series of five and is considered a horseless horse level due to the fact that a live horse is not required and it focuses on basic skills youth need to become acquainted with horses (Ouverson, 2007).

Horseless horse curriculum has also been developed by Iowa State University, Cornell University, University of Minnesota, and a few others. Those who have not developed their own curriculum borrow others' or modify traditional horse program curriculum to meet the needs of the horseless horse members. A majority of these horseless horse curriculum promotes activities such as taking a field trip to a local stable, interviewing equine professionals, participating in 4-H quiz bowl, hippology, and horse judging.

While research is limited, horseless horse curriculum is broadly used by a variety of people. Many traditional 4-H horse clubs utilize the horseless horse curriculum during the winter months and off season to encourage youth to remain involved in the horse program even when they are not able to physically ride a horse. Horseless horse programs have also been used to educate youth who are interested in purchasing their first horse. Programs like this allow youth to become acquainted with horses and the industry before purchasing a horse and becoming fully involved.

The Need for an Online Horseless Horse Learning Lesson.

Youth interest in horseless horse programs is evident. With an increase in the amount of youth living in urban areas coupled with a large portion of youth not having

the means to access horses, the need for an online horseless horse learning lesson is apparent. While National 4-H statistics do not provide specific enrollment numbers for horseless horse members, countless requests for horseless horse materials and conversations at local and state levels indicate interest in horseless horse programs are growing. While existing horseless horse programs allow non-horse owners to become involved in horse programs, it is believed if a web-based horseless horse program is developed even a greater number of youth can become involved. Although there is a great deal of information, activities, and curriculum available for youth interested in participating in the 4-H horse program or similar programs, a majority of these resources revolve around day to day interaction with a live horse. Unfortunately there is very little available for youth who would like to participate in a horse program, but do not have regular, or any, access to a live horse.

A solution to this dilemma is the development of the online horseless horse learning lesson, HorseXploration. The online horseless horse learning lesson will present horseless horse information and activities in an online setting instead of in a print version. This allows for a variety of youth to participate in the learning lesson regardless of their geographic location.

Creating a Horseless Horse Online Learning Lesson.

With only 11.9 percent of 4-H participants residing in farm areas, and the remainder living in urban settings (non-farm areas) (National 4-H Headquarters, 2008), it is crucial to consider the residence of the audience when developing equine related programs. By creating a horseless horse learning lesson available through the use of the

World Wide Web, more youth who have not had access in the past will be able to utilize the information and become involved in a horse program. Overall, youth programs cannot remain static; they must expand and change to address the diverse and changing needs and interests of adolescents and their families (Zarrett & Lerner, 2008).

Technology is an everyday part of today's youth. Youth are being introduced to the internet at a young age. According to PEW Research Center, 93% of all Americans have been introduced to the internet by 12-17 years of age (Jones & Fox, 2009). With youth spending on average 1.5 hours on the computer outside of school (Rideout et al., 2010), reaching youth through the use of the internet is a promising resource. Incorporating technology and traditional horse and horseless horse curriculum to develop an online horseless horse learning lesson can provide many opportunities to expand upon what traditional curriculum already offers. The World Wide Web allows the participants to link to additional resources and Web sites that can supplement the lessons outlined in the horseless horse online learning lesson. In addition, online learning lessons provide the user increased flexibility (Schrum, 2002) and convenience when learning. In a discussion on a distance education course, Poole (2002) found students appreciated the convenience of being able to participate at times and locations convenient to them.

Concepts to be Included in Horseless Horse Online Learning Lessons.

Studies have shown that experiential learning environments effectively develop youths' life skills (Astroth, 1996; Boyd, Herring, & Briers, 1992; Fox, Schroeder, & Lodl, 2003). According to Smith, Swinker, Comerford, Radhakrishna, and Hoover (2006), the results from their study, which surveyed approximately 982 youth, ages 12 to

18, analyzed horsemanship and life skills of youth in horse programs suggest youth horse

programs interested in life skill development should emphasize horsemanship skills,

safety, health management, and nutrition in educational programming. Due to the value

gained from experiential learning, it is important that participation in experiential

learning activities and environments be encouraged throughout the horseless horse

learning lesson. Development of activities that supplement the academic based

information (information provided through the use of text, video, and picture) is essential

in developing strong online horseless horse learning lesson. Studies also suggest there is

a link between PYD and youth programs that go beyond simple extracurricular activities

to focus on promoting youth development (R. Lerner et al., 2009).

When developing a horseless horse online learning lesson, it is important to

design the lesson to promote PYD. A key idea regarding PYD is when a young person's

strengths are aligned with programs that promote youth development then every young

person's own development can be improved (Lerner, 2005, R. Lerner 2009; Lerner,

Phelps, Forman, & Bowers, 2009). Researchers focused on PYD hypothesized programs

that provide activities that support the Five Cs can help steer young people toward a life

of successful contributions (Lerner, 2005).

To develop a program that can be termed a Youth Development (YD) Program,

three attributes need to be incorporated throughout the entire program (R. Lerner et al.,

2009). These three attributes, also referred to as the "Big Three" features of effective

youth serving programs (Lerner, 2004; Blum, 2003; Roth & Brooks-Gunn, 2003) are:

- Positive and sustained relationships between youth and adults

- Activities build important life skills

- Opportunities for children to use these life skills as both participants and as leaders in valued community activities.

Similarly, the National Academy of Sciences created a short list of features found in positive developmental settings for youth. These features contribute to young people's success by providing settings that promote academic, civic and social success, and reduce issues such as teen pregnancy, violence, and drug abuse (Ferber et al., 2005). The National Academy of Sciences recommended features are (Ferber et al., 2005):

- Physical and psychological safety

- Appropriate structure

- Supportive relationships

- Opportunities to belong

- Positive social norms

- Support for efficacy and mattering

- Opportunities for skill-building

- Integration of family, school, and community efforts.

There are many similarities between the "Big 3" and the features outlined by the National Academy of Sciences. Similarities include preparing youth for the future, fostering supportive relationships, and a sense of belonging within their family, school, and community. These are all crucial features to incorporate in the online horseless horse learning lesson.

While an online horseless horse program could benefit a variety of youth, according to Huff (1990), existing horseless horse curriculum doesn't present equine information at an advanced enough level. Therefore, this study proposes to focus on youth, 12-14 years of age. There are many characteristics of youth 12-14 years of age that make this age group unique. During this age range youth struggle with finding their sense of identity, moodiness, are more likely to express feeling by actions than by words, are mostly interested in the present and near future, worry about being normal, and tend to test rules and limits (Huebner, 2000; USDA/Army, n.d.). Intellectually, youth 12-14 years of age are developing skills in the use of logic, can understand cause and effect, can solve problems that have more than one variable, are ready for in-depth, long term experiences, have moved from fantasy to realistic focus on their life's goals, and want to explore the world beyond their own community (USDA/Army, n.d.). The different physical, social, emotional, and intellectual changes occurring in 12-14 year olds present a unique learning opportunity along with special characteristics that need to be considered when developing an online horseless horse learning lesson.

Using an Action Research Model to Develop a Horseless Horse Online Learning Lesson.

It is not uncommon for programs to gather input from those being served when developing new curriculum or new aspects to their programs. What is uncommon is gathering input and ideas from youth. As one 17 year old girl said,

If you had a problem in the black community, and you brought

together a group of white people to discuss how to solve it, almost

nobody would take that panel seriously. In fact there'd probably be a

public outcry. But every day in local arenas all the way to the White

House, adults sit around and decide what problems youth have and

what youth need, without ever consulting us (Ferber et al., 2005, p. 9).

To solve this dilemma, the method of action research can be used to ensure input from

actual users of the program are taken into account when developing and designing the

program or lesson.

The term action research evolved from classroom research conducted informally

by teachers in kindergarten through 12th grade who desired prompt solutions to classroom

problems (Gay, Mills, Airasian, 2002). The teacher served as researcher and tried to

collect data while implementing lesson plans and interacting with students (Gannon-Cook

& Crawford, 2008). Although this created additional responsibility, the teacher was able

to experience and document the process of discovery and follow through with the steps to

solve the problem.

The method of action research has successfully been used in the development of

curriculum, such as Health Rocks! (Potter, 2008). Using action research as a tool for

curriculum development identified topics, clarified strategies, and affirmed preferences

that would have been overlooked using conventional curriculum development practices.

The action research model will be discussed in further detail in Chapter 3 of this study.

Summary

This review of literature discussed the need for an online horseless horse learning

lesson has been discussed. Background information regarding the impact of the horse on

society and more specifically youth was provided. A detailed description of existing

equine and horseless horse programs was presented. The need for an online horseless

horse learning lesson was uncovered, and the method of action research was evaluated as

development tool. The following chapter will describe the methodology for the action

research process that will be used in the completion of this study.

Chapter III

Methodology

The purpose of this study is to develop an online learning lesson, HorseXploration, using an action research model based on user input. The participatory action research model will be used to develop the online horseless horse learning lesson. This model allows for on-going user input to be collected throughout a cyclical process.

Research Questions

The research questions to be answered in this study include:

1. What do youth, ages 12-14, want to learn about horses and the horse industry?

2. How would youth, ages 12-14, like to learn about horses and the horse industry?

3. What do equine specialists believe youth, ages 12-14, need to know about horses and the horse industry?

Review of Literature

The review of literature revealed information that validated the need for the development of an online horseless horse learning lesson. This information stressed the importance of taking into account the needs of the user and incorporating those needs into the design and implementation of an online horseless horse learning lesson. Also, the review of literature addressed the strengths and weaknesses of other equine and horseless horse programs. After reviewing the literature, action research was selected as the method to be used in the development of this online horseless horse learning lesson because of its ability to utilize the various stakeholders in the development process (Herr & Anderson, 2005; Plano-Clark & Creswell, 2010).

Action Research

Action research is a relatively new and unique research method that has proved to be very beneficial in practical research.

Action research challenges traditional social science, by moving beyond exploration by external researchers who sample variables and write up their findings, to an active, moment-to-moment type of research that includes data collecting, inquiring, and analyzing the whole project environment, all while immersed in the midst of the emergent project (Gannon-Cook & Crawford, 2008, p. 18).

A relatively difficult term to define, action research has been described as inquiry done *by* or *with* insiders of an organization or community, but never *to* or *on* them (Herr & Anderson, 2005). Reason and Bradbury (2001) see action research as a method that brings together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people. In general, action research is aimed at the betterment of individual persons and their communities. For these reasons action research has been widely used by practitioners (e.g. teachers, social workers, and nurses) in a variety of settings (e.g. school, communities, and small practices) and lately has been expanding into larger organizations (Plano-Clark & Creswell, 2010).

Although not the first to apply or advocate action research, Kurt Lewin was the first to generate the theory of action research, which overtime has developed into a respectable form of research in the social sciences (Herr & Anderson, 2005). Lewin

believed knowledge should be created from problem solving in real life situations (Herr

& Anderson, 2005) and that to understand and change certain social practices, social

scientists have to include practitioners from the real social world in all phases of inquiry

(McKernan, 1991). Lewin described action research as a process proceeding in a spiral

of steps, each of which is composed of planning, action, and the evaluation of the result

of action (Kemmis and McTaggert, 1998). Lewin's spiral of steps is depicted in Figure 1.

The spiral design implies action research is not neat, orderly, and linear, but is a process

of repeating and revising procedures and interpretations (Creswell, 2008).

Figure 1. Action Research Cycles
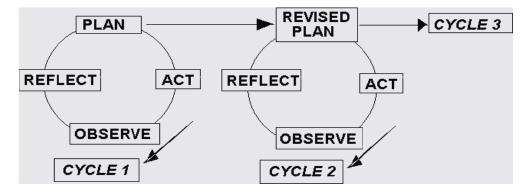
Figure 1. Action research cycles depicting the cyclical process of Plan, Act,

Observe, and Reflect (Carr & Kemmis, 1986).

According to Creswell (2008) there are two primary forms of action research

often used: practical action research and participatory action research (see Figure 2).

Practical action research is used to address a practical problem in one's professional area,

while participatory action research (PAR) places emphasis on producing change in

society while addressing practical problems (Plan-Clark & Creswell, 2010).

Figure 2. Action Research Designs
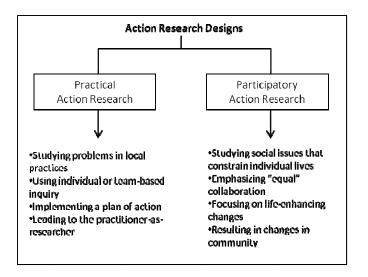
Figure 2. Action research designs and their uses

(Plan-Clark & Creswell, 2010).

Participatory action research "has a social and community orientation and an

emphasis on research that contributes to emancipation or change in our society"

(Creswell, 2008, p. 602). PAR tends to be used by researchers when their goal is to

improve one's organization, community, and personal life (Stringer, 1999). According to

Plano-Clark & Creswell (2010, p. 339-340), key characteristics of participatory action

research include:

- **The PAR researcher wants to help individuals free themselves from**

  constraints. PAR is emancipatory in that it helps unshackle people from the

constraints of irrational and unjust structures that limit self-development and self determination.

- **The PAR researcher gathers information using a recursive process.** PAR is recursive (reflexive or dialectical) and focused on bringing about change in practices. This occurs through spirals of examination, reflection, and action.

- **The PAR researcher emphasizes collaboration.** PAR researchers collaborate with others, often involving participants as co-researchers in the research. This collaboration involves establishing acceptable and cooperative relationships, communicating in a manner that is sincere and appropriate, and including all individuals, groups, and issues. During this collaboration, roles may vary and be negotiated, but the concept of interacting is central to the process.

- **The PAR researcher shares the research to bring about change.** Although PAR researchers publish in scholarly journals, they are typically more interested in sharing the information locally with individuals who can promote change. PAR researchers report their research with individuals who can immediately use the results.

This study was designed through the use of the PAR model as the goals and characteristics of PAR closely resemble the desired outcomes and characteristics of the online horseless horse learning lesson (i.e., personal life), thus, making PAR a rational model to be used. Also, the unique ideas and contributions created through action research provide multiple benefits in the development of an online learning lesson (in this

case, HorseXploration Level 1). With the ambition to close the gap between theory and practice (Reason & Bradbury, 2001), action research is the ideal method to be used when developing an online horseless horse learning lesson. "As a democratic and participatory approach that focuses on practical problem solving, action research is especially appropriate to new media initiatives (e.g. online learning lessons) that involve constant innovation and change; have unpredictable outcomes; and require flexibility, creativity, and an inclusive, user centered approach" (Hearn, Tacchi, Foth, & Lennie, 2009, p. 9).

More specifically, action research was chosen for three primary reasons. First, action research has the ability to address practical problems setting it apart from other research methods. "Action researchers do not undertake this form of research to advance knowledge for knowledge's sake, but to solve an immediate, applied problem" (Creswell, 2008, p. 608). Although action research is similar to mixed methods research, they differ in that action research addresses a specific, practical issue and seeks to obtain a solution to the problem (Creswell, 2008). Secondly, the dynamic process of multiple spirals of planning, action, and evaluation in the research process creates a system of welcomed improvement. This process does not follow a linear or causal sequence from problem to action (Creswell, 2008; Plano-Clark & Creswell, 2010). Action research also reflects the characteristics of formative evaluation. Formative evaluation is the method of evaluating a program while the program activities are forming or happening (Bhola, 1990). Lastly, the participatory nature of action research allows for the collaboration of stakeholders, users, instructors, and others who are vital to the problem being solved.

Because of these reasons, participatory action research was selected as the best way to develop HorseXploration Level 1, an online horseless horse learning lesson. To develop this educational resource it is crucial that the thought, ideas, and needs of those who will be using and benefiting from the online learning lesson be involved in its design and development.

Institutional Review Board

Prior to beginning this study, the principle investigator completed the training program for human subjects research and was certified by the Collaborative Institutional Training Initiative (CITI). Preceding data collection, approval was granted by the University of Nebraska-Lincoln's Institutional Review Board (IRB) to conduct safe and informed research (IRB# 2010081099EP).

Population

The population for this study was youth ages 12-14, adults, and experts in the area of equine science. The sample of convenience was administered in the states of Nebraska, Kentucky, Maryland, Connecticut and Michigan. These states were selected as a result of eXtension horse specialists in these states agreeing to administer and distribute the various cycles of this study. The youth and adult participants in this study represented a broad sampling of individuals from diverse backgrounds, cultures, locations, and experiences. Youth and adult pilot groups were found through contact with eXtension personnel and assistance from their local Extension staff.

Action Research Plan

The action research cycles that were used in this action research study are outlined in Figure 3. There are a total of four cycles in this study. The first cycle used a survey as the method for data collection. The purpose of this cycle was to identify which topics in the equine science area youth ages 12-14 were interested in learning about and how they would like to learn the material (pictures, video, text, etc). The survey was implemented and the first draft of HorseXploration Level 1 was completed in July 2010. The survey was completed by 81 youth 12-14 years of age. Based on the results of this assessment, the first draft of HorseXploration Level 1 was developed.

Cycle 2 empowered the method of pilot/focus groups. The desired outcome of cycle 2 was to gain feedback about the first draft of HorseXploration and incorporate those changes into the second draft. Cycle 2 was completed in August 2010 with 10 participants (five youth and five adults). In this cycle participants were to complete HorseXploration Level 1. Completion of level one encompassed approximately 10 hours of involvement in reading content, watching videos, and participating in activities. Participants were given two weeks to complete level one on their own time. Upon completion of level one, all participants participated in a conference call focus group meeting where their thoughts, concerns, and ideas for improving HorseXploration Level 1 were collected and applied to draft two.

Cycle 3 involved an expert panel of reviewers. The panel of reviewers consisted of eXtension horse specialists from across the country. The reviewers provided feedback on the second draft and ensured equine concepts presented in the online learning lesson

were accurate in content. In addition, the content was reviewed for adherence to PYD principles (age appropriateness, learning methodologies, etc). Recommendations from the panel were incorporated into the development of the third draft. The review was conducted during the month of September 2010. Two expert reviewers participated in this study.

Cycle 4, the final cycle, used the method of pilot/focus groups. The purpose of Cycle 4 was to gain feedback on draft three. The data found through the Cycle 4 pilot/focus groups were incorporated into the final draft of HorseXploration Level 1. In this cycle participants had two weeks to complete HorseXploration Level 1. Upon completion, participants took part in a face-to-face focus group or a conference call where any last revisions were discussed. Cycle 4 pilot/focus groups were completed during October 2010, with participation from 19 youth and 5 adults. Although similar to Cycle 2, Cycle 4 used new youth and adults that had yet participated in the study.

Instrument Development

The first cycle of the action research process involved a needs assessment of concepts to be included in the online learning lesson. To do this, a survey instrument was developed, see Appendix A. This instrument was designed by a panel of experts including an Extension horse specialist, a youth development specialist, and an equine professional. An evaluation expert reviewed the questions to check for validity. Readability was assessed by piloting the instruments with youth. Before the instruments were used, they were examined by a panel of horse experts.

Figure 3.

Description of Action Research Cycle Components

	Purpose	Method Used	Desired Outcomes	Timeline	Number of Participants
Cycle 1	To build a body of knowledge with which to begin the planning and writing of HorseXploration Level 1	-Surveys	*Identify needs of target audience and best methods for instruction *Incorporate findings into first draft of HorseXploration	July 2010	N = 81 Youth
Cycle 2	To pilot and review first draft of HorseXploration Level 1 and to identify areas needing improvement	-Youth Pilot/Focus Groups -Adult Pilot/Focus Groups	* Feedback about the first draft will be incorporated into a second draft	August 2010	N = 5 Youth N = 5 Adults
Cycle 3	To review content in second draft and ensure accuracy as well as identify any areas needing improvement	Expert Panel Review	*Feedback about the second draft will be incorporated into a third draft	September 2010	N = 2 eXtension Horse Specialists
Cycle 4	To pilot and review third draft of HorseXploration Level 1 and to identify areas needing improvement	-Youth Pilot/Focus Groups -Adult Pilot/Focus Groups	*Feedback about the third draft will be incorporated into a final draft	October 2010	N = 5 Youth N = 5 Adults

Survey

In order to assess current knowledge, Cycle 1 of this study involved the creation

of a survey to gain a better understanding of what youth, ages 12-14, deemed as

important topics in the area of equine science, see Appendix A. The survey questions

were designed by a panel of experts including an Extension horse specialist, an eXtension

horse specialist, and a youth development specialist. The format was reviewed by a

National 4-H evaluation specialist for content and face validity. The survey was then

piloted with local youth and revised before being used on a larger scale.

The survey was made available online through the use of surveymonkey.com.

Various Extension and eXtension personnel received an e-mail with a link to the survey.

These Extension and eXtension personnel then randomly sent the survey link out through

e-mail to youth interested in horses. Participants of the survey voluntarily chose to take

the survey. The survey results provided valuable information about equine areas youth

would like to learn about. This information was incorporated into the first draft of

HorseXploration.

Pilot Groups

Pilot groups were utilized in Cycles 2 and 4 to identify areas of HorseXploration

that could be improved. The nature of pilot groups allow participants to provide insight

on details and improvements that may have originally been overlooked. Pilot groups also

provided feedback on whether or not the participants found the topics interesting.

Focus Groups

Focus groups were the predominant data collection method. The purpose of the focus group conference calls were to gather qualitative data to be used in improving drafts one and three of HorseXploration Level 1. The focus groups were a key component used to complete the cyclical improvement process of action research.

The focus groups were used to gather perceptions, attitudes, and ideas about the content of the online horseless horse learning lesson. This data was instrumental in identifying key areas that needed improvement as well as areas that worked well within HorseXploration Level 1. The information gathered from these focus groups was then used in following cycles to develop a new draft of the online learning lesson. The stakeholders who participated in the pilot groups were the same stakeholders who participated in the focus groups.

A list of focus group questions is provided in Appendix B. Due to the evolving nature of qualitative focus group questions, supplemental questions were developed during the conference call and discussion process as patterns in the data became more apparent.

A variation of the focus group method is the use of an expert panel. The expert panel will provide qualitative data for the development of HorseXploration Level 1.

Data Analysis

Data from the surveys and focus groups were assessed to identify major themes. The raw data were coded and major themes were identified. According to Creswell (2002), "coding is the process of segmenting and labeling text to form descriptions and

broad themes in the data" (p. 266). After the data were coded, the list of codes was reduced and clustered to identify larger themes in the data (Creswell, 2002). The data were used to develop and then improve upon HorseXploration Level 1. The data from each cycle were shared with subsequent cycles to aid in the improvement process of the online learning lesson. For the purpose of this study, descriptive statistics were used to analyze data and characteristics.

Validity

Validity was maintained by declaring researcher bias and member-checking. It should be noted that the principle investigator is a horse owner and a past member of 4-H. The principle investigator was a participant in the horse program for 10 years. The researcher also believes equine education is important and can be very beneficial to all types of youth. To ensure interpretive validity, member-checking was used. According to Creswell (1998), member-checking involves taking data and interpretations back to participants so they can judge the accuracy and credibility of the researchers notes. At the conclusion of the focus group, the principle investigator shared notes taken during the focus group with the participants. If the participants disagreed with any of the conclusions drawn from the principle investigator, revisions were made until everyone was in agreeance. This technique is considered by Lincoln and Guba (1985) to be the most critical technique for establishing credibility.

Summary

Chapter III presented the methodology for the action research process that was carried out in the completion of this research. The data findings are presented in Chapter IV.

Chapter IV

Introduction

The purpose of this study was to use the participatory action research model to develop and refine, based on user feedback, an online horseless horse learning lesson. The online learning lesson is learner centered with equine education for youth without horses as its primary goal. The study consisted of four action research cycles. This chapter provides results of each step of the action research process. Also included in this chapter are the response rate, demographics, responses, and findings.

Study Organization

A total of 117 participants were used to gather initial data for this project. Cycle 1 consisted of a survey that was randomly distributed to youth interested in horses by Extension and eXtension horse specialists. Eighty-one youth, ages 12-14, from across the country voluntarily participated in an online survey to gather information about equine subject matter they thought were interesting.

Cycle 2 consisted of a youth and adult pilot group. Both groups were asked to complete level one of HorseXploration. This consisted of reading through the information presented in level one, participating in the activities, completing the progress quizzes, and lastly completing the level one test. Once finished with the pilot, all youth and adult participants participated in a focus group where they were asked to provide feedback on their thoughts, concerns, and ideas for improving level one of HorseXploration. Findings from Cycle 2 were used to revise and improve the online learning lesson.

Cycle 3 consisted of a panel of experts' review of HorseXploration Level 1. The panel combined two experts in equine science and the area of 4-H Youth Development. The experts reviewed the online learning lesson to ensure the information presented was accurate and appropriate for youth ages 12-14. Results of the experts' reviews were used to revise and improve HorseXploration Level 1.

The last cycle of data collection and analysis, Cycle 4, utilized adult and youth pilot groups. A different set of youth and adult participants were used in Cycle 4 than in Cycle 2. Youth participants were recruited from a Midwestern Class B school with a K-12 enrollment of approximately 2,000 students. This school had a well represented urban and rural population of students. There were 19 seventh-grade students who participated in the youth pilot/focus group. In addition, there were 5 adult pilot/focus group participants. Cycle 4 participants completed HorseXploration Level 1 and participated in a focus group where they shared their thoughts on the content and organization of the online learning lesson.

Findings and Discussion

For the purpose of reporting, the findings are separated into the four cycles of action research that were conducted in this study. The intent of each cycle is stated before the results of each cycle.

Cycle 1.

The purpose of Cycle 1 was to develop a better understanding of what youth ages 12-14 are interested in learning about horses and how they prefer to learn. The findings of Cycle 1 were used to write and organize the first draft of HorseXploration Level 1.

Survey.

The demographic distribution of survey respondents is depicted in Tables 1-5. Eighty-one youth who were interested in horses participated in the online survey distributed by Extension and eXtension horse specialists. These specialists distributed the survey to 4-H youth who were enrolled in a 4-H horse program or showed interest in horses. Table 1 shows the proportion of male and female respondents. Females represented 78% of the participants while males accounted for 22% of the survey respondents.

Table 1
Participants' by Gender

Gender	Frequency	Percent
Male	18	22.2%
Female	63	77.8%
Total	81	100%

Table 2 shows the age distribution of survey participants. Nearly one-third (32.1%) of the respondents were 12 years old, approximately twenty-six percent (25.9%) were 13 years old, and 42.0% of the respondents were 14 years old.

Table 2
Participants' Ages

Age	Frequency	Percent
12 years old	26	32.1%
13 years old	21	25.9%
14 years old	34	42.0%
Total	81	100%

Table 3 outlines the distribution of youth participants by ethnicity.

Approximately one percent (1.2%) were American Indian or Alaskan Native, 4.9% were

Black or African American, 4.9% Hispanic or Latino, and 88.9% of the respondents

reported their ethnicity as white.

Table 3
Ethnicity of Participants'

Ethnicity	Frequency	Percent
American Indian or Alaskan Native	1	1.2%
Asian	0	0.0%
Black or African American	4	4.9%
Hispanic or Latino	4	4.9%
Native Hawaiian or Pacific Islander	0	0.0%
White	72	88.9%
Other	0	0.0%
Total	81	100%

Table 4 depicts where the survey participants resided. The largest percentage (44.4%) of participants reported their residence as farm, 22.2% reported living in a town with a population under 5,000, 23.5% reported living in a town with a population between 5,000-30,000, and the smallest percentage (9.9%) reported living in a city with a population above 30,000.

Table 4
Participants' Residence

Location	Frequency	Percent
Farm	36	44.4%
Town, Population under 5,000	18	22.2%
Town, Population 5,000-30,000	19	23.5%
City, Population above 30,000	8	9.9%
Total	81	100%

Table 5 shows the distribution of respondents who had and had not owned or leased a horse. Over two-thirds (69.1%) of the participants had at some time owned or leased a horse, while 30.9% reported they had never owned or leased a horse.

Table 5
Participants' horse status

Owned or Leased Horse	Frequency	Percent
Yes	56	69.1%
No	25	30.9%
Total	81	100%

The next series of questions were utilized to gauge the perception youth have regarding a variety of equine topics. Complete findings are included in Table 6. The responses to the 11 questions all followed the same trend. Participants were typically undecided, agreed, or strongly agreed that the topics were interesting to learn about.

When asked the first question, "It's interesting to learn about what a horse eats?," one-third (33.3%) of the respondents were undecided while 28.4% strongly agreed. The second question, "It's interesting to know how horse's see?," had 37% agree and 33.3% strongly agree that it's an interesting topic. When asked if "It's interesting to know the different bones of the horse?," 40.7% agreed and 25.9% strongly agreed. Nearly one-third (30.9%) agreed and 40.7% strongly agreed that "It's interesting to know the different parts of the horse." Respondents were asked if they thought "It's interesting to understand the different gaits of a horse?," 44.5% strongly agreed and 30.9% agreed that it was interesting.

Question 6 asked participants if they "enjoy learning about the different types of horses (light, draft, and pony)?," 39.5% strongly agreed and 37% agreed. When asked, "I enjoy learning how to properly groom a horse," 44.4% strongly agreed and 30.9% agree.

Approximately forty percent (39.5%) strongly agreed and 35.8% agreed that "it's interesting to learn about the difference between Western and English disciplines." When asked if "It's interesting to learn about Western and English tack?," 38.3% agreed while only 30.9% strongly agreed. Question 10 asked participants if they think "It's interesting to learn about how horses evolved?," 30.9% of respondents were undecided. Participants were also asked if they "enjoy learning about famous horses?," 38.3% strongly agreed and 34.6 % agreed that they enjoyed learning about this topic.

To test if there were any relationships between those who have owned or leased a horse and those who have not, Cochran-Mantel-Haenszel chi squared tests were conducted. These tests were carried out to decipher if there was a significant difference in response between participants who said they have owned or leased a horse and those who have not. There were no significant differences between the two groups' responses.

Table 6

Participants' Perception on Horse Topics

Question	Strongly Disagree		Disagree		Undecided		Agree		Strongly Agree		Total	
	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
1. It's interesting to learn about what a horse eats?	2	2.5%	8	9.9%	**27**	**33.3%**	21	25.9%	23	28.4%	81	100%
2. It's interesting to know how horses see?	2	2.5%	3	3.7%	19	23.5%	**30**	**37.0%**	27	33.3%	81	100%
3. It's interesting to know the different bones of the horse?	3	3.7%	6	7.4%	18	22.2%	**33**	**40.7%**	21	25.9%	81	100%
4. It's interesting to know the different parts of the horse?	2	2.5%	8	9.9%	13	16.0%	25	30.9%	**33**	**40.7%**	81	100%
5. It's interesting to understand the different gaits of a horse?	1	1.2%	6	7.4%	13	16.0%	25	30.9%	**36**	**44.4%**	81	100%
6. It's interesting to learn about the different types of horses?	1	1.2%	3	3.7%	15	18.5%	30	37.0%	**32**	**39.5%**	81	100%
7. It's interesting to learn how to properly groom a horse?	4	4.9%	4	4.9%	12	14.8%	25	30.9%	**36**	**44.4%**	81	100%
8. It's interesting to learn about the difference between Western and English disciplines?	3	3.7%	4	4.9%	13	16.0%	29	35.8%	**32**	**39.5%**	81	100%
9. It's interesting to learn about Western and English tack?	4	4.9%	3	3.7%	18	22.2%	**31**	**38.3%**	25	30.9%	81	100%
10. It's interesting to learn how horses evolved?	4	4.9%	8	9.9%	**25**	**30.9%**	22	27.2%	22	27.2%	81	100%
11. It's interesting to learn about famous horses?	1	1.2%	8	9.9%	13	16.0%	28	34.6%	**31**	**38.3%**	81	100%

Participants were also asked six questions to gauge their perceptions and feelings on different elements of online learning. Complete findings are included in Table 7. When participants were asked if they "enjoy using the internet?," nearly two-thirds (63%) strongly agreed and 23.5% agreed. Question 2 asked participants if they "enjoy learning from pictures?," 63% strongly agreed and 27.2% agreed they enjoy learning that way. Similarly, when asked if they "enjoy learning from video clips?," over half (59.3%) strongly agreed and 30.9% agreed. When asked, "I enjoy reading?," 51.9% strongly agreed and 28.4% agreed they enjoyed reading. Participants were also asked if they enjoy learning at their own pace and if they enjoy learning on their own time. Approximately sixty-five percent (65.4%) strongly agreed and 28.4% agreed they enjoy learning at their own pace. Similarly, 63% strongly agreed and 28.4% agreed they enjoy learning on their own time.

Table 7

Participants' Perception on Learning

Question	Strongly Disagree		Disagree		Undecided		Agree		Strongly Agree		Total	
	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
12. I enjoy using the internet?	2	2.5%	1	1.2%	8	9.9%	19	23.5%	**51**	**63.0%**	81	100%
13. I enjoy learning from pictures?	0	0.0%	5	6.2%	3	3.7%	22	27.2%	**51**	**63.0%**	81	100%
14. I enjoy learning from video clips?	0	0.0%	2	2.5%	6	7.4%	25	30.9%	**48**	**59.3%**	81	100%
15. I enjoy reading?	3	3.7%	4	4.9%	9	11.1%	23	28.4%	**42**	**51.9%**	81	100%
16. I enjoy learning at my own pace?	0	0.0%	2	2.5%	3	3.7%	23	28.4%	**53**	**65.4%**	81	100%
17. I enjoy learning on my own time?	1	1.2%	2	2.5%	4	4.9%	23	28.4%	**51**	**63.0%**	81	100%

The data collected in Cycle 1 were reviewed and the findings were applied in the development and writing of the first draft of the online learning lesson HorseXploration. Cycle 1 was used to clarify which content areas eXtension horse specialists thought should be included in HorseXploration Level 1. The data collected in Cycle 1 assisted in discovering what youth, ages 12-14, want to learn about horses and the horse industry and how they prefer to learn the information. The following three cycles acted as turns in the action research process with the end goal of meeting user needs while improving HorseXploration Level 1.

Cycle 2.

The intent of Cycle 2 was to test the first draft of HorseXploration by piloting the online learning lesson. In this cycle, the first level of HorseXploration was piloted with both youth and adult participants. The pilot/focus groups are fulfilling the "observe and reflect" portion of the action research process. The "plan" element of the action research cycle comes into action after the youth and adult focus groups are completed and revisions to HorseXploration are implemented.

Youth Pilot/Focus Groups.

Participants were able to decide on their own where and how they would access the online learning lesson to complete the pilot. Pilot participants were given two weeks to complete the pilot during times and locations convenient to them. Once piloting was complete, a focus group, which was conducted through the use of a conference call, was used to gain feedback from the youth regarding their thoughts on how the content, activities, and quizzes encompassed in HorseXploration Level 1 could be improved.

In Cycle 2, one youth focus group was utilized. There were a total of five youth, 12-14 years old, who participated in the pilot/focus group. Youth were recruited by eXtension and extension horse specialists. Four of those youth were female while one was male. The entire sample was Caucasian. Three youth were residents of Nebraska and two were residents of Kentucky.

The data collected from the youth focus group were based off the list of questions found in Appendix B. These questions were designed to gain a better understanding of what areas of HorseXploration Level 1youth enjoyed and which areas needed improvement. Table 8 represents the findings of the youth focus group. The data were coded and major themes were identified. The findings were broken down into six major themes: Content, Activities, Quizzes, Format/Design, Pictures/Videos and Overall. Comments were placed in the "meeting standards" column if the participants felt the learning lesson was meeting their standards. If they felt HorseXploration Level 1 could be improved upon, their comments were placed in the "needs improvement" column.

Table 8

Youth Focus Group Feedback

Theme	Youth Participant Comments	
	Meeting Standards	Needs Improvement
Content	- I thought the information was appropriate for kids our age - The information kept my interest and wasn't overwhelming	- Little kids may get confused - Temperature, Pulse, Respiration section was kind of hard to understand - It would be helpful to add links to breed association Web sites
Activities	- Both horse and horseless youth would enjoy activities - Could be group or individual activities	- Some activities were kind of dry - It would be nice to have more online interactive games
Quizzes	- Made it feel "real", not a kid Web site - Easy way to learn the main points	- Some questions were worded kind of funny - Add in a few harder questions
Format/design	- Being able to learn at own pace and on own time was nice - Easy to read, smooth	- Color theme used throughout learning lesson were kind of boring
Pictures/videos	- Great for visual learners - Make text easier to understand - Videos make information more interesting	- Add more videos and pictures
Overall	- Fun, didn't want to stop learning - Information within sections flow well - Thought it was information everyone could learn - Thought learning lesson was self explanatory - Made me think of potential careers	- Add more information

Adult Pilot/Focus Group.

In addition to youth pilot/focus groups, adult pilot/focus groups were also

conducted as a part of Cycle 2. Adult pilot participants were allotted two weeks to pilot

level one of HorseXploration and then agreed to participate in a focus group. The adult

focus group was held through the use of a conference call and was conducted to gain

feedback on their thoughts, perceptions, and concerns about level one of

HorseXploration.

There were five participants in the adult pilot/focus group. Adult focus

pilot/focus group participants all showed a strong interest in horses and were recruited by

extension and eXtension horse specialists. These five adult participants were not directly

connected with the youth participants. All of the participants were female and of

Caucasian ethnicity. Two adults resided in Nebraska, two in Kentucky, and one in

Michigan.

The same questions were used in both the youth and adult focus groups. A list of

those questions can be found in Appendix B. These questions were designed to gain a

better understanding of what areas of HorseXploration Level 1 participants enjoyed and

which areas needed improvement. As with the Youth Pilot, the adult participants

feedback is broken down into six themes: Content, Activities, Quizzes, Format/Design,

Pictures/Video and Overall. Also, the adult participants' comments were placed in one of

two categories, meeting standards or needs improvement. Comments were placed in the

"meeting standards" column if participants felt as though certain items and areas were

being met properly. If they felt as though the area could be improved upon, their

comments were placed in the "needs improvement" column. Table 9 represents the data

collected during the adult focus group.

Table 9

Adult Focus Group Feedback

Theme	Adult Participant Comments	
	Meeting Standards	Needs Improvement
Content	- Topics on target - Covered wide range of basic information for kids with and without horses - Age appropriate - Right amount of complexity	- A few topics were a little wordy, work on condensing information - Topic of gaits may be too detailed for this age range - Double check accuracy of content
Activities	- Great! - Exactly what 4-H leaders and parents need to plan meetings - Difficulty level was good, appropriate for ages, too difficult and kids won't participate	- May need to develop alternative activities for those who aren't able to visit horse barns, etc - Don't add too many activities per topic, becomes overwhelming
Quizzes	- Provides reason to pay attention to detail - Quizzes after each section is great! - Certificate great way for youth to show off accomplishment!	- Could include more difficult questions - Make sure questions are worded clearly
Format/design	- Links to other Web sites were beneficial and useful	- Web site not the most user-friendly - Progress bar on side of screen would be nice
Pictures/videos	- Videos and pictures compliment text well - Videos are exactly what horseless horse youth need!	- Embed videos at the end of each segment, not after the entire section - Videos don't show proper safety - Add more pictures
Overall	- Great information! - Lots of potential for youth with and without horses - Great tool for 4-H Leaders - Encourages learning in general - Horseless horse youth will begin to understand the terminology and behavior associated with the animal	- Check for grammar and spelling errors - Be consistent all the way through

Changes Made in Cycle 2.

Based on youth and adult feedback from Cycle 2, HorseXploration Level 1 was

revised. Specific improvements are listed in Table 10. These revisions included

clarifying information and questions, adding additional games and activities, improving

how video clips were utilized, incorporating more pictures, adjusting the color scheme of

text and lastly, correcting spelling and grammar mistakes.

Table 10

Improvements Implemented in HorseXploration Based on Cycle 2 Feedback

Theme	Improvements Made to HorseXploration
Content	- Information in content areas were clarified for easier understanding - Links to breed associations were added to promote further exploration
Activities	- Additional internet based games and activities were added to aid in the learning process
Quizzes	- Unclear questions were revised and clarified - More difficult questions were added
Format/design	- Font color was slightly adjusted to add more interest, but still remains within the eXtension format
Pictures/videos	- Additional pictures and videos were added to help clarify information - Videos were broken into smaller clips and embedded after each segment
Overall	- Spelling and grammar mistakes were corrected

Cycle 3.

The intent of Cycle 3 was to present the second draft of HorseXploration to a

panel of experts. The experts reviewed HorseXploration Level 1 to check for content

accuracy and overall development of the learning lesson.

Expert Panel Review.

Cycle 3 consisted of an expert panel review of HorseXploration Level 1. The

panel consisted of two Extension equine specialists from Kentucky and Connecticut.

Each of these individuals is a noted equine expert having many years of equine experience built up from childhood, they each teach equine science courses at their respective universities, and all work specifically with 4-H Extension and equine science. Table 11 presents the findings from the expert panel review. A majority of the comments by the expert panel were editorial and dealt with the layout of the learning lesson. The following suggestions were made: make sure necessary information is properly cited, ensure all content is accurate, and include equal amounts of information for both English and Western disciplines.

Table 11

Expert Review Themes for Improvement and Changes Made

Themes	Description of Changes
Proper Citation of Information	- Information taken from sources outside of eXtension were added as appropriate
Content Accuracy	- Content that was unclear or inaccurate was revised to provide clear and correct information
Equal Amounts of Information Across Disciplines	- Additional information was added to the English discipline sections to not show favoritism between the two disciplines

After the completion of cycle 3, suggestions for revisions were taken into account. Revisions were implemented and a third draft of HorseXploration was developed. Content changes were re-reviewed by equine experts to ensure accurate presentation of information. The expert panel review assisted in addressing the third research question; what do horse specialists believe youth, ages 12-14, need to know about horses and the horse industry.

Cycle 4.

Youth and adult pilot/focus groups were once again utilized in Cycle 4. The intent of Cycle 4 was to test the third draft of HorseXploration and gain any necessary feedback regarding how to improve the learning lesson. Cycle 4 is the last cycle in the PAR process and is designed to discover any remaining issues or concerns that need to be addressed in order to improve the final HorseXploration Level 1 before being posted for the general public.

Youth Pilot/Focus Group.

Youth pilot/focus groups were conducted with seventh grade students at a Midwest Class B middle school. These participants were chosen because of the diverse equine and lifestyle backgrounds represented at the school. The students were given two weeks to pilot the learning lesson and were provided a small amount of class time to contribute to piloting. Students were allowed access to the learning lesson outside of class time.

Once the pilot was completed, the students participated in a focus group discussion. The focus group lasted approximately 50 minutes and the questions used can be found in Appendix B. The youth focus group consisted of 19 seventh-grade students; 10 females and 9 males. Of the students who participated, 3 were Hispanic, 1 student was Asian, and the remaining 15 students were Caucasian.

Students gave a variety of comments and suggestions regarding HorseXploration Level 1. Table 12 provides a compilation of the comments the seventh-grade students provided. A majority of the comments reflected that the students felt the learning lesson was very beneficial and was appropriate for horseless horse youth. The following

suggestions were made to improve the learning lesson: Define the word "equine," create
a virtual grooming and saddling game, add some "pizzazz" to the Web site, add more
pictures, add a search bar, and lastly, offer the learning lesson in Spanish or other
languages.

Table 12

Seventh Grade Youth Focus Group Feedback

Theme	Youth Participant Comments	
	Meeting Standards	Needs Improvement
Content	- Appropriate for kids our age - Easy to read and understand	- Define Equine, "I wasn't sure what an equine was at first" - Add info on training
Activities	- Activities were great! - Like the idea of visiting real people and places	- "Virtual game where you groom a horse or saddle a horse would be fun"
Quizzes	- Good way to test understanding	- None
Format/design	- Well organized - "Like that you can pick and choose where in the lesson we want to begin"	- Web site needs some "pizzazz" - Kind of boring look
Pictures/videos	- If text didn't make sense, video would clarify the topic - diagrams were really helpful -Video's kept my interest -Good for visual learners	- Although I felt the pictures were good, more would be fun
Overall	-" Good introduction for kids who don't know anything about horses, like myself" - Sparked interest in horses -"If I were around a live horse I feel like I would know what to do"	- Offer learning lesson in Spanish or other languages - Add search bar for entire Web site

Adult Pilot/Focus Group.

In addition to the youth focus group conducted with seventh graders, an adult
focus group was conducted as a part of Cycle 4. Participants were recruited by extension

and eXtension horse specialists. Adult pilot participants were provided two weeks to pilot HorseXploration Level 1. Upon completion of the pilot, all adult participants agreed to participate in a conference call focus group to gain feedback on their thoughts, perceptions, and concerns on the third draft of HorseXploration Level 1.

There were a total of five adult participants in Cycle 4. All the participants were Caucasian and female. Two of the adult participants resided in Kentucky while the remaining three resided in Nebraska.

The same questions used in the youth focus group were repeated in the adult focus group. The questions used can be found in Appendix B. The findings of the focus group were condensed into six themes: Content, Activities, Quizzes, Format/Design, Pictures/Video and Overall. The comments were then placed in a "meeting standards" column or a "needs improvement" column based on the type of feedback received. Table 13 represents the feedback received from the Adult focus group in Cycle 4. Suggestions include: reorder sections of content, adding additional activities, adjusting the overall design, adjusting video clips, and developing a HorseXploration "logo."

Table 13

Cycle 3 Adult Focus Group Feedback

Theme	Adult Participant Comments	
	Meeting Standards	Needs Improvement
Content	- Well rounded - Language appropriate - Interesting	- Move how to measure a horse before breeds (many of the breed descriptions reference height of horse) - Add information regarding coat colors
Activities	- Fun - Diverse	- Add a couple activities under each section - Make sure activities have a purpose
Quizzes	- Great way for youth to gauge progress	- None
Format/design	- Flowed well	- Require kids to complete one section before moving on to the next - Spruce up background
Pictures/videos	- Pictures and videos great compliment to text information	- Remove additional video links that appear once YouTube video is complete
Overall	- Valuable resource for horse club leaders - Great resource for horseless horse youth	- Develop HorseXploration "logo"

Changes made in Cycle 4.

The final cycle of this study was Cycle 4. Content Organization, Appearance of

Learning Lesson, and Additional resources were the three themes identified in Cycle 4

improvements needing to be made. The changes administered after completing the youth

and adult pilot/focus groups include: Content was adjusted to allow "how to measure a

horse" to come before "horse breeds," additional activities were added to each section,

the background color of the learning lesson was adjusted, a link was added to the learning

lesson which provides users the ability to search the entire eXtension Web site, and lastly,

a HorseXploration logo was added. Table 14 depicts changes administered in Cycle 4.

Table 14

Improvements Implemented in HorseXploration Based on Cycle 4 Feedback

Themes	Description of Changes
Content Organization	- How to measure a horse content was reorganized to come before horse breeds to improve comprehension of participants
Appearance of Learning Lesson	- Colors and backgrounds were adjusted to make learning lesson more "fun" - A HorseXploration Logo was added to the learning lesson
Additional Resources	- A link to www.eXtension.org was added to the learning lesson to allow participants the ability to search for additional resources

Summary

The four cycles of this action research study produced the data used to revise and improve level one of the online horseless horse learning lesson, HorseXploration. Chapter V will discuss conclusions, recommendations, and future research.

CHAPTER V

Overview of Study

Equine science projects and programs continue to be a popular and beneficial outlet for youth to invest their time and interests. The ability for horses to teach youth responsibility, promote positive youth development, and refine life skills reinforces how equine programs can be very advantageous (Arnold & Nott, 2010; Knowlton-Ward, 1996; Schultz, Remick-Barlow, & Robbins, 2007). However, many youth are not able to participate in traditional equine programs and projects for a variety of reasons; some of which include financial, residential location, and lifestyle limitations. In response to this dilemma, horseless horse programs were developed. Horseless horse programs create an alternative way for youth to participate in a horse program, even if they have no prior horse experience or have never owned or leased a horse.

To expand upon traditional horseless horse programs, Level 1 of an online horseless horse learning lesson was developed for the eXtension Web site. The purpose of this study was to develop HorseXploration Level 1, an online horseless horse learning lesson, using an action research process based on user input. The learning lesson is intended to address the needs and interests of youth, ages 12-14, who are interested in horses and a horseless horse program.

A major strength of this learning lesson, and what sets it apart from other horseless horse curriculum, was the utilization of the participatory action research model in its development. The participatory action research model is a collaborative process involving partners as co-researchers with the focus being to promote change (Plano-Clark & Creswell, 2010). The ability to utilize the youth input and ideas in the development

process added a unique dynamic to the creation of HorseXploration Level 1 that could

have been neglected or completely overlooked during the writing of the learning lesson.

The cyclical progression of action research also allowed for a strengthened end product

as the learning lesson was repeatedly reflected upon and evaluated throughout the

development process.

Three research questions served as a guide in identifying the needs of

HorseXploration Level 1. The research questions addressed in this study included:

1. What do youth, ages 12-14, want to learn about horses and the horse industry?

2. How do youth, ages 12-14, like to learn about horses and the horse industry?

3. What do horse specialists believe youth, ages 12-14, need to know about

    horses and the horse industry?

From the research questions, the following four action research cycles were

established. Cycle 1 employed an online survey instrument of youth 12-14 years of age.

The purpose of the survey was to collect quantitative data to gain a better understanding

of what equine content areas youth were interested in learning about. In addition, the

survey asked questions to discover which learning styles youth enjoyed using.

Cycle 2 was completed through the use of youth and adult pilot/focus groups.

The purpose of the focus groups was to gain insight regarding thoughts on the first draft

of HorseXploration Level 1. This included any feedback on the content areas, activities,

and quizzes included in the learning lesson. Insight on the design of the learning lesson

and any other concerns or ideas they may have regarding HorseXploration Level 1 were

also gathered. The findings of Cycle 2 were utilized in the development of the second

draft of HorseXploration Level 1.

Cycle 3 involved a review of the learning lesson by a panel of experts. The experts provided feedback on content accuracy and tips on improving HorseXploration. The feedback gained in this cycle was implemented and a third draft of HorseXploration was developed.

The final cycle, Cycle 4, was completed through the utilization of additional youth and adult pilot/focus groups. The purpose of this cycle was to gain any remaining feedback on how to improve the online learning lesson. The feedback from this cycle was incorporated into the final draft of HorseXploration.

The final result of this action research study was the completion of HorseXploration Level 1, an online horseless horse learning lesson for www.eXtension.org. The online learning lesson is a research-based, interactive, learner-centered program that can be used to impact the knowledge, attitude and behavior of participants towards horses and the horse industry.

 Discussion

Through this study, data were gathered about the thoughts, ideas, and attitudes youth, adults, and experts have regarding equine education for youth who do not own or lease a horse or do not have access to a horse. By using a survey instrument and focus group questions, areas of interest were identified and the most preferable methods of instruction were established. While there is limited research on horseless horse program content, the findings of this study were, to some degree, concurrent with past research which focused on equine education in conjunction with a live horse, not specifically equine education for horseless horse youth. For example, the area of emphasis identified in Smith et al.'s (2006) study on horsemanship and life skills of youth in horse programs,

reflected those identified in this study. Smith et al. (2006) suggested youth horse programs should include education regarding safety, health management, nutrition, and horsemanship skills. All of these areas, with the exception of horsemanship skills, were identified in Cycle 1 and were included in HorseXploration Level 1.

Findings derived from Cycle 1 solidified which horse topics participants thought were most important to include in a horseless horse learning lesson. There were strong similarities found between horse topics youth found interesting and horse topics equine specialists deemed important. The survey questions presented to youth in Cycle 1 were based off of topic areas horse specialists believed to be relevant. It is promising to see that youth answered with agree or strongly agree on 9 out of 11 questions which asked how interested participants were in certain horse topics. This reveals that the needs and wants of the participants are congruent with the topics deemed important by horse specialists. The topics listed by equine specialists that were not as relevant to youth participating in HorseXploration Level 1 included content areas such as the skeletal system, in-depth nutritional analysis, and reproduction. These content areas were not included in HorseXploration Level 1 due to the high level of complexity and lack of appropriateness for youth 12-14 years of age. These topics may be addressed in future HorseXploration learning lessons. Refer back to Table 6, located in Chapter IV, for complete results on participants' perceptions on horse topics. Focus group results from Cycles 2 and 4 also presented themes that were congruent with the ideas of horse specialists. Once again, this reassured that the wants and needs of the participants were similar to the thoughts of eXtension horse specialists.

The similarities derived from this study and the views of horse specialists may be due to the type of participants who participated throughout the various cycles of this study. Participants were recruited by eXtension and Extension horse specialists for participation. Therefore, a majority of the participants more than likely had pre-existing feelings, ideas, and thoughts regarding concepts they thought to be important and interesting. This may explain the highly positive responses that were received in response to how HorseXploration Level 1 was developed throughout the all four cycles.

Throughout this study, data were collected on learning methods participants enjoy using. In Cycle 1, nearly three-fourths of the participants agreed or strongly agreed that they enjoyed using the internet. Knowing that the majority of the participants enjoyed using the internet reinforced the idea that an online horseless horse learning lesson would be well received by youth 12-14 years of age. The findings in Cycle 1 also followed suit with the idea that creating a learning lesson which was heavily infiltrated with pictures and videos would be preferred by the users of HorseXploration Level 1.

The survey implemented in Cycle 1 found that nearly seventy percent (69.1%) of participants had owned or leased a horse while approximately thirty percent (30.9%) had not. Cochran-Mantel-Haenszel chi squared tests were conducted on the survey data collected during Cycle 1 to test for a relationship between survey responses from participants who have owned or leased a horse and those who have not. It was interesting to discover that there were no differences in the way participants who have owned or leased a horse responded to the survey questions compared to those who have not. Therefore, all participants, regardless if they have owned or leased a horse, felt that the same equine content areas were interesting.

There were a variety of comments collected in both the youth and adult focus groups which occurred in Cycle 2. In the theme of content area, the comment "little kids may get confused" was a positive sign that the learning lesson was on track. This is not because it is desired for the final learning lesson to be difficult and confusing, but because the learning lesson was intentionally designed for an older audience, youth ages 12-14. A major goal of HorseXploration Level 1 was to create a learning lesson that was not too simple and did not come across elementary. This goal was also realized when a 14-year-old participant commented that the quizzes "made it feel real, not like a kid Web site." Although the concepts and topics discussed in HorseXploration Level 1 may be elementary, the reading level and presentation style is geared toward a 12-14 year old audience.

The youth focus group conducted in Cycle 4 provided great feedback on HorseXploration Level 1. There were multiple students in the class who had no prior interaction with horses. It was insightful to listen to their feedback on HorseXploration Level 1. These students, as well as others in the class, felt as though the learning lesson adequately prepared them for an encounter with a live horse. It is not uncommon for horseless horse youth to become involved with live horses in the future. Therefore, it was a positive sign to hear the youth say they felt prepared to safely and appropriately act around a horse if the opportunity were to present itself.

Cycle 4 also utilized adult focus groups. It was suggested in the adult focus group that the participants be required to complete one section before moving on to the next. Although a valid suggestion, it was decided to keep the learning lesson as is and allow the participants the ability to pick and chose how they navigate the lesson. This will

allow the participants the flexibility to learn in a manner that is most comfortable to them. This will also allow the users to reference desired sections with no limitations.

Another suggestion received in Cycle 4 was to reorganize a small section of content. It was suggested that it may be more effective if the HorseXploration Level 1 participants learn about how horses are measured before they learn about various horse breeds. Many of the breed descriptions reference the typical height of the breed and if participants do not understand how horses are measured they will not fully understand the characteristics of the breed. This change will ensure participants are more prepared to learn about breeds of horses.

Lastly, the process of action research proved to be a reliable way to develop HorseXploration Level 1. Potter (2008) successfully utilized the method of action research in the development of the 4-H curriculum *Health Rocks*!. Throughout Potter's research, he experienced many of the same benefits and advantageous feedback this action research study experienced. Much like this current study, Potter (2008) found that the Action Research method highlighted topics, clarified strategies, and allowed the users voice to be heard. While critical to the HorseXploration Level 1 project, results from action research also add strength to the body of knowledge promoting action research as a viable method to be used in the development of curriculum or learning lessons.

Recommendations

The strength of the action research process continually became more apparent as this study was carried out. Using action research as a method to develop an online learning lesson allowed content developers to identify areas of interest, affirm learning preferences, and clarify the needs of the participants. The needs of these users may have

been missed or overlooked had a conventional method of content development been used. It is possible that the conventional method of the "expert" determining what it is youth should know and what should be included in curriculum is becoming outdated and less effective. The use of youth feedback combined with feedback from adult and expert participants allowed for the development of a stronger, more comprehensive online learning lesson that was reflective of the thoughts, ideas, and needs of its users. Utilization of the action research process has the potential to be beneficial in developing or improving any curriculum or learning lesson and therefore its use is recommended.

It is also recommended that if a complete action research process cannot be used in the development process of a learning lesson or curriculum, the component of user feedback should be incorporated at a minimum. Through the use of focus groups, surveys, or interviews, insight into the users' perceptions on the development of the learning lesson or curriculum can be gained. Feedback from just one of these methods is better than not including any at all.

In Cycle 4, there were 3 English Language Lerner (ELL) students who participated in the pilot/focus group. ELL students face the challenging task of mastering a new language while at the same time learning subject-matter content (Northwest Regional Educational Laboratories, 2005). If HorseXploration were presented in a bilingual manner, a greater number of participants could potentially utilize the learning lesson. Therefore it is recommended that HorseXploration be offered in Spanish as well as English.

It was also suggested by youth in Cycle 4 that more interactive activities be developed. Suggested interactive activities include virtual grooming and saddling.

Activities such as these would allow the participant to go through the motions of grooming and preparing a horse to ride. This would serve as an alternative for youth who cannot perform these tasks on a live horse. Unfortunately, it's very expensive to create a virtual game such as this and was not able to be completed for HorseXploration Level 1. It is recommended that in the future, if funding allows, such virtual activities be developed.

The HorseQuest Community of Practice (COP) is responsible for developing and managing the information made available in the horse section of the eXtension Web site. There are approximately 35 communities of practice that compose the eXtension Web site. Currently, very few of the COP's have a structured system in place to follow when developing online learning lessons. The findings of this study support the action research process as a strong way to develop a learning lesson; therefore, it's recommended for other COP's within eXtension to utilize action research when developing future learning lessons whose target audience is youth and/or adults.

Through the development of HorseXploration Level 1, using the action research method, it has become apparent how much time and work is needed to successfully develop a learning lesson. One way to capitalize on this approach is to utilize the skills of graduate students in developing learning lessons. This would allow the development of strong learning lessons that are based on the needs and ideas of users while training students in methodology. The work done by graduate students who utilize action research to develop learning lessons is likely to warrant the recognition of graduate credits for their work. Thus, one possibility to explore is giving graduate students the opportunity to develop future learning lessons for eXtension in exchange for college

credit. Thus providing a benefit to the graduate student and to the final user of the learning lessons.

Future Research

The findings of this study open the door for future research to build upon the tools utilized and the data collected. Additional research beyond the range of this study could greatly improve the development of curriculum or online learning lessons and development of horseless horse programs. Recommendations for future research include:

- Conducting a longitudinal study of the use of HorseXploration Level 1 to determine its impact on youth involvement with horses. A study of this type would uncover any benefits or shortcomings of the study.

- Replicate this study with only horseless horse youth as participants to compare and contrast those findings with the findings of this study. By replicating the study with only horseless horse youth, the researcher may discover their thoughts and ideas are different than what was found in this study.

- Replicate this study with only youth who have owned or leased a horse to compare and contrast those findings with the findings of this study. By replicating this study with only youth who have owned or a leased a horse the researcher may discover specific thoughts and ideas unique to that audience.

- Conduct a study to determine if learning objectives outlined in HorseXploration Level 1 are fulfilled after completion. The learning objectives are written to prepare and provide expectations for the learning lesson. If the learning

objectives aren't being met, adjustments may need to be made to the learning
lesson.

- Compare the utilization of HorseXploration in different settings (i.e. use by horse
  and horseless horse clubs, use by individual participants, use in schools, etc.).
  HorseXploration Level 1 could be used in a variety of settings, the benefits to
  participants may be different based on the setting in which the learning lesson was
  used.

- Replicate the action research process with other age groups resulting in additional
  online learning lessons. The same action research process could be used with an
  older age range to develop the higher levels of HorseXploration, which would
  target an older audience.

Conclusion

This study utilized action research to explore and discover what youth, adults, and
horse experts believe should be included in an online horseless horse learning lesson.
During data collection, participants were able to reflect on personal experiences, share
their ideas, and reveal any missing components of the online horseless horse learning
lesson. These findings led to the development of HorseXploration Level 1 and
introduced potential areas of research that could be addressed in the future. In addition,
the findings of this study provided practitioners insight on the benefits of action research
as a method to be used in the development of curriculum or online learning lessons.

References

American Horse Council Foundation. (2005). The economic impact of the horse industry

    on the United States. Deloitte Consulting LLP, edt.

Antoniewicz, R.J. & Kissel, N. (n.d.). Developing youth through horseless horse projects.

    Retrieved from http://4h.uwex.edu/onlinpro/documents/HORSELESS_

    HORSE.pdf

Arnold, M. E. & Nott, B. D. (2010). Oregon state 4-H horse program evaluation.

    Retrieved from http://oregon.4h.oregonstate.edu.

Astroth, K.A. (1996). Leadership in non-formal youth groups: Does style affect youth

    outcomes. *Journal of Extension*, 34 (6).

Bernard, M. E. (1996). Improving student achievement and motivation. Oakleigh, VIC

    (Aus): Anglo Scholarship Group.

Bhola, H., S. (1990). Evaluating literacy for development projects, programs and

    campaigns: Evaluation planning, design and implementation, and utilization of

    evaluation results. Hamburg, Germany: Institute for Education.

Blum, R.W. (2003). Positive youth development: A strategy for improving adolescent

    health. In F. Jacobs, D. Wertlieb, & R.M. Lerner (Eds.), Handbook of applied

    developmental science: Promoting positive child, adolescent, and family

    development through research, policies, and programs: Vol 2. Enhancing the life

    chances of youth and families: Contributions of programs, policies, and service

    systems. (pp. 237-252). Thousand Oaks, CA: Sage Publications.

Boyd, B.L., Herring, D.R., & Briers, G.E. (1992). Developing life skills in youth.

Journal of Extension, 30 (4).

Carr, W., & Kemmis, S. (1986). *Becoming critical: Education, knowledge, and action research* (Rev. ed.). Victoria, Australia: Deakin University Press.

Center for Disease Control Prevention. (2010). Trends in the prevalence of selected risk behaviors for all students national YRBS: 1991-2007 [Data file]. Retrieved from http://www.cdc.gov/HealthyYouth/yrbs/pdf/yrbs07_us_summary_trend_all.pdf

Chew, W., Osseck, J., Raygor, D., Eldridge-Houser, J., & Cox, C. (2010). Developmental assets: Profile of youth in a juvenile justice facility. *Journal of School Health,* 80 (2), 66-72.

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions.* Thousand Oaks, CA: Sage Publications.

Creswell, J.W. (2002). *Educational research: Planning, conducting, and evaluating, quantitative and qualitative research.* Upper Saddle River, NJ: Pearson Education, Inc.

Damon, W. (2004). What is positive youth development? *The Annals of the American Academy of Political and Social Science,* 591, 13-24.

De Guzman, M. R. & Bosch, K. R. (2007). High-risk behaviors among youth. Retrieved from http://www.ianrpubs.unl.edu/sendIt/g1715.pdf

Eccles, J.S., Gootman, J.A. (2002). *Community Programs to Promote Youth Development/Committee on Community-Level Programs for Youth.* Washington, D.C.: National Academy Press.

Ewing, C.A., MacDonald, P.M., Taylor, M., & Bowers, M.J. (2007). Equine-facilitated

learning for youths with severe emotional disorders: A quantitative and qualitative study. *Child & Youth Care Forum,* 36 (1), 59-72.

eXtension. (2010). *Read about our origins and what we have to offer online*. Retrieved from http://www.extension.org/main/about

Ferber, T., Gaines, E., & Goodman, C. (2005). *Positive youth development: State strategies*. Washington, DC: National Conference of State Legislatures.

Fox, J., Shroeder, D., & Lodl, K. (2003). Life skill development through 4-H clubs: The perspective of 4-H alumni. *Journal of Extension*, 41 (6).

Gannon-Cook, R., & Crawford, C. (2008). Combining quality and expediency with action research in e-learning instructional design. *The Journal of Educators Online*, 5 (2), 1-34.

Gay, L.R., Mills, G., & Airasian, P.W. (2002). *Educational research: Competencies for analysis and applications*. Upper Saddle River, New Jersey: Merrill, an imprint of Prentice Hall.

Hearn, G., Tacchi, J., Foth, M., & Lennie, J. (2009). *Action Research and New Media*. Cresskill, NJ: Hampton Press, Inc.

Hecker-Jimmerson. K., Heleski, C., Kaiser, L., Shelle, P., & Waite, K. (n.d.). Quiet interaction with a horse enhances mood of adolescent girls. Unpublished manuscript, Michigan State University, East Lansing, MI.

Herr, K., & Anderson, G. L. (2005). *The action research dissertation: A guide for students and faculty*. Thousand Oaks, CA: Sage.

Huebner, A, (2000). Adolescent Growth and Development (Publication No 350-850).

Family and Child Development, Virginia Tech.

Huff, A. (1990). Advanced understanding needed. *Journal of Extension,* 28 (2).

Jones, S. & Fox, S. (2009). Generations online in 2009. Retrieved from

> http://pewresearch.org/pubs/1093/generations-online

Kemmis, S., & McTaggert, R. (1998). The action research planner. Geelong, Victoria,

> Australia: Deakin University Press.

Knowlton-Ward, C. (1996). Life skill development related to participation in 4-H animal

> science projects. *Journal of Extension,* 34 (2).

Kreitler, B. (2000, October). The future of the horse. *Horse Illustrated*, 66-71.

Lancaster County 4-H. (2005). *Horseless horse 4-H club is off and running.* Retrieved

> from http://lancaster.unl.edu/4H/clubs/clubspotlights/Horseless_2005.htm

Lerner, R.M. (2004). *Liberty: Thriving and civic engagement among America's youth.*

> Thousand Oaks, CA: Sage Publications.

Lerner, R.M. (2005). *Promoting Positive Youth Development: Theoretical and Empirical*

> *Bases.* White paper prepared for the Workshop on the Science of Adolescent

> Health and Development, National Research Council/Institute of Medicine.

> Washington, DC: National Academies of Science.

Lerner, R.M, Lerner, J.V., & Phelps, E. (2009). Waves of the future: The first five years

> of the 4-H study on positive youth development. Retrieved from http://4-h.org/

Lerner, J.V., Phelps, E., Forman, Y.E., & Bowers, E. (2009). Positive youth

development. In. R.M. Lerner & Steinberg (Eds.), Handbook of adolescent

psychology (3rd ed.). Hoboken, NJ: Wiley.

Lincoln, Y.S., & Guba, E.G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

Long-Bailey, E., & Wilson, K. (2009). What can eXtension horse quest do for you?.

Unpublished manuscript, Extension, University of Maryland.

McKernan, J. (1991). *Curriculum action research: A handbook of methods and resources

for the reflective practioner.* London: Kogan Page.

McShane, C., & Tarr, J. (2007). *The horse in the city*. Baltimore, MD: The John Hopkins

University Press.

Melson, G.F. (2001). *Why the Wild Things Are: Animals in the Lives of Children.*

Cambridge, MA: Harvard University Press.

Moodle. (2010). What is moodle. Retrieved from http://moodle.org/

National 4-H Headquarters. (2003). Annual 4-H youth development report. Retrieved

from www.national4-hheadquarters.gov.

National 4-H Headquarters. (2008). 2008 4-H youth development ES-237 Statistics.

Retrieved from www.national4-hheadquarters.gov.

National 4-H Headquarters. (2009). 4-H history. Retrieved from www.national4-

hheadquarters.gov.

Northwest Regional Educational Laboratories. (2005). Focus on effectiveness:

Educational challenges. Retrieved from: http://www.netc.org/focus/challenges/

ell.php

Ouverson, C. (2007). 4-H horseless horse project reaches urban youth. Retrieved from

http://www.extension.org.

Paul, E.S. (2000). Empathy with animals and with humans: Are they linked?, *Anthrozoos,*
13(4), 194-202.

Paul, E. & Serpell, J. (1992). Why children keep pets: The influence of child and family
characteristics. *Anthrozoos 5* (4), 231-244.

Plano-Clark, V.L., & Creswell, J.W. (2010). *Understanding research: A consumer's
guide*. Upper Saddle River, NJ: Pearson Education.

Poole, D.M. (2002). Student participation in a discussion-oriented online course: A case
study. *Journal of Research on Computing in Education,* 33(2), 162-177.

Potter, S. (2008). *Developing a successful youth tobacco, alcohol, and other drug
education curriculum: Health rocks! an action research study* (Master's thesis).
University of Nebraska – Lincoln, Lincoln, NE.

Price, S. D. (Ed.). (1999). *The quotable horse lover*. Guilford, CT: Lyons Press.

Reason, P., & Bradbury, H. (Eds.). (2001). *Handbook of action research: Participative
inquiry and practice.* Thousand Oaks, CA: Sage.

Rideout, V.J., Foehr, U.G. & Roberts, D.F. (2010). *Generation m2: Media in the lives of
8-18 year-olds.* Retrieved from Kaiser Family Foundation Web site:
http://www.kff.org/entmedia/8010.cfm

Roth, J.L., & Brooks-Gunn, J. (2003). What is a youth development program?
Identification of defining principles. In F. Jacobs, D. Wertlieb, & R.M. Lerner
(Eds.), Handbook of applied developmental science: Promoting positive child,
adolescent, and family development through research, policies, and programs: Vol

2. Enhancing the life chances of youth and families: Contributions of programs, policies, and service systems. (pp. 197-223). Thousand Oaks, CA: Sage Publications.

Schultz, P.N., Remick-Barlow, A.G., & Robbins, L. (2007). Equine-assisted psychotherapy: A mental health promotion/intervention modality for children who have experienced intra-family violence. *Health and Social Care in the Community,* 15 (3), 265-271.

Schrum, L. (2002). Oh, what wonders you will see: Distance education past, present, and future. *Learning and Leading with Technology*, 30(3), 6-9, 20-21.

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.

Squires, J. (2009, August 9). Thoroughbred sales drop, an ominous sign for an erratic industry. *The NewYork Times.* Retrieved from http://www.nytimes.com

Stringer, E.T. (1999). *Action research* (2nd ed.). Thousand Oaks, CA: Sage.

Taciturn, A.M. (2009). *Why you should not buy a horse.* Retrieved from http://www.museumofthehorse.org/html-journal/not-buy-a-horse.html

USDA/Army. (n.d). Moving ahead: Preparing the youth development professional.

Zarrett, N., & Lerner, R.M. (2008, February). Ways to promote the positive development of children and youth. Child Trends Research-to-Results Brief. Publication 2008-11.

Zani, B. & Cicognani, E. (2010). Evaluating the participatory process in a community-

based health promotion project. *Journal of Prevention & Intervention in the Community,* 38, 55-69.

<u>Appendix A</u>

Survey Instrument

HorseXploration Questionnaire

HorseXploration Education Impact Study

1. How old are you?
    Pick one:
    _____ 11 years old or younger
    _____ 12 years old
    _____ 13 years old
    _____ 14 years old
    _____ 15 years old
    _____ 16 years old
    _____ 17 years old
    _____ 18 years old

2. What is your gender?
    Pick one:
    _____ Male
    _____ Female

3. How do you describe yourself?
    Select one or more responses:
    _____ American Indian or Alaska Native
    _____ Asian
    _____ Black or African American
    _____ Hispanic or Latino
    _____ Native Hawaiian or other Pacific Islander
    _____ White
    _____ Other

4. Where do you live?
    Pick one:
    _____ Farm
    _____ Town, Population under 5,000
    _____ Town, Population 5,000 – 30,000
    _____ Central Cities, Population above 30,000

5. Do you own or lease a horse?
    Pick one:
    _____ Yes
    _____ No

Instructions: Please read each statement and answer by selecting the level at which you agree with the statement. Then continue by responding to the short answer questions below.

		Disagree				Agree
1.	It's interesting to learn about what a horse eats (hay, grain, etc)?	1	2	3	4	5
2.	It's interesting to know horses see?	1	2	3	4	5
3.	It's interesting to know the bones of the horse?	1	2	3	4	5
4.	It's interesting to know the parts of the horse?	1	2	3	4	5
5.	It's interesting to understand the horses different gaits (walk, trot, canter)?	1	2	3	4	5
6.	It's interesting to understand the difference between the types of horses (light, draft, pony)?	1	2	3	4	5
7.	It's interesting to know how to properly groom a horse?	1	2	3	4	5
8.	It's interesting to know the difference between different horse feeds?	1	2	3	4	5
9.	It's interesting to know the difference between Western and English disciplines?	1	2	3	4	5
10.	It's interesting to know about Western and English tack (saddle, bridle, etc)?	1	2	3	4	5
11.	It's interesting to know how horses evolved?	1	2	3	4	5
12.	It's interesting to learn about famous horses?	1	2	3	4	5
13.	Do you enjoy using the internet?	1	2	3	4	5
14.	Do you enjoy learning from pictures?	1	2	3	4	5
15.	Do you enjoy learning from video clips?	1	2	3	4	5
16.	Do you enjoy reading?					
17.	Do you enjoy learning at your own pace?	1	2	3	4	5
18.	Do you enjoy learning on your own time?	1	2	3	4	5
19.	What is your favorite horse related topic? Why?					
20.	What horse topic do you think is the most confusing? Why?					

<u>Appendix B</u>

Focus Group Questions

HorseXploration Focus Group Questions

1. Did you feel that the content areas were appropriate?

2. Did you feel that the information "flowed" well?

3. Were you able to comprehend the information provided under the different content areas?

4. Which content area was the most difficult to understand?

    a. How can we make it easier to understand?

5. Which content area was the easiest to understand?

    a. Do we need to make it more difficult?

6. What are your thoughts on the activities that accompanied the different content areas?

    a. Were they appropriate for the given content area?

        i. Too difficult?

        ii. Not difficult enough?

    b. Do we need to develop more?

7. Were the pictures, video, clips and Web site links that accompanied the text beneficial? Why?

8. What were your overall thoughts on level one of HorseXploration? Why?

9. Did you have any concerns regarding level one of HorseXploration? Why?

10. What would you change about level one of HorseXploration? Why?

11. Do you think horseless horse youth can benefit from this online learning lesson? Why?