AN ASSESSMENT OF IMPLEMENTING THE CLINICAL VETERINARY SCIENCE CERTIFICATE PROGRAM IN THE TEXAS 4-H PROGRAM

A Dissertation

by

JOE WAYNE MASK

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Chair of Committee,	Chris T. Boleman
Committee Members,	Scott Cummings
	Floron "Buddy" Faries
	Tim Murphy
Head of Department,	John Elliot

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ABSTRACT

The purpose of this study was to determine if participation in the 4-H veterinary science certificate program has contributed to the participant's career decisions. Career development, for most people, is a lifelong process of engaging the work world through choosing among employment opportunities made available to them. Each individual undertaking the process is influenced by many factors, including the context in which they live, their personal aptitudes, and educational attainment.

A sample of 374 was used to gather information form participants of the veterinary science certificate program. Data was collected with the use of an online survey instrument and resulted in a total of 224 responses (59.8%) with 122 (54.4%) completed surveys. This resulted in 112 (29.9%) usable responses for the study.

Participants involved in the VSCP are gaining valuable knowledge and skills about veterinary medicine. There are some areas as indicated in the research that might need to be re-visited and changed to meet the needs of those involved in the program.

It can also be concluded that the VSCP is helping participants successfully determine career choices. VSCP combines lessons, activities and hands on learning that help different learning styles to better understand veterinary medicine, in return help them in career choices.

The results also indicate why participants are not completing all components of the VSCP. It is evident that if the VSCP is going to continue and prosper these finding should be addresses, and it needs to become priority for the betterment of this career

development program. It is time for VSCP to look at short term verses long term experiences. The researcher feels by doing this it would determine if the time commitment is too much for the participant, or is it the commitment of the participant to complete the requirements of VSCP. The researcher also reveals it is relevant to continue the 500 clinical hours due to the parallel of the TVMA certification program, for students that want to become a certified veterinary assistant.

However, to get more participants to complete VSCP educational component it might need to be communicated better that the 500 clinical hours are secondary to the overall VSCP.

DEDICATION

All glory is given to God.

To my biggest supporters, my wife Julie, and my little girl Jennifer. Julie you have sacrificed many things over the past seven years and I am truly grateful to call you my best friend and wife. Jennifer you were a month old when I started my course work, and you always thought Daddy just went to school. Well baby as I complete my dissertation and graduate Daddy is all yours, no more "I have to do school work."

I love you both and thanks for your love and support.

"As we trust God to give us wisdom for today's decisions, He will lead us a step at a time into what He wants us to be doing in the future." – Theodore Epp

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CHAPTER I

INTRODUCTION

Career development, for most people, is a lifelong process of engaging the work world through choosing among employment opportunities made available to them. Each individual undertaking the process is influenced by many factors, including the context in which they live, their personal aptitudes, and educational attainment (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). With 4-H clubs focusing on youth and career development, it is imperative that young people have information and choices that help educate themselves on the existing career opportunities. One such opportunity is the Texas 4-H Veterinary Science Certificate Program (VSCP) that is focused on career development in the veterinary medical field. The Veterinary Science Certificate Program is a 5-year curriculum-based program that includes 100 lessons and 50 activities that provide young people interested in veterinary medicine the opportunity to work and observe with professionals in the field. This program is career-oriented and provides on-the-job training for participants to prepare them for a career in veterinary medicine. The on-the-job training can be done in three different areas of study: clinical, one health, and laboratory. Clinical is the focus this study. It consists of the student 4-H member working side-by-side with a veterinarian or a registered veterinary technician to learn by observation then completing task through hands-on learning. Evaluation of the Extension model of “learn by doing” fits within the Cooperative Extension Program model.

As previous literature has indicated, there has been a need for career development projects and activities in 4-H (Russell and Blume, 1960). This was initiated in the early 1960s, when it was recognized that 4-H clubs could provide a broader opportunity for career exploration than normally possible within the home and school (Tyler, 1961). Since 4-H is a program that allows young people to explore and learn new ideas, what better atmosphere to teach about a career path such as veterinary medicine? Reviewing work conducted by Boardman, (1968) an Extension Service Review included human interest articles of former 4-H members on how 4-H provided them an opportunity to explore careers (Boardman, 1968).

The 4-H Veterinary Science Certificate Program in Texas is an asset to the Texas A&M AgriLife Extension Service, as it helps young people develop an understanding of the veterinary science field. It provides career opportunities in the field and gives 4-H members hands on education in the workforce through an externship opportunity in an actual veterinary practice. With this study, expectations are to develop an understanding of what 4-H members are learning through the program, their intention on following a career path in the veterinary medical profession, and warranted changes to the curriculum and program development.

Statement of the Problem

The 4-H Veterinary Science Certificate Program in Texas has been in existence since 1995, and participants have completed lessons and hours in the veterinary medicine field of study, but there is limited empirical evidence that reveal the value or

impact to young people when it comes to career development decisions. Once participants complete the program and take the Texas Veterinary Medical Association (TVMA) exam to become a Certified Veterinary Assistant or choose not to take exam to be certified, communication with these individuals significantly declines. Therefore, it is important to gauge participant level of learning of the content and the impact made on their career development choices due to their involvement in the program.

Some specific questions include:

- Are lessons being taught relevant to veterinary medicine?
- How do participants perceive this program as a tool for career choices?
- What results has the program had on participant's life skills such as work ethic, values, responsibility, goal setting, and compassion for animals?
- Has commitment and motivation to pursue a career in veterinary medicine increased due to this program?

Purpose and Objectives

The purpose of this study was to determine if participation in the 4-H VSCP contributed to their career decisions. This study has three specific objectives.

1. Determine knowledge and skills gained from the VSCP.
2. Explore relationships between VSCP and selecting a career in animal health.
3. Explore relationships between demographic variables including gender, age, race, and educational background on success in the program and selecting a career in animal health.

Definition of Terms

4-H - The youth development component of the Cooperative Extension Program.

4-H CONNECT – a web-based data management system used by Texas 4-H Youth Development for maintaining membership of youth and adult volunteers and registration of events for current 4-H members.

4-H Veterinary Science Certificate Program (VSCP) – A 5 year curriculum-based program that includes 100 lessons and 50 activities and an apprenticeship giving young people interested in veterinary medicine the opportunity to work with professionals in the field. The program is career-focused and provides on-the-job training for students to prepare them for a career in veterinary medicine. Successful students receive a certificate with classification of Veterinary Assistant.

Career Development - A longitudinal process over one's lifespan and refers to the preparation for, choice of, entry into, and adjustment to work in a specific field (Super, 1954)

Certified Veterinary Assistant (CVA) - an individual that has been educated in the essential skills and knowledge needed to become effective contributors to the veterinary medical care team.

Cooperative Extension Service (CES) – The division of the United States Department of Agriculture (USDA) created by the Smith-Lever Act of "1914" and charged with

disseminating research-based information to the public through state and land-grant universities.

County Extension Agents - professional educator that provides high-quality, relevant, and research-based education to the citizens of Texas and provides leadership to the 4-H & Youth Development Program at the county level.

County Leadership Council – a 4-H organization made up of representatives from each 4-H club within a county.

Instructional Material Services (IMS) - develops standard-based agriculture curriculum covering a wide range of topics related to agriculture, and the goal is to provide agricultural educators with quality, up-to-date and customizable materials that can easily be used in the classroom and are aligned with Texas Essential Knowledge and Skills (TEKS) standards.

Land-Grant University – The Morrill Act of 1862 provided for at least one college in each state to be established to teach items such as agriculture and the mechanic arts. With the passing of the Second Morrill Act of 1890 the then segregated Southern states opened or designated historically black universities which became known as “the 1890 Land-Grants”.

Prairie View A&M University (PVAMU)-1890 Land-Grant University and home of the Cooperative Extension Program in Texas.

Program Development – Ensures that grass roots involvement in identifying issues, designing programs, implementing programs, evaluating programs, and interpreting programs to stake-holders is used in Extension programs.

Qualtrics Survey – online survey software used by Texas A&M AgriLife Extension Service.

Texas 4-H Youth Development – Organization in Cooperative Extension that prepares youth to meet the challenges of childhood, adolescence and adulthood, through a coordinated, long-term, progressive series of educational experiences that enhance life skills and develop social, emotional, physical, and cognitive competencies.

Texas A&M University (TAMU) - 1862 Land-Grant University and home of the Texas A&M AgriLife Extension Service

Texas Education Agency (TEA) – Texas organization that provides leadership, guidance, and resources to help schools meet the educational needs of all students and prepare them for success in the global economy.

Texas Veterinary Medical Association (TVMA) – The association that preserves, promotes, and protects the veterinary medical profession and to advance animal health for the well-being of animals and humans.

United States Department of Agriculture (USDA) - federal executive federal government department that provides leadership on food, agriculture, natural resources, rural

development, nutrition, and related issues based on sound public policy, the best available science, and efficient management.

Workforce Development –career development that is directed to a targeted field. Standards and criteria are identified and outlined with internships and apprenticeships included.

Youth Development - the ongoing growth process in which all youth are engaged in attempting to (1.) meet their basic personal and social needs to be safe, feel cared for, be valued, be useful, and be spiritually grounded, and (2.) to build skills and competencies that allow them to function and contribute in their daily lives.

CHAPTER II

REVIEW OF LITERATURE

A review of literature citing previous research in the field of career development is included in this chapter. The review includes an overview of the history of Land-Grant Universities, Cooperative Extension Service, 4-H, Texas A&M AgriLife Extension Service program development, history of the Veterinary Science Certificate Program, learning communities, career choice influences and career development.

Land-Grant Universities

The Morrill Act of 1862 was also known as the Land-Grant College Act. The grant was originally set up to establish institutions in each state that would educate citizens in agriculture, home economics, mechanical arts, and other professions that were practical at the time. The land-grant act was introduced by Justin Smith Morrill a congressman from Vermont. Congressman Morrill envisioned the financing of agricultural and mechanical education that was available to those in all social classes.

At the time of the passing of the first Morrill Act, there was separation of races in the south. Since blacks were not allowed to attend the original land-grant universities, this situation was rectified with the passing of the second Morrill act of 1892. The second Morrill act expanded the land-grant system to include black institutions.

Texas has both 1862 and 1890 land-grant universities that work separate but together as one 4-H program. Texas A&M University is the 1862 land-grant university

while Prairie View A&M University has the designation as the 1890 land-grant university.

Cooperative Extension Service

The Cooperative Extension Service was formalized in 1914 as a result of the passing of the Smith-Lever Act. The act enabled the land-grant universities to develop a non-formal educational system that would take educational information to the people. According to McDowell (2001, p. 69), the purpose of the Cooperative Extension Service has always been: "(1.) To seek to know the problems of ordinary people and bring those problems to the attention of the researchers, (2.) To deliver functional education, based on the best scholarship available, to ordinary people, and to help solve their problems, and (3.) To collect political support from the beneficiaries of extension programs in order to fund the continued research and education of ordinary people of the society-not just, or even primarily, farmers." These purposes can be defined more distinctively by Rasmussen (1989, p. 1) who stated that, "The mission of the Cooperative Extension Service is to help people improve their lives through an educational process which uses scientific knowledge focused on issues and needs."

"Extension education is an intentional effort to fulfill predetermined and important needs of people and communities" (Seevers, Graham, Gamon, & Conklin, 1997, p. 91). "In order to do this effectively, a program must be developed to ensure that specific objectives of the program are being met" (Boleman, 2003).

History of 4-H

Corn clubs. Before the passing of the Smith-Lever Act of 1914, 4-H programs were beginning to surface. According to Wessel and Wessel (1982), Cornell University's Liberty Hyde Bailey developed and disseminated educational leaflets on Agriculture for youth interested in a career in Agriculture as early as 1896. During the early 1900s, several other states were developing similar educational pamphlets that were being distributed to potential future farmers and ranchers as a result of the impact that Bailey's work was having New York, youth.

According to Wessel and Wessel, (1982), one of the most successful youth educational efforts pertaining to agriculture started in Springfield Township, Ohio. In 1901, the local school superintendent, Albert B. Graham, designed a strategy for after school hours education for young men interested in agriculture. His first meetings were held with these boys on Saturdays. Using litmus paper, he taught the boys how to measure the acidity in their soils so that they could determine the best corn varieties for their farms (Reck, 1951). After a few years, Grahman learned that he needed help from somewhere else to continue to build sequential learning opportunities for the boys he was teaching. Thus, he contacted faculty at the Ohio Agricultural Experiment Station who were eager to disseminate their research based findings to assist Ohio farmers. They concluded that this could be that opportunity to do so. By 1905, Grahman and the Ohio Agricultural Experiment Station had established replicated programs across the state, and membership had grown from less than 100 to nearly 3,000 statewide.

During the same time, other states were beginning to host youth corn contests. Illinois, Georgia, Oregon, Missouri, Nebraska, and Indiana were all hosting some type of corn agriculture exhibit. Not only did these exhibits reveal the highest quality and "prize winning" products, but also exhibitors were able to verbally discuss their crop and answer questions concerning it (Wessel & Wessel, 1982).

United States Department of Agriculture demonstrations come to Texas. During the growth of youth corn clubs, something different was beginning in Texas. As a direct result of seeing the educational success of corn clubs primarily in the country's Midwest region, the federal government was willing to apply newly advanced scientific methods. Texas' infestation of the Mexican Boll Weevil provided this opportunity. The USDA sent Seaman A. Knapp to Texas to convince farmers to implement these practices. Few farmers would agree to work with Dr. Knapp, but Walter Porter from Terrell, Texas eventually did. The experiment was successful and because other farmers were able to witness the experiment, they too began to believe in the program. This Texas study led to Seaman A. Knapp's theory of "learning by doing." According to Scott (1970), this theory would eventually lead to the philosophy behind the Cooperative Extension Service. The Cooperative Extension Service is the agency that houses 4-H Youth Development.

The 4-H organization is formed. The Smith-Lever Act was passed in 1914. The passing of this act provided the financial support for the Cooperative Extension Service

to be successful (Wessel & Wessel, 1982). This also allowed for the youth development component, called 4-H, to be housed under the Cooperative Extension Service.

According to Reck (1951), World War I was a key contributor to the growth of 4-H. In the year before America entered World War I, 4-H club membership was 169,000 nationwide; however, by 1918, this membership passed 500,000. This growth in membership was directly related to the fact that America was at war and needed more food and fiber to sustain itself during these times. In order to insure adult farmers were using the best, most effective production practices, County Extension Agents in the field seized the opportunity to work with youth and teach them best management food and fiber practices. These youth took their knowledge home and helped convince their parents to adopt these new farming practices. As a result, production levels increased (Wessel & Wessel, 1982).

So, the question might be asked, '*what is 4-H?"*. According to Wessel and Wessel (1982, p. 331) 4-H is the youth education program of the Cooperative Extension Service. Participation in the 4-H program is open to all interested youth, regardless of race, color, sex, religion, national origin, or disability. The success of the 4-H program is attributed to the nearly 600,000 volunteer leaders who are backed by the strong educational base of the Land-Grant University staff in almost every county in the nation. The mission of 4-H is to assist youth in acquiring knowledge, developing life skills, and forming attitudes that will enable them to become self-directing, productive, and contributing members to society. This mission is carried out through the involvement of

parents, volunteer leaders, and other adults who organize and conduct educational subject/project experience in community and family settings.

Today's 4-H program looks very similar to the past but with more innovative project programs to entice rural and urban kids to get involved. With the demographics changing in Texas the 4-H and Youth Development program offers project such robotics, companion animals, rocketry, veterinary science certificate program and our strength-based program such as livestock projects. Many studies have been conducted that investigated the value of the 4-H livestock project to the 4-H member. A study by Davis, Keith, and Fraze (2001) investigated the perceived benefits of competitively exhibiting livestock projects in the state of Texas. This study was qualitative in nature as the researchers interviewed 4-H livestock families at the Houston Livestock Show and Rodeo. The benefits of the livestock project are not exclusive to Texas. Rusk, Summerlot-Early, Machtmes, Talbert and Balschweid (2003) found that Indiana 4-H Livestock "members who exhibited at the state fair have higher skill levels in the area of animal health care, animal production management, and animal selection than members who only exhibited at the county fair' (p. 9). Further, they found that livestock projects develop responsibility in youth that benefit them in completing homework assignments, being punctual at work and caring for younger siblings. There is little doubt, that the livestock project is a powerful tool for developing functional citizens throughout the United States. As we look at the VSCP in correlation to livestock projects, even though there has been little to no research done on the impact of the VSCP, it appears that both programs are similar in developing leadership and productive citizens.

Program Development

Program development is an ongoing systematic process that Extension professionals follow as they plan, implement, and evaluate their educational programs. Two very popular models are the Logic and Kirkpatrick. I will spend some time on each of these before I go in depth on the program planning model used by Texas A&M AgriLife Extension Service.

The logic model displays the sequence of actions that describe what the program is, what it will do, and how investments link to results. The five core components of the logic model are inputs, outputs, outcomes/impacts, assumptions, and external factors (Figure 1).

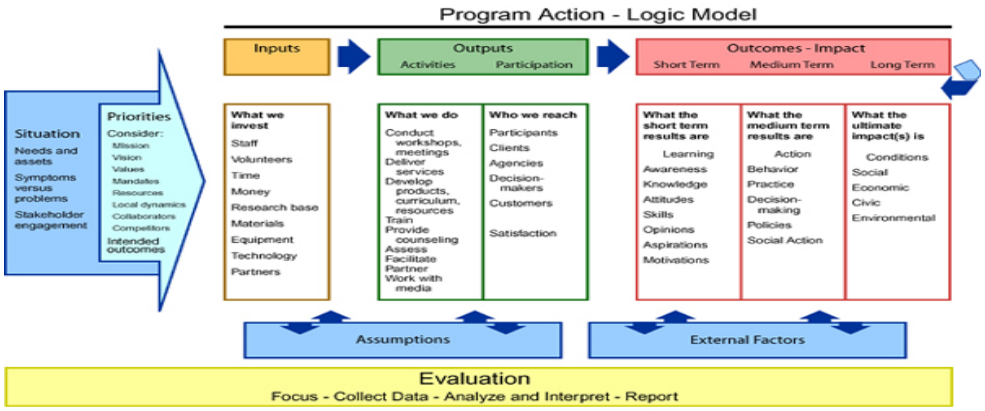

Figure 1

Program Action-Logic Model

Donald Kirkpatrick's four level evaluation model is one of the best known evaluation methodology for judging learning processes. The Kirkpatrick model was first

published in a series of articles in 1959 in the Journal of American Society of Training Directors. While most people refer to the four criteria for evaluating learning process as "levels," Kirkpatrick never used that term, he normally called them "steps." In addition, Kirkpatrick also used words such as "techniques for conducting the evaluation," instead of the word model. The four steps of evaluation consist of; reaction, learning, behavior, and results. Step 1 reaction, how well did the learners like the learning process. Step 2 learning, what did they learn, to what extent did the learner gain knowledge and skills. Step 3 behavior, what changes resulted from the learning process or capability to perform newly learned skills. Step 4 results, what are the tangible results due to the learning process.

Prior to purposely discussing the Texas 4-H Veterinary Science Certificate Program, it is important to define the specific steps in the program development process within the Texas A&M AgriLife Extension Service. Program development is the process of placing together an effective plan to educate a specific target audience. It involves the planning, implementing, and evaluating educational efforts (Prawl, Medlin, & Gross, 1984).

Planning. The first step in the program development process is planning. Proper planning determines the ultimate success of the educational program (Gupta, 1999). Within the planning step is needs assessment. A needs assessment is a process for indicative reasons for gaps in performance. In other words, a needs assessment helps to explain where one is and where one aspires to be at the end of the educational program.

A needs assessment can also be utilized to identify new and future programming needs. Planning allows clients to provide valuable data and input pertaining to issues that these clients need help, guidance, and/or support in answering.

There are many needs assessment models that have been developed to help educational agencies such as Texas A&M AgriLife Extension Service determines the needs of the audience they serve. Six common models include Thomas Gilbert's Human Competence model, Joe Harless' Front-End Analysis, Roger Kaufman's Organizational Elements Model, Robert Mager's Analyzing Performance Problems, Allison Rossett's Training Needs Assessment, and Geary Rummler's Performance Improvement by Managing the White Space (Gupta 1999, p. 5).

Gilbert (1978) wrote that examing people at six factors will determine how educational programs should align themselves. These six can be divided into two categories. The first category is the environment and includes information, resources, and incentives. The second category is referred to as the individual. Knowledge, capacity, and motives are included in this category.

Front-End Analysis is the tendency for groups to have a tendency to look for answers or solutions to problems as they arise (Harless, 1970).

Kaufman's (1994) Organizational Elements Model is one of the most widely used needs assessments strategies. This model has five major components. These five are inputs, processes, products, outputs, and outcomes. Inputs are the resources of the group. Processes are the methods, means, and activities used to achieve results.

Products are the resources the group has to answer a need. Outputs are the end results that are delivered and the outcomes are the impact on the clients and society if the issue is addresses.

Analyzing Performance Problems developed by Mager and Pipe's (1997) hinges on asking the right questions systematically. There are five main areas to Mager's model. These include describing the problem, exploring past fixes, checking consequences of actions, enhancing competencies of the audience, and solutions.

Rossett's (1987) Training Needs Assessment examines the gap between where an audience wants to be and where they currently are pertaining to an issue.

Rummler's (1996) framework focuses on improving people on three levels. These include the individual, the organization, and the structure of the job within the organization.

After the needs assessment is complete, an organization must determine the identified need or issue. This allows the educator to gather baseline data on the issue, to determine the audience that is being affected, and to plan a sequential learning experience for the target audience.

Implementing. Educational programs to target audiences based on issues is the opportunity for the educator to be creative (Marshall, 1994). This is the time for the educator to actually implement the program so that client change can take place. The methods for implementation are too numerous to list. Some group methods defined by

Marshall (1994) include: camps, conferences, discussions, field days, forums, information days, institutes, lectures, meetings, panels, role-playing, seminars, short courses, symposiums, tours, and workshops. In addition, there are also individual contact educations that can take place. These include one-on-one conversations, information shared via telephone or internet, newsletters, and news articles.

Evaluating. In order to determine programming outcomes, evaluation of programs is essential. Evaluating programs allows Extension professionals to know if identified educational objectives were achieved. The results from program evaluations provide local stakeholders with the impact programs leave on audiences. This is especially important in today's society because of passed legislation that requires non-profit agencies to be more accountable for the educational programs they provide.

There are many different definitions of evaluation. Cronbach (1963) defined evaluation simply as "the collection and use of information to make decisions about an educational program" (p. 672). A more detailed definition is provided by Patton (1986), that says "program evaluation is the systematic collection of information about the activities, characteristics, and outcomes of programs for use by specific people to reduce uncertainties, improve effectiveness, and make decisions with regard to what those programs are doing are effective" (p. 16). In addition to varying definitions of evaluations, there are also varying levels of evaluation. One of the most commonly referred to levels of evaluation was developed by Kirkpatrick (1967). His historic works include four levels of evaluation. They include: (1.) measures that indicate the

participant likes or feeling for the training, (2.) learning measures that test retention of training material and indicate the extent to which new ability or knowledge is acquired, (3.) behavioral measures, and (4.) results that indicate whether broad organizational goals are achieved. Rossi, Freeman, and Lipsey (1999) also identify multiple processes to evaluate. The authors indicate that the most effective evaluation methods and levels to use depend on the type of programs the evaluator is planning to evaluate. There are four general themes they identify for service agencies. These include: (1.) program conceptualization and design, (2.) program monitoring, (3.) impact/outcome evaluation, and (4.) cost evaluation.

Relating the program development process to this study. Worthen, Anders, and Fitzpatrick (1997) define a program as a set of activities that are designed to enhance or change the behavior of the learner. Youth participating in the VSCP since the beginning certainly adhere to this definition of a program. The steps involved in the VSCP include completing the 100 lessons, working on the assigned 50 activities, and working to complete a minimum 500-hour apprenticeship with a veterinarian or licensed veterinary technician, and after the completion of all listed above they can take the TVMA test to become a certified veterinarian assistant. As these requirements are being completed, these youth are growing as individuals and receiving advice from other youth, 4-H volunteers and leaders, and county Extension agents in a continuous learning cycle or atmosphere.

John Dewey-Learning Communities

John Dewey (1938) said "…education is essentially a social process. This quality is realized in the degree in which individuals form a community group" (p. 78). The provided theory of community group is in line with the Texas 4-H vet science certificate program effort to encourage the participants to form community learning group. The program has activities and clinical hours for transfer of information and a learning environment where the participants can communicate with peers and veterinaries. These activities and subsequent hours provide a forum for discussion of learning and experiences. Educators are also part of the community and are available to help and assist through the student's learning process. John Dewey also theorized the educator must be part of the community. "It is absurd to exclude the teacher from membership in the group. As the most mature member of the group, he has a peculiar responsibility for the conduct of interactions and the intercommunications which are the very life of the group as a community" (p. 78).

Dewey's statement validates the need for the learning community with the addition of faculty and veterinarians. The program utilizes faculty and volunteer leaders to introduce material and assist in the learning process in the student's 5-year long program. In truth, John Dewey was not familiar with the VSCP in his writings; however the fundamentals of his community of learners are satisfied in the program development model used by the Texas A&M AgriLife Extension Service.

History and Implementation of VSCP

In 1992, Dr. Herman Brown professor and department head of the Agricultural Education department at Texas A&M University, approached Dr. Floron "Buddy" Faries about the possibility of rewriting the Ag Coop veterinary assistant handbook. Dr. Faries served as chairman of the committee to rewrite the handbook along with the help of twenty-five veterinarians and animal scientists across Texas. The writing did not progress as well as one would have thought. Dr. Glenn Shinn became the department head of Agricultural Education department after the retirement of Dr. Herman Brown, at this point Dr. Shinn went back to Dr. Faries for help to see if the handbook could be completed. Dr. Faries said yes and he started writing whenever he had time on the road in his office and at home. He would give what he had written to one of three graduate students to type and he would make revisions, and in 1995 the Veterinary Assistant Handbook would be published and endorsed by Texas Education Agency. In 1995, Dr. Faries started the curriculum only in the Texas 4-H program and in 1997 Texas Veterinary Medical Association approved the apprenticeship that we know today as the 500 hours of on-the-job training.

Once again in 2008, Dr. Faries was approached by Dr. Joe Dettling from the Instructional Material Service (IMS) at Texas A&M University to re-write the curriculum. At this time, Dr. Faries was not sure about rewriting the curriculum; however he decided to update what he had done in 1995. At this time, it became the

manual that is used today in the Texas 4-H VSCP with some changes and updates completed once again in 2011. (Faries, 2012)

To determine if this curriculum is being used, Dr. Faries reflected back from 1995-2002 to determine how many copies had been purchased, there were approximately 200 copies sold each year.

From the start of 2003 until present, there have been approximately 6,600 curricula sold. (Faries, 2012) Dr. Faries reported that modifications to the guidelines of the program have been made since 1997, however the changes have been needed and it has helped the program to continue and grow. Being the only person to market the program from 1995-2004, Dr. Faries started clubs in about five counties per year. He now conducts the program with help from County Extension Agents and volunteer leaders. This includes 25 orientations per year for the 4-H VSCP.

During these orientations, the county Extension staff work with Dr. Faries, to set up a date that works for all involved. Dr. Faries shares with the attendees a presentation that outlines the goals and objectives of the VSCP. He also visits about the curriculum and certificates of completion. Dr. Faries outlines the process of veterinary school and the expectations of submission and completions and also enlightens the participants on the challenges and opportunities of both. As the orientation meeting comes to a close, asks for volunteers to organize and lead a new project group of members for the next five years.

"I respond to demand or need, I do not promote the program" was Dr. Faries last comment has we concluded our interview (Faries, 2012).

Since the inception of the program there have been changes to the VSCP. The program is now in two different venues state 4-H programs, and agricultural science programs in high school. Texas 4-H has the program in 164 counties in Texas with predominate leadership being conducted by volunteer leaders with county Extension agents serving in a roll of advisement and oversight. 4-H members wanting to obtain their 500 hours of clinical apprenticeship must work under the supervision of a veterinarian or a licensed veterinary technician. Agricultural Science classrooms is another place that has embraced VSCP in 31 states with the curriculum, activities and 200 of the clinical hours being taught by agricultural science teachers.

Career Choice Influences

Career choice encompasses exploration, commitment, and reconsideration (Porfeli & Lee, 2012). The career choice that adolescents make is a decision that is influenced not only by their development, but also by the context in which they live (Ford & Lerner, 1992). Research suggests that career interest are better predicted from perceived ability than from actual ability (Barak, 1981). Adolescents perceive their career expectations to be influenced by personal, background and environmental factors, with personal variables having the strongest influence on career motivation. Among the personal variables, interests were one of the top variables that had the most influence (Paa & McWhirter, 2000).

Career behavior and choices are also influenced by community resources available to youth, by support of family members (Jackson, Kacanski, Rust, & Beck, 2006), and their own self-efficacy (Anderson & Brown, 1997). There is evidence to support that family, peer and teacher support affects adolescents' career behavior (Ali et al., 2005). With that being said, career decision making is often deferred when adolescents do not get adequate assistance from their family and community in career development, which can also lead to uncertainty (Ferry, 2006).

Walker (1987) suggested exploration and reflection activities, including job shadowing and in-depth experiences, help to better meet the needs of youth. This is reinforced by the findings of King et al. (2008) that also revealed observational experiences of other people at work sometimes stimulated a career interest or interest among youth.

Career Development

Adolescent occupational choice is influenced by many factors, including life context, personal aptitudes, and educational attainment (Ferry 2006). With the 4-H VSCP in Texas, it is believed that young people are receiving the educational opportunity to influence their occupational choices. With the program covering five years, it might not be apparent to the participant in the first year or even the third year, but the hope is by the end of the instruction and their fifth year, data will show that their choice was influenced either positively or negatively when it comes to veterinary medicine. Reviewing a previous study, it adds to the understanding of the critical role

parents play in shaping career choice (Ferry, 2006). With this being said, this is why it is important to have parental involvement in the program as leaders, and volunteers. This is one avenue that the Texas A&M AgriLife Extension Service does a great job allowing the parents to serve as the leader of the groups under the supervision of the county Extension agent. It is also a finding, in the research that Natalie M. Ferry conducted to the importance of extending career educational efforts beyond the adolescent to families and community (2006). This is shown through the VSCP as well if parents want to complete the course they can also take the TVMA exam to become a "Certified Veterinary Assistant".

CHAPTER III

METHODOLOGY

This chapter will describe the methods of this study, including: Research Design, Population and Sampling, Instrumentation Development, Pilot Study, Data Collection, and Analysis of Data.

Research Design

The Veterinary Science Certificate Program study was submitted to the Texas A&M University Institutional Review Board for research review. After corrections were made, approval was granted for this study to be conducted on September 17, 2013 (IRB2013-0485). A copy of the complete VSCP study approved by the IRB is attached as Appendix A.

The purpose of this study was to identify if 4-H VSCP workforce participants learned relevant knowledge about veterinary medicine and whether the program contributed in making career development choices.

Data collection was conducted through an on-line survey of past and present participants of the VSCP in Texas which could be located by email. The researcher asked 4-H volunteer leaders and county Extension agents to collect email addresses of members in their programs as well as using current data collected from the *4-H CONNECT* on-line membership and registration website. The frame was further limited to members that had one year remaining in the program, and those that had completed

the program within the last 10 years so the researcher could more accurately access career types.

The study sought to answer the following questions.

- Are lessons in the VSCP being taught relevant to veterinary medicine?
- How do participants perceive the VSCP as a tool for career choices?
- What impact has the VSCP had on participant's life skills, examples include work ethic, values, and compassion for animals?
- Has commitment and motivation to pursue a career in veterinary medicine increased due to the VSCP?

Population and Sampling

The researcher, along with Dr. Floron "Buddy" Faries, went through archived files kept by Dr. Faries to determine names of leaders and/or county Extension agents involved in VSCP. This was the first action to locate members that had completed the VSCP. The second attempt was to build a list of members that had selected "Veterinary Science" in their profile in the 4-H CONNECT system during the past three 4-H membership years 2011-2012, 2012-2013, and 2013-2014. Lastly, the researchers compiled a list of members that had competed in the Texas 4-H Veterinary Science Skill-A-Thon at Texas 4-H Roundup in June of 2011, 2012, and 2013. The three attempts yielded 3011 email addresses and after removing duplicate emails, it yielded 1026 independent email addresses. The researchers went further to determine members who had two or more emails attached to their membership, which resulted in the survey

population of 663. As the invitation to participate in the study, the researcher found that 187 were invalid. Thus, bringing the sample frame for this study to be 476 participants. As the population responded to the emails sent about the study, a frame error of 102 said they were interested, but never actually participated in the program. This yielded a sample size for this study of 374 participants in the

4-H VSCP, which 122 completed an online survey, which 112 were usable. Table 1 is included to provide this information above in more detail.

Table 1

Total population for Veterinary Science Certificate Program study (n=476)

Survey Population	663
Invalid Email Addresses	187
Sample Frame	476
Non-Response Error	102
Sample Size	374
Frame Error	102
Completed Surveys	122
Usable Surveys	112

Instrumentation Development

The research instrument can be found as Appendix B. It was developed by the researcher and Dr. Floron "Buddy" Faries. It was then approved by the remainder of researcher's committee which consisted of Dr. Chris Boleman, Dr. Scott Cummings, and Dr. Tim Murphy. The instrument contained 18 questions in four major sections. The sections were: levels of knowledge and skills, program completion, career goals, and demographics. A further description of these four sections is below.

The "Increase levels of knowledge and skills" section was directly tied to the curriculum taught in the VSCP for the 100 lessons and 50 activities. The "knowledge measurement" from the involvement in the 100 lessons was assessed using a five-point Likert scale defined as: 1 = *none*, 2= *a little*, 3= *some*, 4 = *a lot*, and 5= *did not complete*. The increase in knowledge statements included (a) knowledge of careers in veterinary medicine; (b) knowledge of practice management; (c) knowledge of patient management; (d) knowledge of the normal animal; (e) knowledge of animal nutrition; (f) knowledge of handling and restraining animals; (g) knowledge of assisting with examinations and treatments; (h) knowledge of laboratory aids; (i) knowledge of human and animal health; (j) knowledge of infectious diseases; (k) knowledge of non-infectious diseases; (l) knowledge of principles and methods of disease control; (m) knowledge of sterilization and disinfection; (n) knowledge of common surgical skills; (o) knowledge of production practices; (p) knowledge of regulatory veterinary medicine; and (q) knowledge of animal management during emergencies.

The "increase of skills" from the involvement in the 50 activities was assessed by the respondents using a four-point Likert scale defined as: 1 = *none*, 2= *a little*, 3= *some*, and 4 = *a lot*. The increase in skills statements included (a) skills to perform physical examinations; (b) skills to perform fecal, blood and urine examinations; (c) skills to use laboratory aids and equipment; (d) skills to use correct sterilization/disinfection procedures; (e) skills to handle and restrain animals correctly; (f) skills to perform office procedures; and (g) skills in clinical veterinary practice.

The third section, "Program Completion," posed questions to the respondent to determine their level of participation and completion of the required 100 lessons, 50 activities, and the 500 clinical hours. The instrument asked open ended questions for each of the componets of the program. The questions were as follows: how many clinical hours did you complete and why did you not complete all 500; how many of the 100 lessons did you complete and if you had not completed them how many were complete; and how many of the 50 activities did you complete and if you have not completed them what was the reason. The instrument asked if they planned or did actually take the TVMA test to become a certified veterinary assistant.

The fourth section was for "Career Goals." "Career goals" attempted to determine if VSCP helped reinforce their decision to seek a career in the veterinary medicine field, or did it help them determine this career path was not for them. The questions were as follows: Do you plan on pursuing a career as an veterinary

professional?; Did the VSCP help in making your career choice?; and Has participating in VSCP through 4-H changed your idea about pursuing a career in veterinary medicine?

"Demographics" asked respondents for their, gender, grade or classification in college, ethnic background, type of school attended, and size of town where they reside. The respondents were provided a drop down box where they were asked about their grade or classification. This ranged from kindergarten to senior in high school to freshman in college to post graduate. Type of school attended included (a) home school; (b) private; (c) public; (d) college; or (e) out of school. The following were used to determine ethnic background (a) American Indian; (b) Asian; (c) Black (not of Hispanic origin); (d) Hispanic; (e) White (not of Hispanic origin); or (f) Other. Lastly the respondent was provided the following choices to ascertain community residence: (a) rural area; (b) town less than 10,000; (c) city between 10,000-50,000; (d) suburb of city more than 50,000; or (e) central city more than 50,000. These questions followed the demographics typically asked when 4-Hers annually enroll as members.

Pilot Study

This instrument was first piloted with 4-H members to establish validity and reliability of the 4-H VSCP evaluation survey instrument. On January 16, 2014, 12 members of a County Leadership Council completed the paper-based survey instrument. Participants were asked to complete the research instrument to the best of their ability. The average time it took to complete the pilot instrument was 13 minutes. As a part of the pilot these respondents were asked to make notes on the survey to assist the

researcher in readability of the instrument, punctuation, grammatical errors, formatting issues, and any item(s) or instructions that were not clear. This feedback was requested in an effort to ensure face and content validity. After analysis of these comments and suggestions, minor modifications were made and the survey was deemed ready for implementation.

Collection of Data

With the census database, following procedures outlined by (Dillman, Smyth & Christian, 2009), the researcher had the ability to send a notice by email of the impending receipt of the survey Appendix C. A week later, a cover letter and instrument Internet link was emailed to the group that had been identified Appendix D. A designated return date was identified for the respondents to complete their survey instrument. A few days after the intended completion date, the population received a thank you note/reminder Appendix E to complete the instrument and return it (Dillman, Smyth & Christian, 2009). Reminders about the study were sent out a second and third time 1 week apart to make multiple contacts with participants. Reponses to this instrument were confidential, but not anonymous. A response rate was determined once data were collected and at that time, it was determined whether or not to send reminders to those who have not completed the survey instrument. Data collection was conducted using an on-line instrument with a link delivered via email. All data were stored in the Qualtrics database during the time the survey was open. At the closing of the survey the

data was transferred to an excel spread sheet and then into SPSS version 22 for Macintosh for further analysis.

Handling of nonresponse error. Data collection was discontinued on April 21, 2014; additional measures were taken to reduce non-response error. The researcher used procedures outlined by Linder, Murphy, and Briers (2001), specifically using method three to compare early respondents with late respondents. Early responders were those that completed the survey from March 26, 2014 through April 15, 2014. The researcher then labeled the late respondents as those that were after April 16, 2014. The 16 late responders completed the survey after they had received the second reminder. When data collection was complete, comparisons between early respondents and late respondents were made from the skills questions. The results of the independent samples *t*-test, as revealed in Table 2, indicate that there were no significant differences ($p < .05$) between the early respondents and late respondents for the perceived skills gained.

Table 2

Skills statement comparing early and late responders to the Veterinary Science Certificate Program survey (n=122)

Skills Statement	Early Mean	Late Mean	t value	df	Sig
Perform physical examinations	2.93	2.94	-.012	20.034	.991
Preform fecal, blood, and urine examinations	2.65	2.81	-.565	21.279	.578
Use of lab aids and equipment	2.59	2.75	-.534	21.472	.599
Use correct sterilization/disinfection procedures	2.81	3.06	-1.037	24.603	.310
Handle and restrain animals correctly	3.09	3.31	-.754	19.847	.460
Preform office procedures	2.64	2.69	-.188	23.618	.853
Clinical veterinary practice	2.87	2.69	.590	19.83	.562

Analysis of Data

Data were analyzed using the Statistical Package for Social Science (SPSS) version 22 for Macintosh. Descriptive and inferential statistics were used for this study. Confidence intervals and tests for statistical significance were set at an alpha level of $p < .05$.

CHAPTER IV

RESULTS AND DISCUSSION

Purpose and Objectives of Study

In this chapter, a summary of the population response is provided along with a profile of the research participants. The results are discussed for each of the three research objectives.

Data Collection

After the initial e-mail invitation to participants in the research study was sent to the population, 150 (40%) responded to the survey, with only 48 (12.8%) usable. At the conclusion of the data collection process, which consisted of multiple e-mail reminders, 224 (59.8%) of the 374 participants had responded to the survey. This response rate exceeds the range of online response rates found by Nulty (2008), which range from 23-47 %. Of the 224 respondents, there were 122 (54.4%) had provided completed surveys. Ten of these participants were over the intended age group which the researcher concluded was a parent completing the survey. These responses were removed from analysis. This resulted in the researcher having 112 of 374 (29.9%) usable responses that comprised the data sample for the study.

Profile of Participants

Of the 112 participants, 93 (83.0%) were female and 19 (17.0%) were male, see Table 3.

Table 3

Gender of Veterinary Science Certificate Program study participants (n=112)

Gender	Frequency	Percent
Female	93	83.0%
Male	19	17.0%

The mean age of the participants was 15.41 years (SD=3.08) with ages ranging from 9-21 years. The leading age of participants was 16 (16.1%) years old followed by 18 (15.2%) years old and tied for third most participants was 13 and 14 years old making up 13.4% each, see Table 4.

Table 4

Age of Veterinary Science Certificate Program study participants (n=112)

Age	Frequency	Percent
9	1	.9%
11	5	4.5%
12	5	4.5%
13	15	13.4%
14	15	13.4%
15	12	10.7%
16	18	16.1%
17	8	7.1%
18	17	15.2%
19	9	8.0%
20	6	5.4%
21	1	.9%

Levels of education were from 5th grade to post graduate. When analyzing the levels of education, the top three responses were college freshman 17 (n=112) 15.5% of the survey participants, followed by a tie in 10th and 11th grade. The 16 (n=112) participants (14.5%) had indicated 10th grade as well as 16 (n=112) of the participants (14.5%) reporting 11th grade. The breakdown of participants by age and level of education are displayed below in Table 5.

Table 5

Education level of Veterinary Science Certificate Program study participants (n=110)

Level of Education	Frequency	Percent
5th Grade	1	.9%
6th Grade	3	2.7%
7th Grade	5	4.5%
8th Grade	11	10.0%
9th Grade	14	12.7%
10th Grade	16	14.5%
11th Grade	16	14.5%
12th Grade	9	8.2%
College Freshman	17	15.5%
College Sophomore	9	8.2%
College Junior	5	4.5%
College Senior	3	2.7%
Post Graduate	1	.9%

The mean years in 4-H among the 112 participants was 5.018 (SD=2.5) years with responses ranging from 1 year to 10 years. As the researcher further analyzed participants years involved in 4-H, it was determined that the four highest percentages were 2, 5, 3, and 10 years. Two (2) years yielded the highest with 19 (n=112) participants (17.1%), next being 5 years with 17 (n=112) participants (15.3%), with 3 years being third high with 16 (n=112) participants (14.4%), rounding out the top four

10 years with 11 (n=112) participants (10.0%). The breakdown of years in 4-H is displayed in Table 6.

Table 6

Years of 4-H participation of Veterinary Science Certificate Program study participants (n=111)

Years in 4-H	Frequency	Percent
1	8	7.2%
2	19	17.1%
3	16	14.4%
4	10	9.0%
5	17	15.3%
6	9	8.1%
7	4	3.6%
8	8	7.2%
9	9	8.1
10	11	10.0%

Youth in the survey were also asked to indicate what type of school they attended. The most frequent response was public school 53 (n=112) participants (47.3%). This was followed by home school 32 (n=112) participants (28.6%), third being college 14 (n=112) participants (12.5%), next private school with 11 (n=112) participants (9.8%) followed by out of school 2 (n=112) participants (1.8%). The breakdown of where the 112 participants attended school is found in Table 7.

Table 7

School provider choices and levels of Veterinary Science Certificate Program study participants (n=112)

School	Frequency	Percent
Home School	32	28.6%
Private	11	9.8%
Public	53	47.3%
College	14	12.5%
Out of School	2	1.8%

Participants were also asked their ethnicity and type of community for which they reside. The most frequent response to ethnicity was white (not of Hispanic origin) 86 out 112 (76.8%), next was Hispanic 18 out 112 (16.1%) as seen in Table 8.

Table 8

Ethnicity of Veterinary Science Certificate Program study participants(n=112)

Ethnicity	Frequency	Percent
Asian	1	.9%
Black (not of Hispanic origin)	2	1.8%
Hispanic	18	16.1%
White (not of Hispanic origin)	86	76.8%
Other	5	4.5%

The most frequent response to which type of community the participants reside was rural area which yielded 41 of 112 participants (36.6%), next being a town less than 10,000, 23 participants (20.5%), then city between 10,000-50,000 had a total of 19

participants (17.0%), fourth highest was suburb of city more than 50,000 18 participants (16.1%) and the final area is central city more than 50,000, 11 participants (9.8%), Table 9.

Table 9

Community size of Veterinary Science Certificate Program study participants (n=112)

Residence	Frequency	Percent
Rural area	41	36.6%
Town less than 10,000	23	20.5%
City between 10,000-50,000	19	17.0%
Suburb of city more than 50,000	18	16.1%
Central city more than 50,000	11	9.8%

The final demographic question asked to participants, was in what county did you participate in the 4-H VSCP. The map below shows the counties and how many of the 112 participants were in each county across the state of Texas, (Figure 2).

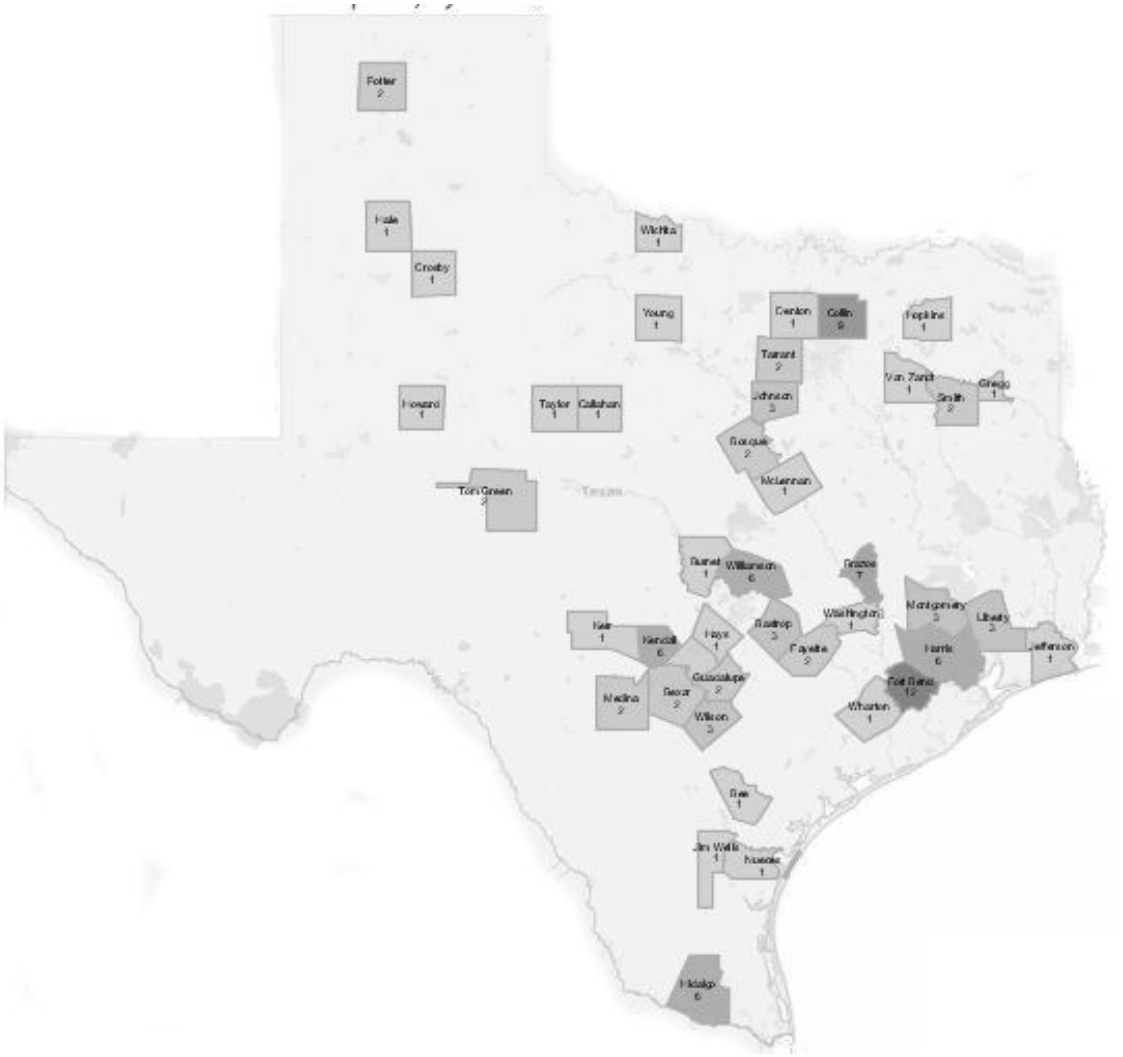

Figure 2

Counties in Texas where Veterinary Science Certificate Program participants reside.

Findings Related to Objective One

The perceived increase in knowledge gained through VCSP was evaluated to meet objective one. A set of seventeen (17) statements comprised this section of the research instrument to determine knowledge increase. For each statement, the participants were given a Likert scale to respond to the statement 1 = *None,* 2 = *A little,* 3 = *Some,* 4 = *A lot,* and 5 = *Did not complete*. A grand mean for participants for knowledge statements was calculated to be 3.30 (SD = .13). Responses for each knowledge statement were also analyzed individually with use of mean values, standard deviations, frequencies and percentages, which are displayed in rank order by mean value from highest to lowest in Table 10. The highest rank mean was for the statement "Knowledge of careers in veterinary medicine has increased" (3.61, SD = .639). The lowest ranked mean was for the statement "Knowledge of production practices has increased" (3.02, SD = .964). An ANOVA was ran on the mean values and it was determined there was no difference statistically.

A closer analysis yielded nine statements with at least an 80% overall agreement of "some" and "a lot." These included; careers in vet medicine, normal animal, handling and restraining, patient management, practice management, assisting with exams and treatments, human and animal health, infectious diseases, and animal nutrition.

There were also three items that received a lower than 70%, laboratory aids, common surgical skills, and production practices.

Table 10

Perceived knowledge gained by VSCP participants (n=112)

Topics	N	M[1,2]	S.D.	*f* "Some"	% "Some"	*f* "A lot"	% *"A lot"*	Overall %
Careers in vet medicine	109	3.61	.639	31	28.4%	73	67.0%	95.4%
Normal animal	106	3.51	.707	29	27.4%	66	62.3%	89.7%
Handling and restraining	107	3.51	.732	28	26.2%	68	63.6%	89.8%
Patient management	104	3.47	.710	35	33.7%	60	57.7%	91.4%
Practice management	105	3.45	.747	29	27.6%	62	59.0%	86.6%
Assisting with exams and treatments	104	3.44	.786	29	27.9%	62	59.6%	87.5%
Human and animal health	106	3.32	.857	36	34.0%	55	51.9%	85.9%
Infectious diseases	102	3.31	.796	34	33.3%	51	50.0%	83.3%
Animal nutrition	107	3.29	.813	37	34.6%	52	48.6%	83.2%
Sterilization and disinfection	105	3.27	.923	21	20.0%	58	55.2%	75.2%
Methods of disease control	101	3.25	.942	24	23.8%	54	53.5%	77.3%
Animal management during emergencies	101	3.25	.984	22	21.8%	56	55.4%	77.2%
Regulatory veterinary medicine	100	3.19	.918	28	28.0%	48	48.0%	76.0%
Non-infectious diseases	103	3.13	.893	32	31.1%	44	42.7%	73.8%
Laboratory aids	99	3.10	.995	22	22.2%	47	47.5%	69.7%
Common surgical skills	97	3.08	1.038	17	17.5%	48	49.5%	67.0%
Production practices	100	3.02	.964	26	26.0%	41	41.0%	67.0%

1 Likert scale defined as 1 = *None*, 2 = *A little*, 3 = *Some*, 4 = *A lot*, and 5 = *Did not complete*

2 Mean score is on a four point scale since the researcher removed all responses of five from the Likert scale

The perceived increase in skills gained through the VSCP was evaluated to meet objective one. A set off seven (7) statements were used to determine the gain in skills through the VSCP. For each statement, the participants responded according to a scale defined as 1 = *None*, 2 = *A little*, 3 = *Some*, and 4 = *A lot*. A grand mean determined for the participants for the skills statements was 2.81 (SD = .14). Those same statements

were analyzed individually with use of mean values, standard deviation, frequencies, and percentages, which are exhibited in mean rank order in Table 11. The highest rank mean was for statement "Skills to handle and restrain animals correctly have increased" (3.12, SD = 1.072). The lowest ranked mean was for the statement "Skills to use laboratory aids and equipment have increased" (2.62, SD = 1.210). An ANOVA was ran on the mean values and it was determined there was no difference statistically.

Results after a closer analysis yielded three statements with at least a 60% overall agreement of "some" and "a lot." These included; handle and restrain animals correctly, perform physical examinations, and use correct sterilization/disinfection procedures.

The following four items received a lower than 60%; clinical veterinary practice, preform office procedures, perform fecal, blood, and urine examinations, and use of lab aids and equipment.

Table 11

Skills increased perceived by VSCP participants (n=112)

Skills has increased	N	M	S.D.	*f* "Some"	% "Some"	*f* "A lot"	% "A lot"	Overall %
Handle and restrain animals correctly	112	3.12	1.072	22	19.6%	58	51.8%	71.4%
Perform physical examinations	112	2.94	1.133	20	17.9%	51	45.5%	63.4%
Use correct sterilization/disinfection procedures	112	2.86	1.146	24	21.4%	46	41.1%	62.5%
Clinical veterinary practice	112	2.84	1.143	21	18.8%	46	41.1%	59.9%
Preform office procedures	112	2.66	1.119	26	23.2%	35	31.3%	54.5%
Preform fecal, blood, and urine examinations	112	2.64	1.169	21	18.8%	38	33.9%	52.7%
Use of lab aids and equipment	112	2.62	1.210	20	17.9%	39	34.8%	52.7%

1 Likert scale defined as 1 = *None*, 2 = *A little*, 3 = *Some, and* 4 = *A lot*

Findings Related to Objective Two

The relationship between VSCP and selecting a career in animal health was addressed using three different questions. The questions included: if taking the VSCP changed their idea about pursuing a career in veterinary medicine, did they plan to pursue a career as a veterinary professional, and had the program helped in making their career choice.

The first question was "has taking the VSCP through 4-H changed your idea about pursuing a career in veterinary medicine?" The response choices were "yes" or "no," and if the participant answered "Yes" they were asked what part of the program contributed in changing their mind. The open-ended statements are included as

Appendix F. Fifty (50) participants (44.6%) answered yes and sixty-two (62) participants (55.4%) answered no Table 12.

When analyzing the open ended responses for the yes statements, two themes surfaced. Participants indicated that the clinical hours, or the entire program helped in changing their mind to pursue a career in veterinary medicine.

Table 12

Change about pursuing a career in veterinary medicine of VSCP participants (n=112)

Statement	Frequency	Percent
Yes	50	44.6%
No	62	55.4%

A ANOVA was calculated to determine if any significant differences existed between knowledge gained and change of participant's idea about pursuing a career in veterinary medicine. The results are displayed in Table 13. These results indicate that those changing their idea had a higher mean for ten out of seventeen statements. These ten statements were: careers in vet medicine, practice management, normal animal, animal nutrition, laboratory aids, human an animal health, infectious diseases, non-infectious diseases, principles and methods of disease control, and common surgical skills. Overall, the *t*-test did not reveal a significant difference ($p < .05$) among knowledge gained and change in participants idea about pursuing a veterinary medicine career for any of the mean scores calculated.

Table 13

Knowledge gained by Career Choice in veterinary medicine during the VSCP (n=112)

Knowledge statement	Yes			No			F value	
	N	M[1]	S.D.	N	M[1]	S.D.		Sig
Careers in vet medicine	49	3.67	.474	60	3.55	.746	5.902	.297
Practice management	45	3.47	.726	60	3.43	.767	.821	.821
Patient management	44	3.39	.722	60	3.53	.700	.095	.302
Normal animal	48	3.52	.618	58	3.50	.778	2.007	.878
Animal nutrition	48	3.40	.644	59	3.20	.924	6.906	.208
Handling and restraining animals	47	3.49	.655	60	3.53	.791	.449	.754
Assisting with examination and treatment	45	3.33	.826	59	3.53	.751	.410	.225
Laboratory aids	43	3.14	1.014	56	3.07	.988	.249	.738
Human and animal health	46	3.39	.802	60	3.27	.899	1.719	.454
Infectious diseases	44	3.39	.813	58	3.26	.785	.161	.427
Non-infectious diseases	45	3.16	.878	58	3.10	.912	.008	.770
Principles and methods of disease control	45	3.33	.929	56	3.18	.956	.271	.413
Sterilization and disinfection	46	3.26	.953	59	3.27	.906	.275	.955
Common surgical skills	43	3.09	.996	54	3.07	1.079	.157	.929
Production practices	43	3.00	.951	57	3.04	.981	.042	.857
Regulatory veterinary medicine	43	3.16	.898	57	3.21	.940	.420	.797
Animal management during emergencies	43	3.23	.972	58	3.26	1.001	.651	.896

1 Likert scale defined as 1 = *None*, 2 = *A little*, 3 = *Some*, and 4 = *A lot*

A second ANOVA was calculated to determine if differences existed between skills gained through the VSCP and participant's change of idea for pursuing a career in veterinary medicine. The results displayed in Table 14. Overall, the *t*-test did not reveal a significant difference ($p < .05$) among the skills gained and participants idea to change about pursuing a veterinary medicine career for any of the mean scores calculated.

Even though the mean score indicates that the participants gained "a little" or "some" of the skills taught, it had no effect on their career choice change. The mean was higher for the skill statements indicated "no" on six of the seven skill statements which are in mean rank order: handle and restrain animals correctly 3.16 (SD=1.089), perform physical examinations 3.00 (SD=1.131), use correct sterilization/disinfection procedures 2.92 (SD=1.135), clinical veterinary practice 2.85 (SD=1.185), preform fecal, blood, and urine examinations 2.71 (SD=1.246), and preform office procedures 2.69 (SD=1.139).

Table 14

Skills gained by Career Choice in veterinary medicine during the VSCP (n=112)

Skills statement	Yes			No			F	Sig
	N	M[1]	S.D.	N	M	S.D.	value	
Perform physical examinations	50	2.86	1.143	62	3.00	1.131	.041	.519
Preform fecal, blood, and urine examinations	50	2.56	1.072	62	2.71	1.246	4.161	.496
Use of lab aids and equipment	50	2.64	1.258	62	2.60	1.180	1.281	.853
Use correct sterilization/disinfection procedures	50	2.78	1.166	62	2.92	1.135	.850	.526
Handle and restrain animals correctly	50	3.06	1.058	62	3.16	1.089	.027	.620
Preform office procedures	50	2.62	1.105	62	2.69	1.139	.047	.730
Clinical veterinary practice	50	2.82	1.101	62	2.85	1.185	1.714	.872

1 Likert scale defined as 1 = *None*, 2 = *A little*, 3 = *Some, and* 4 = *A lot*

Table 15 is included to reveal results for the statement "Do you plan on pursuing a career as a veterinary professional." A second open-ended question was also asked to ascertain their future career goals. Seventy-five (75) participants (67.0%) answered yes and thirty-seven (37) participants (33.0%) answered no (Table 15). When further analyzing the answers that the participants that answered yes, they indicated the following for careers.

- large or small animal veterinarian
- equine veterinarian
- avian veterinarian
- veterinary technician
- animal scientist

The entire list of comments is noted in Appendix G.

The responses that answered no also had recurring themes that included human medicine, animal science, chef, business, and others that included lawyer, fashion design, engineer, art, and photography (Appendix H).

Table 15

Intent to pursue a career as a veterinary professional by VSCP study participants (n=112)

Statement	Frequency	Percent
Yes	75	67.0%
No	37	33.0%

Utilizing these yes/no statement responses, a *t*-test was calculated to determine if any significant differences existed between a gain in knowledge and skills learned and participants plan to pursue a career as a veterinary professional. Tables 16 and 17 display the information gathered. Overall, the ANOVA did not reveal a significant difference ($p < .05$) among knowledge and skills gained and plans of participants to pursue a career as a veterinary professional.

Responses for each knowledge statement compared to the participants plan to pursue a career as a veterinary professional were also analyzed, which are displayed in the order ask on the survey (Table 16). An average of sixty-nine (69) participants answered that "yes" due to knowledge gained in the VSCP they plan to pursue a career as a veterinary professional. The highest mean score for those that indicated "yes" was for the knowledge statement "handling and restraining animals" 3.53 (SD+.649). For those indicating "no" this accounted for twelve (12) out of seventeen (17) knowledge statement highest mean scores, with the highest being "career in veterinary medicine" 3.75 (SD=.439).

The ANOVA calculated on the knowledge gained and participants plan to pursue a career as a veterinary professional revealed no significant difference ($p < .05$). However, it is worth pointing out that "increase knowledge of careers in veterinary medicine" did reveal a value of .054.

Table 16

Knowledge gained by intent to pursue a career as a veterinary professional during VSCP (n=112)

Knowledge statement	Yes			No			F value	
	N	M[1]	S.D.	N	M[1]	S.D.		Sig
Careers in vet medicine	73	3.53	.709	36	3.75	.439	9.127	.054
Practice management	71	3.42	.805	34	3.50	.615	3.756	.588
Patient management	70	3.44	.733	34	3.53	.563	2.993	.519
Normal animal	71	3.51	.673	35	3.51	.781	.321	.963
Animal nutrition	71	3.28	.778	36	3.31	.889	.563	.892
Handling and restraining animals	72	3.53	.649	35	3.49	.887	2.656	.804
Assisting with examination and treatment	70	3.43	.791	34	3.47	.788	.031	.800
Laboratory aids	66	3.05	1.029	33	3.21	.927	.269	.419
Human and animal health	71	3.30	.835	35	3.37	.910	.057	.681
Infectious diseases	69	3.28	.820	33	3.39	.747	1.152	.470
Non-infectious diseases	69	3.12	.867	34	3.15	.958	.700	.873
Principles and methods of disease control	67	3.24	.955	34	3.26	.931	.149	.896
Sterilization and disinfection	71	3.25	.906	34	3.29	.970	.118	.838
Common surgical skills	65	3.11	1.033	32	3.03	1.062	.720	.738
Production practices	66	3.05	.952	34	2.97	1.000	.517	.720
Regulatory veterinary medicine	67	3.27	.880	33	3.03	.984	.614	.243
Animal management during emergencies	69	3.28	.953	32	3.19	1.061	1.121	.691

1 Likert scale defined as 1 = *None*, 2 = *A little*, 3 = *Some, and* 4 = *A lot*

Table 17

Skills gained by intent to pursue a career as a veterinary professional during VSCP (n=112)

Skills statement	Yes			No			F value	
	N	M[1]	S.D.	N	M	S.D.		Sig
Perform physical examinations	75	2.99	1.133	37	2.84	1.143	.057	.518
Preform fecal, blood, and urine examinations	75	2.57	1.176	37	2.78	1.158	.016	.371
Use of lab aids and equipment	75	2.57	1.221	37	2.70	1.199	.107	.595
Use correct sterilization/disinfection procedures	75	2.89	1.146	37	2.78	1.158	.046	.638
Handle and restrain animals correctly	75	3.16	1.040	37	3.03	1.142	.208	.553
Preform office procedures	75	2.67	1.131	37	2.65	1.111	.087	.936
Clinical veterinary practice	75	2.92	1.124	37	2.68	1.180	.477	.299

1 Likert scale defined as 1 = *None*, 2 = *A little*, 3 = *Some*, *and* 4 = *A lot*

"Did the VSCP help in making your career choice" was the next question asked. The responses included "yes" or "no" similar to the previous questions, a follow up open-ended question was asked (Appendix I and Appendix J). Seventy-nine (79) participants (70.5%) answered that yes it help in making their career choice and thirty-three (33) participants (29.5) indicated that it did not help (Table 18). For those participants that indicated "yes," three themes surfaced for the open ended response. These included:

- it helped me determine I want to be a veterinarian
- no veterinary medicine is not for me
- helped me see what careers are available as a veterinary professional.

The participants responding “no” when asked how did you make your career choice, it can be determined by their open ended responses that they had pre-determined career choices and the VSCP neither changed their mind positively or negatively (Appendix J).

Table 18

Effectiveness of VSCP on participants career choice (n=112)

Statement	Frequency	Percent
Yes	79	70.5%
No	33	29.5%

The researcher conducted a *t*-test to determine if any significant differences existed between perceived increase of knowledge and skills and participants making career choices. Referring to Tables 19 and 20 there is a significant difference at the ($p < .05$) for fifteen (15) of the knowledge statements. These statements were: practice management, patient management, normal animal, animal nutrition, assisting with examination and treatment, laboratory aids, human and animal health, infectious diseases, non-infectious diseases, principles and methods of disease control, sterilization and disinfection, common surgical skills, production practices, regulatory veterinary medicine, and animal management during emergencies. As well there is indicated a significant difference for all seven (7) skill statements which include perform physical examinations, preform fecal, blood, and urine examinations, use of lab aids and equipment, use correct sterilization and disinfection procedures, handle and restrain

animals correctly, preform office procedures and clinical veterinary practice when correlating the VSCP participants in making their career choice.

Table 19

Knowledge gained by career choice during the VSCP (n=112)

Knowledge statement	Yes			No			F value	
	N	M[1]	S.D.	N	M	S.D.		Sig
Careers in vet medicine	78	3.69	.465	31	3.39	.919	24.346	.087
Practice management	75	3.59	.660	30	3.10	.845	1.311	.007
Patient management	74	3.58	.619	30	3.20	.847	1.383	.031
Normal animal	75	3.65	.557	31	3.16	.898	14.497	.007
Animal nutrition	76	3.42	.678	31	2.97	1.016	6.079	.028
Handling and restraining animals	76	3.62	.610	31	3.26	.930	9.176	.053
Assisting with examination and treatment	74	3.59	.618	30	3.07	1.015	9.620	.011
Laboratory aids	71	3.34	.844	28	2.50	1.106	5.355	.001
Human and animal health	75	3.56	.620	31	2.74	1.064	18.632	.000
Infectious diseases	72	3.47	.712	30	2.93	.868	.000	.004
Non-infectious diseases	73	3.30	.794	30	2.70	.988	1.820	.005
Principles and methods of disease control	71	3.45	.771	30	2.77	1.135	13.075	.004
Sterilization and disinfection	74	3.49	.781	31	2.74	1.032	4.966	.001
Common surgical skills	70	3.33	.880	27	2.44	1.155	5.509	.001
Production practices	72	3.24	.831	28	2.46	1.071	4.093	.001
Regulatory veterinary medicine	71	3.44	.712	29	2.59	1.086	14.806	.000
Animal management during emergencies	72	3.51	.750	29	2.59	1.181	19.365	.000

1 Likert scale defined as 1 = *None*, 2 = *A little*, 3 = *Some*, and 4 = *A lot*

Table 20

Skills gained by career choice during the VSCP (n=112)

Skills statement	Yes			No			F	
	N	M	S.D.	N	M	S.D.	value	Sig
Perform physical examinations	79	3.15	1.014	33	2.42	1.251	5.905	.005
Preform fecal, blood, and urine examinations	79	2.84	1.067	33	2.18	1.286	3.718	.013
Use of lab aids and equipment	79	2.86	1.163	33	2.03	1.132	.504	.001
Use correct sterilization/disinfection procedures	79	3.08	1.059	33	2.33	1.190	2.192	.003
Handle and restrain animals correctly	79	3.30	.952	33	2.67	1.216	7.487	.010
Preform office procedures	79	2.85	1.039	33	2.21	1.193	1.922	.010
Clinical veterinary practice	79	2.99	1.104	33	2.48	1.176	.689	.040

Findings Related to Objective Three

Results for determining the correlation between gender and the perceived increase in knowledge gained. A *t*-test was calculated to determine if significant differences existed between gender and perceived knowledge increase. The results are displayed in Table 21. Overall, the *t*-test only had a significant difference ($p < .05$) among female and male respondents on one knowledge statement "Knowledge of principles and methods of disease control has increased." It is indicated that the female mean was higher than the male mean for the knowledge statement listed above.

The research revealed that that when comparing female/male to perceived increase in knowledge, females had a higher mean score than those of the male participants. Theses knowledge statements include in mean rank order for females; handling and restraining animals, normal animal, patient management, practice management, assisting with examination and treatment, human and animal health, infectious diseases, sterilization and disinfection, principles and methods of disease control, animal nutrition, animal management during emergencies, regulatory veterinary medicine, non-infectious diseases, laboratory aids, common surgical skills, and production practices.

There was only one statement that was higher for males. The research indicates however, that the male participants did have a higher mean with the knowledge of "careers in vet medicine" statement.

Table 21

Perceived increase in knowledge by gender of VSCP participants (n=112)

Knowledge statement	Female N	Female Mean	Female S.D.	Male N	Male Mean	Male S.D.	F value	Sig
Careers in vet medicine	90	3.54	.670	19	3.74	.452	3.494	.213
Practice management	87	3.51	.713	18	3.17	.857	1.825	.131
Patient management	86	3.52	.664	18	3.22	.878	1.497	.184
Normal animal	87	3.54	.696	19	3.37	.761	.656	.374
Animal nutrition	88	3.34	.756	19	3.05	1.026	1.715	.259
Handling and restraining animals	88	3.56	.692	19	3.32	.885	1.905	.276
Assisting with examination and treatment	86	3.47	.793	18	3.33	.767	.005	.516
Laboratory aids	82	3.15	.995	17	2.88	.993	.005	.329
Human and animal health	88	3.38	.821	18	3.06	.998	.173	.217
Infectious diseases	85	3.38	.786	17	3.00	.791	3.822	.086
Non-infectious diseases	86	3.17	.884	17	2.88	.928	.004	.245
Principles and methods of disease control	84	3.35	.898	17	2.76	1.033	2.004	.042
Sterilization and disinfection	87	3.36	.862	18	2.83	1.098	3.659	.071
Common surgical skills	81	3.09	1.039	16	3.06	1.063	.067	.935
Production practices	83	3.05	.987	17	2.88	.857	.521	.486
Regulatory veterinary medicine	83	3.24	.892	17	2.94	1.029	1.288	.276
Animal management during emergencies	84	3.30	.967	17	3.00	1.061	1.017	.296

Another *t*-test was performed to compare gender and the perceived skills gained (Table 22). The *t*-test did not reveal a significant difference ($p < .05$) among gender and skills gained for any of the mean scores calculated.

Table 22

Perceived increase in skills by gender of VSCP participants (n=112)

Skills statement	Female			Male			F value	
	N	M	S.D.	N	M	S.D.		Sig
Perform physical examinations	93	2.94	1.150	19	2.95	1.079	.511	.966
Preform fecal, blood, and urine examinations	93	2.62	1.160	19	2.74	1.240	.031	.717
Use of lab aids and equipment	93	2.61	1.216	19	2.63	1.212	.169	.952
Use correct sterilization/disinfection procedures	93	2.90	1.133	19	2.63	1.212	.293	.377
Handle and restrain animals correctly	93	3.14	1.079	19	3.00	1.054	.349	.604
Preform office procedures	93	2.68	1.115	19	2.58	1.170	.030	.739
Clinical veterinary practice	93	2.87	1.144	19	2.68	1.157	.020	.526

The researcher determined that the mean scores among female/male and perceived increase in skills due to their participation in the VSCP was different. Female participants in the study had a higher mean for four of the seven skill statements asked on the survey. The mean for the skill statements for female participants included; handle and restrain animals correctly 3.14 (SD=1.079), use correct sterilization/disinfection procedures 2.90 (SD=1.133), clinical veterinary practice 2.87 (SD=1.144), and perform office procedures 2.68 (SD=1.115). The remaining three high mean scores for the skill statements were indicated higher for male participants. The mean for those skill statements included perform physical examinations 2.94 (SD=1.079), perform fecal, blood, and urine examinations 2.74 (SD=1.240), and use of lab aids and equipment 2.63 (SD=1.212).

Overall Veterinary Science Certificate Program Success

The researcher also determined how many completed the 100 lesson, 50 activities, and the 500 clinical hours. A frequency was run on the three above mentioned items. When asked if they had completed the 500 clinical hours (Table 23). Twenty–four (24) participants (21.4%) answered yes. Of the eighty-eight (88) participants (78.6%) that answered no, they indicated to the researcher the number of hours they did completed (Table 24). Forty-five (45) participants (51%) answered they had not completed any hours, seventeen (17) participants (19%) answered less than 100 hours, ten (10) participants (11%) indicated 100-190 hours, while four (4) participants (5%) completed 200-299 hours, seven (7) participants (8%) completed 300-399 hours, and five (5) participants (6%) completed 400-499 hours. They were also given an opportunity to tell the researcher why they had not completed the 500 clinical hours. Five themes emerged as to why all 500 clinical hours were not completed and they included still involved in program, too many hours to complete, no longer in program/program faded out, school related issues, and no veterinarian wants to take me due to my age (Appendix K).

Table 23

Completion of 500 clinical hours by VSCP study participants (n=112)

Statement	*f*	%
Yes	24	21.4%
No	88	78.6%

Table 24

Number of hours completed by participants completing less than 500 (n=88)

f	%	Number of Completed Clinical Hours
45	51%	No hours completed
17	19%	< 100 hours
10	11%	100-190 hours
4	5%	200-299 hours
7	8%	300-399 hours
5	6%	400-499 hours

Next the researcher evaluated participant response regarding the 100 lessons in the curriculum. Thirty (30) participants (26.8%) indicated they had completed the lessons, with eighty-two (82) participants (73.2%) indicating they have not (Table 25). The researcher wanted to know for the participants that answered that they had not completed all 100 lessons how many were completed (Table 26). Four (4) participants (5%) did not complete any lessons, nineteen (19) participants (23%) completed less than 25 lessons, thirteen (13) participants (16%) completed 25-49 lessons, twenty-one (21) participants (26%) completed 50-74 lessons, ten (10) participants (12%) completed 75-99 lessons, and fifteen (15) participants (18%) did not indicate how many lessons they had completed. For the respondents that answered they have not completed, the three

reasons were: still involved, program stopped in my county, and student stopped and did not complete the program (Appendix L).

Table 25

Completion of 100 lessons by VSCP study participants (n=112)

Statement	*f*	%
Yes	30	26.8%
No	82	73.2%

Table 26

Lessons completed by those participants completing less than 100 (n=82)

f	%	Numbers of Completed Lessons
4	5%	No lessons completed
19	23%	< 25 Lessons
13	16%	25-49 lessons
21	26%	50-74 lessons
10	12%	75-99 lessons
15	18%	No response to question on survey

Lastly, the researcher wanted to know how many of the participants had completed the 50 activities outlined in the curriculum. Thirty-four participants (30.4%) said they did complete the activities, while seventy-eight (78) participants (69.6%) indicated they had not completed the activities (Table 27). Of the seventy-eight (78)

participants that indicated that they had not completed the 50 activities further explained how many that they did complete (Table 28). Six (6) participants (8%) did not complete any activities, forty-six (46) participants (59%) completed less than twenty-five (25) activities, fifteen (15) participants (19%) completed 25-49 activities, and eleven (11) participants (14%) did not enter a response.

The same themes as with the 100 lessons resurfaced with the 50 activities, still involved, program stopped in my county, and student stopped and did not complete the program (Appendix M).

Table 27

Completion of 50 activities by VSCP study participants (n=112)

Statement	*f*	%
Yes	34	30.4%
No	78	69.6%

Table 28

Number of activities completed by participants completing less than 50 (n=78)

f	%	Number of Complete Activities
6	8%	No activities
46	59%	< 25 activities
15	19%	25-49 activities
11	14%	No response to question on survey

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to determine if participation in the 4-H veterinary science certificate program had contributed to member's career decisions. In reaching the purpose, three objectives were established:

1. Determine knowledge and skills gained from the veterinary science certificate program.
2. Explore relationships between VSCP and selecting a career in animal health.
3. Explore relationships between demographic variables including gender, age, race, and educational background on success in the program and selecting a career in animal health career.

Objective 1-Increase in Knowledge and Skills

With the purpose and objectives in mind, the first results to consider were that of increased knowledge and skills gained through the VSCP.

At first, one might evaluate results for knowledge gained and see that at least 67% of the participants had marked "some" or "a lot" on their survey regarding the seventeen (17) knowledge statements. The researcher feels the program helped with a gain in knowledge of veterinary medicine. As we look at the results of the study under the direction of Cooperative Extension Service, Rasmussen (1989) stated 'the mission of the CES is to help people improve their lives through an educational process which uses

scientific knowledge focused on issues and needs." Clearly, there was evidence in this study to support knowledge transfer.

However there are four items; non-infectious diseases, laboratory aids, common surgical skills and production practices that need to be reviewed to determine why participants mean score is lower. With additional training on these four topics listed above for leaders and instructors, it might help participants to gain more knowledge. As we look at work cited by (Marshall, 1994) educational programs to target audiences based on issues is the opportunity for the educator to be creative. To reach the differences in the participants it is imperative that the leader be creative in their teaching methods.

When reviewing the results regarding the skills obtained by participants, it is clear that improvements in this area are needed. Skills are obtained through activities and the completion of 500 clinical hours through an apprenticeship, of which only 21.4% of participants surveyed achieved. This percentage can be explained by the fact that many students who did not complete their clinical hours were unable to find a veterinarian willing or unable to supervise them. Walker (1987) suggested exploration and reflection activities, including job shadowing and in-depth experiences, help to better meet the needs of youth. That is why the researcher believes the leaders of the VSCP has to do a better job of recruiting veterinarians to help with teaching skills during the 500 clinical hours. This can be accomplished by inviting local veterinarians to teach lesson for VSCP participants and to have them help out with activities. By having

veterinarians participate in the educational component of the VSCP the researcher feels as they would be more receptive to having VSCP participants come to their clinic to complete the 500-hour requirement.

However with over 52.7% of the participant's report an increase in all seven skills statements, the researcher can conclude that participants are gaining skills through the VSCP.

The researcher can confidently conclude based on above mentioned data that indeed the VSCP is beneficial to young people that participate in the program and participants are increasing their knowledge and skills within veterinary medicine.

Objective 2-Relationship between VSCP and Career Choice

The survey asked three questions regarding the impact of the VSCP and career situations.

First, participants were asked if participating in the VSCP changed their ideas about pursuing a career in veterinary medicine. The finding are as follows 50 (n=112) participants (44.6%) marked "yes" while 62 (n=112) participants (55.4%) indicated "no." When reviewing the open ended questions those that indicated "yes" wrote that clinical hours and the entire program changed their mind, when the "no" responses wrote that they determined veterinary medicine was not for them. The researcher feels strongly that yes the program had an impact on their ideas. However, when conducting the *t*-test it was determined that there was no significant difference between the

participant's idea about pursuing a career in veterinary medicine and the gained knowledge and skills. Previous research indicates the critical role parents play in shaping career choice (Ferry, 2006). With this being said, there is more research to be done with the participants of the VSCP and their parents motivation to career choice.

Second, participants were asked has taking the VSCP impacted plans to pursue a career as a veterinarian professional. The results of this questions were 75 (n=112) participants (67.0%) said "yes" with 37 (n=112) participants (33.0%) reposting "no." The career choice that adolescents make is a decision that is due to their environment, influenced not only by their development, but also by the context in which they live (Ford & Lerner, 1992). Therefore one could conclude that one of the other components of the VSCP had an influence or that their plans were already made prior to them taking this program.

Thirdly, the participants in the study were asked did VSCP help in making their career decisions. Seventy-nine (79, n=112) of the participants (70.5%) answered "yes" while thirty-three (33, n=112) of the participants (29.5%) reported "no." With this being one of the main goals of VSCP, these results yield that this program (with the combined lessons, activities, and hands on learning) is beneficial to making career choice decisions for those involved. When comparing making career choices with gain in knowledge and skills, it also proves beneficial. This can be reinforced by the findings of King et al. (2008) that revealed observational experiences of other people at work does stimulate a career interest or interest among youth.

To conclude objective two, as previous literature has indicated, there has been a need for career development projects and activities in 4-H (Russel and Blume, 1960). This initiated in the early 1960s, when it was recognized that 4-H clubs could provide a broader opportunity for career exploration than normally possible within the home and school (Tyler, 1961). Since 4-H is a program that allows young people to explore and learn new ideas, what better atmosphere to teach about a career path such as veterinary medicine? Reviewing work conducted by Boardman, (1968) an Extension Service Review that included human interest articles of former 4-H members on how 4-H provided them an opportunity to explore careers (Boardman, 1968). The results from this study support these studies in saying that VSCP is helping youth with career decisions. The researcher concludes more programs in youth development like the VSCP is needed.

Objective 3-Relationship between Demographics and Selecting Careers in Animal Health

As the researcher evaluates the results from objective three of the study, it revealed very little difference between participant demographics and their selecting a career in animal health. Of all the demographic questions asked there was only one question asks in the knowledge statements when correlated to gender had a significant difference. Adolescent occupational choice is influenced by many factors, including life context, personal aptitudes, and educational attainment (Ferry, 2006).

This study reveals that it does not matter who you are, from where you are, or where you received your education when it comes to career selection in veterinary medicine or animal health. The researcher concludes it is programs such as the VSCP that allow youth to explore options and learn about what is available that help with career selection. As this study has indicated, many had a career in mind when starting the program, however they may have changed their minds from what they learned or saw or it might have strengthen their selection.

Conclusions

Due to the findings of this study the following conclusions can be made.

Participants involved in the VSCP are gaining valuable knowledge and skills about veterinary medicine. There are some areas as indicated in the research that might need to be re-visited and changed to meet the needs of those involved in the program.

It can also be concluded that the VSCP is helping participants to successfully determine career choices. VSCP combines lessons, activities, and hands-on learning that help different learning styles to better understand veterinary medicine, in return help them in career choices.

The results also indicate why participants are not completing all components of the VSCP. It is evident that if the VSCP is going to continue and prosper these findings should be addressed, and it needs to become priority for the betterment of this career development program. It is time for VSCP to look at short term verses long term

experiences. The researcher feels by doing this it would determine if the time commitment is too much for the participant, or is it the commitment of the participant to complete the requirements of VSCP. The researcher also reveals it is relevant to continue the 500 clinical hours due to the parallel of the TVMA certification program, for students that want to become a certified veterinary assistant. However, to get more participants to complete VSCP educational component it might need to be communicated better that the 500 clinical hours are secondary to the overall VSCP.

Recommendations

After conducting the VSCP study, I have determined areas that could use some modifications. Without a definitive way to track past participants and to keep in touch with present participants, the following modifications should be made by the state level leadership of VSCP.

- Develop a database for tracking participants and progress through the VSCP.
- Cultivate a monthly newsletter via email to keep participants engaged in the VSCP.
- Implement quarterly social media/technology driven question/answer sessions to keep participants updated.

In my opinion the database mentioned above for tracking reasons would have to be easy to use so that participants and leaders would have the ability to update. By using the 4-H CONNECT system in Texas 4-H it might be possible to incorporate a system

that works for both 4-H membership and participation and tracking of VSCP membership and completion of lessons, activities, and externship hours.

The next modification that should be addressed is to introduce veterinarians and their staff to VSCP, so that they are engaged and willing to work with youth participants to fulfill their 500 clinical hours. The following would be considered awareness or promotional activities for veterinarians. Theses should also be coordinated with the state level leadership of VSCP.

- VSCP should participate as vendors to set up a booth at trade shows that are attended by veterinarians. (Ex. TVMA meetings and TAMU Beef Cattle Short Course)
- Develop written articles to be published in magazines and publications subscribed by veterinarians.
- Interact with veterinarians to teach lessons and activities so they learn more about VSCP.

The following recommendation would be a county based decision that would empower leaders and veterinarians to focus on county needs for VSCP.

- Implement a county VSCP committee that consist of county Extension agent, leaders of clubs and identified veterinarians from the county.

To ensure that implementation of VSCP is successful on the county level I believe that there should be a train-the-trainer program implemented for Texas 4-H, that is conducted each year in June-August. This program would be initiated from the state

level leadership with input from county Extension agents, VSCP leaders, and veterinarians. To ensure reliability of VSCP program the following components need to be included in the training.

- Information to successfully teach the lessons.
- Ideas sharing from leaders on what works, and what does not work while teaching VSCP.
- Present ideas to leaders on hands on activities to encage participants.
- Train leaders on tracking system to help with participant's information.
- Share ideas on encouraging veterinarians to accept participants in their practices so they can obtain their 500 clinical hours.

These modifications are a start that can be made to address some of the participants concerns in the VSCP this study.

Explanation of the VSCP curriculum, technology, roles of volunteers, and county Extension agents includes:

The current curriculum is a bound book that includes 100 lessons and suggested activities. It consists of 17 educational units that have color photos to engage the learner as well as questions to be answered at the end of each chapter lesson by the participant to determine mastery of the lesson.

A needed change is to continue to move VSCP toward greater usage of EBook technology. VSCP EBook is supported by Kindle, Nook, and

IPad, and it also can be viewed on a participant's windows based personal computer.

VSCP also utilizes technology as a method to engage participants as well as leaders. Dr. Floron "Buddy" Faries has recorder each of the 100 clinical lessons to be used as a teaching tool for VSCP to support the teacher toolbox. The online applications for the leader to use provide the leader greater efficiency. All of this can be found on the VSCP website.

In reviewing the curriculum design and these results, it is critical that this program utilize volunteers for more efficient implementation. Volunteer leaders and volunteers are a mainstay in Extension programming. There is simply no way a county Extension agent can complete all their duties without the help of beneficial leaders in the county. It is imperative that VSCP leaders stay engaged and encourages the participants to continue with the program. This is a most important conclusion of this study because it is critical to the potential sustainability and ultimate growth of this program.

County Extension agents must continue to provide oversight of this program. The county Extension agent is going to be the supervisor/manager of VSCP in their particular county, and provide overall leadership to the program and direction. Finally, the county Extension agent will always need to be involved at some level to teach a lesson or two a year to give the leader a break, and so they can interact with the participants.

Future Research

Since this is the first research study of this magnitude to determine the impact of the VSCP on career development choices, the following should be conducted. A yearly survey instrument should go to all VSCP participants to measure progress in the program as well as knowledge and skills gained. It also needs to include career choice questions so that the program can determine when and at what stages does the VSCP influence career choices. The ability to conduct a small study yearly will also help with keeping up with participants and will help the VSCP to be a strong influencer on career choices made by the participants.

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APPENDIX A

INSTITUTIONAL REVIEW BOARD – HUMAN SUBJECTS RESEARCH

APPROVAL LETTER

DIVISION OF RESEARCH

Office of Research Compliance

TEXAS A&M UNIVERSITY

APPROVAL DATE:	09/17/2013
MEMORANDUM	
TO:	Christopher Boleman ALEXT - Agrilife Extension Service - Ag Leadership, Education & Communication
FROM:	Dr. James Fluckey Chair Institutional Review Board
SUBJECT:	Submission Response for Initial Review Submission Form Approval

Protocol Number:	IRB2013-0485
Title:	The Assessment of the 4-H Veterinary Science Certificate Program in Texas.
Review Type:	Process Administratively
Approved:	**09/17/2013**
Continuing Review Due:	
Expiration Date:	09/15/2014
Documents Reviewed and Approved:	Letter of support from Dr. Faries ; Reminder/Thank You email; Letter that precede the survey; Survey-VSCP; Email to announce the survey for VSCP; Proposal-THE ASSESSMENT OF THE 4-H VETERINARY SCIENCE CERTIFICATE PROGRAM IN TEXAS
Document of Consent:	Waiver approved under 45 CFR 46.117 (c) 1 or 2/ 21 CFR 56.109 (c)1
Waiver of Consent:	

Provisions:

Comments: Reviewer approved. Application returned for documentation of CITI training for all study personnel.

This research project has been approved. As principal investigator, you assume the following responsibilities

1. **Continuing Review:** The protocol must be renewed by the expiration date in order to continue with the research project. A Continuing Review application along with required documents must be submitted by the continuing review deadline. Failure to do so may result in processing delays, study termination, and/or loss of funding.
2. **Completion Report:** Upon completion of the research project (including data analysis and final written papers), a Completion Report must be submitted to the IRB.
3. **Unanticipated Problems and Adverse Events:** Unanticipated problems and adverse events must be reported to the IRB immediately.
4. **Reports of Potential Non-compliance:** Potential non-compliance, including deviations from protocol and violations, must be reported to the IRB office immediately.
5. **Amendments:** Changes to the protocol must be requested by submitting an Amendment to the IRB for

750 Agronomy Road, Suite 2701
1186 TAMU
College Station, TX 77843-1186

Tel. 979.458.1467 Fax. 979.862.3176
http://rcb.tamu.edu

review. The Amendment must be approved by the IRB before being implemented.

6. **Consent Forms:** When using a consent form or information sheet, you must use the IRB stamped approved version. Please log into iRIS to download your stamped approved version of the consenting instruments. If you are unable to locate the stamped version in iRIS, please contact the office.
7. **Audit:** Your protocol may be subject to audit by the Human Subjects Post Approval Monitor. During the life of the study please review and document study progress using the PI self-assessment found on the RCB website as a method of preparation for the potential audit. Investigators are responsible for maintaining complete and accurate study records and making them available for inspection. Investigators are encouraged to request a pre-initiation site visit with the Post Approval Monitor. These visits are designed to help ensure that all necessary documents are approved and in order prior to initiating the study and to help investigators maintain compliance.
8. **Recruitment**: All approved recruitment materials will be stamped electronically by the HSPP staff and available for download from iRIS. These IRB-stamped approved documents from iRIS must be used for recruitment. For materials that are distributed to potential participants electronically and for which you can only feasibly use the approved text rather than the stamped document, the study's IRB Protocol number, approval date, and expiration dates must be included in the following format: TAMU IRB#20XX-XXXX Approved: XX/XX/XXXX Expiration Date: XX/XX/XXXX.

The Office of Research Compliance and Biosafety is conducting a brief survey for the purpose of programmatic enhancements. Click here to take survey or copy and paste in a browser
https://tamu.qualtrics.com/SE/?SID=SV_1CgOkLNU45QebvT

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

APPENDIX B

RESEARCH INSTRUMENT

4-H Veterinary Science Certificate Program Evaluation of Completion

Default Question Block

Are you in your final year or have you completed the Veterinary Science Certificate Program?

- ○ Yes
- ○ No

1. As a result of my involvement in the lessons of this curriculum my:

	None	A little	Some	A lot	Did not complete
a. knowledge of careers in veterinary medicine has increased	○	○	○	○	○
b. knowledge of practice *management has increased*	○	○	○	○	○
c. knowledge of patient management has increased	○	○	○	○	○
d. knowledge of the normal animal has increased	○	○	○	○	○
e. knowledge of animal nutrition has increased	○	○	○	○	○
f. knowledge of handling and restraining animals has increased	○	○	○	○	○
g. knowledge of assisting with examinations and treatments has increased	○	○	○	○	○
h. knowledge of laboratory aids has increased	○	○	○	○	○
i. knowledge of human and animal health has increased	○	○	○	○	○
j. knowledge of infectious diseases has increased	○	○	○	○	○
k. knowledge of non-infectious diseases has increased	○	○	○	○	○
l. knowledge of principles and methods of disease control has increased	○	○	○	○	○

m. knowledge of sterilization, and disinfection has increased	○	○	○	○	○
n. knowledge of common surgical skills has increased	○	○	○	○	○
o. knowledge of production practices has increased	○	○	○	○	○
p. knowledge of regulatory veterinary medicine has increased	○	○	○	○	○
q. knowledge of animal management during emergencies has increased	○	○	○	○	○

2. As a result of my involvement in the activities of this curriculum

	None	A little	Some	A Lot
a. skills to preform physical examinations have increased	○	○	○	○
b. skills to preform fecal, blood and urine examinations have increased	○	○	○	○
c. skills to use laboratory aids and equipment have increased	○	○	○	○
d. skills to use correct sterilization/disinfection procedures have increased	○	○	○	○
e. skills to handle and restrain animals correctly have increased	○	○	○	○
f. skills to preform office procedures have increased	○	○	○	○
g. skills in clinical veterinary practice have increased	○	○	○	○

3. In which county did you participate in the Veterinary Science Certificate Program?

4. Did you complete the required 500 clinical skill hours with a veterinarian or a registered veterinarian technician?

○ Yes

○ No

a. If no, how many were completed

b. If no, please tell why they were not completed

5. Did you complete the 100 lessons in the curriculum?

Yes

No

a. If no, how many were completed

b. If no, please tell why they were not completed

6. Did you complete the minimum of 50 activities in the curriculum?

Yes

○ No

a. If no, how many were completed

b. If no, please tell why they were not completed

7. Did you participate in any on-line lesson?

○ Yes
○ No

a. If yes, how many on-line lessons did you attend?

8. Has taking the Veterinary Science Certificate Program through 4-H changed your idea about pursuing a career in Veterinary Medicine?

○ Yes
○ No

a. If you answered yes, please tell us what part of the program contributed to changing your mind?

9. Do you plan to take the TVMA certification test to become a Certified Veterinary Assistant?

- ○ Yes
- ○ No

a. If you have taken the test did you pass?

- ○ Yes
- ○ No

10. Do you plan on pursuing a career as an veterinary professional?

- ○ Yes
- ○ No

a. If yes, what are your future career goals?

b. If no, what are your future career goals?

11. Did the Vet Science Certificate Program help in making your career choice?

- ○ Yes
- ○ No

a. If yes, how did it help with your career choice?

b. If no, how did you make your career choice?

12. You are:

- ○ Female
- ○ Male

13. Your age:

14. Your grade or classification in college:

15. Years of participation in 4-H:

a. Date of completion of Veterinary Science Certificate Program

16. Where do you attend school?

- Home School
- Private
- Public
- College
- Out of School

17. I consider myself to be:

- American Indian
- Asian
- Black (not of Hispanic origin)
- Hispanic
- White (not of Hispanic origin)
- Other

18. Most of the time, I live:

- ○ Rural area
- ○ Town less than 10,000
- ○ City between 10,000-50,000
- ○ Suburb of city more than 50,000
- ○ Central city more than 50,000

APPENDIX C

INVITATION LETTER FOR VSCP RESEARCH

Dear Texas 4-H Vet Science Certificate Program Participate,

I am currently a doctoral candidate in the Department of Agricultural Leadership, Education, and Communication at Texas A&M University. I am working under the direction of Dr. Chris Boleman and Dr. Floron "Buddy" Faries Jr., on a project dealing with the impact of the 4-H Veterinary Science Certificate Program (VSCP) on Career Development choices. The purpose of this study is to provide information to more accurately determine if the program in place helps with participant's career development choices.

You have been selected based on your participation in the 4-H Veterinary Science Certificate Program. I am asking each of you to complete a web survey related to your level of understanding of the curriculum and your career choices as it was impacted by the program. It should not take more than ten-fifteen (10-15) minutes to complete. On March 26, 2014, you will be sent a second message which will include a web link to the survey.

The objectives of this research project are to:
1. Determine knowledge and skills gained from the veterinary science certificate program.

2. Explore relationships between VSCP and selecting a career in animal health.

3. Explore relationships between demographic variables including age, race, and educational

background on success in the program and selecting a career in animal health career.

I appreciate your cooperation and support. Without you I would not be able to conduct this research project, which I hope will provide valuable insight of the impact of the 4-H Veterinary Science Certificate program. When this study is completed, I will provide you with a description of the results.

This study is confidential and your questionnaire answers will be securely stored. No identifies linking you to this study will be included in any sort of report that might be published. Research records will be stored securely and only Joe W. Mask and Chris Boleman will have access to the records. If you have any questions that might not be answered in the letter, please feel free to contact me at 979-559-2000.

Best Regards,

Joe W. Mask, M.S.
County Extension Agent 4-H and Youth Development Fort Bend County Texas A&M AgriLife Extension Service

Joe W. Mask, MS
Texas AgriLife Extension-Fort Bend County County Extension Agent 4-H and Youth Development
1402 Band Road, Suite 100
Rosenberg, Texas 77471
Tel. 281-342-3034 ext 7008
Fax. 281-633-7000
joe.mask@ag.tamu.edu

APPENDIX D

COVER LETTER WITH SURVEY LINK

4-H Vet Science Certificate Program Participants,

You should have received an email last week announcing a survey to determine the impact of the 4-H Veterinary Science Certificate Program on career development choices.

I, along with the Texas 4-H Veterinary Science Certificate Program (VSCP), would like your help! The survey is being conducted for research purposes and will assist the Texas A&M AgriLife Extension Service in making the VSCP even better for helping participants make career development choices. I would like to know how the VSCP has impacted your career choices and what knowledge and skills you have gained. Your responses will also help the Texas 4-H Program know what can be done to better enhance programs focused on career development.

You have been selected to participate in this research project because you meet the following criteria:

- Current or Former 4-H Member;
- Participated in the Texas 4-H Veterinary Science Certificate Program;
- Participated in the Texas 4-H Veterinary Science Skill a thon;
- Have an e-mail address.

Your participation in this research project is voluntary, however if you are under the age of 18 please have parents complete the attached consent form and return it via email to joe.mask@ag.tamu.edu prior to taking the survey.

If you would like to participate, please click the link at the bottom of this email to go to the online survey. The survey will take 10-15 minutes to complete. By completing the survey, you are giving permission for the researcher to use your survey responses for research purposes.

Sincerely,

Joe W. Mask

Follow this link to the Survey:

https://agrilife.az1.qualtrics.com/SE/?SID=SV_0W18IXGNSz3dVbL

Joe W. Mask, M.S.
County Extension Agent
4-H & Youth Development
Texas A&M AgriLife Extension-Fort Bend County
1402 Band Road, Suite 100
Rosenberg, Texas 77471
Office: 281-342-3034 ext 7008
Fax: 281-633-7000
joe.mask@ag.tamu.edu

APPENDIX E

REMINDER AND THANK YOU

To the Vet Science Certificate Program participants:

If you have completed the 4-H Veterinary Science Certificate Program (VSCP) survey, we want to thank you for your time and effort. The feedback you have provided will greatly help us to better understand the impact the VSCP has had on career development choices.

If you have not had an opportunity to take the survey, we would appreciate it if you could take 10-15 minutes to do so. The research gained about the impact the 4-H Veterinary Science Certificate Program has on career development choices will serve as an instrumental tool in gaining data to better understand the program. Attached is the parental consent form for students under the age of 18 who would like to fill out the survey.

We appreciate your help and thank you for your consideration. To participate in this survey please click the link below.

https://agrilife.az1.qualtrics.com/SE/?SID=SV_0W18IXGNSz3dVbL

If you have any further questions please feel free to contact the researcher at joe.mask@ag.tamu.edu.

Thanks again and have a great day!

Joe W. Mask, M.S.
County Extension Agent
4-H & Youth Development
Texas A&M AgriLife Extension-Fort Bend County
1402 Band Road, Suite 100
Rosenberg, Texas 77471
Office: 281-342-3034 ext 7008
Fax: 281-633-7000
joe.mask@ag.tamu.edu
http://fortbend-tx.tamu.edu

APPENDIX F

RESPONSES TO QUESTION TELL US WHAT PART OF THE PROGRAM CONTRIBUTED TO CHANGING YOUR MIND

Please tell us what part of the program contributed to changing your mind?

- going to clinicals I realized that I wouldn't actually want be to a vet as a full time job, but a vet tech or working in the clinic would suit me
- All of it. I found the whole experience very interesting and it made me much more excited and determined to pursue a career in veterinary medicine
- The program enabled me to shadow an avian veterinarian, so I became interested in exotic animal veterinary medicine
- The Shadowing and Clinical Skills portion of the program have greatly increased my desire to pursue a profession in Veterinary Medicine
- I was going to be an animal caretaker, then once I got into vet science, I wanted to work in the offices of the clinic
- I had originally entered the program with the plan of continuing on to become a Veterinarian. After having worked in the clinic setting, I have changed my mind. I realize that it would not be practical for me to become a veterinarian. Now I am working towards entering a large animal veterinary technician program. I plan on becoming certified as a veterinary technician and then working in the large animal setting, preferably on a ranch.
- I am learning new things in the Veterinary Science Program and more excited than I was when I started. I have a better understanding of the work that is required and look forward volunteering and learning from a Veterinarian
- Seeing how much money one made, I want more
- I really want to go to college to become a vet but I know it is very hard to get in. I love animals and volunteer to help with them whenever I have the chance. This program gives me a different way to work with animals and also a chance to work with them professionally as I work towards becoming a vet. Also my experience will hopefully give me the edge I need to become get accepted to a Vet program at A & M someday
- The unorganized program, the inability to be able to complete the activities in the lesson, its a fend for yourself kind of program
- Cassie has always wanted to be a veterinarian. She enjoys the hand on projects and working with animals
- I think if this program was offered, I would encourage my daughter to take it.

- Working at a vet's office has changed my mind on wanting to be a vet. I was not 100 percent certain going into the program that this was what I wanted anyhow
- I want to be a Vet. Asst, until I can get into Veterinary School.
- I'm very interested in all of the material, I feel like I could get a lot out of this program if I had a well-organized 4-H group
- / I never wanted to be an actual Vet, i just wanted to learn more about animals
- The clinical
- The program has only confirmed to me that I want to be a vet
- Too difficult to get into Texas A&M; changed to nursing... :(
- Didn't change my mind, just for sure want to pursue being a vet. /
- Having to volunteer at the vet clinic to get experience
- The content is too difficult to understand
- the curriculum and program has not - my own learning and experiences gained at zoo and vet clinics confirmed my desire to pursue degree in vet medicine
- For a long time I was set on becoming a veterinarian, however now I am going to major in Animal Behavior and consider veterinarian school as well as other options available to me. No specific part really changed my mind, just the whole experience
- I already knew I wanted to be a vet, it has just confirmed that that's what I really want to do.
- lack of help and participation among adults and vets
- Because of the internship I am more sure than ever that I want a career being a Vet or working with a Vet
- Working in veterinary clinics and working on lessons
- It strengthened my desire to become a veterinarian!
- Still interested in animal science, however not a veterinarian
- This program gave me the opportunity to observe, volunteer, and later be hired at a veterinary clinic. Through my experiences there I came to the conclusion that the field of veterinary medicine was not the right choice for me. If I had not been apart of the program I may not have found that out until pre vet or vet school thus a waste of time and money was avoided
- Helping animals
- It has confirmed my desire to be a vet
- I have always wanted to pursue veterinary career, vet science has helped me understand more about the field I want to be in

- The uncial hours, working at a veterinary clinic had changed my mind. I wish to pursue a career in veterinary medicine
- I think it has increased my interest in the field
- I used to wish to be a large animal vet and now would like to pursue large and small animal veterinary practices
- The actual shadowing a vet helped me realize I do not want to become a vet. / The lessons and activities were informative and interesting. I would have stayed in the program if I wanted to pursue a degree in Animal Science. I have since decided to pursue a career in Mechanical Engineering
- Overall decided not to pursue it
- I didn't mind learning about animals and how to treat, teach, restrain, and care for them but I didn't feel that it was my future career. It didn't speak to me as what I wanted to spend the rest of my life doing. It was fun to talk with others about similar things but it's not what I want to do
- Working with a veterinarian at the clinic
- The demands of a practice and time made her decide not to pursue a career in vet science
- All of it
- For a long time I was set on becoming a veterinarian, however now I am going to major in Animal Behavior and consider veterinarian school as well as other options available to me. No specific part really changed my mind, just the whole experience
- Sadly, the program instructors negatively affected my ability to complete the program. I am a public school student and had school events that conflicted with the class time which was inexcusable to my instructors. If I skipped my school events to attend their class and ended up with failing grades at school then what is the point in trying to complete this program. I can't get into A&M with a low GPA. Two misses were allowed but there were times when I had other school events that were mandatory. I wanted a classroom and hands-on learning experience but it just was not a good fit for me.
- I have always known that I would want to be a vet but this program has made me realize everything a vet career has to offer and made me want to be a vet even more
- the multiple jobs that are in this field and not just the Veterinarian him/herself

- The requirement for shadowing hours helped expose me to real clinical situations. I was able to see firsthand the different job positions in a private practice, thus influencing my career decision
- all of it, but mostly the hands-on activities at the vet clinic
- dissection and meeting the Veterinarians from Sea World
- The amount of blood, surgery, and telling little kids there pet didn't make it made it an easy choice for me! Being a vet was the wrong choice
- I learned that the vet career was not for me after partaking in multiple surgeries
- i decided it was too much
- I have always wanted to be a Vet and I have not changed my mind
- Working in the vet clinic

APPENDIX G

RESPONSES TO QUESTION WHAT ARE YOUR FUTURE GOALS

What are your future career goals?

- To become a large or mixed animal veterinarian
- I am still deciding which profession, but definitely animal related
- To have my own practice and be able to take care of large and small animals
- My passion is in the Equine industry, and I am also interested in the research side of veterinary medicine
- I want to go to Texas A&M Veterinary school and become avian board certified
- I want to become a veterinarian and treat large animals as well as smaller ones. Ideally, maybe a traveling vet because of how rural our town is
- To be more satisfied in the idea of me pursuing my dreams, and to be more interactive with handling animals
- I plan on going to college to become a registered veterinary technician. This will allow me to work in the veterinary field on a ranch. The large animal area of the veterinary profession is my favorite part of the wide range of options
- I plan on going to Texas A&M to pursue my goal in becoming a veterinarian.
- Be a Veterinarian
- Study Large Animal and Avian Medicine at Texas A&M after majoring in Poultry Science. I will then try to find a practice in central or west Texas to work as a large animal veterinarian, as well as find out about becoming as USDA inspector for poultry facilities
- To eventually become a Vet and to always work with animals
- My daughter still desires to be involved in the veterinary medical profession. Attending the club on a regular has cemented her resolution as it has provided her insight as to the college curriculum and required labs/activities
- Attend Texas A & M Veterinary School, and become a Veterinarian
- As mentioned above, I don't plan to be a vet, but my daughter does. She is 12 now, but has wanted to be one and has assisted my husband in doctoring animals her whole life. And continues to care for all kinds of animals. She is book savvy, common sense smart and if she sets her mind to it, she will succeed
- Be a Vet Science major in college

- I plan to attend Vet school to become a veterinarian specializing in breeding animals
- I plan on becoming a Veterinarian, as of now I am working part-time as Veterinary Assistant before I go to college
- To be a large animal vet specializing in cattle health and management
- Veterinarian
- I hope to become a veterinarian or a vet tech
- I plan on specializing in equine medicine, and eventually opening up my own clinic
- To graduate and become an orthopedic equine vet. I found through the curriculum, that I enjoy learning about the musculoskeletal system
- To become a vet
- Veterinary Medicine
- I want to become a vet and work on large animals
- want to be able to bond with the animals and care for all the animals as a veterinarian
- veterinarian
- Army, Army Reserve, or Civilian Veterinarian
- I will probably work part-time as a veterinary assistant while I go to college to obtain my degree in zoology or research
- Maybe I'm not sure as I'm in 7th grade and still just thinking about options that are out there
- For a long time I was set on becoming a veterinarian, however now I am going to major in Animal Behavior and consider veterinarian school as well as other options available to me
- Attend Texas A&M and become a vet
- Plan to attend A&M's Veterinary School and following graduation I hope to start my own practice
- My future goal is to be a veterinarian
- Vet, Vet Tech or animal control officer
- To take the TVMA test and get my CVA . I plan on getting my DVM at Texas A&M University after attending Palo Alto College for two years,
- Large animal veterinarian
- To be a veterinary technician if not going on to be a veterinarian.
- Become certified vet tech, work part time at a vet and go to college

- Attend Texas A&M as an undergrad thru vet school and set up a practice in the Boerne area
- Vet Tech at age 16 with hoped of becoming a veterinarian after college
- TO finish vet science
- Equine Chiropractic
- I would like to become a Vet Tech
- I would like to pursue a career in veterinary medicine and apply to Texas A&M University to become a graduate student of the veterinary program there
- To become a large animal veterinarian
- Mixed animal veterinarian
- I want to become a lawyer, a engineer, or a football or baseball coach
- Veterinary sports medicine / Or / Vet assistant
- Veterinarian
- large and small animal vet
- lg animal vet
- Be able to run my own veterinary clinic
- I become an equine veterinarian
- Be a vet tech or veterinarian for horses, cats and dogs
- I am not going to pursue a vet profession
- Either to own a small animal practice or work with exotic animals
- Considering to become a veterinarian
- My future career goals are to complete my veterinary certification and graduate from high school and go on to Texas A&M to study veterinary science and become a veterinarian
- Not sure
- I want to be a vet assistant
- Vet Tech
- For a long time I was set on becoming a veterinarian, however now I am going to major in Animal Behavior and consider veterinarian school as well as other options available to me
- Possibly as a veterinarian or a zoo keeper
- After graduating from college with my doctorate degree I would like to work as a vet in a small animal practice until I have saved up enough money to open and manage my own veterinary practice
- Become a large animal veterinary technician

- I plan to receive my pre-vet Bachelor's degree (animal science) from Texas Tech University then will continue on to a nearby veterinary school (Texas A&M, Colorado State, Kansas State)
- Receive my doctorates in veterinary sciences from Texas A&M
- I am still exploring the opportunities available to me as a large and/or small animal veterinarian
- I plan to attend Texas A&M University at College Station, Texas to pursue my goal of becoming a veterinarian
- Equine Neonatal RVT . Currently enrolled in the Blinn Veterinary Technology Program with an estimated graduation date of May 2015
- To become first and assistant and eventually a doctor
- Veterinarian
- To go to Texas A & M and become a Veterinarian
- Registered veterinary technician
- Possibly: If so, own an exotics practice or work for somewhere like the zoo or wildlife rehab.
- I plan to be either a vet with an undergraduate in photography, or be a vet assistant with a graduate in photography. I'm thinking about either going into mixed or exotic practice

APPENDIX H

RESPONSES TO QUESTION WHAT ARE YOUR FUTURE CAREER GOALS

What are your future career goals?

- something in the medical industry or personal services industry
- Pediatrician or Occupational Therapist
- My goal is be a Veterinarian and return to the Valley
- Undecided
- Become a leader in the beef industry
- unknown
- I plan on going to college to become a RN
- Instead I have decided to pursue a career in Marine Biology
- When I graduated from the program and from high school, I fully intended to pursue a veterinary degree. I changed my mind when I was in my sophomore year of college (went into Judging program and re-evaluated life priorities). I will complete a BS in Animal Science with a Meat Science certificate and hopefully go on to complete a MS in Meat Science. After that, I will most likely go into QA or manage consumer studies and surveys for an R&D department
- To become a Marine Biologist
- To become A chef, and own my own restaurant
- occupational therapy
- LVN School transition to RN Program
- I will use the knowledge I have gained to help me in a zoology career, which is where I want to be. I may also use it in a research career. I believe this certificate program is beneficial to many students who want to pursue any type of animal career to gain knowledge you would not otherwise get
- I plan to get my degree in business management
- Electrical engineer
- I want to become an engineer. I will use the certificate to better myself while I am in school
- I want to be a fashion designer
- Ranch Management
- I am not sure yet. I am 12
- Right now I am working on a ba in history. Then I would like to attend law school at William & Mary in Virginia. After that I plan on pursuing a PhD
- Pediatric nurse

- I want to become a lawyer, a engineer, or a football or baseball coach
- Veterinary sport medicine
- Pursue a degree and career in engineering, probably mechanical engineering
- I went to school for photography
- Family medicine
- Something awesome, fun, interesting, inspiring, creative, deviant, different, and so amazing that it will improve my life exponentially. (That's a fancy way of saying I'm not really sure yet, but I am thinking about going into writing or art
- Business
- unsure
- Pharmacy or Law
- Not sure. I'm in a deciding state at the moment
- Medical Doctor
- I plan on attending law school after my undergrad stuff is completed
- i want to become an ag teacher
- To become a medical doctor specializing in surgery

APPENDIX I

RSPONSES TO QUESTION HOW DID IT HELP WITH YOUR CAREER CHOICE

How did it help with your career choice?

- showed me that being a veterinarian might not be the best job for me
- Same as above
- It allowed me to see what being a veterinarian consists of, and all the other options available in Veterinary Medicine
- Before, I was pretty sure that I wanted to pursue a career in the veterinary field, but now I am positive, and I have a better idea of what is available
- It helped me to realize that I was interested in exotic animal veterinary medicine.
- It showed me that I really want to learn and be able to help animals
- I, at first, didn't know which part of the vet clinic I would be in, I just had a rough idea of what I wanted to be. Now, I have more description of what I want to be.
- It allowed me to get a good, hands-on view of the veterinary profession, and figure out what job would work for me. I have realized that I do not want to be in the small animal setting. I prefer working with cattle, sheep, and horses.
- The Vet Science program allows to better understand if this career choice is for me
- it helped to cultivate an interest in medicine, albeit human medicine
- Helped me narrow down my options and choose a specific field of animal medicine
- It gave the chance to prepare early for work.
- It is providing a wide variety of choices within the veterinary sciences profession
- Help Cassie realize this is what she wants to do for the rest of her life
- Once I get more info on it and have my daughter check into this, I feel certain it will seal the deal for her to be a Vet.
- Just reinforced what I thought I wanted to do. Finding out more about the field and expectations has solidified my decision
- Through the required clinic hours, I was able to work in the veterinary practice and I fell in love with the job. I was able to determine that that is the career I want to pursue
- By exposing all the different aspects of the field of vet medicine and the opportunities within the career
- It made me realize that Veterinary Science is not career suited for me

- I never would have made it to A&M and had the experiences that I've had here if I hadn't been driven and motivated by the Veterinary Science Project.
- It helped solidify my wish to become a Veterinarian
- I strengthened my love for vet science
- It helped me decide that I do want to pursue a veterinary career and it also helped me find what area I enjoy the most (orthopedics).
- Volunteering at the vet's office was the most beneficial in helping to confirm my decision to become a vet
- Just made it stronger
- It was her lifelong dream to work with animals--but settled for people; she LOVES the science aspect of the healthcare field. Learned so much in the Vet Science Program--became even more passionate about animal science. REALLY appreciated Dr. Lipsey conducting "hands-on" activities and Monica Porras for making the class interesting and being so enthusiastic!
- Confirmed I love working with animals
- it made me want to get even more serious with veterinary science
- It gave me the experience of what being a vet is like
- Found vet that would mentor me and help me toward CVA, as well as experience more of vet job to confirm my career goals
- Helped me see more what is involved in this possibility
- For a long time I was set on becoming a veterinarian, however now I am going to major in Animal Behavior and consider veterinarian school as well as other options available to me
- It just confirmed that I want to be a vet
- The Vet Science Certificate Program helped with my career choice by making my desire to become a veterinarian stronger and helped to increase my knowledge of what is needed and expected of my in the present and future
- I like it
- I've wanted to be a veterinarian since I was four years old and it was finally official after starting this program and working in a clinic for the first time
- Want to work with animals still, but not become a veterinarian
- By helping me realize that vet science was not the field for me
- I liked the class and learning about how to take care of the animals.
- It confirmed my desire to be a vet
- gave me knowledge and skills that can be used in chosen field

- I found many options to be available as a veterinary professional, not just a Veterinarian or a Vet Tech
- If I really wanted to be a vet or not.
- Helped me make up my mind that this was definitely something that I wanted to do
- It confirmed that I wanted to become a vet
- I didn't really enjoy vet science so it help want to learn more about other careers that I wanted to do
- Increased knowledge and interest in the field
- Has given me insight into what it takes to be a vet
- It helped me focus on what the veterinary field truly is about.
- It helped me realize that being a vet is a suitable job for me
- It exposed me to the field of animal sciences and medicine that I would not have been exposed to any other way. / It was a fantastic experience
- At first I was resolute with following a small animal career but now I'm interested in exotic animals
- I realized it was not what I thought and it's not for me
- Now I don't think I want to be a vet
- I became interested in becoming a vet while watching the veterinarian preform several surgeries.
- The Vet Science Corticated Program through Fort Bend County is very active and hands on. My leader is very supportive and the Veterinarian that I am working at to complete my clinic hours is very informative and supportive as well. Fort Bend County Extension Agency has a strong Vet Science Certificate Program and I hope they continue to have this opportunity available for students for years to come.
- She doesn’t want to be a vet
- All the information. Also learning about all the different fields I can go into
- It helps know that I can do it if I try. And it helped to gain the knowledge needed
- For a long time I was set on becoming a veterinarian, however now I am going to major in Animal Behavior and consider veterinarian school as well as other options available to me
- It solidified the idea that I had been tossing around in my head that that would be a job that I would be good at and enjoy

- Not in the way you would think. My instructors did not motivate me to complete the program because I had conflicting mandatory school events that caused me to be absent more than twice. I think this is wrong to dismiss a student even if it could be proven an absence was due to a school event
- gives me an idea of what I'd be getting into as a vet
- It is teaching me many different aspects of veterinary practices
- The requirement for shadowing hours helped expose me to real clinical situations. I was able to see firsthand the different job positions in a private practice, thus influencing my career decision
- This program has made me want to become a medical doctor. If I had not participated in this program, I do not think I would have that desire
- It made me realize that I didn't want to be a vet anymore
- Preparation and access to the profession
- Learned it was not for me
- i want to be an ag teacher now
- It has confirmed my interest in the field.
- I was already considering it, but it made me see what could be done a little better. /
- The program allowed me to work in the veterinary field at a young age and make the decision that I wanted to expand my education.
- It narrowed it down to what exactly I wanted to do. I had so many more options beforehand.
- As a result of assisting in surgeries at the vet clinic where I volunteered/worked, I became mostly interested in surgery. I realized that more than working with animals I wanted to do surgeries and knew that my greatest chance to perform lots of surgeries was in human medicine

APPENDIX J

RESPONSE TO QUESTION HOW DID YOU MAKE YOUR CAREER CHOICE

How did you make your career choice?

- I have always loved animals and have always considered working with them
- I have always wanted to be a veterinarian so I thought that this would help me towards that goal
- I have always love working with animals and through the Vet Science program I have learn much more about them
- Haven't yet
- By getting involved with the Texas Beef Leaders of Tomorrow
- It made me realize that while I love animals and want to help them, I do not want to be a vet or technician
- not decided
- I've been around with horses for a very long time, and I've always enjoyed working with them. I think they would be a very good career choice because they're my passion
- Has always been my passion. Attended Sea Camp at Texas A&M Galveston for two years as well as Sea World Camp in San Antonio for one
- I decided, I'd rather be cooking
- interest in medical field, and I attended occupational therapy as a patient
- I have always known what I wanted to do. I just thought the veterinary certificate program would benefit me in furthering that career choice
- I realized at a young age I enjoyed and understood electrical circuits
- I chose this career because I enjoy building and creating
- I have always wanted to be a fashion designer
- Schooling
- I have always wanted to be a vet
- I have always wanted to be a vet
- Had made my choice long before vet science. Always knew I wanted to help animal s
- I had made my career choice long before finding the veterinary science program
- It help me to find a different career
- have always liked animals
- It's what I've always wanted to be
- This course helped me decide not to become a vet
- Already knew what I wanted to do with my life

- Already wanted to go down this career path
- I have wanted to be a vet since I first found out what a vet really was. I was very young but I have not given up on my dream since then and have continued pushing harder and harder to make it reality. This program made me realize I had to push myself to be ready to become a vet
- When beginning the program, I had plans to be a breeding manager at some high-class barn somewhere. When college began, I realized I needed a degree with several options so I would have job security. I decided I was going to do genetic research. After a year of chemistry and still another year to go, I decided I'm more of a hands-on kina girl and my most recent decision to go to vet school
- From a young age I knew I want to help animals
- Since I was about three-years old I have always loved animals and have dreamed of someday becoming a veterinarian. This is why I was so excited when this program opened in Hidalgo County and wanted to be a part of it. I was only in the 6th grade, but my parents knew this was a program that I would definitely not to pass up on; therefore, my mother contacted the county agent. The county agent decided to give me a chance since she had noticed I was an active member and knew I would dedicate myself to the program
- I have always wanted to be a Vet and help animals in need

APPENDIX K

RESPONSE TO QUESTION PLEASE TELL WHY THE 500 CLINICAL HOURS WERE NOT COMPLETED

Please tell why they were not completed?

- still in the program
- I did not have the time or resources to complete the 500 hours. That is just too many to complete while managing school and other responsibilities
- The program changed in the middle of my involvement. Most hours working were going towards observation hour requirements, which do not count anymore
- Insufficient Veterinarians available to allow 14 year old to shadow and earn the clinical skill hours
- I am in my last year of the program, and am still collecting my hours. I also doubled my second year so I have finished the course work and activities in 4 years, but am therefore also still working on my hours
- I am still in the process of completing the program
- We are only halfway through course
- I'm not to the point where I can complete the clinical hours.
- I have not had a chance to do my clinicals
- On my 3rd year of program. I shall start volunteering this summer at an veterinarian clinic. Not much practice on activities or skills in the classroom. I would suggest that Texas A&M Vet Hospital students help with clinical hours
- I'm not done yet
- I can not find a vet to work with. They either say no or they need more info. I am a first year student in the program
- Dropped out of the program it was too unorganized, too little meetings during the program my last year in 4H in which all I wanted to do was vet science we had one meeting that actually was about vet. Science. /
- This was a 4H club and my daughter was in the 7th - 8th grade
- Still working on the program, only 13 years old
- I was not in this program, but willing to do the survey. My daughter is very interested in attending TAMU and going to Vet school. I have a counsin that is a graduate of Vet school from TAMU and operate in Wichita Falls, TX. I am a graduate of TAMU Bachelor of Scinet in Agricutlural Economics and love animals. Plus I am a 4H Alumni and my children participate in 4H as well, too
- Still in the program. About to finish my 2nd yr. It is very difficult to find a Vet willing to participate in the program. I have contacted over 15 Vets in the area and most are not interested in allowing a youth to observe their practice. It would help if there was a coordination office to help place individuals with practices that are willing to contribute to the education of an individual in this manner. Even a listing of offices that want to participate would help. As it is we are on our own to find someone who will allow us to

come and observe/participate/apply what we have learned. I have been trying for 8+ months now so that I can stay on track with the requirements of the program. / Are there any plans to share this curriculum with the FFA organization?

- Not finished with the program yet... only in year two
- Just getting started
- I never got the opportunity
- Too young.
- I am still in my first year of the program
- I'm still working toward the hours I need. It is hard to find a vet who will let me shadow because of my age
- 500 hours was a lot to try to complete after school. The vets nearby did not have weekend hours available
- Have not completed program, only in year three
- only in my second yr
- My daughter was the youngest student in the very first Vet Science Class but made the BEST grades of all her classmates when it came to the curriculum...BUT because she was so young at the time, no Vet Clinic would allow her to shadow; even after practically "begging" them to and writing letters/visiting and making calls etc. By the time she was older she attended a high school that integrated college classes in addition to H.S. classes and was too busy with school to shadow then. She tried several attempts to get in on "shadowing" with a Vet Program offered through the local H.S. but b/c she didnt do the curriculum with them they were less than enthusiastic. She loves every bit of the veterinary concept but "shadowing" was just not in the stars. I would still love for her to complete the shadowing and not waste all the time and effort she put forth in completing the curriculum. It saddens me that she was so close (5 years of curriculum)! I suggest you be over the age of 10 when joining the class and that 4-H actually have Vets who are willing to let the kids shadow BEFORE the program starts. It's so hard to find one on your own; as a parent I tried my best to find someone to no avail - so much for the life lesson of "finishing what you start" along with the couple of times (2nd and 3rd year) she felt she couldnt do it (in addition to homework) and I told her "nothing worth having is never easy" you can do it! It is worth it!! Maybe now, graduated in May 2013, she can Shadow while going to college...Told there was no time limit from the time you complete the curriculm to the time you shadow and take the exam....
- Program just fizzled out
- i am 15 years old and most veteranarians require i be 17 years old in order to start
- still in process

- Since I am just in my 3rd year I am still working on completing my clinical hours. In my area it is very difficult to find a veterinarian to take on students under 16 and there is a lot of students in this program both through 4H and now through several High Schools.
- Didn't know it was required
- First year student
- I am not old enough
- Just beginning year in 7th grade
- None of the local veterinarian practices would allow anyone under the age of 16 to participate, and when I finally turned 16 I was offered a job (which I took) however they would not accept volunteer hours because of their insurance policies
- The program I was attending faded out
- Change of Program Teacher numerous times, / Couldn't find vets interested in working with the "program" / Too much talk about horses!!
- I just started the program
- Still working on the program
- Still in the process of getting my hours, I'm currently still working on it.
- I am in my last year of the program
- We are in the 3rd year of the 5 year program
- This is a 3 month program in our county.
- I haven't gotten to that part of the class yet
- In 8th grade and being 14 I've had to gain the confidence of vets I am working with to allow me to do clinical hours. It is my plan to complete program
- Stilll working on the book
- Have not completed course. Still have one more year
- She is 13 and we were told she needed to do 20 hours per year I am not sure that she has 10 it may be more
- I am not old enough to find work in a clinic yet
- As the student, I am 13 yrs old, and am in the 2nd year of the 5 year program
- I didn't have time go participate because of sports and other school activities
- We just started
- Not of age to be at vets office yet
- I have not finished my five years. It is very difficult to achieve 5 hours of clinical skills and not enough time.
- have 3 more years to go
- Due to lack of available time the hours will be completed in the summer
- I am still currently shaddowing and working to obtain my 500 hours
- I haven't finished the program yet
- I stopped the course

- I was thr first person in my county to go through the program. None of the parents in the county wanted to help with planning and none of the veterinarians in my town wanted to help without a parent leader
- I haven't reached the end of my last year
- Veterinarian was not comfortable me performing any duties in the office due to my age
- First, we couldn't find a vet office that would allow it, they wouldn't sign the paper that shows proof of hours (for liability). Second, the one we found was too far to drive
- Hours have not been completed because I am only a freshman in high school and I am currently in my second year
- I have been very involved in school activities
- I was and am too young, the veterinarians want someone older
- None of the local veterinarian practices would allow anyone under the age of 16 to participate, and when I finally turned 16 I was offered a job (which I took) however they would not accept volunteer hours because of their insurance policies
- I was the instructor so I wasn't going for my certificate
- Only in second year of program
- I stopped the program after my 3rd year
- It is difficult to find a vet, I am still working on getting 500
- Life got too busy, and I had to get a job that paid
- I joined over the summer of 2013 and the school year has been busy
- Almost no vets are available. they reserve slots for schools before 4H making it almost impossible to find one. by the time you do, you're almost done with the curriculum and now have to wait another year of so to finish
- I am in my first year of the program
- As per most veterinary offices, they do not allow teenagers under the age of 16 years old due to liability issues
- We are in our second year of participation
- Because the vet science program was a great eye opener and it made me realize that was not something I wanted to do anymore. I am now on the path of getting an ag communications major and then furthering my education in law school
- Did not complete the program final year
- don't know where to go
- See above.
- Because I am only 12 and some Vets will not except me because of my age
- Still working on it, in my last year
- It's too hard to find a vet to work with any of our group but especially me, because I was the youngest when we started the group. I'm 14, almost 15 now, and still can't find any vets to work with me

APPENDIX L

RESPONSE TO QUESTIONPLEASE TELL WHY THE 100 LESSONS WERE NOT COMPLETED

Please tell why they were not completed?

- still in the program
- I am still in the program, working towards completion
- I am currently in my second year of the program
- I'm only about half way through the program
- We are currently still working on the course
- I'm only in my second year
- I have not completed the program yet, but this is my final year. I have in about 700 clinical hours, and now I am working on completing the lessons in the book
- The class was small so the director of the class let the class go. I have not yet continued the course on my own
- Working on the lessons, having 2 classes each month
- All
- all were completed
- First year student
- The 4H club has divided the work to be completed over a 3 year time span, with meetings and outings occurring once a month
- Still working on it
- Didn't know anything about it
- I felt like I did not have enough material to answer the chapter questions sometimes
- still in program
- Our instructor that was teaching the class left and the substitute was not there half the time. This resulted in cancelled meetings.
- Only in year two of program
- we havent done that many yet
- Have not completed the veterinary science program yet
- Just getting started
- My 4-H group was poorly organized, and I feel like there wasn't much productivity or focus in my group
- Still in progress
- I am still in my first year if the program
- just starting 3rd year in program

- pressed for time
- Only in year three of the five year program
- only in my second yr
- Completed
- Course fizzled out
- i am currently on my 3rd year
- still in process, also our agent left and we have not been meeting very often
- I am finishing my 3rd year so I have not completed all lessons yet
- I have not completed the program yet.
- / / / / / / Did the whole book. / / / /
- They have been completed. Or will be after the last meeting for the year
- I have not finished program
- still working on finishing this year into next
- Just starting this curriculum.
- Every year we got a new teacher and one year I even had to switch clubs to continue the vet program. Every year I seemed to do the same lessons over and over again.
- I still have 2 more years to complete the program
- doesn't apply
- Program faded out
- Change of Program Teacher numerous times, / Couldn't find vets interested in working with the "program" / Too much talk about horses!! / What's the use in continuing in the program when you cannot find vets that are willing to participate??
- I am still in the program
- I'm still working on the lessons
- Still in the process of completing
- Still have one more year to complete program
- The survey is acting like I said no so I am writing here and above so the survey will accept my answer.
- This is a 3 month program in our county
- I haven't completed the class yet
- Finishing my third year this May. Our class is on schedule
- Still working on the book /
- She has not finished the program

- Have not completed course. Still have one more year
- I haven't gotten to them yet
- As the student, I am 13 yrs old, and am in the 2nd year of the 5 year program
- All were completed
- I did not participate in this
- They are the only ones that they gave us to do
- We started late
- On my 3rd year
- Have not completed 5 years
- have 3 more years to go
- The program has needed to start over three times because the coaches/instructors haven't been able to continue.
- I completed them
- I haven't finished the program yet
- I discontinued the course. I found out I did not want to become a veterinarian
- I'm not done
- Have 1+ year to finish
- didn't finish homework
- I am only a freshman in high school and am currently in my second year
- it was difficult to find a clinic willing to take a young girl (14).
- unknown
- I still have 2 years in the program
- Laziness?
- Have not completed the program
- Every year we got a new teacher and one year I even had to switch clubs to continue the vet program. Every year I seemed to do the same lessons over and over again.
- I had to resign from my leadership position. But in my opinion this course is too long. I had different kids show up every month, which means you spend the first 15 mins of every class going over the layout. Not to mention it was a nightmare keeping up with who came to what classes. At one time I had over 50 kids on my role but only about 10 would show up at each meeting they would miss 2 -3 and then expect me to keep up with which lessons they missed.
- Only in second year of program
- they were completed

- I stopped the program after my 3rd year
- My 4-h group is in their final year and we are not finished yet. Also I started much later than most and am still catching up on the last few lessons
- I just never did them
- I completed the 100 lessons /
- not all classes have been completed yet
- I am in my first year
- This is my 3rd year of the 5-Year Program
- We are in our second year of participation
- Did not complete final year
- my year is not over
- This is our first year in the program and we have only been conducting our monthly classes for a few months
- Yes
- We are now reviewing the book again by going through the new book.
- completed all

APPENDIX M

RESPONSE TO QUESTION PLEASE TELL WHY THE 50 ACTIVITIES WERE NOT COMPLETED

Please tell why they were not completed?

- still in program
- Have not had the opportunity to complete more
- I'm currently in the second year of the program
- I'm still in the process of completing the program
- Still working through course
- I've only been there for two years
- As previously stated, this is my last year in the program, and I am working on completing the lessons and activities
- Had not finished the course
- 50 hours have been completed
- all
- all were completed
- Lack of opportunity
- Was hard to get the 4H leader to help assists in completing them, my vet. I followed was too busy to take the tome to help me, I just followed, watched and helped at the desk. /
- Activities are not held every month. When they are held, my daughter attended
- still working on it
- Didn't know anything about it.
- Did not have the resources or contacts at the time.
- still in program
- My county club disbanded before I could complete the activities, so I continued to finish the lessons, but not the activities
- Only in year two of program
- because we haven’t done that many
- Have not completed the veterinary science program yet
- Just getting started
- My 4-H group never enforced us to complete the activities
- / Still in progress
- I am still in my first year of the program
- Have not completed yet. I'm still working on them. (3rd year student
- missed those meetings

- Have not completed all five years of the program.
- only in my second yr
- All 50 activities were completed
- Course fizzled out.
- i am currently on my 3rd year
- still in process
- I am finishing my 3rd year so I have not completed all activities yet
- I have not completed the program yet
- Did all activities
- Because most of the lessons require you to be in a office setting. This makes it difficult until you begin the clinical hours
- I haven't finished the program
- answered yes above
- Just beginning curriculum
- I didn't even know we were supposed to do activities
- I still have two more years
- doesn’t apply
- Program faded out
- I am still working on it
- look above
- I am still working on the lessons
- Still in the process of completing
- I have one more year to go!
- Still in the program
- The survey is acting like I said no so I am writing here and above so the survey will accept my answer
- This is a 3 month program in / Our county
- I haven't completed the class yet
- not finished with program
- Still working o. The book
- we are on year 2 of a plan to finish in 5 years, it is staged out
- Course is not completed. Still have one more year
- I haven't gotten to them yet
- As the student, I am 13 yrs old, and am in the 2nd year of the 5 year program. Some of the activities are difficult to complete, (due to the facility needs

required) however, an trying very hard to look for all available opportunities to complete them.

- Some of the activities were unattainable for one to do on one's own due to the facility/animal/equipment required to complete the activity. Many would be better suited as group activities
- I did not participate in this
- I had to leave early for some of the activities that we doing to go to sport practices
- Just started
- Not completed with program yet
- have not completed 5 years
- have 3 more years and we don't do many in class
- All were completed.
- I am still completing them
- I haven't finished the program yet
- This course was instrumental in helping me decide on a course of study for college
- I'm not sure what is meant by activities??
- Not done
- just didn't do it
- I am only a freshman in high school and am currently in my second year
- Lost interest
- unknown
- I am still in the program
- Not no
- Have not completed the program
- I didn't even know we were supposed to do activities
- I resigned
- Only in second year of the program
- they were completed
- not sure, did complete three years of the program
- Again, I started much later than most and am working on catching up on all of the activities
- The program began to fall apart
- I completed the minimum of 50 activities

- no vet. i live in the city and its hard to do activities involving animals such as horses
- I am in my first year
- Not yet assigned to students
- we are in our second year of participation
- years not over
- This is our first year with the program
- Yes
- We normally schedule a field trip to cover the activities a little while after we cover the chapter.
- completed all