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LEADERSHIP STYLES OF STATE EXTENSION SPECIALISTS

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LEADERSHIP STYLES OF STATE EXTENSION SPECIALISTS

DISSERTATION

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in the
College of Education
at the University of Kentucky

By
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ABSTRACT OF DISSERTATION

LEADERSHIP STYLES OF STATE EXTENSION SPECIALISTS

Cooperative extension is one of three components, along with teaching and research that form the mission of land grant universities. The focus of extension work is to take knowledge gained through research conducted at the university, and disseminate the information, in a practical manner to the end user. In most instances, extension work revolves around agriculture. Within the extension system are personnel that help to foster this program of educating clientele who work in the agricultural industry. County level agents are in place to teach and address the needs of local constituents, specialists are generally housed at the university campus and are hired for their expertise in a specific field of agriculture, and administrators help to keep the system functioning. Many studies have been conducted on the leadership characteristics of county agents and extension administrators, however the current knowledge base concerning leadership behaviors of extension specialists is lacking.

Traditionally, specialists were strictly used as a resource for subject matter information; however, changes overtime to cooperative extension have seen specialists move to a leadership position that involves leading agents groups and conducting programing that directly serves the clientele. With newly acquired expectations to perform in a leadership capacity, yet without training or educational background to ensure these skills, there is potential for complications to arise. Using a mixed methodological approach, this sequential explanatory study was conducted using Burn's (1978) transformational leadership as a theoretical framework, with the purpose of examining current transformational leadership characteristics among extension specialists in addition to gaining information concerning demographic and professional information pertaining to this group.

The sample group consisted of equine extension specialists, an initial survey was sent which contained questions relating to educational background, make-up and tenure of their position, as well as the Multifactor Leadership Questionnaire (MLQ) to analyze self-perceived transformational leadership characteristics. This survey was followed by a voluntary individual interview with the researcher. The purpose of the semi-structured interview was to gain a broader example of the leadership perspectives of this particular group.

Although no significant connections could be made concerning demographic information and MLQ leadership scores, the group as a whole registered below average for displaying transformational leadership characteristics, ranking in the 40th percentile for composite MLQ scores compared to the general population. The interview data showed that as a whole there was agreement with the concepts of transformational leadership, however MLQ scores and anecdotal evidence show that practical application of transformational leadership is lacking. Most participants indicated they did not feel prepared for their job, and many indicated that interpersonal relationship skills were used

more often than their degree specialization. The findings from this study may help to encourage leadership training focused towards extension specialists, and to emphasize the need for leadership skills within this position.

KEYWORDS: Cooperative Extension, Extension Specialists, Leadership, Transformational Leadership

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November 27, 2018
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LEADERSHIP STYLES OF STATE EXTENSION SPECIALISTS

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Date

DEDICATION

To Joe Brack and Tyson, never give up on your dreams, for it is passion that makes life worth living.

"It's supposed to be hard. If it wasn't hard, everyone would do it. The hard is what makes it great." --*A League of Their Own,* 1992

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CHAPTER 1

INTRODUCTION

It is commonly assumed in our society that a person who proves to be proficient at a particular skill or supremely knowledgeable in a certain subject matter should be designated to lead others in the specified area. However, as we see all too often, one's leadership characteristics are in large part separate and unrelated to expertise in a given subject. Therefore, organizations often hire leaders based solely on their educational background or experience level and hope that they also possess the leadership skills necessary for the position.

On occasion, this type of hiring philosophy can be randomly successful. Unfortunately, even though a person can successfully raise livestock without a degree in Animal Science Production Animal Nutrition, it does not mean that we are not also reliant on researchers to study animal nutrition to find ways to maximize potential production in an efficient and cost effective manner that will be imparted to the farmer.
As in leadership, there are people who have an inherent ability to influence those around them, inspire others to work for the benefit of the organization, and organize and manage resources and conflicts. Still, scholars are needed in order to find the best ways to lead, to conclude how leadership theories and methods are used in different situations, and how to teach those who are in leadership roles but lack the innate abilities to perform the desired outcomes.

Rost (1991) suggests that leadership should be defined as an "influence relationship among leaders and followers who intend real changes that reflect their

mutual purposes" (p. 102). The turn of the current century brought an addition to the original Rost definition, adding that leadership is the ethical use of influence to achieve goals and positively alter the behavior of others with the purpose of achieving a certain outcome (Rankin & Ingersoll, 2006; Yukl, 2002). This definition allows for the interpretation that anyone who is in a position of influence and stands as a catalyst for change would then be considered a leader.

Cooperative Extension Service

The cooperative extension service is a key component of the tripartite mission of the Land Grant University system. Teaching, research, and extension in the area of agriculture are the intended purposes of the creation of Land Grant Institutions (National Research Committee, 1995). Teaching and research were already well within the realm of university activities, but the idea of extension created an entire dimension not fulfilled by the rest of the university. Thus came the creation of the position known as "extension specialist". This role would take people who were experts in a given subject area who would then extend the knowledge created through university research and share it with people in a particular industry who could subsequently apply it, simultaneously converting scholarly work into practical endeavors (National Research Committee, 1995).

The people who filled these positions were intended to not only help the individual farming communities, but to also contribute to the agricultural industry of the United States. Following a model set by European colleges that primarily emphasized scientific research simply did not fit the mold of agriculture, and the American pragmatism that underscored the importance of applying knowledge to improving

industry production. In addition, a single professor in a department, supported by staff, which was widely the model used in the late 1800s, could not be expected to cover all of the various aspects of agriculture. The depth and reach was too wide and varied when considering all that agriculture encompasses. Multiple experts would be needed in order to sufficiently cover one person could be expected to know all. Therefore, people who specialized in the individual topics were hired to answer questions and lead programs in their given area of capability (National Research Council, 1995).

This position, established to aid rural Americans in agricultural endeavors, would not only serve these individuals, the personnel hired in this capacity were also serving the community and the country as a whole. Farmers were able to increase yields, consequently increasing the gross domestic product of the United States and therefore strengthening the country. It behooved the government to support programs that increased the education and efficiency of rural Americans who were involved in agriculture. Not only were farmers able to stay in business with improved knowledge and technologies, but the country benefited from lower costs of food and textiles (National Research Council, 1995). This was an investment into the public education system that would pay multifaceted dividends for years to come.

With each region of the country having different agricultural identities based on climate, geography, and topography, each university would have to tailor its extension programs to meet the needs of the people in its region. In addition, as new research was conducted and new knowledge generated, unique methods and programs would need to be created to keep farmers up-to-date with the latest information. Therefore, the nature of extension services is one of dynamic programing that continually adjusts to meet the

needs of the local populous. This requires the specialists to be informed of the latest research as well as the current industry concerns. Not only do the specialist need to have the information, but it is necessary that they be able to effectively disseminate the knowledge. As times and technology change, the specialist can no longer rely on giving speeches to gathering crowds from the back of train cars (University of Kentucky, 2011), as was performed in the early days of extension. Now it takes coordinated efforts of county extension agents, the recruitment of volunteers, fund raising, marketing, conflict resolution, and event planning in addition to being able to influence and convince a group of people to change something they are accustomed to doing. This responsibility of influencing people to change in order to benefit themselves and the group harkens back to our accepted definition of leadership.

Problem Statement

We can begin to see the connection between this specific role in extension and its ties to leadership, however there is no current literature that specifically examines leadership characteristics of people in the role of extension specialists. This gap in literature is particularly alarming since the person in this role is typically hired for the position based on his or her subject matter knowledge not background in leadership. Thus, a look into the leadership practices of extension specialist can be an important step into understanding the position, meeting the needs of the people that occupy that role, and addressing issues that may appear in specialist-led programing.

A quick look at job postings and descriptions for extension specialist reveal a paradox. A recent job opening at West Texas A&M University (2017) for the position of Assistant Professor and Extension Swine Specialist requires a PhD in animal science with

emphasis on swine production and management, or a doctorate in veterinary medicine. However, another qualification for the job requires "proven ability to provide leadership and implement meaningful educational programs". The disconnect lies between the curriculum for most animal science PhD programs and the requirement to provide leadership in educational programing. A study of West Texas A&M University's (2017) required curriculum for a doctor of philosophy degree for the college of agriculture contains a host of advanced science courses with no mention of classes in leadership or education. This begs the question as to where people are supposed to obtain these unique skills in leadership and education that are required in the position of extension specialist.

Job descriptions require extension specialists in animal science fields to have achieved a PhD in an animal science related field, which makes sense because applicants are assumed to be an expert in the subject. However, when providing leadership in extension programing and education, is the primary job responsibility, some assessment is necessary to answer three questions: What kind of leadership methods are being used by people in these roles, where they are learning their leadership skills and styles, and what can be done to assist people in these roles to gain the required skills they may be lacking.

A critique of leadership styles was performed by using transformational and transactional leadership theory. The idea of transformational leadership originated form the writings of Burns (1978) and is focused on the notion that the role of transformational leaders is to serve as models as well as to nurture the followers' needs for growth. The theory of transformational leadership perspective is often juxtaposed to transactional leadership perspectives. Transactional leadership tends to center on give-and-take

exchanges, and focuses on reward and punishment based on performance or adherence to rules (Bolman & Deal, 2013).

Since the nature of the cooperative extension service is to influence and convince the people in agriculture fields to learn new strategies that better their production and management, transformational leadership would be the logical approach to most situations. However, there is value in transactional leadership. Burns (1978) used the idea of transforming leadership to describe the differences between management and leadership, equating transactional leadership to that of a role of a manager, not necessarily a leader. But, transactional leadership has proven to be effective in certain situations. Deichmann and Stam (2015) showed that transactional leadership was key for innovation while other studies concluded that providing rewards upon task completion, a transactional approach, increased motivation (Vaccaro, Jansen, Van Den Bosch, and Volberda, 2012).

If, instead of approaching transformational leadership and transactional leadership as mutually exclusive, we considered the two approaches on a continuum and available as tools in a tool box for leaders to use based upon circumstance, then we might enhance the impact of the person's leadership abilities (Gibson & Birkinshaw, 2004). Understanding which theory most specialists lean towards can also help us to understand how followers are responding to leaders and potentially how effective their programing is. This study will not imply that either style of leadership is inherently superior, but instead offers that the value of each is situation dependent. The Multifactor Leadership Questionnaire (MLQ), will be used to see if there are any types of trends within the specialist

community pertaining to leadership style and attempt to hypothesize the significance of a common leadership style and its potential implications.

Purpose and Significance of Study

During the last fifteen years, literature on leadership practices within extension services has focused on the county agent or on administrators rather than on the position of extension specialist. This position of extension specialist has been identified by universities as a leadership position (University of New Hampshire Cooperative Extension, 2011; Missouri University Cooperative Extension, 2016; Virginia Cooperative Extension, 2016). Most universities base hiring qualifications largely on subject matter knowledge with little concern for leadership or educational experience or skills based on the typical requirement of a doctoral degree in a science based field. This contradiction of expectations paired with actual abilities poses a potential gap in the system and begs the question as to whether people currently in these roles are able to adequately perform the requirements of their position. It is evident that the knowledge base in the field would be enriched by studies not only on the current leadership skills and practices of these individuals, but also on whether additional training or programing should be offered to assist in the understanding of leadership concepts and characteristics.

The purpose of this explanatory study was to (a) examine the current transformational leadership characteristics among extension specialists, (b) ascertain these individual's training and educational background that would prepare them to enact this leadership style, and (c) learn more about the position of extension specialist from their perspective.

Research Questions and Design

1) To what extent are transformational leadership characteristics exhibited by extension specialists in the area of equine science?
2) Can any differences in leadership characteristics be explained by demographic factors such as educational background, or years in the position?
3) What leadership skills and training do the individuals feel are necessary to perform the duties of this position?
4) How are leadership methods learned or developed among this population?

Since research has not examined the role of extension specialist, this study will rely on previous studies' in the field of extension as well as studies in alternative fields that had similar objectives. Creating a knowledge base for this group of people who to this point had not been studied regarding leadership styles, will require an initial phase of data gathering that will shed some light on the subject, as well as paint a picture of how transformational leadership theory applies and is practiced by this group of individuals. Once themes emerge from the initial gathering of data, those theories will need to be confirmed and explained by using a more focused qualitative approach. To this accord, the research design that makes the most sense for the task at hand is a sequential explanatory approach (Creswell, 2009). The sequential explanatory method is a mixed method style that is characterized by an initial data collection phase that is quantitative in nature, followed by the collection and analysis of qualitative data that is meant to explain and build on the results of the first phase (Creswell, 2009).

Logically, when looking to understand the leadership characteristics of extension specialists and understand the presence of transformational leadership within this

population, it is important to allow participants to frame the data by expressing personal opinions and experiences. Once data trends and correlations emerge from the quantitative phase, qualitative methods can be used to explain and broaden our understanding of the themes by conducting personal interviews of people in these positions. The quantitative data will be used to generate some of the interview questions.

Participants

Several people who operate under the umbrella of cooperative extension services at land grant institutions have the title of extension specialist. Specialists can be widely varied within a given specialty; there are also numerous specialties that are not necessarily uniform from one university to the next. Areas can range from specific species within the department of animal sciences, to plant and soil sciences, to more personnel based specialties such as leadership or volunteerism. In the early days of land grant institutions, the specialists were strictly agriculturally based in either animal, plant, or soil science. These specific areas are where the current discrepancies come onto play. People trained in traditional bench science fields are then asked to fill a leadership role across the state. The more recently acquired positions that involve personnel enrichment lack this assumed discrepancy since their backgrounds typically align with their job description in a more logical manner.

Therefore, this study will choose to focus on the traditional science-based fields of extension specialists. For ease of sampling and clarification, this study will sample extension specialists in the department of animal sciences with a focus on the equine species. This group was chosen because it is concise and easily defined, and this group

of people is accessible to the researcher. It also allows further studies in other fields of extension.

Instrumentation

Two data collection instruments were used in this study: an online survey was sent to study participants via email, and individual interviews based on the survey data collection. The survey consisted of a series of demographic questions such as educational background, and length of time as a specialist, and whether the participant had received any leadership training. Also contained within the survey were questions from the Multi-factor Leadership Questionnaire (MLQ) (Avolio & Bass, 2004). The MLQ is a tool that evaluates a person's tendency to use transformational leadership styles.

The MLQ has been the primary instrument used for research on the full-range theory of leadership (Tejada et al., 2001). Since it has been used frequently and has undergone several revisions, the MLQ is considered the most stringently validated measure of transformational leadership (Ozaralli, 2003). Furthermore, many leadership characteristic studies that have been performed within the extension system have also utilized the MLQ which more easily allows for future comparison of results and reflection (Brown et al., 1996; Hastings Elizer, 2011; Moore & Rudd, 2006; Sinasky & Bruce, 2006;; Stedman & Rudd, 2006; Woodrum & Safrit, 2003).

Following the data collection and analysis of the quantitative phase, an interview phase took place to complete the qualitative portion of the mixed methods study. The interviews were conducted either by phone or face-to-face. The interviews were semi-

structured so that questions were largely based on the data collected by the survey, but the interviewer had freedom to ask for more explanation or to explore new themes that may arise. The number of interviews conducted was dependent upon the number of individuals willing to participate in the interview portion.

Delimitations

The decision to only use equine extension specialists was for the purpose of keeping the study organized and concise while remaining thorough. Equine extension specialist do not differ from other animal science extension specialists when posed with the problem statement of this study. The species of equine was chosen because that is the field in which the researcher currently works, therefore, the hope was that this fact would produce a higher response rate than that of another species where participants are not familiar with the researcher.

Limitations

The MLQ is being used in this study as a self-assessment tool. It is recognized that colleagues, followers, and superiors to the individual participant may have differing opinions as to the level of transformational leadership displayed by the participant. However, since this is an initial explanatory study (Creswell, 2009) seeking to collect data on a group of people that has not been studied before in this capacity, the self-assessment will be used as our clearest indicator of personal choices the specialist makes. This also allows for additional research that would perform a more thorough analysis of the transformational leadership characteristics of extension specialist.

Summary

This study is a sequential explanatory mixed methods projects set to evaluate the leadership characteristics of equine extension specialists. This specific group has not been researched in the past regarding leadership characteristics and poses as an interesting group due to their paradox of required educational background being subject matter specific, while job responsibilities require the additional aspect of leadership and educational knowledge and skills. The study consisted of a quantitative phase based on a survey which included demographic and background questions, plus a transformational leadership analysis tool called the Multi-factor Leadership Questionnaire. The survey was followed by a qualitative portion consisting of interviews that would provide a more in-depth explanation of trends displayed in the survey data.

CHAPTER 2

LITERATURE REVIEW

The purpose of this study was to understand the leadership characteristics of equine extension specialists, given that they are a group that is naïve to leadership research and more specifically are a population with explicit leadership and educational responsibilities in their job duties. This sample population is especially interesting considering they are hired for their position based on their education and research background which is typically focused in bench science and enter the position without studying or formal training in leadership or education. The study hopes to produce a knowledge base of leadership practices and characteristics among extension specialist, and to understand how those characteristics are learned or developed.

The following literature review is divided into three sections. The first is intended to give the reader background information as to the progression of leadership theory as well as the theoretical framework associated with this study. The second section looks at the literature pertaining to the cooperative extension service, which will provide information on the role of an extension specialist, and how these people fit into the extension system. Finally, the third section will explore prior research that addressed leadership within extension to build the argument for the purpose of the study, that the position of specialist should be studied with regards to leadership, and how the chosen theoretical framework fits within this research topic.

The Study of Leadership Theory

In its infancy, the study of leadership relied mostly on the assumption that good leaders were born possessing a particular set of traits, and leadership skills were simply inherited. Galton (1840) produced a study supporting the theory that "greatness" or what we would consider proficient leadership skills were not only inherited, but that great men frequently begat great men, and therefore society should take notice by specifically breeding for this purpose. Apparently, at the time of Galton's writing even Charles Darwin agreed with his "great man" theory (Galton, 1840). However, as seemingly obvious today, Galton failed to recognize the power of social and financial privilege. One of Galton's main arguments was that not only were certain men powerful and held political prestige, but that these men's brothers also held societal clout. Socioeconomic status and its effect on one's ability to succeed was apparently uncharted territory at the time. But the creation of the great man theory led to later work which would attempt to identify similar traits shared by these powerful individuals.

Trait theory emerged and became the next wave in the study of leadership. Trait theory assumed that people possessing specific traits of character were more likely to emerge as leaders. Traits commonly associated with leadership characteristics included intelligence, insight, adaptability, extroversion, initiative, self-efficacy, and cooperation (Stodgill, 1948). Bowden (1926) also noted that extroverted personalities often correlated with people in leadership roles. Once again, context seemed to be a confounding limitation for early leadership scholars since Bowden's study looked at the student body president of forty universities, of which the very nature of the position and how one would rise to it would assume some level of extroversion. However, being

extroverted proved to be an area of potential failure during a study by Hogan and Hogan (2001) where it was stated that this particular personality trait may lead to estranging followers who wished to have more input in the organization. This finding would suggest a major conflict in the notion that personality traits can predict or determine one's success in a leadership role.

Both the great man theory and the traits theory relied heavily on the intrinsic properties of the individual person; and failed to take note of the interaction between the leader and the followers. This relationship, which is largely dictated by situational decisions made by the leader, was looked at more closely during the Industrial Revolution when people became interested in increasing productivity of the work force.

Management versus Leadership

It could be postulated that the modern study of leadership would not exist without management theorists. Scholars from the early twentieth century were largely motivated to examine the relationship between management and laborers with the intention of discovering methods to increase production (Taylor, 1916, Fayol 1916). Further evidence to support this notion comes from classical theory that promotes the ideas that efficiency of resources, the potential for personal gain, and complete comprehension of one's responsibilities is only achieved through rigid organizational structure (Weber, 1922). In essence, strong management. Unlike trait theorist who made the assumption that successful leadership relied solely on the personality of the leader, the idea of management was based on the interaction between superior and subordinate. This thought process dominated many early leadership studies where the labels of management and leadership became synonymous (Rost, 1991). These interchangeable definitions made

sense during the industrial era where most relationships were dyadic in nature and included people who were securely set within either authoritative or subordinate roles. Principles of classical leadership theory include a unilateral flow of communication, increased training equating to greater efficiency, and strict adherence to procedure as the first step to circumvent conflict (Gulick & Urwick, 1937).

One of the assumptions of this theory suggests that workers can be trained to perform a given task to the highest level of efficiency. Consequently, the burden of training the workers to perform at this level falls on the supervisors, with the belief that this will in turn maximize the potential production of the organization (Taylor, 1916). The conclusion was that the integrity of this organizational structure made it possible to more efficiently utilize resources, provide promotions as a means for motivation to work diligently, threaten penalties for unsatisfactory behavior, and that it would give everyone a clear understanding of their positional responsibilities (Weber, 1922).

However, as society moved into the post-industrial era, the separation between management and leadership became somewhat murky. Questions arose about the idea that one could be a good manager, but whether they were also demonstrating leadership, or simply a relationship based on positional authority (Rost, 1991). Therefore, researchers set out to define the two terms. Rost (1991) argues that leadership studies traditionally lack an agreed upon definition, and the inconsistency of definitions makes it difficult to compare leadership studies thus, Rost (1991) attempts to formulate his own; "Leadership is an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes," (p. 102). This definition stands out from other scholars' interpretations in that it emphasizes a relationship that is more complex in

nature and purpose. Traditional managerial relationships focus on production and sales, and beyond supplying necessary resources, does not require a concerted effort and meeting of the minds to accomplish.

Another anomaly in Rost's (1991) definition of leadership is his explanation of the relationship between the leaders and followers. The first implication is that the followers are actively and willingly participating. Both leaders and followers are involved in the influence relationship and both are doing so with the intention of actual change occurring from their actions. This breaks from the customary understanding of management in which the focus of the relationship relies on production, and the driving motivation comes from not wanting to lose one's job as opposed to a shared desire to bring about overall change.

As mentioned, Rost's (1991) definition of management describes the relationship as "An authority relationship between at least one manager and one subordinate who coordinate their activities to produce and sell particular goods and/or services" (p. 145). This would infer a much more rudimentary relationship that exists on the notion of positional power (Bolman & Deal, 2013), and is void of the complexities that come with the idea of influence and real change.

Based on Rost's (1991) definitions of management and leadership, leadership is not simply a connection between the manager and worker at an organization, but is much more complex and may arise from any number of relationships between people that encompass numerous leaders and followers. In this sense, leaders may come from the group of followers, or leaders and followers may change roles. Where managerial relationships may be successful by maintaining the status quo, Rost (1991) suggests that

leadership relationships can bring about real change that is both substantive and transforming. A management decision could also involve change, but the relationship does not require both parties to be intellectually committed to such change. Contrarily, leadership revolves around the notion that both leaders and followers are devoted to the mission at hand.

Rost (1991) makes a compelling argument that management and leadership are not one in the same, and should not be considered synonymous. It is easy to see that actions performed by a manager do not inherently constitute leadership. One could serviceably fulfil all responsibilities of a manager by directing workers, ordering supplies, and arranging schedules. However, if done in a manner in which it is unfavorable to the workers and therefore resulted in poor production, it would be easy to identify these actions as lacking leadership qualities. Rost (1991) acknowledges that y st scholars do not equate the terms management and leadership, but instead categorize them as management and good management where good management would constitute leadership. This was the essence of leadership study within the industrial paradigm, however this concept still fails to identify the process by which to discern the two.

This idea would suggest that management and leadership are not mutually exclusive, but that one is a better version of the other. Rost (1991) is of the opinion that management and leadership are in fact two distinct and separate relationships. Those who follow the theory of transactional and transformational leadership may postulate that the two are mutually exclusive to some extent (Burns, 1978; Bass & Avolio, 1993), in that they are often perceived as opposite approaches to leadership. However, if you believe as Burns has stated, that transactional does not depict managerial, then

transactional and transformational being mutually exclusive would have no bearing on leadership and management being mutually exclusive as well (Rost, 1991).

However, this study takes the opinion that management and leadership are actually complementary in practice. Organizations can be effectively managed but lack the leadership necessary to inspire, create positive change or evolve the organization (Dubin, 1979). In the same light, leadership can influence a group of people to believe and work toward a common goal, however, if not managed properly, the efforts are often futile and misguided (Dubin, 1979). Effective leadership requires a certain element of good management as well. Organization, directives, and daily custodial diligence, are all necessary to keep an idea and a process afloat. Meanwhile, good management without leadership many result in stagnation, resentment, and questioning of purpose.

In this light, one could view management and leadership on a spectrum and conclude that a person in a leadership role must constantly be adjusting the pendulum back and forth in order to inspire and influence followers, while also managing in a way that tasks are sure to be accomplished.

Four Frames of Leadership

With the focus on management as leadership in the industrial era, classical theory was dominant. By narrowing in on rigidity and rules, the classical theory could easily be seen to increase production while utilizing minimal resources. Assumptions surrounding the structural frame begin with the aforementioned idea that the organization exists in order to meet preconceived goals and therefore the needs of the organization supersede the needs of the employees. This strictness to the adherence of rules and regulations

failed to address many needs of the organization and its workers, and proved insufficient over time.

The notion of flexibility lends to the postulations by Bolman and Deal (2013) that leadership should be approached as if the leader possessed a series of frames or lenses to use in various situations. Still addressing leadership from a relationship aspect, Bolman and Deal (2013) suggest that there are a total of four frames in which to approach leadership; (a) structural or classical frame, (b) human resource frame, (c) symbolic frame, and (d) political frame. This also echoes the researcher's opinion that management and leadership are on a spectrum which both can and should be used by leaders. Bolman and Deal (2013) go even deeper to suggest that a leader should possess even more tools.

As Bolman and Deal (2013) describe, a frame is a mental model that is based on a set of assumptions that one can use to help understand or negotiate particular circumstances. Frames can also be compared to a map, a guide to a landscape that allows one to decipher a situation and find the best solution. An analogy that Bolman and Deal used in their book is to compare frames to maps and included an example that a map of Chicago would not help you to find your way around Paris, similarly, multiple frames are needed to recognize different situations and a need for a different set of solutions.

Where having a plan or diagnosing a situation is imperative to addressing problems, framing is just the first step. Understanding the assumptions and also the limitations of each frame is important. Each frame has positive and negative attributes. If there was just one frame that fit and fixed all problems then effective leadership would need no further study nor would it seem so elusive in many organizations. Being able to

accurately assign frames and subsequently adjust the situation to align with a different frame is the essence of reframing (Bolman & Deal, 2013).

Classical/structural frame. Characteristics of the structural frame harken to the industrial days of manufacturing plants with many workers at essentially the bottom of the hierarchy, abiding by the instructions of managers. Those managers then report to yet another level of managers or superiors and on up until one reaches the executive level of the organization. Organizations that strictly adhere to the structural frame typically believe that increased training along with strictly enforced rules and procedures lead to exceedingly efficient labor forces and prevent problems from occurring (Taylor, 1916). The individuals at the top of the hierarchy are the ones concerned with overarching organizational goals and positions, while each tier bellow is responsible for a narrower focus concerning just its direct subordinates (Fayol, 1916).

An assumption within this frame is that a higher level of efficiency can be obtained through appropriate division of labor and specialization (Gulick & Urwick, 1937). This idea focuses on the notion that people can operate at a higher level if they are not given multiple responsibilities. Dividing up jobs and having people do only what they are good at, makes for a highly productive work force (Bolman & Deal, 2013). A separation of labor can only properly succeed when expertly coordinated and controlled by upper management. This assumption is followed logically by the premise that an organization operates the best when rational thinking takes precedence over emotions and personal agendas (Bolman & Deal, 2013).

The classical theory has many valid points and is why it is still used today in certain situations, however, there are weaknesses to this leadership approach as well.

With all of the production driven, and seemingly efficiency inducing strengths of the classical theory, one of its main short comings is where the priorities of the organization lie. Fayol (1916) calls this Subordination of Individual to General Interests. It is the expectation that workers within an organization should resign their own needs so that the interests of the organization can be met. It can also be assumed that an organization would put its goals before the workers as well. This means that to the organization, workers are somewhat dispensable, and leadership within this theory would be more inclined to get rid of a worker as opposed to fixing a problem within the organization.

It is this idea that the organization should be placed before the individuals when paired with the rigidity of its structure and principles that causes the structural frame to fall short in many cases. Fayol (1916) indicated a need for managers to be able to assess and adjust the amount of centralization within an organization in order to adapt to the needs of the organization. This dynamic principle suggests that organizations have a need to be somewhat flexible in order to adapt to changing climates both within the organization and in the external environment. This inability to be flexible is what causes the greatest failures in the classical theory.

Human resource frame. In response to the short comings of the classical frame, lying on the extreme opposite end of the spectrum, is the human resource frame. The main shift in doctrine comes from a belief that the people are dependent on the organization, therefore the organization is dependent on the people. This change in ideology came about in the 1950's even though people began to realize the importance of catering to the needs of workers prior to the reference of the frame itself (Shafritz & Ott, 2001). This frame acknowledges that people's feelings, attitudes, and general wellbeing

have a direct impact on their productivity (Bolman & Deal, 2013). It was soon recognized by leaders, who were able to cast off the assumptions of what an organization is supposed to look like, that meeting a worker's needs actually had the result of improving production. When the organization took care of its employees, when the employees felt respected, and when they were given the opportunity to have input and develop their skills, the entire organization benefitted (Bolman & Deal, 2013). The organization was not only able to achieve its goals, it was also able to grow, change, and advance.

The assumptions of the human resource frame are in many ways contradictory to the structural frame. For example, the first assumption is that the organization exists to serve human needs (Bolman & Deal, 2013). It also assumes that there is a symbiotic relationship between organizations and people. Neither can exist and thrive without the other. Organizations provide people with careers, salaries, and the opportunity for self-actualization, while people are the driving force for an organization's ideas, energy, talent, and man power. In keeping with this theme, not only do people and organizations need one another, if a problem arises specifically caused by a poor fit between the person and the system, both are negatively affected (Bolman & Deal, 2013).

The strengths of the human resource frame should be somewhat obvious, as there are definite benefits to treating people with respect and acting in their best interest. By paying attention to the working conditions, as well as emotional and physical needs of individuals, the people in return will often choose to respond by growing and improving themselves which in turn improves the organization (Maslow, 1943). People who are dissatisfied with their work will not perform to their full potential (Herzbergs, 1966). In

order to motivate individuals to give full effort at their work there must be some benefit for them. This can come in the form of performance-based positive reinforcement. The combination of eliminating dissatisfaction while simultaneously providing opportunities for personal and professional gains has shown to be an optimal mix to maximize worker potential (Herzbergs, 1966).

The human resource frame emphasizes worker input, collaborations among people of different skills and positions, and prioritizes flexibility. It offers the option of having a smaller, more flexible and diversified workforce, which in theory, would reduce cost, have the potential to increase production, and allow the organization the ability to respond to environmental fluctuations (Bolman & Deal, 2013). This ease and flexibility is in sharp contrast to the rigidity of the structural frame, but in many ways it makes sense. Instead of dividing up work and categorizing people, it allows them to cooperate on projects to accomplish a task more quickly and with fewer departments and therefore, fewer supervisors. It is easy to see where each approach to organizational frames could have a place that would be dependent upon the type of work being done.

Another strength of this frame is the continuity of satisfied workers. Workers who feel as though their needs are being met and have positive feelings towards the organization are more likely to stay with the organization for an extended period of time (Bolman & Deal, 2013). This allows for a reduction of costs required to hire and train new workers, as well as allowing people with experience in the company to assist in problem solving from a front line perspective. Communication flow is also a main feature of the human resource frame. As opposed to the structural frame where communication flows from the top down in directives, the human resource frame stresses

a multidirectional flow of information. Management seeks the input of workers, managers discuss common issues among their ranks and executives welcome suggestions and feedback from subordinates (Bolman & Deal, 2013). This encouraged flow of communication makes everyone in the organization feel as though they have purpose. It also allows those in leadership positions the possibility of receiving information first hand, in turn creating the means of addressing a problem before it gets out of hand.

With all of the positive aspects of the human resource frame it is not without its downsides. Unfortunately, people do not always behave as anticipated. The success of this frame relies on the ambition and response of the workers to motivational triggers. Some people will avoid work whenever possible regardless of incentives and positive motivators (Bolman & Deal, 2013). There is a limit to what organizations are actually able to pay people or to provide as incentives for advancement. Even if the organization's philosophy is to value the worker, if they are unable to pay a person a salary that meets his or her needs, there is very little else the organization can do. At that point, any amount of inclusion in office decisions, rhetoric of appreciation, or opportunity of skills advancement becomes a moot point (Bolman & Deal, 2013).

Another weakness of the human resource frame, is just like anything in life, too much of a good thing can be a negative. Being free of structural shackles may seem like a brilliant and progressive idea, however an organization completely devoid of structural parameters will have a hard time getting anything accomplished (Bolman & Deal, 2013). If the organization is negligent with policies and guidelines then it is difficult to hold people accountable. If everyone is able to have equal input in decision making, then it may become increasingly problematic to arrive at a final conclusion. Organizations that

have implemented this style of organization are extremely reliant on the autonomy and work ethic of individuals. If people within the organization have a personality that needs constant supervision; and directives, it will be a struggle for that person to succeed in an environment that is committed to the human resource frame (Bolman & Deal, 2013).

Symbolic frame. The idea of the symbolic frame is that the organization projects its priorities and goals through the use of various symbols that can be expressed in a multitude of ways (Bolman & Deal, 2013). The culture of an organization is created by visuals, attitudes, history, and stories passed down over the years. This all creates an idea of what the organization is about, and how its workers are expected to act, look, respond, believe, and any number of additional expectations. Some organizations are acutely aware of the symbols they project to people both inside and outside of the establishment, whereas other organizations are completely unaware of how their culture is perceived, was created, or continues to exist.

The assumptions of the symbolic frame include the understanding that what actually happens is in most cases not as important as what it means or how it is perceived (Bolman & Deal, 2013). This also carries with it the notion that an action taken by the organization may be more for the purpose of taking action as opposed to the action itself. An example of this would be a company that is being sued for a wrong-doing, that responds by firing a person in a managerial role even though the manager may have had nothing to do with the problem. The action taken was to demonstrate to the public that they were taking the matter seriously and that they responded, regardless of whether the problem was solved.

The symbolic frame is often used to attempt to communicate the strength of an organization. It can communicate any number of desired messages, including cohesion, power, humor, efficiency, and ambivalence. The combination of symbols generated create the culture of an organization. Schein (1993) defines culture as.

> A pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems (p. 11).

In essence, culture gives an organization, and those within an organization, an identity and a commonality. Culture is also used to teach people how things were successfully dealt with in the past so that they can be dealt with in the future (Schein, 1993). This gives people a foundation on which to base their decision-making as well as reassurance that they are complying with organizational principles. When new people enter an organization it is the culture that helps them to not only understand expectations and procedures, but also to help a new employee.

This shared identity that incorporates people within an organization can foster loyalty to people as well as to their place of work. Symbols and loyalty also create a sense of ownership and pride. These elements are key in many organizations and allow people to tolerate unfavorable changes or subprime conditions since their belief in the organization is solid and they are proud to be a part of it (Bolman & Deal, 2013). This loyalty produced by culture can lead to tight bonds among workers that results in more collaboration, greater pressure to increase production, and an increased occurrence of assistance between workers.

One of the leading causes for weakness within the symbolic frame is the acknowledgment that symbols are vulnerable to interpretation. A symbol may not reflect the intended message and in turn project an unwanted image or understanding. Very rarely are the symbols verbally communicated, leading to individual interpretation. This scenario requires leaders to not only think through how something may be perceived, but the various iterations of how something may be construed (Bolman & Deal, 2013).

Another problem with this frame takes place when an intended symbol fails to communicate any message and the action is therefore seen as pointless or unnecessary (Bolman & Deal, 2013). Sometimes the best efforts to create a culture or send a message fall short, and are either ignored or seen as a waste of time and money. Even actions that seem to be entrenched in the culture of an organization can become obsolete. As new generations of workers become involved, people may begin to question the purpose of certain actions or processes. If the intended purpose of the action is not effectively communicated, or if the only reason for it is because the organization has always done things that way, the act can actually detract from the overall goal and render people disconnected or resentful (Bolman & Deal, 2013).

Culture can also keep an organization from advancing. When the group is more focused on tradition than progress, culture can become a stumbling block. A problem can also arise when the message is obtuse, overly complex, or so abstract that people either reject the message or do not understand it (Bolman & Deal, 2013). This can result at best in wasted time and energy, and at worst in people offended or put off by the symbol.

Political frame. The political frame differs from the other three frames that have been discussed in that the structural frame, human resources frame, and the symbolic

frame are all initiated by the leader or can be easily altered by the leader. The political frame requires more recognition than implementation. Politics is the natural phenomenon that occurs between people and groups of people when forced to compete for limited resources (Bolman & Deal, 2013). Those resources can include time, personnel, influence, power, materials, facilities, and of course, money. With the competition that ensues for the ownership of these resources, conflict is inevitable (Bolman & Deal, 2013). One must be aware of this internal struggle so that the leaders are not unwittingly swayed by false pretenses, and also so that the leaders do not lose control of the organization.

When discussing the assumptions that accompany the political frame it is important to understand the definition of the term, "coalition". An organization is a coalition made up of diverse people and multiple interest groups (Bolman & Deal, 2013). As these people vary in their experiences and therefore their perspectives, so do priorities and perceptions of reality. This means that not everyone is going to agree on where resources should be allocated. Conflict is hence unavoidable as differing opinions arise. Subsequently, one of the most important jobs of a leader within an organization is to make the difficult decisions about how limited resources will be allocated (Lasswell & Kaplan, 1950). As the conflict and competition for resources divides interest groups, power becomes the most valuable resource out of necessity (Bolman & Deal, 2013).

This ongoing struggle between intra-organizational interest groups gives rise to a potentially hectic environment filled with bargaining, lobbying, and negotiation (Bolman & Deal, 2013). The need for the limited resources motivates individuals to behave in such a way. The constant conflict forces the leader's hand in prioritizing one interest

group over another, which either intentionally or unintentionally, begins to define the goals and motivations for the organization (Bolman & Deal, 2013).

An understood strength of the political frame is the thought that embracing conflict will bring about positive change (Bolman & Deal, 2013). Conflict is sometimes viewed as a negative component, however, without conflict, outdated processes and ideology becomes antiquated and begins to hurt production. A reasonable amount of conflict, handled in the correct way, can be the catalyst that brings forward necessary changes that allow the organization to progress. When people compete for resources, they must justify their needs. This allows issues to be thought out, prioritized, and addressed in a logical manner.

Negotiation paired with conflict resolution tactics can lead to interest groups working to find common ground and potentially broadening each other's perspective. If the leadership within an organization is cognizant of how to properly handle a situation, the political frame can ensure that all parties are heard, which enables a well thought out solution that serves the greater good. This can also create working relationships between interest groups that can bridge gaps and create a more cohesive unit (Bolman & Deal, 2013). Negotiation, if handled correctly, can resolve conflicts by addressing the most pressing needs of each party thereby allowing the organization to function at its optimal level.

Conflict, in some cases, is the only way issues are realized, understood, and properly resolved. However, it requires leaders to handle conflicts appropriately. In many circles, the idea of politics receives a bad reputation because if handled incorrectly, politics has the potential to create division, nasty competition between workers, and can

influence a leader to make a decision that is not in the best interest of the organization (Bolman & Deal, 2013). This is especially true if the leader is out of touch with organizational needs and susceptible to manipulation (Bolman & Deal, 2013).

If a leader decides to award one sector with contested resources without due cause or without communicating the intended purpose and reasoning behind the decision, gaps in interest groups can widen, causing further division within the organization (Bolman & Deal, 2013). This can also give a particular group an inordinate amount of power within the organization which could tilt the balance and result in conflict based on greed or envy instead of actual needs of various departments. Politics can also present a major problem if the leader is dishonest. If a leader can be persuaded by the chance of personal gain, then often the goals of the organization are pushed aside in trade for individual wants and greed (Bolman & Deal, 2013). This scenario is why many leaders and people in general choose to ignore politics. However, the decision to overlook politics can create greater problems. According to Wirt and Kirst (2001), politics within the organization will continue to exist but failure of acknowledgment by the leader will leave the person susceptible to manipulation by the interest groups.

Transformational Leadership Theory

Following the notion that leaders must be flexible and be able to adjust the frame in which they use to assess and analyze the system, this study will focus on the idea of transformational and transactional leadership theory. Burns (1978) originated the idea of transformational leadership, which is based on the concept that a transformational leader's role is to transform the followers' ideas and thoughts in order to develop a unified mission that not only serves to further the organization but also allows the

followers to grow as individuals. The categorical opposite of transformational leadership is considered transactional leadership. The theory of transactional leadership is built on the idea that leaders and followers' interactions are based on a give-and-take relationship. The followers are thereby rewarded or punished depending on their adherence to organizational policy and their performance (Bolman & Deal, 2013).

The post-industrial realization that leaders must not only manage but also inspire others to excel (Kouzes & Posner, 2003) led to the creation of new leadership theories that more aptly apply to the various complexities of post-modern organizational needs. In Rost's (1991) expanded version of his leadership definition, he notes "Leadership is about transformation" (p. 123). This bolsters his argument for a leadership definition that states that leadership is "An influence relationship among leaders and followers who intend real changes that reflect their mutual purposes" (p. 102). Rost further explains this concept by breaking down his definition to three components that are all based on the notion of transformation.

Rost's (1991) first argument is that actual influence relationships are not built by coercion, but are instead achieved by persuasion. This would align with the human resource frame that places an importance on the relationship between worker and leader. Next, Rost offers that the sole purpose of a leadership relationship requires the element of transformation. According to Rost, the only way to have leadership take place is if there is the intent for real change to occur, or in other words, transformation. Finally, real change, or transformation, can only be obtained when the group as a whole develops a common purpose. If one is to embrace Rost's definition of leadership, then the concept of transformation must be a key component.

Thus, the idea of a transformational leadership theory pairs nicely with Rost's (1991) definition. Transformational leadership theory is often juxtaposed with transactional leadership. Transactional leadership fits more with the idea of the structural frame whereby leaders tend to focus on give-and-take exchanges along with reward and punishment in dealing with followers (Bolman & Deal, 2013). In stark contrast, transformational leaders focus on serving as role models, and shepherd the followers' needs for growth (Bass & Avolio, 1993). Transformational leaders are able to generate interest along with awareness for the task at hand, as well as promote the individual's desire to expand their skills and knowledge base as both parties embrace their collective goals (Burns, 1978). Transformational leadership theory emphasizes emotions and values, where other leadership theories focus on rational processes (Yukl, 1999).

In addition to the overarching theme of influence relationships, Bass and Riggio (2006) further identified five dimensions of transformational leadership. These are considered components of transformational leadership and have emerged as conceptualizations and the ability to measure transformational leadership has been refined. The first components are idealized influence, which can be separated into attributes and behavior. Idealized influence-attributes is concerned with the elements attributed to the leader by the followers. Idealized influence-behavior is addressing how the leader behaves regarding leadership. Leaders who excel in the component of idealized influence are willing to take risks and are consistent with their follower, not known to make arbitrary decisions. The next dimension of transformational leadership is inspirational motivation. This component deals with how a leader motivates and inspires

their followers. It can also be measured by how well the leader articulates the shared mission of the group.

Intellectual stimulation is the next component. This element of transformational leadership is concerned with empowering their followers to be creative, innovative, and to find new ways to approach existing situations. This dimension is one of the elements that separates transformational leadership from many other leadership styles, since it empowers followers, uses them as resources, and relies on them to create the necessary change. The final dimension is individualized consideration. Transformational leaders tend to understand each individual follower's needs for growth and individual improvement, and therefore encourages followers to develop leadership skills. This is achieved through the leader serving as a mentor or coach to the follower as they learn the necessary skills to achieve their goals. These five components of transformational leadership were identified by Bass and Riggio (2006) and used in the Multifactor Leadership Questionnaire as categories used to measures a person's tendency toward transformational leadership.

Cooperative Extension Service

In 1862 the United States Government sought to increase its influence on a significant portion of the population. During this time, the federal government realized that food needs, human health needs, agricultural economy, and proper training for each, were not only issues with people in rural America, but also had national implications concerning the overall well-being of the country (National Research Council, 1995). Increasing the wealth of the nation, logically involved increasing gross domestic product, which meant bolstering agricultural returns since agriculture was a dominant economy at

the time and affected a major portion of the population. This mindset led to President Lincoln signing three acts that bolstered the U.S. agricultural industry. First, an act of Congress that established the U.S. Department of Agriculture. Second, the Homestead Act that offered the settlement of lands in the public domain. Finally, the Morrill Act that created land grant colleges, which ensured that agricultural education and home economics was taught in institutions of higher education (University of Kentucky, 2011). This also allowed people in rural areas the opportunity to go to college as well as for the colleges to teach subjects that would not only help these individuals make a living, but also increase the country's agricultural production.

The Hatch Act was passed in 1887. While the Morrill Act accounted for the teaching component of land grant colleges, the Hatch Act ensured the original research aspect. This act established the creation of experiment stations that were assigned the task of verifying experiments that dealt directly with agricultural issues within the U.S. (National Research Council, 1995). Now, not only were colleges teaching people the principles of agriculture, the university was also helping to solve problems and create better methods for farmer and rural life. However, the knowledge created by the university research stations was still not reaching the people who were actually farming the fields. In 1899, a professor at Tuskegee College, George Washington Carver, came up with an idea of a moveable school where information could be taken from the campuses and research stations and taught to the people in the farming communities (University of Kentucky, 2011). This led to the creation of agricultural trains that would travel from town to town to set up displays, and allow presentations from speakers (University of Kentucky, 2011).

Theodore Roosevelt, acknowledging the need to encourage and support the agricultural economy, called for a Country Life Commission in 1909, which looked into the needs of farmers and rural Americans (University of Kentucky, 2011). One of the proposed "movements" of the commission to address rural life was to nationalize extension work in that "Each state college of agriculture should be empowered to organize as soon as practicable a complete department of college extension, so managed as to reach every person in the land" (Wunderlich, 2004, p. 4). Thus, in 1914 the Smith-Lever Act created the cooperative extension service, which was a joint effort by the USDA and land grant colleges to disseminate practical knowledge to people not attending those particular colleges (National Research Council, 1995). This information was to pertain to agriculture and home economics and to use cooperative partnership from the county, state, and federal levels for funding and programing (University of Kentucky, 2011). This completed the tripartite mission of teaching, research, and extension at land grant colleges that still exists today.

The Evolution of Cooperative Extension

At the very beginning of the cooperative extension service the country was plagued with a Farm Depression, and the Great Depression, both of which were sandwiched between two world wars. When the U.S entered WWI, extension services had only formally been around for about five years. The involvement in the war left somewhat of a dilemma in agriculture. As farmers were leaving home to join the war effort, either by enlisting or to work in war industries, the country's demand for food production was increasing to new heights (Rasmussen, 1989). Two pieces of legislation, the Food and Fuel Control Act and The Food Production Act, were signed into law

encouraging the production of agricultural commodities, promoting the conservation and preservation of perishable food, and providing assistance in moving commodities to market (Rasmussen, 1989).

This set the stage for cooperative extension to excel. Extension sprang into action using multiple avenues of their expertise. As an agent of the federal government, extension offices quickly displayed signs indicating and promoting how civilians could and should do their part to help the war effort (Rasmussen, 1989). County agents and specialist worked with farmers developing more efficient ways to plant and harvest, while also encouraging the incorporation of more acreage into their farmed land. Due to the increased European demand which began before the U.S. entered the war, wheat acreage increased from 47 million acres in the U.S. in 1913 to 74 million acres in 1919 (National Institute of Food and Agriculture, 2017). People rapidly acquired a need to learn how to properly can, dry, and preserve food. Where previously this had been a recommended skill, was now a necessity, and the extension service was ready to teach.

In addition to agriculture advice and home economic training, the extension service led the charge in other aspects as well. The Women's Land Army, and the Boy's Working Reserve were organized through cooperative extension. These organizations provided labor to work the harvest for local farmers (Rasmussen, 1989). The Secretary of Agriculture reported that more than 45,000 people had been recruited to help provide farm labor during the wheat harvest in 1918 (Rasmussen, 1989). County agents also served on local draft boards and advised which farmers would provide more service by remaining at home to tend to the crops than by enlisting in the military (Rasmussen, 1989).

When the war ended, so did the demand for increased production, and commodity prices plummeted. Extension services had done such a superb job in helping farmers increase production, supply now far outweighed demand (American History USA, 2012). This left rural America in an economic depression, even though the urban areas were thriving. However, it also opened the door for more reliance on extension services. During this time cooperative extension services helped to create and organize commodity cooperatives, where farmers with similar products could combine their efforts and extend their marketing reach. A further realization was that women played a far bigger role in farming than was previously understood. When a study showed that women contributed to the raising of chickens and livestock, milked cows, churned butter, kept gardens, carried water, and worked the fields, the government put a new emphasis on home economics and created permanent positions throughout extension that catered to improving home life in rural America (Rasmussen, 1989).

The economic depression that had plagued the farming community continued into the 1930s as the nation as a whole was now also confronted with a depression. Extension continued to educate and advocate for the use of new technologies and methods; they also brought the new focus and understanding about nutrition to rural families that was gaining emphasis and inspiring research at the universities (Rasmussen, 1989). At the onset of the New Deal in 1933, the extension service was largely responsible for coordinating efforts to carry out its functions while also helping to gain support by the people in rural communities. Extension led the way by carrying out programs such as agriculture price support, production control, and rural electrification (Rasmussen, 1989). By the time World War II struck, extension was embedded in rural communities and

served as a beacon of hope. Cooperative extension personnel continued their efforts to increase production and organize labor throughout the end of the war.

Many of the efforts extension services were asked to perform during these trying times were not things that were initially thought of when land grant universities or extension itself was created. However, extension found itself in a position to serve the American people, primarily in rural American, while simultaneously aiding the Federal Government. This securely positioned the cooperative extension services as a fixture in rural communities and earned a new found respect. The work performed during difficult circumstances enhanced the prestige and established a deeply rooted connection between communities and their local extension office (Rasmussen, 1989). Instead of being seen as merely book farmers, cooperative extension was looked upon as champions for a cause.

A shift to include community development. Even though the country survived the Great Depression and World War II, rural poverty was still a problem that plagued the country. Production yields acted as negative feedback loops in which one farmer's increase in production meant pushing another farmer out of business. The American farmer's efficiency was effectively putting himself out of work. The idea of community development had been around since Theodore Roosevelt had commissioned the Country Life reports, however little had been done to act upon it. In 1954 rural development programs began as a means to fight against poverty in the face of agricultural abundance and overall economic prosperity (Rasmussen, 1989). A study requested by President Eisenhower suggested that to fix this conundrum people would need to be moved out of agriculture. This was followed by a series of legislation that gave money and promoted

programs that would assist in the establishment of a sound rural economy (Rasmussen, 1989).

These programs allocated funds and provided loans to communities that were disadvantaged in agricultural development (Rasmussen, 1989). Hospitals, small manufacturing plants, and recreational areas were built in small towns in efforts to create job opportunities and improve community relations. According to Rasmussen (1989), many of these efforts made by the federal government were an attempt to slow the rush of rural poor immigrating into the cities. The programs that were designed to help improve rural communities were termed Rural Areas Development, and were given to extension services for oversight along with organizational and educational leadership (Rasmussen, 1989).

In 1958 the Extension Committee on Organization and Policy issued a report that stated, "Extension must become aware of and then address the needs of the broader rural community", (Rasmussen, 1989, p. 194). An amendment to the Smith-Lever Act in 1961 allowed the funding of special programs including resource and community development (University of Kentucky, 2011). A series of pilot programs labeled as Community and Rural Development began in the 1950s and 1960s which led to improved health conditions in rural areas, improvement of library facilities, the creation of school lunch programs, paved roads (Rasmussen, 1989). This all indicated a clear change from the initial intent of extension. It was no longer solely concerned with agriculture, but now rural communities as a whole. Their mission moved beyond relaying college of agriculture research to farmers, and began to tackle larger community concerns. The societal pressures of rural poverty, and federal concern for those citizens as well as fears

of burdening urban areas with increased unemployment led to a change in the role that extension plays to people in rural areas.

A reach to urban areas. Since the end of World War II the nation has seen a steady decline in the number of farms. Yields increasing per acre, thanks to research being conducted at universities and then shared through extension services meant fewer farms could succeed. The average corn yield in the early 2000's was 125 bushels per acre; this figure is five times greater than the average bushel per acre harvested in the 1930s (Plant & Soil Sciences, 2011). Agricultural supply began to overcome agricultural demand. During the 1950s, many farm families sought to take advantage of opportunities in urban and suburban areas by either leaving the farm altogether or supplementing family income by one adult finding work in an urban setting while the other tended to farm duties. This shift in family and home dynamics, combined with emerging research in nutrition presented cooperative extension with new problems to undertake.

Addressing the needs of low-income families became a priority for extension services. As part of the Rural Community Development initiative, programs were created to assist people and their communities to improve their quality of living through educational programs. However, it was soon realized that these same programs designed to aid rural families, could be easily transferable to urban low-income families. Home economic issues that were once related to agriculture had expanded to include financial planning, improved food preparation, nutritional understanding and decision making, better food buying practices, caning, storing and freezing foods to reduce waste, work and home balancing and organization, as well as drug and alcohol abuse awareness

(Rasmussen, 1989). These lessons being taught by extension programing were no longer isolated as rural issues, but were human issues.

In 1968, congress launched the Expanded Food and Nutrition Education Program (Rasmussen, 1989). Two stipulations accompanied this legislation; the information taught in these programs had to be based on the most recent available research, and the teaching had to produce measurable behavior changes in the target population (Rasmussen, 1989). The target population was people who existed below the poverty line. For the first time, legislation regarding extension services was not directed at rural populations. Monetary allocations were based on total number of individuals below the poverty line in each state regardless of area of residence (Rasmussen, 1989).

As far as extension programing targeted at youth populations is concerned, urban 4-H clubs were present following WWII, but not prevalent. In 1973, Congress appropriated increased funding for 4-H programs, of which 70% of the increased funding was stipulated to urban 4-H projects (Rasmussen, 1989). The primary focus of 4-H programing is human development, stressing the issues of developing self-worth, leadership skills, teamwork, communication, and a community obligation (Rasmussen, 1989). Regardless of whether the 4-H project was centered on livestock, science and engineering, gardening, government, or community service, the overall goals of human development were a continuous thread throughout.

Again, as society dictates, extension adapts and changes. Where it once was entirely rural focused, as populations decreased in rural areas, and programing was realized to have positive influence on many different populations, extension grew to encompass the needs of a broader clientele. In the original 1914 version of the Smith-

Lever Act, the mission statement was, "To aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics and to encourage the application of the same," (Rasmussen, 1989, p. 223). With changes that included elevating extensions role in society, increasing extensions emphasis on community development, and broadening extension's scope to reach not only people in rural areas, but to all citizens, has brought us to where extension is today. In 1988, the Cooperative Extension Service changed its mission statement to read, "The Cooperative Extension System helps people improve their lives through an educational process which uses scientific knowledge focused on issues and needs," (Rasmussen, 1989, p. 223). The new versions emphasized the idea of helping people help themselves, by methods based in sound research, regardless of discipline, audience, or geography (Rasmussen, 1989).

Structure of Cooperative Extension and Relevance to Transformational Theory

Universities, being a source of knowledge, expertise, and the creation of new knowledge, was the ideal entity to support this educational component of the agriculture industry. However, this required a new system of higher learning. Traditionally, universities had followed the European model for colleges that focused on research, and typically hired a single professor for a department who was then supported by staff (University of Kentucky, 2011). Agriculture proved to be too diverse to follow such archetypal university format. The depth and reach was too broad and varied when considering all that agriculture encompasses. It was realized that multiple experts would be needed since one person could not adequately fill the role of expert in a field dealing with so many different species of plants and animals (National Research Council, 1995).

The breadth of subject matter paired with American pragmatism which underscored the importance of applying knowledge, begged a new prototype to meet the intended needs. The extension system was born, to place educators in close proximity to the farmers, while experts reside at the university supplying the educators with information. These experts at the university were deemed extension specialist, and were experts in a given subject matter (National Research Council, 1995). They were responsible with providing the knowledge while county agents provided the education. The goal was for the specialist to teach the agents the information, and then the agents to teach the information to the clients.

However, as society, agriculture, and universities evolved, new demands have been placed on this system. Initial structure that used county agents to educate clientele with knowledge passed to them by the extension specialist has now evolved into a vague mix of agents and specialists forming ad hoc work groups to accomplish tasks (Brown, et al., 1996). As the knowledge base grows in every subject matter it becomes increasingly more difficult to expect county agents to have a solid enough base knowledge in each category to be able to both understand and teach new found methodology. Therefore, it is becoming more typical for the specialist to actually teach the clientele and have more face-to-face contact. These extension work groups combine agent resources and regional knowledge with the specialists' area expertise and industry knowledge.

This shift in the agent/specialist relationship has brought on a greater leadership role to the specialist. In recent job postings for extension specialists, verbiage that acknowledges this leadership responsibility is becoming increasingly frequent. The first line of a job description for an extension specialist at the University of New Hampshire

reads “Provide statewide leadership in educational programs development and evaluations within an assigned subject matter area” (University of New Hampshire, 2011, p. 1). The description goes on to say that the person is expected to provide leadership and support to field staff and other specialist, provide leadership for program evaluation within subject area, numerous organizational leadership duties, and a statement regarding the management of personnel (University of New Hampshire, 2011). This makes it clear that the position of specialist is thought of as a leadership role within extension. However, it is important to comprehend the nature of extension and the structure of the organization to more clearly understand the appropriate leadership style with which one must approach the situations.

Extension is anything but a hierarchy. There is no clear structure for reporting or flow of information (Blalock, 1963). For example, the county agents are generally paid less and not usually required to have the same level of education as a specialist, but in no way does this mean that agents are subordinate to specialists. The specialists have no control over the programs that the agents create, and vice versa. Agents and specialists are expected to coordinate their efforts in a way that benefits the clientele the most (University of Kentucky, 2011). The county agents report to their district directors, or other administrators who are somewhat regionally located. Both agents and specialists report to the associate dean of extension and the dean of the college of agriculture both housed at the university. Additionally, most specialists are part of either the animal sciences department at the university, or the plant and soil sciences department, which means they are also to report to their respective department chairs. If the county agents or specialist have youth responsibilities they will also report to the state 4-H director.

This convoluted system of organizing means that there is no clear channel of communication, which can lead to confusion and either gaps in the system or overlaps since it is not clear who anyone is to report to. Therefore, extension fits well into the human resource frame of leadership in that there is not a clear hierarchy of positions within the college of agriculture since so many people have multiple responsibilities, each of which are under the supervision of a different person. Consequently, the success of the extension program lies squarely within the ambition and autonomy of each person in the system with no clear lines of communication in place. Personnel are therefore the only assets.

This organizational structure also lends itself well for the individual leadership style of transformational leadership. Since tangible products are not being produced, the product itself is the relationships that are being built between extension employees and the clientele. As Rost (1991) defined leadership through influence relationship, he could have been speaking directly about extension programs. The whole reason for the existence of extension is to persuade and influence people in the agriculture industry to seek knowledgeable solutions to everyday problems. The effort is made to convince farmers and producers to learn how to be more efficient and resourceful in their daily work for the arrogate goal of furthering the agriculture industry. The clientele has a personal interest, where the university as well as state and federal government seek to benefit from a strong economy where agriculture is a leading factor. This shared goal, common purpose, and focus on the growth of the followers is a key component of transformational leadership (Brown, et al., 1996). The notion that followers are motivated to do more than originally projected paired with giving followers the tools to

become leaders themselves create solid foundations of both transformational leadership theory and extension. Youth extension programs that focus on youth development benefit specifically from this approach (Burns, 1978; University of Kentucky, 2011).

Bass and Avolio (1993) stated that the objective of transformational leaders is to serve as role models as well as cultivate the followers' needs for growth. This component of transformational leadership mimics goals set forth by extension programs that wish to set standards and examples in agriculture practice as well as aid farmers with tools to expand and increase their business (University of Kentucky, 2011). The idea that transformational leaders are able to generate interest along with awareness for the mission and the notion of promoting individual growth once followers embrace the collective goals of the organization (Burns, 1978), parallels objectives set out by extension programs (University of Kentucky, 2011). Conversely, the perceived opposite to transformational leadership, transactional leadership, is difficult to logically apply to an extension program given the main focus. The non-bureaucratic structure of extension services is antithetical to transactional style of leadership (Brown, et al., 1996). Transactional leadership, being deeply rooted in the give-and-take between leaders and followers is difficult to carry out. Since specialists are not superior to county agents they have no positional power (Bolman & Deal, 2013); a specialist attempting to use transactional methods when working with agents will have little effect. Whether defining industry workers or county agents as followers in the leadership relationship, the notion of reward or punishment based on performance is out of the question since specialist really have nothing to give save knowledge, and no power to take anything away. For

this reason, transformational leadership styles tend to be more effective within organizational contexts that do not depend on extrinsic rewards (Shamir et al., 1993).

In order for extension programs to carry out their goal of teaching new, innovative agricultural methods and to insert research findings into the consciousness of the agricultural community it requires inspiration, trust, and being able to communicate a bigger picture to the clientele. The same is required to garner the cooperation and participation from the county agent, which is necessary when planning educational programing. For these reasons, a transformational style of leadership makes sense in most situations with this unique organizational structure.

However, there is value in transactional leadership. Burns (1978) used the idea of transforming leadership to describe the differences between management and leadership, equating transactional leadership to that of a role of a manager, not necessarily a leader. However, transactional leadership has proven to be effective in certain situations. Deichmann and Stam (2015) concluded that transactional leadership was key for innovation while other studies determined that by providing rewards upon task completion a transactional approach increased motivation (Vaccaro, et al., 2012).

Instead of approaching transformational leadership and transactional leadership as mutually exclusive, if we behaved as though they were on a continuum and available as tools in a tool box for leaders to use based upon circumstance, then we might enhance the impact of a person's leadership abilities (Gibson & Birkinshaw, 2004). Understanding which theory most specialists lean toward can also help understand how followers are responding to their leaders and potentially how effective their programing is. This study

does not imply that either style of leadership in inherently superior, but rather that each is important depending on the situation.

Leadership Studies Involving Extension Personnel

It is easy to see the leadership role that extension took in a variety of measures throughout its history. Extension programing is designed to be tailored to meet the needs of the people in the area it serves. Therefore, it is self-evident as to the power, and influence that people in extension have in their communities. They are looked upon as leaders. A National Impact Study of Leadership Development in Extension was commissioned (NISLDE) by the Extension Service of the U.S. Department of Agriculture in 1985 to describe and assess the teaching of leadership development within extension (Michael, 1990). The creation of this impact study not only illustrates the emphasis on leadership development within the federally regulated cooperative extension services, but also taps into the mantra of transformational leadership which focuses on the growth of the followers as well as the capacity to motivate them to do more than originally intended (Brown, et al., 1996).

The NISLDE study indicated that among extension educators (county agents) that 84% of the respondents felt that teaching leadership development skills to their clientele was part of their responsibilities (Michael, 1990). A review of the NISLDE concluded that extension educators held vague and competing definitions of leadership development, which calls for extension to decide which skills should be taught as part of its leadership development effort (Paxson et al., 1993). These scholars also indicated a need for further research and the creation of policy with regard to leadership practices and development. This also begs the question as to how extension personnel should be

prepared to teach these skills and what theory of leadership fits the needs of extension staffs.

Leadership characteristics of extension administrators and educators have been studied in a variety of ways. For example, Moore and Rudd (2006) conducted three studies spanning the years 2004-2006 that looked at leadership skills of extension administrators using both qualitative and quantitative research methods. The qualitative study identified six major leadership skill areas needed by extension leaders. The administrators listed communication skills and specifically leadership skills as necessary to the position, which had not been previously identified in literature. Based on their 2004 study, they developed a survey instrument using the six major leadership skills identified in the qualitative study including; human skills, conceptual skills, technical skills, communication skills, emotional intelligence skills, and industry knowledge skills. Participants rated emotional intelligence skills as the most important for the job as opposed to technical skills, which was rated least important (Moore & Rudd, 2005). This is significant due to the way in which most extension personnel are hired. According to Ladewig and Rohs (2000), most extension administrators are not professionally trained in management or leadership styles necessary for postmodern, evolving organizations. Instead, they are typically hired or promoted for their proficiency in their chosen subject-matter discipline.

The third study by Moore and Rudd (2006) did a comparative analysis of the demographics and leadership styles of extension administrators. This study utilized the multifactor leadership questionnaire (MLQ) to assess the transformational versus transactional leadership qualities of 47 extension administrators. This showed that from

the self-reported results the administrators engaged in transformational leadership practices fairly often to frequently, where transactional behaviors were reported to occur once in a while to sometimes (Moore & Rudd, 2006). This suggests that in most cases extension administrators display transformation leadership qualities, however it cannot be assumed that the same can be said for extension specialists. However, similar methodology may be used to evaluate extension specialists in order for further research and comparisons.

Sandmann and Vanderberg (1995), stated that there was a need for extension to teach leadership to their constituents however there was a lack of consistency in how it was taught, and what was being taught. This also translates not only to what is being taught to the clientele, but also as to what type of leadership is being practiced. Ladewig and Rohs (2000), looked at extension directors (administrators) to understand leadership competencies. This study showed strength in the directors' ability to plan and schedule work, but a deficiency in their ability to listen and organize, and think clearly and analytically. Again, this study shows and emphasis placed on extension personnel displaying leadership skills, however it is focused on administrators without a clear understanding of the type of leadership necessary for extension work. Furthermore, a more recent study used the theoretical framework of self-leadership to evaluate the self-perception of extension educators (Ricketts, Carter, Place, & McCoy, 2012). This project noted that extension educators were able to use a wide variety of ways to motivate themselves as well as how to reward themselves and adjust their behavior to make successful leadership choices. The exception to this was found in the category of self-

talk and their recognition that thought process contributed to their leadership success (Ricketts et al., 2012).

Additional studies all used the theoretical framework of transformational leadership theory to base their analysis of leadership practices within extension by using the multi-factor leadership questionnaire. One study compared MLQ self-perception results to that of followers' responses and concluded that in the changing landscape of extension, with the majority of problems being solved by work-groups and teams, that leadership must adopt transformational styles in order to continue to be effective (Brown, Birnstihl, & Wheeler, 1996). Woodrum and Safrit (2003) looked specifically at extension agents working in 4-H youth development programs. This study found that there was a lack of uniform leadership training, as results showed large standard deviations indicative of mixed leadership practices. The MLQ was used once again to understand the leadership styles of 4-H agents in a 2006 study conducted by Stedman, and Rudd.

A 2006 study by Sinasky and Bruce used the MLQ to evaluate 4-H agents' leadership styles through both self-perception, and evaluation from their supervisors. The main conclusion of this research was that leadership training is needed in order for agents to have more effective programing, and the study also affirmed the results of a 1989 Bass and Yammarino study that show leaders tend to rate themselves higher in leadership categories than others would rate them (Sinasky & Bruce, 2006). Finally, a study conducted by Elizer (2011) attempted to find a correlation between transformational leadership and job satisfaction among subordinates. The MLQ was used for extension agents to rate their supervisors, then a job satisfaction survey was given.

Results were compared and the conclusion was made that leaders that used transformational leadership skills did in fact have higher scores on job satisfaction assessments from the extension agents (Elizer, 2011).

It is evident that there is a need for leadership studies that focus on the position of extension specialist. It is imperative that specialists in addition to extension administers and county agents, hold leadership roles within the system. Extension programing has grown and evolved over the years to the point that the original format of the specialist teaching the agent who then passes on the knowledge is no longer feasible. There is simply too much information that is ever-changing for the agents to be educated in every aspect, therefore specialists must be able to teach, lead, recruit, plan events, coordinate work groups, and influence clientele to cast aside their trusted understandings in order to adopt knew practices with hopes that it will improve their production. How specialists are supposed to learn and express these leadership characteristics or relationships with no direction or education in the area is currently not understood or even acknowledged. This study seeks to create a knowledge base to identify what leadership characteristics are currently employed by these groups, how they arrived at these methods and hopefully find areas that can, with continued research, be taught and addressed with trainings and programing.

CHAPTER 3

METHODOLOGY

Leadership within cooperative extension programs has been studied extensively from various angles and perspectives. However, the research has been dominated by leadership studies focusing on the position of extension educator (county agent) or extension administrators including; district directors, 4-H directors, and associate deans of extension (Brown et al., 1996; Ludwig & Rohs, 2000; Moore & Rudd, 2004). The role of extension specialist has languished among researchers. Although it is acknowledged that the county extension agent has a large role in being a community liaison, state specialists are also expected to provide educational opportunities, organize state wide events, be a guest lecturer at local, state, and national functions, and lead their respective industry to the adoption of improved practices based on scientific research. If the specialist has the added obligation to head youth extension programs, their leadership roles are further intensified. Youth extension not only involves education, but also organizing shows and competitions, event planning, writing rules and safety policies, and many times breaking industry ground by increasing standards at the youth level.

A possible reason for the lack of leadership research focused at the specialist position could be the assumed structure of extension as an organization where the model would dictate that specialists provide content while the county agents create programs and disseminate the information. This would liken the current state of extension to its intended roots implying that county agents require leadership skills, but specialist would not since they are only dealing with their respective scientific field. However, given the

responsibilities of specialists and job descriptions created by universities advertising for the position, it is clear that the organizational body that is extension, believes otherwise in practice. Job responsibilities listed in position posts contain descriptions that includes leadership as well as scholarship (Purdue University, 2017; University of New Hampshire, 2016). Or, as stated in a job description from Cornell University for a position in Precision Agriculture Specialist Extension Associate;

> The candidate must, provide commercial crop and vegetable growers, consultants and industry representatives with the knowledge and educational resources necessary to advance precision agriculture and new technology applications to production and management practices that will sustain and enhance the profitability of the field crops and the vegetable industries in Western New York, (Cornell University, 2017, p.1)

Even though this description fails to mention the word "leadership" specifically, it is easy to see that strong leadership skills are necessary in order to fulfill the intended outcome of this position. Creating pivotal change by influencing people to adopt new methods requires not only leadership skills, but specifically transformational leadership skills in order to convince followers of the common good, and with the intention of building up and bettering the followers.

Purpose and Significance

This explanatory study had two purposes (a) To examine the current transformational leadership characteristics among extension specialists, and (b) To ascertain these individual's training, educational background, understanding of leadership, the extent of leadership responsibilities held by specialists, and gaps between skills that one already has and needed skills. The intention of this study is to initiate discussion and create a knowledge base about leadership within the position of extension

specialist, with hopes of establishing grounds for further research that could aid in the hiring process, in the creation of training opportunities, and in the understanding of the nature and responsibilities of the job.

Research Questions

Four basic research questions provided the backbone to this study. The overall purpose was to gain a knowledge base and an understanding of leadership characteristics of people in the position of extension specialist. The specific research questions were as follows:

1. To what extent are transformational leadership characteristics exhibited by extensional specialists in the area of equine science?
2. Can any differences in leadership characteristics be explained by demographic factors such as educational background, or years in the position?
3. What leadership skills and training do the individuals feel are necessary to perform the duties of this position?
4. How are leadership methods learned or developed among this population?

Based on literature review of the subject matter the following hypothesis was formed:

H_1: Extension specialist will exhibit transformational leadership behaviors when performing extension duties and programing.

Description of the Study Design

Since research has not extensively examined the role of extension specialist, this study relied on previous studies in the field of extension and in alternative fields that had

similar objectives. Creating a knowledge base for this naive sample group required an initial phase of data gathering that was intended to shed light on the subject and paint a picture of how much transformational leadership theory is displayed by this group of individuals. Once trends and statistical data were gathered from the initial data set, the findings were explored to get a better understanding of the leadership manifested within this group. To this accord, the research design that made the most sense for the task of this study was a sequential explanatory approach (Creswell, 2009). The sequential explanatory method is a mixed method style that focuses on the collection and analysis of quantitative data, then uses a qualitative approach to build upon and inform the potential reasons behind the quantitative data. In the case of this study the issue that was investigated was the presence and practice of transformational leadership within cooperative extension specialists.

The sequential explanatory strategy focuses on the use of both qualitative and quantitative methodology with the intent that the quantitative phase gathers initial information about the subject that is later built upon and reaffirmed through the use of qualitative methods (Creswell, 2009). Similar to a sequential exploratory strategy, which is aimed to use the qualitative phase to gather initial data, and then latter corroborate and confirm in the quantitative phase, sequential explanatory strategy uses the reverse sequence of methodology. This research design has been utilized in several leadership studies when the researcher seeks to understand the presence, style, and characteristics among a group of people that have not previously been studied regarding leadership practices. A sequential explanatory study was performed at Concordia University, which aimed to assess the servant leadership qualities among university leadership by first

distributing a survey to address the research questions, and then followed with interviews (Beck, 2014). This method was used to broaden the understanding of the data collected in the quantitative phase by using qualitative methods to test leadership theory among a group of people in leadership positions (Beck, 2014).

Another study, addressing how mentoring can apply to leadership development with concerns to higher education administrators (Grotrian-Ryan, 2015), used the sequential explanatory methodology as well. Initial surveys were sent to the people in the designated positions at institutions of higher education, followed by interviews of the same sample. The qualitative portion of the Grotrian-Ryan (2015) study used semi-structured interview style in order to expand on the findings of the quantitative portion.

The mixed-method design compliments this study because there is no knowledge base for leadership within this particular group. This study analyzed leadership style in a survey type quantitative form, and attempted to understand the position's leadership requirements, the view of leadership among individuals within the profession, and the potential gap between educational background of the people and the required skills needed to fulfill the job requirements. These elements can only be fully understood from a qualitative method since there is no knowledge base to make initial assumptions. Therefore, the nature of the study required a quantitative analysis to be completed first in order to gather basic data relating to the leadership practices associated with extension specialists, followed by qualitative interviews that were based on thematic areas that emerged from the quantitative phase.

Participants

For the past six years, I have worked as an equine extension associate for the University of Kentucky. An *extension associate* is a term used by some land grant universities to describe a person who has the same or similar job responsibilities as an extension specialist; however typically an associate position requires only a master's degree, and is usually a staff position. The majority of extension specialists are faculty appointments on a tenure track. Depending on the subject area, some universities only hire an associate to oversee a given area, while other universities only hire a specialist for a particular subject. This is generally dictated by the prevalence of the subject matter in the given state. For example, since Kentucky is known for its prominence in the horse industry, the University of Kentucky employs two equine specialists and one associate, where other states that do not have near the abundance of horse farms or industry may only have one person responsible for equine programing, or in some cases no one at all.

My professional and observations of leadership practices in the field has fueled my interest in exploring this topic. It is an intriguing challenge for many talented scientific minds struggling to perform a job that bases success on social interactions and the ability to lead and influence industry personnel. Most extension specialist positions, as well as associates, require a PhD or master's degree in a bench science field that categorizes them as an expert in the subject, even while their prior training (primarily their educational background) has been laboratory based. Few have experience or preparation in teaching, event planning, team dynamics, sociology, psychology, much less leadership. Hence, a further understanding of the position as well as an analysis of

how these people handle leadership, what their leadership characteristics are, and how these characteristics came about is needed.

The apparent disconnect that is seen between an individual's educational background and training and what their actual job responsibilities are, is not only seen in the equine specialty but in most animal science, and crop science specialists. Due to my professional connections to equine specialists, this group was chosen for the study in hopes that it would produce a high response rate.

Quantitative Data

During the quantitative phase, the study participants included all equine specialists and associates at land grant universities in the United States (N=61). The quantitative portion of the study was collected via electronic survey through Qualtrics computerized distribution software in March 2018. A link to the survey was emailed to all specialists and associates with a cover letter (see Appendix A) describing the intent of the study, a statement assuring the confidentiality of the responses, and a request for participation. A reminder email with a survey link was sent out two weeks later. Consent was implied by responding to the survey, and was stated in an interview consent letter attached to the survey (see Appendix B). Upon creation of the survey, *Anonymize Responses* option was activated in Qualtrics. This option in the survey tool Qualtrics, was able to remove all identifying information including IP address and location data upon submission of the survey. This option allowed respondents to remain anonymous, but continued to allow their submission to be intact.

Instrumentation

The survey included the MLQ as well as demographic information. The demographic questions included highest level of education completed, field of study in which degree(s) were earned, number of years in current position, number of years total within cooperative extension, percent of job duties allocated to extension, percent of job duties that involve youth extension, whether the respondent considered the role of a specialist to be a leadership role, and whether he or she had ever received any formal leadership training and in what format (see Appendix C). The goal of the demographic questions within the survey were intended to be basic and non-intrusive. The main purpose in asking demographic questions was to determine whether tenure or educational background had any bearing on an individual's approach to leadership style. Of additional interest was how much involvement the individual had in youth extension, information generally presented either as a percentage of one's faculty appointment, or a time estimate. The purpose of this question was to gage if there was any difference in leadership styles when dealing with youth programing.

Following the demographic questions were the MLQ (Avolio & Bass, 2003). The MLQ questions were loaded into the Qualtrics survey format to enable ease of use for the respondent (see Appendix D for the permission letter obtained from Mind Garden, Inc. for permission of distribution of the questionnaire). The use of the survey for student-led research purposes was paid for by the Primary Investigator.

The MLQ was developed by Bass in 1995, and revised in 2004. This tool evaluates the theory proposed by Burns (1978) of transactional versus transformational leadership styles demonstrated by an individual. The MLQ identifies five subscales for

transformational leadership: (a) Idealized influence-attributes, (b) Idealized influence-behavior, (c) Inspirational motivation, (d) Intellectual stimulation, and (e) Individual consideration. The MLQ contains four questions pertaining to each of the subscales for a total of 25 questions relevant to transformational behavior. Responses were measured using a 0-4 point Likert scale (Likert, 1932) which indicates both frequency and intensity for each subsection of transformational leadership used. In this scale, the points are 0= not at all (0% of the time), 1=once in a while (25% of the time), 2=sometimes (50% of the time), 3=fairly often (75% of the time), and 4=frequently (100% of the time).

The five factors of the MLQ are important indicators for determining a person's tendencies towards transformational leadership. The factor of idealized influence-attributes considers the intrinsic factors within an individual that enables a person to motivate or influence followers (Bass & Riggio, 2006). This is similar to idealized influence-behavior, which evaluates the person's propensity to motivate the follower through external factors. In sum, idealized influence describes a transformational leader's ability to serve as a role model, and the follower's ability to identify and desire to emulate the leader. Inspirational motivation is another factor considered on the MLQ that takes into account the transformational leader's ability to provide meaning and challenge to the work of followers. Inspirational motivation involves enthusiasm and optimism, and evaluates the person's ability to clearly communicate expectations, enabling the articulation of a shared vision and goals (Bass & Riggio, 2006). The dimension of intellectual stimulation measures a leader's ability to inspire creativity and problem solving by raising questions, reframing problems, and questioning assumptions (Bass & Riggio, 2006). This type of behavior is thought to inspire out-of-the-box

thinking and promoting new ways of solving old problems. Finally, the factor of individualized consideration is used by transformational leaders in order to build relationships with each follower, understanding individual needs and motivations, and work towards developing followers into leaders (Bass & Riggio, 2006).

The MLQ was designed to measure and explain in behavioral terms these five transformational dimensions (Avolio & Bass, 2003). Since the specialist was answering the questions about themselves, it is considered a self-perceived assessment. This has the potential to create some limitations within the survey, and it has been suggested that using a 360-feedback process where the person is not only rated by themselves, but colleagues, supervisors, and subordinates also providing feedback, has more reliable results (Avolio & Bass, 2003). However, the nature of this position and the absence of historical information about leadership practices within this groups, limited this study to the first person assessment in the MLQ. Future studies may choose to look at this from a more in depth perspective, however due to feasibility of the study, the design is currently only concerned with self-perception.

The MLQ has been the primary instrument used for research on the full-range theory of leadership (Tejada, et al., 2001). Since it has been used frequently and has undergone several revisions, the MLQ is considered the most rigorously validated measure of transformational leadership (Ozaralli, 2003). Additionally, of the leadership characteristic studies performed within the extension system, many have used the MLQ (Brown, et al., 1996; Hastings Elizer, 2011; Moore & Rudd, 2006; Sinasky & Bruce, 2006; Stedman & Rudd, 2006; Woodrum & Safrit, 2003). Even though these studies have focused on different samples, primarily county agents and administrators, the

research provides a standard for the field. The use of the MLQ in this study will allow for the potential future analysis and comparison of responses to the MLQ from the various positions within extension.

MLQ reliability. Measuring the correlations between items on a singular instrument can determine the reliability of the instrument. This measures the instrument's internal consistency, which determines whether similar items measure the same construct (Vogt, 2007). Avolio and Bass (2004) tested the reliability of the MLQ by using Cronbach's alpha coefficient, a method of calculating the internal consistency of an instrument, considered the most widely used method of measuring reliability (Tavakol & Dennick, 2011). The range of scores in Cronbach's alpha coefficient label a coefficient between 0.60 to 0.69 as weak, 0.70-0.79 as acceptable, 0.80-0.89 as good, and above 0.90 as excellent (Nunnally & Bernstein, 1994). Avolio and Bass (2004) found eight out of nine leadership factors to have a Cronbach's alpha coefficient of a 0.82 or higher, with the exception of Management by Exception-Active receiving a score of 0.74. The structural validation of this questionnaire was performed by Muenjohn and Armstrong (2008). Further evidence of strength of this instrument was measured by Lowe and Kroech (1996) who concluded that the MLQ was successful at identifying leadership styles at various levels of leadership.

Data Analysis

Data were collected on Qualtrics for the MLQ and demographic questions were then imported onto an Excel file, rows representing the respondents while the columns represented the questions on the survey. SPSS Version 25.0 was used for analysis of data for descriptive statistics as well as for comparative analysis. Due to the relatively small

sample size of this study, the data may not align with assumptions that are made with many of the standard comparative means tests. As with the Analysis of Variance (ANOVA) test, two assumptions are made about the data: (a) That there are equal variances between treatments or Homogeneity of Variances, and (b) That the data is normally distributed (Morgan, 2004). Therefore, before running normal statistical analysis on the data, tests for normality, Shapiro-Wilk, and homogeneity of variance, Levene's test, were required. If the results from these initial tests proved not significant then continuation with the ANOVA was merited, however, if the tests showed significance, ($p<0.05$), then a non-parametric Kruskal-Wallis test was selected to analyze the data (Morgan, 2004).

Null Hypothesis. In order to test whether demographic variables were a factor in determining an individual's tendency toward transformational leadership, a series of null hypothesis were created. Demographic and professional traits served as the independent variables while responses to the MLQ served as the dependent variables. Each independent variable was tested against the scores from the five subscales of transformational leadership. An individual's score for each of the five dimensions was calculated by averaging the responses to the four questions that pertained to the specific dimension. In addition to testing the five dimensions of transformational leadership, a composite score was also calculated by obtaining the average of the five dimensional scores. Therefore, each relationship with demographic variables was tested six times, one for each dimension, and once for the composite transformational score. The null hypothesis are as follows:

$H_0$1= No significant difference exists between highest academic degree obtained and the mean score found for the transformational behavior factor of idealized influence-attributes. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$2= No significant difference exists between highest academic degree obtained and the mean score found for the transformational behavior factor of idealized influence-behaviors. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$3= No significant difference exists between highest academic degree obtained and the mean score found for the transformational behavior factor of inspirational motivation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$4= No significant difference exists between highest academic degree obtained and the mean score found for the transformational behavior factor of intellectual stimulation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$5= No significant difference exists between highest academic degree obtained and the mean score found for the transformational behavior factor of individual

consideration. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$6= No significant difference exists between highest academic degree obtained and the composite score found for transformational behavior. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$7= No significant difference exists between field of study and the mean score found for the transformational behavior factor of idealized influence-attributes. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$8= No significant difference exists between field of study and the mean score found for the transformational behavior factor of idealized influence-behaviors. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$9= No significant difference exists between field of study and the mean score found for the transformational behavior factor of inspirational motivation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set

was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$10= No significant difference exists between field of study and the mean score found for the transformational behavior factor of intellectual stimulation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$11= No significant difference exists between field of study and the mean score found for the transformational behavior factor of individual consideration. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$12= No significant difference exists between field of study and the composite score found for transformational behavior. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$13= No significant difference exists between years of experience in extension and the mean score found for the transformational behavior factor of idealized influence-attributes. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$14= No significant difference exists between years of experience in extension and the mean score found for the transformational behavior factor of idealized influence-behaviors. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$15= No significant difference exists between years of experience in extension and the mean score found for the transformational behavior factor of inspirational motivation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$16= No significant difference exists between years of experience in extension and the mean score found for the transformational behavior factor of intellectual stimulation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$17= No significant difference exists between years of experience in extension and the mean score found for the transformational behavior factor of individual consideration. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$18= No significant difference exists between years of experience in extension and the composite score found for transformational behavior. This hypothesis was tested

by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$19= No significant difference exists between years in current position and the mean score found for the transformational behavior factor of idealized influence-attributes. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$20= No significant difference exists between years in current position and the mean score found for the transformational behavior factor of idealized influence-behaviors. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$21= No significant difference exists between years in current position and the mean score found for the transformational behavior factor of inspirational motivation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$22= No significant difference exists between years in current position and the mean score found for the transformational behavior factor of intellectual stimulation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data

set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$23= No significant difference exists between years in current position and the mean score found for the transformational behavior factor of individual consideration. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$24= No significant difference exists between years in current position and the composite score found for transformational behavior. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$25= No significant difference exists between percent of job appointment allocated to extension and the mean score found for the transformational behavior factor of idealized influence-attributes. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$26= No significant difference exists between percent of job appointment allocated to extension and the mean score found for the transformational behavior factor of idealized influence-behaviors. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$27= No significant difference exists between percent of job appointment allocated to extension and the mean score found for the transformational behavior factor of inspirational motivation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$28= No significant difference exists between percent of job appointment allocated to extension and the mean score found for the transformational behavior factor of intellectual stimulation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$29= No significant difference exists between percent of job appointment allocated to extension and the mean score found for the transformational behavior factor of individual consideration. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$30= No significant difference exists between percent of job appointment allocated to extension and the composite score found for transformational behavior. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$31= No significant difference exists between percent involvement in youth extension and the mean score found for the transformational behavior factor of idealized

influence-attributes. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$32= No significant difference exists between percent involvement in youth extension and the mean score found for the transformational behavior factor of idealized influence-behaviors. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$33= No significant difference exists between percent involvement in youth extension and the mean score found for the transformational behavior factor of inspirational motivation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$34= No significant difference exists between percent involvement in youth extension and the mean score found for the transformational behavior factor of intellectual stimulation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$35= No significant difference exists between percent involvement in youth extension and the mean score found for the transformational behavior factor of individual consideration. This hypothesis was tested by first running Levene's and

Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$36= No significant difference exists between percent involvement in youth extension and the composite score found for transformational behavior. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$37= No significant difference exists between whether people received some sort of leadership training and the mean score found for the transformational behavior factor of idealized influence-attributes. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an independent sample t-Test was used, since the dependent variable only consisted of two treatment groups (yes training, or no training), if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$38= No significant difference exists between people who received some sort of leadership training and the mean score found for the transformational behavior factor of idealized influence-behaviors. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an independent sample t-Test was used, since the dependent variable only consisted of two treatment groups (yes training, or no training), if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$39= No significant difference exists between people who received some sort of leadership training and the mean score found for the transformational behavior factor of inspirational motivation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an independent sample t-Test was used, since the dependent variable only consisted of two treatment groups (yes training, or no training), if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$40= No significant difference exists between people who received some sort of leadership training and the mean score found for the transformational behavior factor of intellectual stimulation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an independent sample t-Test was used, since the dependent variable only consisted of two treatment groups (yes training, or no training), if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$41= No significant difference exists between people who received some sort of leadership training and the mean score found for the transformational behavior factor of individual consideration. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an independent sample t-Test was used, since the dependent variable only consisted of two treatment groups (yes training, or no training), if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$42= No significant difference exists between people who received some sort of leadership training and the composite score found for transformational behavior. This

hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an independent sample t-Test was used, since the dependent variable only consisted of two treatment groups (yes training, or no training), if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$43= No significant difference exists between whether people believe the role of an extension specialist is a leadership position and the mean score found for the transformational behavior factor of idealized influence-attributes. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$44= No significant difference exists between whether people believe the role of an extension specialist is a leadership position and the mean score found for the transformational behavior factor of idealized influence-behaviors. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$45= No significant difference exists between whether people believe the role of an extension specialist is a leadership position and the mean score found for the transformational behavior factor of inspirational motivation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$46= No significant difference exists between whether people believe the role of an extension specialist is a leadership position and the mean score found for the transformational behavior factor of intellectual stimulation. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$47= No significant difference exists between whether people believe the role of an extension specialist is a leadership position and the mean score found for the transformational behavior factor of individual consideration. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

$H_0$48= No significant difference exists between whether people believe the role of an extension specialist is a leadership position and the composite score found for transformational behavior. This hypothesis was tested by first running Levene's and Shapiro-Wilk tests. If the data set was found to be parametric, then an ANOVA test was used, if it was non-parametric then a Kruskal-Wallis test was used.

Qualitative Data

The qualitative phase of this study was conducted by an interview. The choice to conduct interviews with extension specialists was made in order to gain insight regarding people's feelings, perspectives, opinions, and to recount instances in the past, things that cannot be observed (Merriam, 2009). Since there is no prior research on leadership

practices in the profession of extension specialist, and very little information about the position in general, a semistructured style of interview was selected. This style of interview allowed for flexibility within the interview (Merriam, 2009). There are common leadership themes that needed to be explored through this portion of the study, however, since there is no preexisting data on the subject it would be difficult to limit the interview to a structured format. Furthermore, a completely unstructured interview is typically used when the researcher is not familiar enough with a phenomenon to ask relevant questions (Merriam, 2009). This is not the case with this particular study since the researcher is very familiar with the position of extension specialist and with the theory to be explored. In addition, the interview was guided by the questions that were in the quantitative survey. The interview will be used to explain and provide depth to the data collected by the survey.

Participants in the survey were asked if they also wished be involved in the qualitative portion of the study. At the end of the survey a brief explanation of the interview was given with a link that would take them to an entirely different Qualtrics survey where they could enter their name and email address to be contacted in order to set up an interview. This method was chosen since identifying information had to be collected to schedule the interview, however if given on the original survey, their response would no longer be anonymous. This allowed for the collection of email addresses separate from the quantitative survey, but still limited the participants to people who had also completed the survey.

A semistructured interview was appropriate for this study since it allowed uniformity in topics and the flexibility to rephrase, to inquire more deeply about an

emerging theme, or to revisit topics for further explanation. These interviews were approached with the philosophy of a phenomenological interview. This type of interview is designed to uncover the essence of a person's experience of the phenomenon to be studied (Merriam, 2009). In the case of this study, the phenomenon to be explored was the leadership practices and presence of leadership skill among extension specialist. Interviews were designed to understand the specialist's comprehension of what leadership is, how that understanding applies to day-to-day activities as well as overall job responsibilities, and how the individual approaches such situations.

Interviews were conducted individually in order to have access to the participant and allow freedom of scheduling. Since it is likely that each state would have only one or two equine specialists, setting up a focus group was not feasible. Even in the settings of an event, where multiple specialist would be gathered at one time, finding time to pull everyone into a group setting would be difficult. Asking an individual to step aside for 45 minutes to an hour is easier to organize than taking six to ten people away from their duties at one time. This study focused on complex opinions and personal perspectives of leadership, and, the potential for dominate personalities to override a focus group could circumvent the intention of the interview process (Johnson, 2014).

Semi structured interviews revolved around the basic ideas of leadership and how it related to the job responsibilities of an extension specialist (See Appendix E for interview questions). The researcher attempted to be as unbiased as possible, however experience with the job was a basis for some of the questions, and used as a tool to investigate areas where leadership, and particularly transformational leadership skills

necessary to executing the mission of an extension specialist, have been observed. Of the thirty-three survey participants, nine agreed to be involved in the individual interviews.

The questions started with broad generalized questions to gauge the persons' opinion of his or her job, an understanding of leadership, and perspectives of how leadership fits into job responsibilities. The interview began with a statement to reintroduce participants to the study as well as summarizing the procedures of the interview. A voice recorder was used in addition note taking. A statement was made before each interview began that assured anonymity and, consent to be interviewed as well as to be recorded for further data analysis. Those interviewed were told they did not have to answer any question with which they felt uncomfortable, and that they could stop the interview at any time. A verbal agreement to consent was acquired. Questions began with asking years of experience in the field, educational background, and determining job responsibilities. It was important to follow the question addressing responsibilities with a question regarding the skills necessary for the job.

Once general questions were asked about their opinions of the role of a specialist, the interview shifted to a comprehension of leadership styles and principles. Asking personal opinions of leadership style can be somewhat enlightening, and can set the stage for understanding unique interpretations of the questions to follow. Following were questions about whether leadership was required or was part of the job. Asking for anecdotal evidence can help expand understanding and help to paint a better description of leadership roles in the eyes of the interviewee. Next, feelings about extension itself, the organizational structure at their university, and where respondents felt they gained leadership skills was assessed. The interviews concluded by asking participants what

they considered the most significant challenge in their position. This question had not been originally planned but based on the response of the first person interviewed, it was asked of the remaining participants.

Being semistructured in nature, the interviews addressed the aforementioned topics to maintain thematic integrity as well as the questions generated from the survey. However, there were dramatic variations in each of the interviews, therefore, for some of the interviews, questions were added or asked in different orders so that the interviewer could take advantage of a story that was shared. Since this was a study of leadership within a group of people that had not been previously studied in this light, there was no precedence to follow specifically; therefore, how this group of people would respond or individual opinions of leadership styles and characteristics was primarily unknown.

Data Analysis

The sequential construct of this study makes the quantitative analysis portion important since it would be the basis for the semi-structured interview. Data analysis of the survey was conducted and concluded prior to the qualitative phase of the study. The number of participants was drawn from those who took the survey and also volunteered to be part of the interview. The intention was to continue to conduct interviews until repeated themes emerged or no new information was being gained (Johnson, 2014). The number of people willing to participate was a limiting factor. Data analysis of the interviews was performed using QSR International's NVivo 12 software. The interviews were transcribed by the Primary Investigator as well as coded, and analyzed by the researcher.

Coding is the process by which the material is organized onto various categories of text before it is analyzed for meaning (Creswell, 2009). Merriam (2009) breaks down the coding process in to two actions: Open coding and analytical coding. Open coding takes place when notes and key words or thoughts generated by the data are written into the margin of the transcript and the researcher is open to anything that might be noteworthy. Open coding is then followed by analytical coding which groups portions of text together based on the notes assigned (Merriam, 2009). These categories can be either preexisting based on the research questions, purpose statement, or theoretical framework, or they can be based on emerging themes found in the data (Creswell, 2009).

Once the coding categories were constructed and the data was sorted, the search for meaning began. The final step in the qualitative data analysis process was interpreting the data and asking what lessons were learned as well as determining how the information helped answer the research questions (Creswell, 2009). This information established a basis for understanding leadership practices, and gathered opinions of leadership within the profession of extension specialists. In addition, examining responsibilities, one's place within extension and the larger university, and challenges that were faced were assessed. The themes and categories formed by the data collected from the interview was assessed for pertinence to the overall purpose of the study. Participants were assigned pseudonyms to ensure confidentiality during reporting.

Limitations

As indicated in Chapter 1, it is recognized that the MLQ is sometimes thought to be a more thorough tool when used in a 360-degree assessment, or when supervisors, colleagues, and subordinates all use the MLQ to rate the individual, rather than just

focusing on the responses from one individual. Additionally, the assumption must be made that with the self-assessment of the MLQ that all participants answered truthfully and participated voluntarily. Although consent was implied via participation, it is unknown as to whether certain people felt compelled to respond based on a prior professional relationship to the researcher.

The MLQ was the instrument of choice because of its focus on transformational leadership, and its use in similar studies. Many studies that have been conducted that involve leadership characteristics among extension personnel have used the MLQ, therefore it was the chosen instrument in order to potentially compare results in future studies. However, since the extent of the MLQ questions are proprietary and are not released until units of the survey are purchased for distribution, the actual nature of the questions were unknown to the researcher until after the commitment to the instrument was made by monetary means. Upon receipt of the questions, I was surprised by the wording of many of the questions in that they seemed very leading towards transformational tendencies. After having gained knowledge of the MLQ, I would be pressed to use the MLQ in the future unless specific protocol required it.

Delimitations

A choice was made in this study to narrow the sample size to only equine extension specialists. This was a difficult choice and one that was made knowing that it would create a small pool of respondents, however this decision was made based on several factors. First, the researcher field of work is in equine extension, therefore it was hoped that knowledge of the researcher would inspire a higher response rate. It is unknown at this point if that assumption aided in the 54% response rate or not. Second,

land grant universities structure extension in a number of ways. Therefore, finding where specialist are housed can be difficult. One university many list all extension personnel separate from the departmental personnel, others may categorize specialists by species or by program such as beef cattle, or general livestock. Some places include poultry in the livestock category, while others break poultry up into meat poultry, and laying poultry. For this reason, the idea to stick to a single species made the effort of tracking down specialist much easier since it was only one species that was being looked for. The third reason is that importance was placed in this study on the potential disconnect that sometimes occurs with a specialist that has had science based educational background but hired into a role that requires much more interpersonal skills, and leadership knowledge. It is acknowledged that some universities may have a specialist list serve for mass email communication. However, this list serve would also include many specialist within the extension system that most likely would not observe this disconnect. In modern extension structure the presence of Extension Specialist for Volunteerism, Extension Specialist for Leadership, and Extension Specialist for Youth Development, are more and more prevalent, and would not represent the issue that is being looked at in this study.

Another delimitation is the unavoidable bias of the researcher. Since I work in the field of equine extension and have seen firsthand experience with many of the issues discussed in the interviews, there is the potential that some of the responses could be skewed based on the way the question was asked. Every attempt to avoid persuading participants was made, however since the researcher was also the data collector there is always the opportunity for unintentional bias. Of the interview participants, the

researcher had prior relationships with five, and had never met the remaining four. The prior relationships were all due to work related programing.

CHAPTER 4

ANALYSIS AND RESULTS

In order to more easily define the sample group, this study focused on equine extension specialists. This decision was made since the position of specialist can encompass a multitude of topics, setting strict parameters on the group made it easier to collect data. The decision was made based on the criteria of needing to be an agricultural topic where the person typically has a bench science degree, and that can be easily identifiable regardless of universities interpretation of the position. The equine species was specifically chosen because of the researcher's association with equine specialist in tic hope that it would generate greater response rates. As discussed in Chapter 2, the history of the position of extension specialist was based on the notion of a well-educated scientist disseminating knowledge through the university system to county cooperative extension agents, who would then address the needs of the agrarian people in their community. The focus and characteristics of extension services has changed significantly over the years from its original model. This study examined the role of specialists to see what their leadership roles look like in this modern version of extension in order to establish a knowledge base for future studies on extension and the role of the specialist.

The study revolved around the four research questions, with the data collection and analysis attempting to answer them within the study design. The questions are as follows:

1. To what extent are transformational leadership characteristics exhibited by extensional specialists in the area of equine science?

2. Can any differences in leadership characteristics be explained by demographic factors such as educational background, or years in the position?
3. What leadership skills and training do the individuals feel are necessary to perform the duties of this position?
4. How are leadership methods learned or developed among this population?

Quantitative Data

The online survey served as the instrument to collect quantitative data in this study. This enabled a broad range of information about equine extension specialist to be gathered and analyzed before the quantitative phase of the study was conducted.

Characteristics of the Respondents

In total, 61 (*N*=61) equine extension specialists were identified through land grant university systems by an online search of Animal Science Departments and Cooperative Extension websites for faculty directories. Each university approached the manner in which they labeled their specialist differently. Some universities listed their specialist's separately on their websites, some only listed specialist or extension work in their biography on the website, and some were only listed on extension pages that were separate from departmental pages. There was no consensus or uniformity on how specialists should be listed or identified on a university web site. There is also no national organization, or means of communication currently established specifically for this group of people.

From the 61 identified equine extension specialist, all were sent the email with a link to the survey. Of the 61 people emailed, 33 took part in the survey, for a response

rate of 54%. According to the online survey creation website, SurveyGizmo (2015), internal electronic surveys typically receive a response rate of 30-40%. Of the 61 people who were sent the survey, 51 were female, only 10 were male. For this reason, it was decided to omit the question of gender on the survey since it could easily identify a participant by answering male and linking one other demographic question. A descriptive analysis of the data established means, standard deviation, and ranges of responses (Creswell, 2009). Later, comparative statistics were computed. Both descriptive statistics as well as comparative statistics were analyzed using SPSS Version 25.0.

Of the 33 respondents, when asked about the highest degree they had earned, 68.7% held a doctoral degree (either a PhD or a Doctorate of Veterinary Medicine). A master's degree was the highest degree earned for 21.2% of the respondents, and 9.1% held only a bachelor's degree only. Of the degrees earned the majority of people (78.8%) earned their degree in a bench science field, including Veterinary Science, Animal Science, Biology, Equine Science, Experimental Medicine, and Zoology. Only 9.1% held degrees in Social Sciences, identified as Sports Psychology, Agricultural Education, Liberal Studies/Communication, and Agricultural Business; 12.1% of the respondents noted degrees in both bench and social sciences.

Next, the question was asked both about the total number of years the respondent had been in the current position, and also the total number of years the person had held a position working within the cooperative extension system. Most of the respondents (45.5%) had only been in their current position for five years or fewer. The subsequent blocks of time were more evenly distributed with 6-10 years, 11-15 years, and 16-20

years, being represented by 15.2%, 21.2%, and 12.1% respectively. Only two respondents had held their current position for more than twenty years (6.1%). The average number of years in their current position was 9.3, with a range from 6 months to 40 years. When asked how many years the person had worked in extension in any role, the numbers were more varied with 27.3% only having worked in extension for 0-5 years, 24.2% that had worked in extension for 6-10 years, 15.2% that held extension careers for 11-15 years, the same percentage for individuals who had served 16-20 years in extension. Finally, 18.3% of the respondents indicated that they had held extension positions for over twenty years. The average length of time that people have held jobs within the extension system, not necessarily their current role, was 13.3 years, with an identical range as was listed for the current position statistic.

One trend discussed in detail during the qualitative portion of the study was the percent of job responsibilities that consist of extension work. Many of these people were faculty members within a department and were sometimes required to teach at the undergraduate and graduate levels, and/or conduct research as well. When asked what percentage of their Distribution of Effort (DOE) was allocated towards extension the majority (57.6%) indicated 76-100%. Twenty-five percent responded that their extension appointment consisted of 51-75% of their time, while 15.7% said that less than 50% of their DOE was extension work (1-25%= 2 responses, 26-50%= 3 responses). The average percent of extension was 78.4% with a range from 15-100%. One person failed to answer this question.

The aforementioned question is typically decided by supervisors or administration and is a precise number used on performance evaluations. However, the next question

asked of the respondents regarded the percentage of extension duties that were allocated towards youth extension programing. This percentage point may or may not be precisely defined in the individual's job description. In many cases an estimate of time allocation was determined by the respondent. With three people not responding to this question, and an additional two people indicating 0% youth extension, the rest of the responses were more evenly distributed; 27.3% held between 1-25% youth extension responsibilities, 12.1% of the respondents were spending 26-50% of their extension work on youth programing, 18.2% of the people fell into the third quadrant of 51-75% youth extension, and 27.3% of the respondents indicated that 76-100% of their extension work was with youth programing. The average percent of extension time spent on youth programing was 52.2% with a range from zero to 100%. Six of the respondents indicated that 100% of their time was allocated to working on extension projects with youth programing.

An overwhelming majority of respondents (84.8%) indicated a *Definitely Yes* when asked if they considered the position of Extension Specialist to be a leadership role. Of the remaining respondents, 9.1% answered with a *Probably Yes*, and 6.1% answered *Might or Might Not*. When asked about leadership training, 51.5% of the participants had not received any form of formal leadership training. Of the respondents that had leadership training, 68% said their training came from course work, another 68% of those receiving training had participated in a leadership clinic or workshop, 43.8% said their training came from books or readings, and three people indicated that they had participated in a University Leadership Program or LEAD21 which is a national extension leadership program.

The Table 4.1 below shows the descriptive statistics for the numerical data including range, mean, and standard deviation.

Table 4.1
Descriptive Statistics for Numerical Data

	N	Minimum	Maximum	Mean	Std. Deviation
Years in Current Position	33	0.5	40	9.29	8.65
Years in Extension	33	0.5	40	13.35	10.63
Percent Appointment Extension	33	15%	100%	78.4%	24.81
Percent Youth Extension	33	0%	100%	52.23%	35.29

Note. N=number of participants

Table 4.2 is a frequency chart that displays the results of the demographic questions by frequency and percent as they relate to each categorical response.

Table 4.2
Frequency Table for Demographic Questions

		Frequency	Percent of Total
Highest Degree Earned			
	Bachelor's	3	9.1
	Master's	7	21.2
	Doctoral	23	69.7
Field of Study			
	Bench Science	26	78.8
	Bench and Social Science	4	12.1
	Social Science	3	9.1
Years in Current Position			
	0-5	15	45.5
	6-10	5	15.2
	11-15	7	21.2
	16-20	4	12.1
	>20	2	6.1
Years in Extension			
	0-5	9	27.3
	6-10	8	24.2
	11-15	5	15.2
	16-20	5	15.2
	>20	6	18.2
Percent App. Extension			
	0-25%	2	6.1
	26-50%	3	9.1
	51-75%	8	24.3
	76-100%	19	57.6
Percent Youth Extension			
	0%	2	6.7
	1-25%	9	27.3
	26-50%	4	12.1
	51-75%	6	18.2
	76-100%	9	27.3
Is a Specialist a Leadership Role?			
	Definitely No	0	0
	Probably No	0	0
	Might or Might Not	2	6.1
	Probably Yes	3	9.1
	Definitely Yes	28	84.8
Received Leadership Training			
	No	17	51.5
	Yes	16	48.5

Note. App.= Appointment

Multifactor Leadership Questionnaire

The Multifactor Leadership Questionnaire Manual and Sample Set (Bass & Avolio, 2004) provides a table of MLQ scores from a normed population. This table allows a comparison of the sample group to the average population in order to see how a group in a study compares to the average population. An average score for each factor in the MLQ was calculated for the group of equine extension specialist. The average score of the group for each factor was then compared with the table to find what percentile the equine specialists aligned within the normed population. The table titled Percentiles for Individual Scores based on Self Ratings (Bass & Avolio, 2004) was used, since this MLQ survey was a self-evaluation of leadership.

For the Transformational Leadership factor of Idealized Influence-Attributed, the Equine Specialist average score was 2.99, which ranks them in the 40th percentile. This means that 40% of the normed population responded with scores lower than the group, while 60% of the normed population scored higher. The group average was 2.93 for the leadership factor of Idealized Influence-Behavior, which landed them in the 30th percentile. For the factor of Inspirational Motivation, the equine specialists were in the 30th percentile with a score of 2.92. The study group resulted in the 40th percentile for both leadership factors of Intellectual Stimulation and Individual Consideration with scores of 2.94, and 3.16 respectively.

Comparative Statistics

Responses of the questionnaire were then analyzed to see if trends emerged in the MLQ responses that could be connected with demographic or professional variables

included: (a) highest academic degree obtained, (b) field of study in which the degree was earned, (c) years of experience within the cooperative extension system, (d) percentage that the person was involved with youth programing, and (e) whether or not the person has received any leadership training. The independent variables were represented by the responses to the demographic and professional survey questions, while the MLQ responses are considered dependent. This was determined by independent variable being defined as factors that may cause or affect results (Creswell, 2009). Dependent variables are thereby factors that may be influenced by the independent variables (Creswell, 2009). This was done in order to examine trends that would identify a particular characteristic that could influence someone's use of transformational leadership behavior.

These data were collected from the online survey via Qualtrics. The responses were then processed in accordance with the Multifactor Leadership Questionnaire Manual (Avolio & Bass, 2004). Four separate questions are used to assess each identified factor in transformational leadership. The answers to the MLQ were in a Likert scale format, therefore the responses to each question were whole numbers ranging from 0-4. Therefore, when calculating a score for a particular factor, the response given for each question pertaining to the given factor was added and then divided by four to achieve an average score. This generated an MLQ scale score for each of the transformational leadership dimensional factors. Consequently, there was a score for idealized influence-attributes, idealized influence-behaviors, inspirational motivation, intellectual stimulation, and individualized consideration. After the dimensional factor

scores were calculated, an overall composite MLQ score was obtained by averaging all of the factor scores (Avolio & Bass, 2004).

Null Hypotheses. Since the sample size was small, some of data sets resulted in a non-normal distribution, which meant traditional parametric statistical tests were not effective in analyzing the data. Therefore, all data had to be tested for the assumptions of a parametric test which are, homogeneity of variance, and whether the dependent variable was normally distributed. A Levene's test was applied to test for homogeneity of variance, while a Shapiro-Wilk test was used to see if the data was normally distributed. These tests determined what test was used for data analysis. A p value of <0.05 for either the Levene's test or the Shapiro-Wilk test meant that ANOVA could not be used to analyze the data. If this occurred a Kruskal-Wallis test was used instead.

In comparing responses to MLQ questions and the demographics of the sample, null hypotheses were created to test the results. Educational and professional characteristics were treated as the independent variables, while the self-reported answers to the MLQ prompts were considered dependent variables.

H_01 = No significant difference exists between highest academic degree obtained and the mean score found for the transformational behavior factor of idealized influence-attributes. Levene's test showed no significant difference for Homogeneity of Variances, however in the Shapiro-Wilk test $p=0.018$ for the Doctoral group, therefore the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of degree earned on this factor of transformational leadership. The effect of degree earned on idealized influence-attributes was not statistically significant with $p= 0.226$, therefore H_01 was not rejected.

H_02= No significant difference exists between highest academic degree obtained and the mean score found for the transformational behavior factor of idealized influence-behaviors. Levene's test showed no significant difference for Homogeneity of Variances, however in the Shapiro-Wilk test p=0.000 for the Bachelors group, therefore the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of degree earned on this factor of transformational leadership. The effect of degree earned on idealized influence-behavior was not statistically significant with p=0.764, therefore H_02 was not rejected.

H_03= No significant difference exists between highest academic degree obtained and the mean score found for the transformational behavior factor of inspirational motivation. Levene's test showed no significant difference for Homogeneity of Variances, however in the Shapiro-Wilk test p=0.006 for the Doctoral group, therefore the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of degree earned on this factor of transformational leadership. The effect of the degree on inspirational motivation was not statistically significant with p=0.851, therefore H_03 was not rejected.

H_04= No significant difference exists between highest academic degree obtained and the mean score found for the transformational behavior factor of intellectual stimulation. Levene's test showed no significant difference for Homogeneity of Variances, and the Shapiro-Wilk test also showed no significant difference, which means the data was normally distributed. An ANOVA was conducted to find the effect of degree earned on this factor of transformational leadership. The effect of the degree

earned on intellectual stimulation was not statistically significant with p=0.313, therefore $H_0$4 was not rejected.

$H_0$5= No significant difference exists between highest academic degree obtained and the mean score found for the transformational behavior factor of individual consideration. Levene's test showed no significant difference for Homogeneity of Variances, however in the Shapiro-Wilk test p=0.000 for the Bachelors group, therefore the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of degree earned on this factor of transformational leadership. The effect of the degree earned on individual consideration was not statistically significant with p=0.851, therefore $H_0$5 was not rejected.

$H_0$6= No significant difference exists between highest academic degree obtained and the composite score found for transformational behavior. Levene's test showed no significant difference for Homogeneity of Variances, and the Shapiro-Wilk test was also not significant, which means the data was normally distributed. An ANOVA test was conducted to find the effect of degree earned on the composite score for transformational behavior. The effect was not statistically significant with p=0.800, therefore $H_0$6 was not rejected.

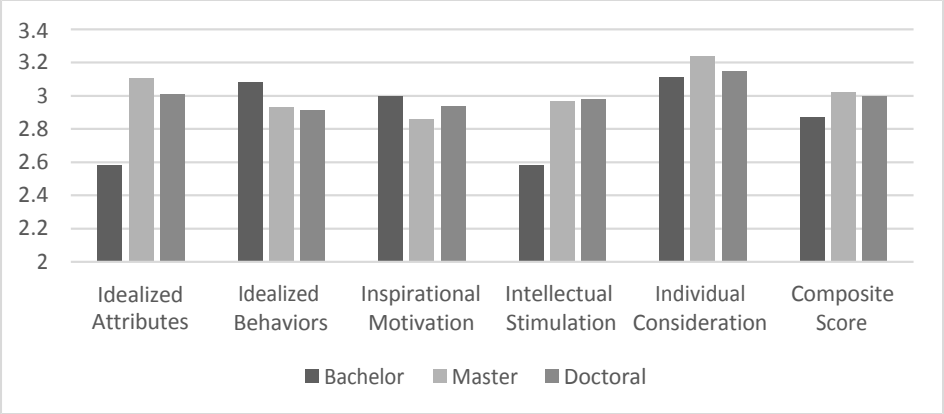

Figure 4.1
Highest degree earned and mean MLQ Score. This chart illustrates the data collected for the MLQ responses categorized by degree earned.

$H_0$7= No significant difference exists between field of study and the mean score found for the transformational behavior factor of idealized influence-attributes.

Levene's test showed no significant difference for Homogeneity of Variances, however in the Shapiro-Wilk test p=0.026 for Bench Science, and p=0.000 for Social Science, therefore the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of field of study on this factor of transformational leadership. The effect of the field of study on idealized influence-attributes was not statistically significant with p=0.792, therefore the $H_0$7 was not rejected.

$H_0$8= No significant difference exists between field of study and the mean score found for the transformational behavior factor of idealized influence-behaviors.

Levene's test showed no significant difference for Homogeneity of Variances, however in the Shapiro-Wilk test p=0.000 for Social Science, therefore the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of field of study on this factor of transformational leadership. The effect of the field of study on idealized

influence-behaviors was not statistically significant with p=0.428, therefore $H_0$8 was not rejected.

$H_0$9= No significant difference exists between field of study and the mean score found for the transformational behavior factor of inspirational motivation. Levene's test showed no significant difference for Homogeneity of Variance, however in the Shapiro-Wilk test p=0.011 for Bench Science, and p=0.024 for Bench and Social Science, therefore the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of field of study on this factor of transformational leadership. The effect of the field of study on inspirational motivation was not statistically significant with p=0.346, therefore $H_0$9 was not rejected.

$H_0$10= No significant difference exists between field of study and the mean score found for the transformational behavior factor of intellectual stimulation. Leven's test showed no significant difference for Homogeneity of Variance, however in the Shapiro-Wilk test p=0.016 for Bench Science, therefore the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of the field of study on this factor of transformational leadership. The effect of the field of study on intellectual stimulation was not statistically significant with p=0.287, therefore $H_0$10 was not rejected.

$H_0$11= No significant difference exists between field of study and the mean score found for the transformational behavior factor of individual consideration. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of the field of study on this factor of transformational leadership. The effect of the field of study on

intellectual stimulation was not statistically significant with p=0.342, therefore $H_0$11 was not rejected.

$H_0$12= No significant difference exists between field of study and the composite score found for transformational behavior. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of the field of study on the composite score for transformational leadership. The effect was not statistically significant with p=0.464, therefore $H_0$12 was not rejected.

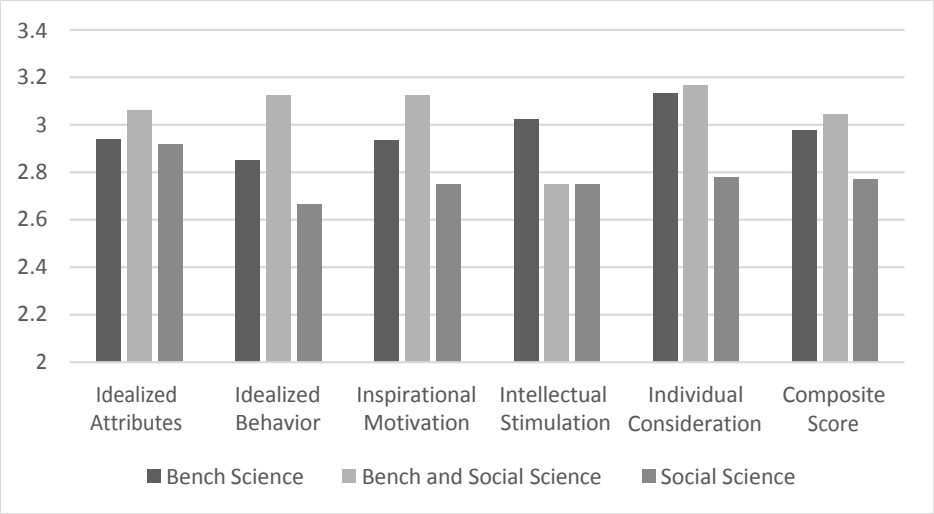

Figure 4.2 Field of study and mean MLQ score. This chart illustrates the data collected for the MLQ response categorized by field of study by which the individual earned their degrees.

$H_0$13= No significant difference exists between years of experience in extension and the mean score found for the transformational behavior factor of idealized influence-attributes. Levene's test showed no significant difference for Homogeneity of Variance,

and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of years of experience on this factor of transformational leadership. The effect of years in extension on idealized influence-attributes was not statistically significant with p=0.931, therefore $H_0$13 was not rejected.

$H_0$14= No significant difference exists between years of experience in extension and the mean score found for the transformational behavior factor of idealized influence-behaviors. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of years of experience on this factor of transformational leadership. The effect of years in extension on idealized influence-behavior was not statistically significant with p=0.219, therefore $H_0$14 was not rejected.

$H_0$15= No significant difference exists between years of experience in extension and the mean score found for the transformational behavior factor of inspirational motivation. Levene's test showed a p value of 0.048 which indicates that the assumption of Homogeneity of Variance was not met. Also, the Shapiro-Wilk test returned p values of 0.006 and 0.001 for the age ranges of 6-10 years and greater than 20 years respectively, therefore the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of years of experience on this factor of transformational leadership. The effect of the years of experience on inspirational motivation was not statistically significant with p=0.187, therefore $H_0$15 was not rejected.

$H_0$16= No significant difference exists between years of experience in extension and the mean score found for the transformational behavior factor of intellectual stimulation. Levene's test showed no significant difference for Homogeneity of Variance, however in the Shapiro-Wilk test p=0.009 for the 0-5 year range, which means the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of years of experience on this factor of transformational leadership. The effect of the years of experience on inspirational motivation was not statistically significant with p=0.525, therefore $H_0$16 was not rejected.

$H_0$17= No significant difference exists between years of experience in extension and the mean score found for the transformational behavior factor of individual consideration. Levene's test showed no significant difference for Homogeneity of Variance, however in the Shapiro-Wilk test p=0.030 for 0-5 years range, which means the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of years of experience on this factor of transformational leadership. The effect of the years of experience on individual consideration was not statistically significant with p=0.937, therefore $H_0$17 was not rejected.

$H_0$18= No significant difference exists between years of experience in extension and the composite score found for transformational behavior. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of years of experience on the composite score for transformational leadership. The effect of years in extension on the

transformational leadership composite score was not statistically significant with p=0.875, therefore $H_0$18 was not rejected.

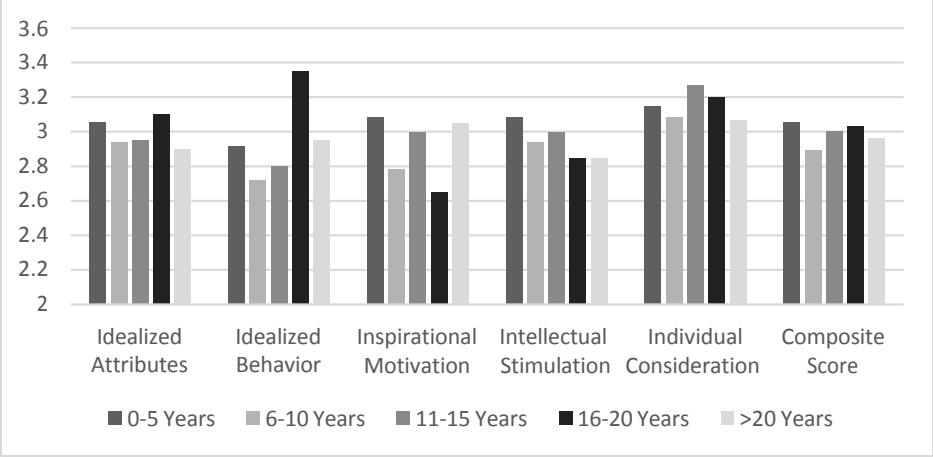

Figure 4.3. Years of experience in extension and mean MLQ score. This chart illustrates the data collected for MLQ response categorized by years of extension experience.

$H_0$19= No significant difference exists between years in current position and the mean score found for the transformational behavior factor of idealized influence-attributes. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of years in current position on this factor of transformational leadership. The effect of years in current position and the mean score found for idealized influence-attributes was not statistically significant with p=0.907, therefore $H_0$19 was not rejected.

$H_0$20= No significant difference exists between years in current position and the mean score found for the transformational behavior factor of idealized influence-behaviors. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates

that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of years in current position on this factor of transformational leadership. The effect of years in current position on idealized influence-behaviors was not statistically significant with p=0.148, therefore $H_0$20 was not rejected.

$H_0$21= No significant difference exists between years in current position and the mean score found for the transformational behavior factor of inspirational motivation. Levene's test showed no significant difference for Homogeneity of Variance, however in the Shapiro-Wilk test p=0.001 for 6-10 years range, which means the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of years in current position on this factor of transformational leadership. The effect of the years in current position on inspirational motivation was not statistically significant with p=0.124, therefore $H_0$21 was not rejected.

$H_0$22= No significant difference exists between years in current position and the mean score found for the transformational behavior factor of intellectual stimulation. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of years in current position on this factor of transformational leadership. The effect of years in current position on intellectual stimulation was not statistically significant with p=0.961, therefore $H_0$22 was not rejected.

$H_0$23= No significant difference exists between years in current position and the mean score found for the transformational behavior factor of individual consideration. Levene's test showed no significant difference for Homogeneity of Variance, and the

Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of years in current position on this factor of transformational leadership. The effect of years in current position on individual consideration was not statistically significant with p=0.821, therefore $H_0$23 was not rejected.

$H_0$24= No significant difference exists between years in current position and the composite score found for transformational behavior. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of years in current position on this factor of transformational leadership. The effect of years in current position on the composite score for transformational leadership was not statistically significant with p=0.592, therefore $H_0$24 was not rejected.

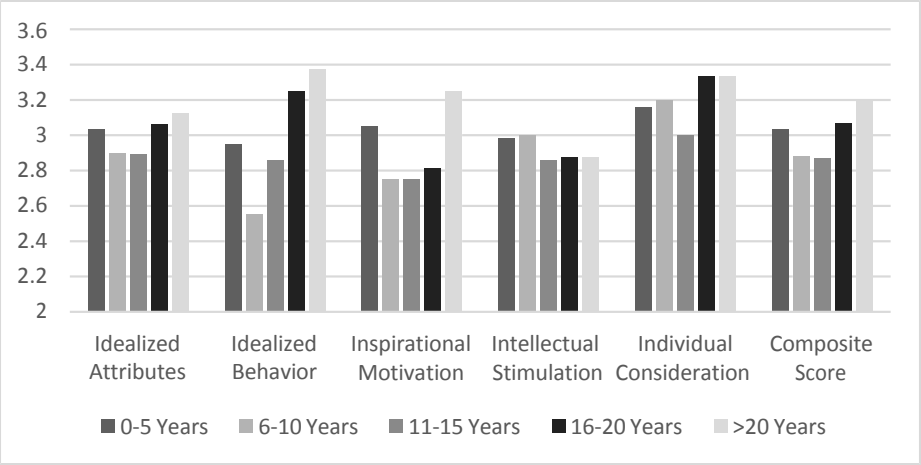

Figure 4.4. Years in current position and mean MLQ score. This chart illustrates the data collected for MLQ response categorized by the number of years a person was in their current position.

$H_0$25= No significant difference exists between percent of job appointment allocated to extension and the mean score found for the transformational behavior factor of idealized influence-attributes. Levene's test showed no significant difference for Homogeneity of Variance, however in the Shapiro-Wilk test p=0.000 for 26-50% range, which means the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of percent of job appointment allocated to extension on this factor of transformational leadership. The effect of the percent of job appointment allocated to extension on idealized influence-attributes was not statistically significant with p=0.686, therefore $H_0$25 was not rejected.

$H_0$26= No significant difference exists between percent of job appointment allocated to extension and the mean score found for the transformational behavior factor of idealized influence-behaviors. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way

ANOVA test was conducted to find the effect of percent of job appointment allocated to extension on this factor of transformational leadership. The effect of percent of job appointment allocated to extension on idealized influence-behaviors was not statistically significant with p=0.268, therefore $H_0$26 was not rejected.

$H_0$27= No significant difference exists between percent of job appointment allocated to extension and the mean score found for the transformational behavior factor of inspirational motivation. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of percent of job appointment allocated to extension on this factor of transformational leadership. The effect of percent of job appointment allocated to extension on inspirational motivation was not statistically significant with p=0.559, therefore $H_0$27 was not rejected.

$H_0$28= No significant difference exists between percent of job appointment allocated to extension and the mean score found for the transformational behavior factor of intellectual stimulation. Levene's test showed no significant difference for Homogeneity of Variance, however in the Shapiro-Wilk test p=0.034 for the 76-100% range, which means the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of percent of job appointment allocated to extension on this factor of transformational leadership. The effect of the percent of job appointment allocated to extension on intellectual stimulation was not statistically significant with p=0.595, therefore $H_0$28 was not rejected.

$H_0$29= No significant difference exists between percent of job appointment allocated to extension and the mean score found for the transformational behavior factor of individual consideration. Levene's test showed no significant difference for Homogeneity of Variance, however in the Shapiro-Wilk test p=0.000 for the 26-50% range, which means the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of percent of job appointment allocated to extension on this factor of transformational leadership. The effect of the percent of job appointment allocated to extension on individual consideration was not statistically significant with p=0.845, therefore $H_0$29 was not rejected.

$H_0$30= No significant difference exists between percent of job appointment allocated to extension and the composite score found for transformational behavior. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of percent of job appointment allocated to extension on this factor of transformational leadership. The effect of percent of job appointment allocated to extension on the composite score for transformational leadership was not statistically significant with p=0.450, therefore $H_0$30 was not rejected.

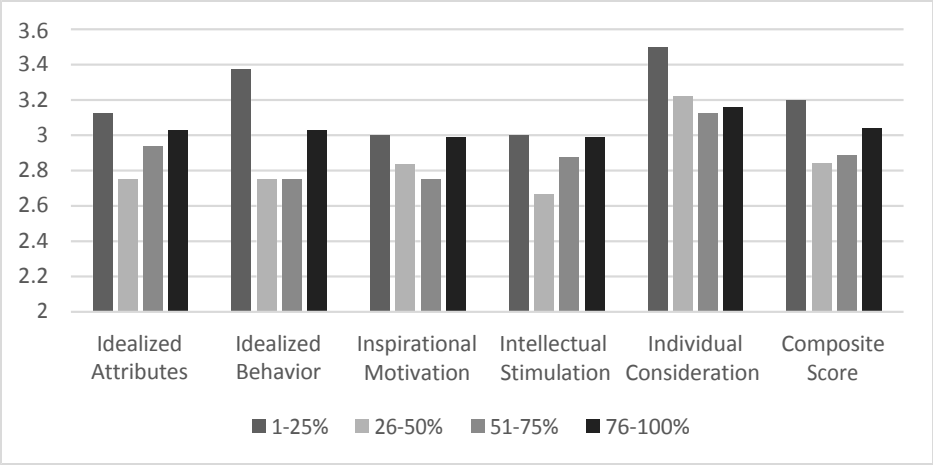

Figure 4.5 Percent of job responsibilities allocated to extension and the mean MLQ score. This chart illustrates the data collected for MLQ response categorized by the percent of job responsibilities allocated towards extension work.

$H_0$31= No significant difference exists between percent involvement in youth extension and the mean score found for the transformational behavior factor of idealized influence-attributes. Levene's test showed no significant difference for Homogeneity of Variance, however in the Shapiro-Wilk test p=0.000 for the 1-25% range, which means the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of percent involvement in youth extension on this factor of transformational leadership. The effect of the percent involvement in youth extension on idealized influence-attributes was not statistically significant with p=0.519, therefore $H_0$31 was not rejected.

$H_0$32= No significant difference exists between percent involvement in youth extension and the mean score found for the transformational behavior factor of idealized influence-behaviors. Levene's test showed no significant difference for Homogeneity of Variance, however in the Shapiro-Wilk test p=0.001 for the 26-50% range, which means

the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of percent involvement in youth extension on this factor of transformational leadership. The effect of the percent involvement in youth extension on idealized influence-behavior was not statistically significant with p=0.171, therefore $H_0$32 was not rejected.

$H_0$33= No significant difference exists between percent involvement in youth extension and the mean score found for the transformational behavior factor of inspirational motivation. Levene's test showed a p value of 0.013 which indicates that the assumption of Homogeneity of Variance was not met. Also, the Shapiro-Wilk test returned p values of 0.020 and 0.000 for the percent ranges of 1-25 years and 76-100% years respectively, therefore the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of percent involvement in youth extension on this factor of transformational leadership. The effect of the percent involvement in youth extension on inspirational motivation was not statistically significant with p=0.236, therefore $H_0$33 was not rejected.

$H_0$34= No significant difference exists between percent involvement in youth extension and the mean score found for the transformational behavior factor of intellectual stimulation. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of percent involvement in youth extension on this factor of transformational leadership. The effect of involvement in youth extension on intellectual

stimulation was not statistically significant with p=0.563, therefore $H_0$34 was not rejected.

$H_0$35= No significant difference exists between percent involvement in youth extension and the mean score found for the transformational behavior factor of individual consideration. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of percent involvement in youth extension on this factor of transformational leadership. The effect of involvement in youth extension on individual consideration was not statistically significant with p=0.562, therefore $H_0$35 was not rejected.

$H_0$36= No significant difference exists between percent involvement in youth extension and the composite score found for transformational behavior. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of percent involvement in youth extension on the composite score for transformational leadership. The p value was not statistically significant with p=0.525, therefore $H_0$36 was not rejected.

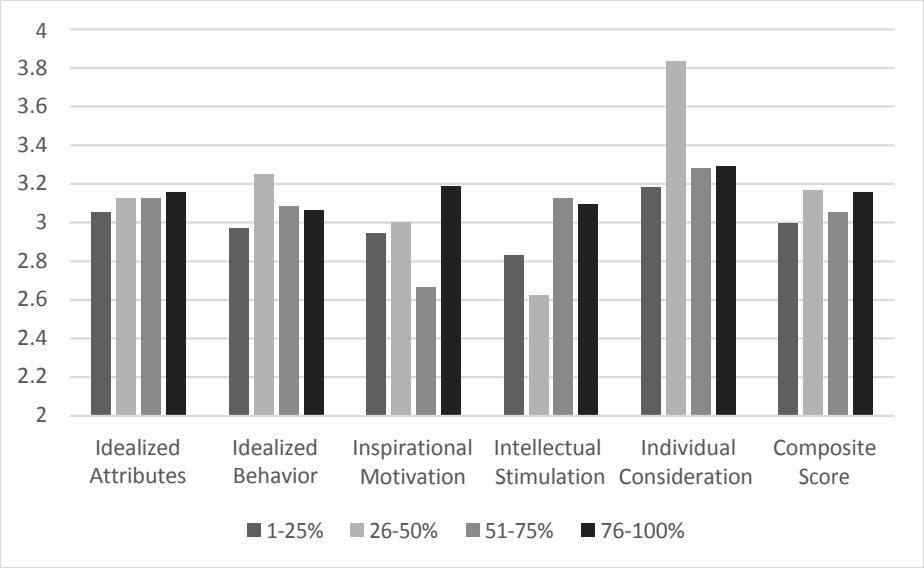

Figure 4.6. Percent youth extension and mean MLQ score. This chart illustrates the data collected for MLQ score categorized by the percent of their workload that involves youth extension.

$H_0$37= No significant difference exists between whether people received some sort of leadership training and the mean score found for the transformational behavior factor of idealized influence-attributes. Since this involved just two categories, yes or no, for whether they received training or not, an independent sample t-Test was conducted. The Shapiro-Wilk test was not statistically significant, which means the data is normally distributed. The effect of leadership training on idealized influence-attributes was not significant with p=0.177, therefore $H_0$37 was not rejected.

$H_0$38= No significant difference exists between people who received some sort of leadership training and the mean score found for the transformational behavior factor of idealized influence-behaviors. Since this involved just two categories, yes or no, for whether they received training or not, an independent sample t-Test was conducted. The Shapiro-Wilk test was not statistically significant, which means the data is normally

distributed. The effect of leadership training on idealized influence-behaviors was not significant with p=0.949, therefore $H_0$38 was not rejected.

$H_0$39= No significant difference exists between people who received some sort of leadership training and the mean score found for the transformational behavior factor of inspirational motivation. A Kruskal-Wallis test was performed because the Shapiro-Wilk test showed significance at p=0.003 for the 'did not receive training' category. The effect of leadership training on inspirational motivation was not significant with p=0.834, therefore $H_0$39 was not rejected.

$H_0$40= No significant difference exists between people who received some sort of leadership training and the mean score found for the transformational behavior factor of intellectual stimulation. Since this involved just two categories, yes or no, for whether they received training or not, an independent sample t-Test was conducted. The Shapiro-Wilk test was not statistically significant, which means the data is normally distributed. The effect of leadership training on intellectual stimulation was not significant with p=0.820, therefore $H_0$40 was not rejected.

$H_0$41= No significant difference exists between people who received some sort of leadership training and the mean score found for the transformational behavior factor of individual consideration. A Kruskal-Wallis test was performed because the Shapiro-Wilk test showed significance at p=0.043 for the 'received training' category. The effect of leadership training on individual consideration was not significant with p=0.942, therefore $H_0$41 was not rejected.

$H_0$42= No significant difference exists between people who received some sort of leadership training and the composite score found for transformational behavior. Since this involved just two categories, yes or no, for whether they received training or not, an independent sample t-Test was conducted. The Shapiro-Wilk test was not statistically significant, which means the data is normally distributed. The effect of leadership training on the composite score for transformational leadership was not significant with p=0.936, therefore $H_0$42 was not rejected.

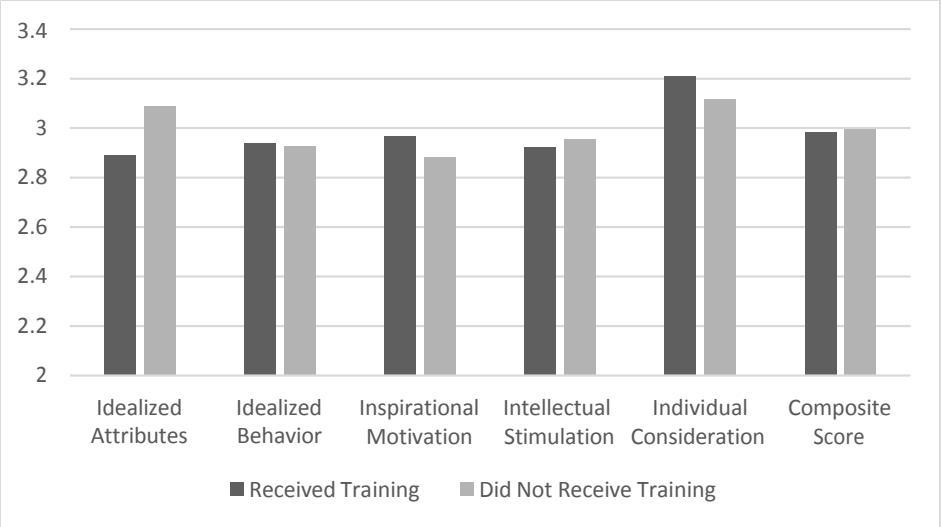

Figure 4.7. Whether or not people received leadership training and mean MLQ score. This chart illustrates the data collected for MLQ scores categorized by the question as to whether or not people have received leadership training.

$H_0$43= No significant difference exists between whether people believe the role of an extension specialist is a leadership position and the mean score found for the transformational behavior factor of idealized influence-attributes. Levene's test showed no significant difference for Homogeneity of Variance, however, the Shapiro-Wilk test returned p values of 0.004 for the category of 'definitely yes', therefore the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of whether

people believe the role of an extension specialist is a leadership position on this factor of transformational leadership. The effect of this question on idealized influence-attributes was not statistically significant with p=0.260, therefore $H_0$43 was not rejected.

$H_0$44= No significant difference exists between whether people believe the role of an extension specialist is a leadership position and the mean score found for the transformational behavior factor of idealized influence-behaviors. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of whether people believe the role of an extension specialist is a leadership position on this factor of transformational leadership. The effect of this question on idealized influence-behaviors was not statistically significant with p=0.850, therefore $H_0$44 was not rejected.

$H_0$45= No significant difference exists between whether people believe the role of an extension specialist is a leadership position and the mean score found for the transformational behavior factor of inspirational motivation. Levene's test showed no significant difference for Homogeneity of Variance, however, the Shapiro-Wilk test returned p values of 0.009 for the category of 'definitely yes', therefore the data is not normally distributed. A Kruskal-Wallis test was conducted to find the effect of whether people believe the role of an extension specialist is a leadership position on this factor of transformational leadership. The effect of this question on inspirational motivation was not statistically significant with p=0.481, therefore $H_0$45 was not rejected.

$H_0$46= No significant difference exists between whether people believe the role of an extension specialist is a leadership position and the mean score found for the

transformational behavior factor of intellectual stimulation. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of whether people believe the role of an extension specialist is a leadership position on this factor of transformational leadership. The effect of this question on intellectual stimulation was not statistically significant with p=0.798, therefore $H_0$46 was not rejected.

$H_0$47= No significant difference exists between whether people believe the role of an extension specialist is a leadership position and the mean score found for the transformational behavior factor of individual consideration. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of whether people believe the role of an extension specialist is a leadership position on this factor of transformational leadership. The effect of this question on individual consideration was not statistically significant with p=0.302, therefore $H_0$47 was not rejected.

$H_0$48= No significant difference exists between whether people believe the role of an extension specialist is a leadership position and the composite score found for transformational behavior. Levene's test showed no significant difference for Homogeneity of Variance, and the Shapiro-Wilk test did not show a significant difference either, which indicates that the data is normally distributed. A One-way ANOVA test was conducted to find the effect of whether people believe the role of an extension specialist is a leadership position on the composite score for transformational

leadership. The effect of this question on the composite score for transformational leadership was not statistically significant with p=0.322, therefore $H_0$48 was not rejected.

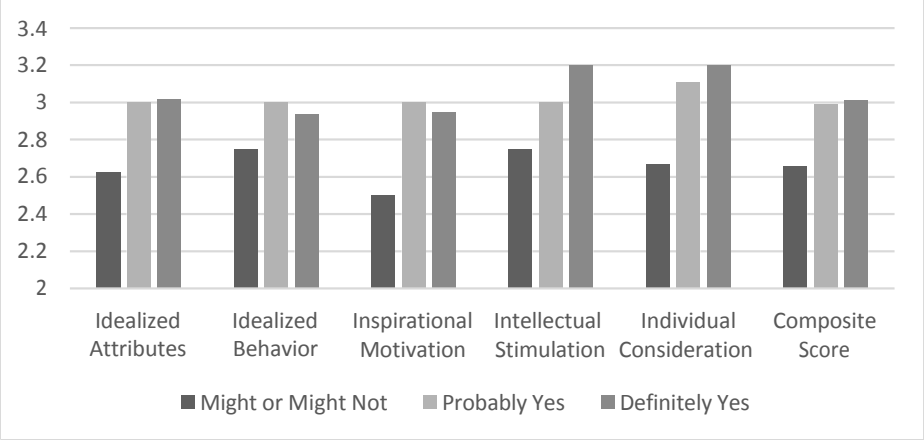

Figure 4.8. Is an extension specialist a leadership role and MLQ score. This chart illustrates the data collected for MLQ scores categorized by whether or not the individual believes that the position of extension specialist is a leadership role.
Note. No person responded with "Probably No" or "Definitely No"

Qualitative Data

A phenomenological approach to qualitative research was selected for this study since the strategy "Describes the meaning for several individuals of their lived experiences" (Creswell, 2007, p. 57). The common experiences were that of the shared trait of being an equine extension specialist at a land grant university. An understanding of how these individuals behave in leadership capacities in this common role required the use of not only quantitative data to have an idea about leadership approach and to describe professionals filling these roles, but it also called up on the use of qualitative data in order to have a deeper comprehension of their opinions of leadership and the shared challenges they faced. All survey participants were given the option to also participate in an interview. Out of 33 (n=33) respondents, nine volunteered to be

interviewed. All interviews were conducted one at a time, eight of the interviews were over the phone, while one was face to face. According to Creswell (2007) a recommendation for number of interviews for a phenomenology study is 3-10 individuals; this study fits well within range. Even though interview participants were not selected based on specific criteria, the resulting pool of people were diverse within the sample, allowing for a wide variety of perspectives. For example, the range of number of years within the cooperative extension system was from less than one year to over 40 years. The group included five doctorates, one Doctor of Veterinary Medicine, one person with a master's degree, and one person with a bachelor's degree currently working on a master's degree. The interview participants were assigned pseudonyms to ensure confidentiality.

Oral Interviews

The interview format was semi-structured based on a pre-established interview protocol (see Appendix E). This protocol outlined the topics to be addressed with each interview. The topics included background information similar to the demographic and professional questions asked on the survey, the leadership requirement of the specialist position, the manner in which leadership duties are connected to educational background, the principles of transformational leadership, how the structure of extension affects specialists and their ability to lead, and possible improvements to extension and/or additional skills necessary to perform the job.

Due to the semi-structured nature of the interviews, not all of the interviews followed the same order. As an interviewee mentioned a theme that was relevant, subsequent questions were asked at that time, as opposed to revisiting the theme later.

Therefore, when analyzing the data, common themes that emerged as well as questions that were asked to each person became clear codes and topics of focus (see Appendix G). Comments and phrases that fit within these codes were categorized using NVivo 12. Once all of the transcripts had been analyzed, it was realized that some themes were subcategories of larger themes. Therefore, the data was reorganized according to its relevance within a theme or code.

The first category was background information, which included many of the same questions that were asked on the survey. This category contained educational experience, their pathway to a position in extension, their distribution of efforts related to extension, and the number of years they have worked in extension. The next main category of themes was leadership. This category contained subgroups, which included; whether they believe that a specialist has a leadership role, what they believe their leadership style is, leadership skills they have acquired since they began extension work, where they obtained their leadership style, what type of training, if any, they had experienced, and how do they feel transformational leadership fits into extension.

The next category was challenges that the specialist experience. This category was not planned; however, the theme of challenges seemed to permeate through each interview. This category included subgrouping of expanded knowledge, funding, and dealing with people. People seemed to create a myriad of problems, in all different ways. This pointed out the importance of relationship building in transformational leadership. Finally, the organizational structure of extension was discussed. The subcategories included; modern extension and how it has or has not changed from its original intended

plan, an overall reduction in manpower, and the hierarchy of extension at each persons' respective institutions.

Background information. These questions began with the same questions that were on the demographic portion of the survey. The participants were asked to speak about the amount of time they have spent at their current position and extension in general, what their current distribution of responsibilities was, including the amount of time spent on youth programing, educational background, and how they came to hold a job in extension. This led to the question about whether or not participants felt like their education and prior experience prepared them for their current role.

All interviewees indicated that their extension appointment was greater than 50%. Most of the individuals had at least some involvement in youth programing. An interesting component to extension that some of the interviewees mentioned was the collaborative effort that most people in extension make. Even if youth programing was not actually in a person's job description most extension specialist will serve on some type of planning committee for youth events, write educational materials for youth, or serve as officials for youth competitions. One of the interviewees, Bobby, mentioned a specific incident where all state specialists were given the task of running the State Youth Hog Show, even though none of them had any prior experience. This type of collaboration within extension is common and is why most participants mentioned helping with youth programing regardless of actual job appointment.

All of the participants indicated that in some way, their education led to their work in extension, however some had experience in extension as graduate students, while others had more circuitous journeys into the field. Chris recalled that extension made

sense because it aligned with their interests, “I knew academia was what I wanted, and I never necessarily saw myself as a general lecturer, not that I wouldn’t have accepted that, but it just wasn’t what I was really interested in. I really enjoy kind of being in a research setting but I wasn’t super thrilled about being 100% research appointment that had the pressure of finding those big dollar grants all the time.” Dana indicated that her path to extension was a lot less planned, “I didn’t really have any solid plans, and then I read this posting for an extension specialist position when I was about to graduate and I thought ‘Well, I guess I could do that.”

After getting an idea about people’s backgrounds, participants were asked whether they felt that there was a disconnect between some of the position requirements of a specialist, e.g., a PhD in an Animal Science related field, and the actual tasks they are asked to complete, potentially resulting in people not being prepared for their job by educational background alone. Chris responded by saying “When I came here the youth component was really a stretch for me because I had never really done it before, and so much of it was already entrenched to a degree. I mean, did I get taught how to put on a horse show? No.”

When Alex was asked “When you were first hired for your job did you feel like you were prepared for all the responsibilities required of you?”, the response was a sharp, “Um, no,” followed by laughter indicating the disparity of her training and subsequent responsibilities. She went on to say, “Besides trying to keep the knowledge base up, with as much as my work from the 4-H group has become leadership and, and not that that shouldn’t be there, but instead of being equine content I’ve had to do a lot with committees…I’ve had to deal with that end of it more than what I feel like my job is

supposed to be. So that the client content has fallen by the wayside." Dana responded with "100%" when asked if they felt there was disconnect between the job requirements and the work required. Dana elaborated by indicating that she felt there were multiple stereotypes to overcome when starting the job, in addition to learning people skills and trying to adapt to a particular culture. She concluded by saying "I mean, I've spent eight years learning how to become a scientist, not how to become a manager."

This idea of a disconnect was probably best exemplified by Kelly's response, "It doesn't make sense, because why would they spend the money to hire somebody with any kind of advanced degree when like a really competent high school student could do it. And I mean that's exaggerated, but you know I think just a really organized person who understood and had good public speaking skills and just cared about stuff would be totally fine in a position like this." She went on to add at a different point in the interview, "Because again, my training is in horses not people, so you could argue that I'm not that well prepared to do this job, even though on paper I was." Gene used this example to illustrate disconnect in educational background and actual job duties, "Do I use my animal science degree? Yes, sometimes. Do I use more of my human cognitive behavior classes and conflict resolution? I would say that probably 95% of the time, and I actually use my animal science degree about 5% of the time."

Leadership. The leadership questions were prefaced by giving the participants the definition of leadership created by Rost (1991) which states, "Leadership is an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes" (p.102). This was provided so that there was a universal consensus on how to define leadership for the purpose of this study.

S***pecialist and leadership roles.*** Most of the respondents agreed that the position was a leadership role, some more emphatically than others. Alex replied with a simple "Yes", before going on to say that they are responsible for many committees and groups across the state and are called upon to lead and provide guidance for each of the groups. Bobby went into detail about coordinating all counties across their state, creating an 'identifiable program', putting on educational programs among other things, and finished by saying, "So, I think without a leadership role it would be impossible to create a program like that."

Dana took an opposing look on the matter. She responded by saying "Yes and no." She went on to comment that in the position she is in, there are numerous pre-existing programs that the interviewee is expected to facilitate and keep in operation. However, she believed that since the programs were not her creation, that little of what they do is actually leading. Fran, however, felt that it was the job of the specialist to not just maintain the status quo, "It is expected and anticipated that the specialist do play a role and are not just completely reactive, that we do take a role in being proactive and defining some program areas and delivering that education out to the state." They saw the major difference between a specialist exhibiting leadership qualities or not, was based on the person being proactive in encouraging change and disseminating new knowledge.

Personal leadership style. It was noticed when coding for leadership style that people's opinions of their own leadership style and how they approached leading people varied considerably. Bobby mentioned a relative who served in the military having a big influence on their life and therefore understanding the need for a transactional approach at times. An example of taking the transactional approach was given when the

interviewee had to overcome some prior complications within extension that occurred before she started working at the university. However, she acknowledged that her subsequent approach was to communicate very clearly to the people being led, what they were being asked to do, and perhaps even more importantly, what they were not expected to do. This leadership style was fair and up front, but had many transactional characteristics.

Erin took great pride in her collaborative skills, mentioning several projects where she brought specific people together based on individual talents and knowledge, in order to complete the task. Erin acknowledged the need to correct people if they were not contributing, however the overarching message was "I am a member of your team, and if we are in a public setting, you are going to get that credit, not me, because you make me look good."

Gene shared that they conscientiously led first and foremost with positivity and honesty. They gave an example of helping to guide youth to a career path, "You know, extension or the animal science industry is not for everybody. You know it takes a very special kind of person to do what we do really….I always lead them in a positive direction saying, yes, if you don't want to train [horses] or if you don't want to put on clinics or if you don't want to go into an extension field, let's find something else in the equine industry that I can lead you to."

A transformational approach was taken by Kelly. She responded by saying, "Let's see what we all agree on and let's steer everything in that direction, and let's have a common goal and figure out a way to achieve it." This was very similar to the leadership style of Chris, in describing their interactions with a current working group,

and stating, “It’s like, we got to let them talk, and then gently remind them of what the goal is. And then let them talk….They get to where they want to be because the goal is theirs anyway, they are just losing sight of it because they’re so excited about all this other stuff.”

Leadership skills acquired since taking your job. The most common response to this line of questioning was related to improved people skills, typically referring to soft skills that included communication, self-confidence, conflict resolution, and being assertive. Alex felt that her leadership skills improved from “Not wanting to be a leader at all to realizing what it takes to be a leader.” Alex went on to say she doesn’t know if her leadership style has changed, but “more my confidence and learning what I need to do to be in that position to be successful.”

The theme of confidence was reiterated by Bobby, “I’m more comfortable. And I’m more familiar with the system here, and I think I have a clear picture of what I’m trying to accomplish now than I did in my first three months I was here.” This was also expressed by Dana, “I’m more creative and more willing to take risks because I don’t really care about what they say.” More confidence was seen as a factor in accomplishing other goals as well. Jamie shared that encouraging more adult and youth partnerships was key. They said, “The more stuff you can get them to do for you, the better. And I think with experience comes a little bit more confidence I guess in that role. You can hand over the reins to something that you feel is very important but trusting that the others will get it done.”

Origin of personal leadership style. The overwhelming response to this question was “mentors”. For some interviewees the only way they were able to get started in their

position was by having a valuable mentor from whom they could seek guidance. Some people also attributed their leadership skills to parents, sports coaches, 4-H leaders, or other family members. However, the theme that showed up in multiple responses was that having a mentor in extension was the factor contributing the most to success. Five out of the nine respondents mentioned mentors as being the most helpful to acquiring leadership skills, or attributed a lack of a mentorship program as being one of the biggest shortcomings of a particular university.

Erin stressed the importance of having a good mentor by saying, "My mentor was a bigwig at the University level, and he taught me how to play the political game at the University." Fran attributed their involvement in extension to the exposure received from a mentor, "Mostly just as a grad student, having a mentor that valued putting people into those opportunities where we could actually help with extension." Not having a mentorship program was considered a detriment. Chris lamented the fact that their university did not have such program, "The other thing we really need to do for specialist, and we do a very poor job, is there is no mentoring of how you need to do what you need to do."

Leading into the next coding category, one participant compared mandatory trainings and mentorships by saying, "I really don't think any of those trainings are that helpful, but what I think is really helpful is good mentorship."

Training. A personal observation was that there were many opportunities for county agents to receive professional development and leadership training, but most of the time the specialist was either excluded or was an afterthought. The question about training was asked to the groups to gauge their feelings and whether they had attended

any formal training. Alex noted that there was an annual extension conference, in their state, that included some leadership training. When asked if they thought it was beneficial, it received a mixed review, "I think it's kind of a Catch-22, because they include all state specialists, all county people, all 4-H people, all in one conference, and for those of us who do both you could say that's great because you can participate in both things at the same time. But, we're not necessarily always faced with similar challenges in regard to our leadership. The challenges I have as state specialist are not often close to what they have at the county." Chris expressed discontent with the trainings by saying, "So you come and talk to us for 30 minutes and you know they say 'you need to do this'. You need to do what? Can we instead of wasting this 30 minutes, maybe we need to invest a week of 30 minutes?" This opinion was indicating that a one-time training was not helpful, and although they thought training would help, the training needed to be more intensive in order to accomplish anything.

Fran stated that their university had recently implemented some internet-based, optional leadership training, however she said she had a hard time with the internet training, and felt a face-to-face training would be more effective. While maintaining that training was needed by saying, "I would try to encourage our Dean to continue [with trainings], that's great, keep it up, but we need to make sure that we are building some of that very specific leadership training or some of this knowledge professional development into some of these extension gatherings, because making time to do it outside of that is truly tough."

Some trainings were seen as positive. Gene said, "We have a really good professional development program here, specifically for our specialists, for our

coordinators, and then for our county agents." Kelly also thought the trainings at their university were beneficial for the most part. "I did a management institute for academic professionals…it was actually really interesting," said Kelly. "I realized though that I also have no training in volunteer management, and that it's actually quite different than employee management, which I do have experience in." Kelly went on to describe a specific interaction that occurred at the management training, "I asked, what do I do if it's a volunteer that I've never met who I'm talking to on the phone [referring to conflict resolution]? And they were like, 'oh, you should never do that or be in that situation. Who is putting you in this situation?' And I was like, I don't know, the university?"

Transformational leadership and extension. Bobby had a good example of using transformational leadership to get agents involved in equine programing, "I tend to deliver programs in the transformational leadership style, there is a lot of building people up, empowerment, and for a number of reasons I feel like that is helpful." They went on to say, And so, a lot of it is almost like, not a sales pitch, but being able to tell somebody, here's why you can do this and why you're good at it, and here's why I'm here to help you." Chris agreed that transformational leadership approach was effective in extension. They described the leadership within their department as being transformational, "We have good leadership in this building, in this department. You don't get rewarded or punished…it's encouraging…'you're doing okay, keep going'…'Take control of your life'…And I remember because it happened to me, I mean something came down and I was like what the heck is the point, and [the leadership said] 'Do not let yourself be judged by somebody who doesn't know what you do.' And I was like 'well, that was a reward'."

Dana saw the importance of a transformational style of leadership in dealing with extension programing. She described an approach to building relationships in the industry, "I've learned the hard way that it's kind of like okay I'm going to plant the seed and show number one that I'm worth my salt…I feel like the influence part is an important part of the equation because you have to build a relationship so that they trust you. They have to buy into what you are, what you know. And once that happens you're capable of planting little seeds of 'hey, you might want to try this', and 'this is a way that I've been successful since I manage a farm outside of work." When the definition of transformational leadership was read to Erin, the response was, "Absolutely, that is absolutely my leadership style. And in all of my capacities I have surrounded myself with good people, found money for them, and let them do their job." They continued by saying, "The only way you're going to get a great team is to acknowledge the fact that you guys are great and you all bring an important thing to this table, and this is what our challenges are, how are we collectively going to fix it?"

Fran also thought transformational leadership was the best way to approach extension situations by saying, "Because I think that was one of the things that helps us as specialists when we come in especially if we've moved and come into a new position, because people are looking to kind of gauge not only just your general personality, but they are looking for that enthusiasm, that renewed 'let's go do this'."

The only opposition to transformational leadership was brought up by Kelly. She said that in an ideal situation, a transformational approach would be the preferred method, however, this had been attempted with a particular group, with very negative results. "There's something called the Horse Education Advisory Committee and it's just

like a group of volunteers and some agents, all the horse people basically, and technically I'm in charge of that. I say technically because the woman who had the position before me, her kind of way of doing stuff is still very much what people expect I think. But it's not how I would probably. The difference between leadership and management, I would say she was probably more of a manager, which is its own skill. And I think that's what they tend to respond to, so if I try to open it up and say, let's think of some goals, or did anyone have any ideas how we can change this, they're kind of like, 'What is she talking about, why don't you just tell us what to do?" Kelly explained.

Challenges. Through coding, several issues were brought up by the interviewees that could be considered challenges or obstacles they faced. As they were grouped, it was apparent that many of the people faced similar challenges that seemed to be universally experienced by people in this position. Below are the subcategories of the larger *Challenges* category.

Expanded knowledge. Two people mentioned the necessity in this line of work of always being on the cutting edge of new information in the equine industry as well as having a broad understanding of not only the science, but the business as well. Alex said, "I would say that what I really had to do is learn more about every topic that somebody is possibly going to ask me by via phone, or email, or when you go to an event." They went on to say that it doesn't matter what your current presentation is about you have to be prepared to answer any question under the sun regarding horses. Dana reiterated the difficulty of staying relevant in an ever changing industry. "I've got to stay relevant. And staying relevant is hard, you know?"

Funding. This theme seems to be cropping up everywhere, but specialist, particularly in the equine field, may even have more of a challenge than other groups. Many state and federal grant programs do not include horses in the category of livestock. Therefore, several United States Department of Agriculture, and other entity grants are often not available for horse research and programing. Bobby shared this opinion when asked what challenges were faced, "The first thing that comes to mind honestly is funding. Which I know is a kind of cliché answer, but I think that from what I can accomplish from a programmatic perspective would be greatly enhanced with graduate students, but extension here does not fund any specific assistantships. Which is fine, and I'm able to go out and find that money on its own but when horses are not really included in USDA funding, there is a lesser chance and it really knocks most of my grants out from being competitive."

Dana emphasized the importance of funding when asked about challenges, "I think finances are big." But, they also shared how they work around the lack of funding, "A lot of times I just do things at my own farm or I do it at somebody's place who just wants me to host it there, and we'll get volunteers to cook a supper or something." When asked about the biggest challenge Erin faced, the reply was, "Continually trying to find money for the programs that we want to conduct and the research we want to conduct." Kelly admitted that sometimes things have to be done as cheaply as possible, "Funding had decreased and so you know it costs money, we have to pay the time card employees to be here on the weekends to work the event or whatever, and stuff like that is always a hassle, so if it could be done in a cheaper way it's probably going to be done that way."

People. The topic of people came up multiple times in different forms. Sometimes this referred to the difficulty and lack of training in dealing with people in general. Sometimes the comments were directed at specific groups such as county agents, volunteers, or parents. Everyone seemed to enjoy or at least not have an issue with working with youth, however the over involved parents frequently caused problems. Chris put it this way, "I think at the end of the day the kids are great, sometimes our parents are a pain. The kids are great, and I think if we can let them learn and grow, they won't be as much [of a pain] when they become adults, because they're going to know how to act." This person went on to describe a particular incident where they were called to confront a parent for breaking a rule. The parent got angry until the specialist reminded the parent that they were the one that suggested that particular rule in the first place.

"Well, the problem with youth programing is that the parents are involved. If the adults were not there, that's why I always say we're going to put a big wall at the state horse show and parents are not allowed on the other side of that wall. Because it's not the kids, it's the parents," Erin said. Gene described the biggest challenge by saying, "Parents. I think the youth's parents are my biggest challenge. I think if you talk to almost any person who's in extension and they'll say what is the best part of your job and they'll say well it's the people, and what is the worst part, and they'll say well the people." They continued with, "We have a lot of parents, for lack of a better term, are more or less helicopter parents and they don't let their youth speak for themselves or go to events and try to expand their knowledge, the parents really I guess correct them. Which is kind of unfortunate."

Erin told about a time when these tensions rose to physical violence, "And thinking of the time that, yes, a 4-H volunteer at a horse judging contest came around behind me with his hands around my neck trying to choke me. And at the state horse show my significant other who is an announcer was upstairs in the booth announcing and saw two parents, two men attack me, and State Police had to be called. So, I'm like, did I have freaking training for this? What kind of abuse do we take, so yes just reflecting back on this not only do you not have a personal life because of all the work hours you're putting in but you know your life is on the line." This same interviewee shared other incidences of physical violence or threats of violence that they received, as well as a time with a youth attempted suicide while at 4-H camp. Their response was, "You're never trained to deal with that kind of stress and that kind of trauma both physical and mental."

Another problem that the specialist had in dealing with people in general, was the clientele's unwillingness to accept teaching. Dana said, "So if you try to say well research says, then they'll come back with, well did you use it? And if you say, well no…[the client will say] 'And then how do you know it works?' Because I trust these people!" Dana continued by adding, "Number one, I'm not a veterinarian, so my opinion doesn't really carry as much weight in the industry as I feel like it maybe should." Interviewee #6 shared the same sentiment, "You're trying to give really good science based unbiased advice, and you've got people that listen and make changes and you've got people that never call you back."

Additionally, is the added problem of relying on agents for the program to be successful. Bobby described this in great detail, "We had an agent who showed up to one of our youth events hammered from the night before, that was handled immediately and

then reported elsewhere." They went on to share, "But, we have in the past had agents that have been assigned to our event that are essentially useless. For example, one agent last year was terrified of horses yet she was assigned to the horse show, so it was kind of like, 'Well, what can I do with you because these animals are everywhere." Alex also had some frustration with county agents, "So we communicate by email directly to them [clientele] because we are finding out 4-H agents were not getting them the information."

Organizational structure of extension. As mentioned in the literature review, the original structure of extension was to have a topic expert reside at the university who could teach and give information to county agents who would in turn serve their community. It was suggested that this model has changed somewhat as it currently requires specialists to be more directly involved with their species-specific programs. This overarching category was further divided into modern extension format, reduction of manpower, and hierarchy of the organization.

Modern extension. Alex described how the format of extension has changed just from the time they began work, "When I started 14 years ago there were maybe five agents out of 72 that were interested in doing equine programing at all. Now there's probably two. By necessity most of it just comes directly out of my office versus the contact with the county agent." Dana shared a similar perspective, "I don't think that model [original] is effective anymore especially in our circumstances, just because our agents are so overwhelmed and they have so many different things that they have to take over. I feel like I get a heck of a lot less done if I rely on my agents to pass that information along." Fran said, "Now more and more of our agents are also expected to be more of a specialist in the sense…at this point to be a county agent within a state

within five years of their hiring, they need to have completed a master's degree." They went on to say, "I feel like it [original model] has to change. I feel like it has partly, again because these agents are expected to work together with specialists on things like grant proposals and projects and applied research."

One person agreed that the model had changed but said they liked the original model better. Gene said, "I do wish it was more on the older model, I think that we accomplished a lot more and there was a lot less, for lack of a better term, hands in the kitchen." On the other hand Kelly had a decent argument for the need for change, "I understand why that is the model [original] in some cases, like I can't go to every county, but I would worry that stuff would be getting lost in translation when it's reiterated by people who don't have the same background as you or maybe didn't totally get the take home point."

However, some states have made real efforts to adhere to the traditional model of extension. Bobby describes the state where they work, "Yes, we are still much a county-based system, and our administration has been unfaltering in their commitment to keep that as such." They continued with, "It was clear that that is kind of the dissemination of information [through agents]….But, for us, we are still very much the traditional system."

Reduction of manpower. With budget cuts, come the reduction of manpower, essentially fewer people doing more work. This challenge is not specific to extension, but it was repeatedly mentioned by participants. Alex spoke about how entire specialist positions have been taken away and now many of the programs are entirely ran by one person. They said, "Pretty much every state specialist other than the dairy office is an entity of one." In describing involvement in youth programing, Bobby said, "Formally

it's supposed to be 20% [youth programing], and I would say in reality it's probably closer to about 40%, just because of our current structure and the lack of youth educational information." Jamie had a positive, yet humorous viewpoint, "There's more and more to be done on fewer and fewer people, and it's draining, but it also seems to make for some job security as well!" Finally, Kelly had possibly the best example of functioning on a reduction of manpower, "The former [person at my] position, she was at 100% extension, this was her only job, and so to be honest, I asked straight out, 'so which duties do I not have to perform?' I mean it's 50% [extension for me] right? And I still haven't' gotten an answer."

Hierarchy of extension. As illustrated in Chapter 2 using the organizational chart for the University Of Kentucky College Of Agriculture, Food, and Environment, the hierarchy of the institution can be somewhat vague, especially when it involved extension. The question was asked as to whether or not these specialist felt the same way, or whether their university had clear channels of communication and supervision. Chris gave an initial concise response, "It is an insane model". They continued with, "I think the structure is a problem, because you're never sure who your boss is…How do we fit with agents? How do agents fit with us?" Dana also agreed that the structure was a problem, "You have no power over agents, but you're responsible for agent's conduct." They followed with an additional comment: "And honestly, the way I think about it is that the agents are really kind of more of my bosses than my bosses are…if they don't like you or if they don't support the program's that you are doing they will not send the emails out to inform people of your programs." This interviewee went on to describe a situation where agents claimed to not have any horse people in their area and therefore

did not need to send out the horse information, even though the biggest racetrack in the state resides in the middle of the city the agent is in.

When responding to the question about extension structure, Erin replied: "They have multiple masters", with 'they' meaning people in extension. However, this person also followed that comment with a possible solution, "I think that extension people need to become leaders at the University level and that's possible by serving on committees and getting recognition. You can't just stay in your county or in your office and have that political power." This comment was referencing the larger need for the administrators and the university as a whole to embrace extension so that some of these complications could be worked out. Gene had issues with the lack of a clear hierarchy, "There is definitely a lack of chain of command that you go through. You know nobody really knows who you're actually supposed to go to, or go to first. I'm sure somewhere there is a written statement or whatever that says you need to do A, B, C, and D, and follow through. But really, right now it's just whoever is here, please answer."

Summary

The first part of this chapter detailed the results obtained from the survey instrument used to collect demographic and professional data as well as measure transformational leadership from equine extension specialists from across the United States. A total of 33 responses were collected from a pool of 61 people for a response rate of 54%. Descriptive statistics of the respondents were reported in order to paint a picture of the group of people being studied. The average MLQ scores for the group for each leadership factor were then compared to a normed population reported in the Multifactor Leadership Questionnaire Manual and Sample Set (Bass & Avolio, 2004) to

see where this group ranked among a standardized group of people. Comparative means were then calculated in an attempt to find relationships between demographic and professional groups and MLQ scores. No relationship was deemed significant by the calculations.

The second part of the chapter relayed the interview responses that were coded for key elements of the research questions as well as reoccurring themes that emerged in multiple interviews. Of the 33 survey participants, 9 agreed to be interviewed. A semi-structured interview format was followed. The participants were all eager to answer questions and provided valuable insight into the role of equine extension specialist that included challenges faced, educational background, the pathway that led them to extension, perceived preparedness for the job, as well as feelings on transformational leadership and the organizational structure of the cooperative extension system.

CHAPTER 5

DISCUSSION

An examination of university-based cooperative extension programs and equine extension specialists reinforces the value of understanding how leadership is defined and enacted in the profession. Although leadership responsibilities are listed with every job requirement (University of New Hampshire, 2017), it remains an area that is neither well understood in practice nor informed by extant research findings. This study was designed to add to the knowledge base on leadership roles of extension specialists, leadership training, and to examine the needs of the individuals who currently fill those positions. The three primary purposes of this explanatory study were, (a) to examine the current transformational leadership characteristics among extension specialist by way of the Multifactor Leadership Questionnaire, (b) to determine the training and educational background that prepared professionals for this leadership style, and (c) to use a first person perspective to explore the position of extension specialist.

Four research questions guided the research study:

1. To what extent are transformational leadership characteristics exhibited by extension specialists in the area of equine science?
2. Can any differences in leadership characteristics be explained by demographic factors such as educational background, or years in the position?
3. What leadership skills and training do the individuals feel are necessary to perform the duties of this position?
4. How are leadership methods learned or developed among this population?

Although these research questions guided the study, additional data were collected. This expansion occurred during the qualitative data collection phase, as participants gave more information than had been anticipated. Consequently, these data added to the richness of the study and provided unique anecdotal insights into the nature of leadership of equine extension specialists. The following sections include an interpretation of findings, implications for practice, implications for future research, and a summary.

Interpretations of Findings

The four research questions provided an outline for reporting the research results from this study. The following sections are organized in this manner to answer the research questions.

Transformational Leadership Characteristics

The Five behavior dimensions of transformational leadership include; idealized influence-attributes, idealized influence-behavior, inspirational motivation, intellectual stimulation, and individual consideration (Bass& Riggio, 2006). These five factors identify a person's tendency to exhibit the behaviors that reflect transformational leadership. Equine specialists' self-rated scores for the idealized influence-attribute fell in the 40th percentile, according to the MLQ Manual (Avolio & Bass, 2004), which measures a leader's ability to influence a follower through intrinsic mannerisms (Bass & Riggio, 2006).

Idealized influence-behavior gauges a leader's ability to influence others through outward behaviors, such as making sure everyone in a group is committed to a collective

goal. For the category of idealized influence-behavior, the equine specialists scored in the 30th percentile. The behavior dimension of inspirational motivation, evidences a leader's tendency to provide meaning to their follower's work (Bass & Riggio, 2006); the equine specialist scores were in the 30th percentile. Their scores in the remaining two categories, intellectual stimulation and individualized consideration, measured their ability to stimulate innovative thinking, and respond to individual's needs, respectively (Bass & Riggio, 2006). For these attributes, scores were in the 40th percentile. Overall, these data suggest that this group of equine extension specialists tend to exhibit fewer transformational characteristics than 60-70% of the general public (Avolio & Bass, 2004).

Although this result was surprising, it could be explained in several ways. According to a study by Brown, Birnstihl, and Wheeler (1996), transformational leadership skills seem ideal for an extension type setting where little authority is actually exercised over followers. Consequently, leadership relies primarily on the specialist's ability to influence clientele not only to believe in the information being presented, but also to have confidence in the person presenting it. However, with educational backgrounds in bench sciences, and having little leadership training, the majority of specialists exhibited leadership characteristics that were not aligned with transformational leadership.

Leadership styles ranged from what might be described as exhibiting transactional and, to varying degrees, transformational leadership characteristics. All participants in the interviews acknowledged the need to take different approaches to leadership depending on the situation, but failed to give criteria of what would cause them to change

their approach. It also appeared that extension specialists were able to use transformational, transactional, or laissez-faire leadership (Bass & Riggio, 2006) depending on their confidence level when dealing with various groups of people. The more confident they were, the more likely attempts were made to build relationships and nurture intended change. However, transactional tactics or laissez-faire leadership was often used when the specialists lacked confidence. In these situations, specialists tended to take on a managerial role, or were inclined to avoid a situation altogether. Three interviewees noted issues with clientele either not accepting the information they were provided or being reluctant to work with the specialist because of prior experiences with extension specialists. Possibly, gender was an issue: One of the interviewees noted that she felt many people were used to extension specialists who were male and were therefore reluctant to embrace a female in the job. These issues seemed to cause a great deal of frustration on the part of the female specialists. They acknowledged that while a transformational style would be ideal, the clientele may have had existing gender bias that led to resistance to influence.

All interviewees indicated they saw how transformational leadership fit well within the cooperative extension system. However, some participants unfamiliar with transformational theory, did not fully understand the difference between rewards for good behavior (transactional), and verbal encouragement (transformational) (Bass & Riggio, 2006). Many pointed to the need to occasionally use a "transactional style", because they described efforts to provided encouragement and appreciation towards volunteers. This type of interaction with followers aligns more closely with transformational than transactional leadership characteristics (Burns, 1978). However, this may demonstrate

participants' lack of familiarity with these leadership concepts, paralleling the results of a previous study by Paxson et al. (1993).

Participants' verbal agreement with a transformational leadership approach, compared with low scores on the MLQ, presents an anomaly. Job descriptions for an extension specialist essentially establishes expectations that they use a transformational leadership approach in building relationships (Cornell University, 2017; Purdue University, 2017; University of New Hampshire, 2017). However, the MLQ scores for this group of specialists indicate that these people are less transformational than the average population (Avolio & Bass, 2004). This may also indicate discord in their own thinking. Although most participants agreed with the philosophy of transformational leadership, some even indicating it as their own style, the majority of study participants enacted a transactional leadership style. This dissonance became evident in challenges described by the interviewees and their MLQ score. It appears that many of the challenges experienced by equine extension specialists relate closely with relationships and interactions with people. Lack of interpersonal skills can be an obstacle for a leader who wishes to exhibit transformational characteristics.

While data pertaining to challenges faced by equine extension specialists were not originally the focus of the interviews, insights gained when transcribing and coding the interviews about perceived challenges proved valuable in understanding how individuals exhibited leadership styles. For example, many specialists acknowledged that a shift had occurred within the structure of extension that put them in direct contact with clientele. The traditional concept of a specialist informing agents who then relay the material to the clients is, for the most part, a thing of the past (National Research Council, 1995).

Currently, specialists are expected to build relationships with the people they serve requiring greater leadership acuity that enables them to interact, influence, and persuade clientele (Brown, et al., 1996). Although many scientists can take academic studies and rewrite them for practical applications, few possess the experience or training to directly interact with clients. The expectation for increased interaction with people appears to be a significant change in the profession.

Influence of Demographic Factors on Leadership

Demographic and professional background questions included on the survey were used to gain an understanding of the characteristics of equine extension specialists. The average length of time in the current position was 9.29 years, with an average amount of time in extension of 13.35 years. It is presumed that the difference in length of time for the two categories represents people who were promoted from an associate or county agent position to specialist or those who moved from one university to another. Since the question did not define what other positions in extension were held, it could also include time spent as a graduate student involved in extension projects.

With regard to the percent of time allocated to duties as part of their extension appointment, the range was noteworthy. Time spent on extension responsibilities ranged from 15% extension to a 100%. It should be noted that different universities place varied amounts of emphasis on extension. It is not known if the individuals who indicated a low percentage towards extension were in a university with multiple equine specialist or if the equine industry was relatively insignificant in that particular state. For example, since the horse industry is robust in Kentucky, the University of Kentucky employs two equine specialists, an equine associate, and an extension veterinarian who primarily work on the

equine species. However, in some states with a small population of horse owners, it would not be atypical to see a person as the sole equine lecturer in the animal science department, also have a small percentage of responsibilities allocated towards extension, and be the only equine specialist.

The question intended to gather information on the percent of the appointment allocated to youth extension programs needed better wording. On the survey the exact phrasing was, *What percent of your job duties involve youth extension?* In retrospect, it appears that this question may have been interpreted in two ways. Possibly, people responded with the percentage of total job duties, or else they responded by indicating a percentage of their extension appointment. Regardless of the interpretation, most equine extension specialists have at least some responsibilities relating to youth programing. Despite their possible interpretation and response to this questions, it was important to determine whether dealing with children had an effect on an individual's leadership style.

Since extension specialists traditionally hold faculty positions within colleges of agriculture (National Research Council, 1995), it was expected that the majority of participants would hold doctoral degrees (69.7%). If a doctoral degree is not required, then the position is usually not on a tenure track. However, three people responded that their highest degree obtained was a bachelor's degree, and one of the interview participants noted that they were currently working on a master's degree. Consequently, the possibility exists that the other two participants may be in similar situations. It was also not surprising that 78.8% of the respondents only had degrees in bench science fields. As noted in Chapters 1 and 2, it is typical for universities to mandate advanced

degrees in animal or veterinary science fields for specialists (Cornell University, 2017; Purdue University, 2017).

Once the data were analyzed for descriptive purposes, hypotheses were studied to look for relationships between demographic and professional information and transformational leadership scores obtained from the MLQ. Forty-eight separate hypotheses were tested based on eight demographic data sets; each tested against the five transformational dimensions plus the composite MLQ score, assuming that this statistical analysis would show a certain group's propensity to be more or less transformational. However, this statistical analysis was not as straight forward as intended. Due to the small sample size, many of the data sets were not normally distributed, therefore, a test for normality was performed for each set. Data sets that were normally distributed were then analyzed using ANOVA, while those that indicated the data set was not normally distributed were analyzed using a Kruskal-Wallis test (Morgan, 2004).

None of the null hypotheses were rejected, meaning that none of the demographic or professional categories seemed to have an effect on someone's transformational leadership characteristics. However, the small sample size may have contributed to this result. It would be premature to say the there was no relationship in any of the categories, since some of the data sets contained less than five entries. Therefore, it is difficult to draw any firm conclusions. Nonparametric tests, such as the Kruskal-Wallis test, can be subject to low power, thereby causing a Type I error due to small sample size (Sullivan, 2017).

The only test where a pattern was seen in the accompanying figure (Figure 4.8) was in the null hypothesis $H_0$43-$H_0$48 which reads, *No significant difference exists*

between whether people believe the role of an extension specialist is a leadership position and 5 dimensional MLQ factors and composite score. This alone does not indicate significance, however; the people who responded with *Maybe or Maybe Not* when asked if the position of extension specialist was a leadership role scored the lowest of the three groups on all five dimensions of transformational leadership including the composite score. The participants who responded with *Definitely Yes*, scored the highest of the three groups on all of the MLQ questions. Again, the tests indicated no significance, even though there was a visual trend on the figure.

Leadership Skills and Training

The people who participated in the interview portion of the study were extremely candid and supplied information in great detail. For the most part, the participants in the interview portion were enthusiastic and more than willing to divulge their feelings, experiences, and opinions.

For questions regarding skills necessary for the position, all specialists recognized the need for people skills, mentioning obvious items that included communication, organization, and conflict resolution. These interpersonal skills were also identified as necessary for extension work by Brown and colleagues (1996), as in the study conducted by Moore and Rudd (2004). It appeared as though the two most significant factors in the specialists' ability to improve these skills were gaining confidence and having access to a quality mentor. A significant finding from this portion of the interviews was that there was consensus that gaining confidence aided job performance and that mentorship programs should be seriously considered at universities and within the extension system. Some extension programs have acknowledged the benefit of mentorship programing and

have implemented formal programs, but many are focused at the county level (University of Kentucky, 2011).

The value of formal leadership training divided the group of specialists. Some felt that their experiences with leadership training was a waste of time; some indicated that if their training experiences had been formatted differently, tailored to a specific audience, or focused on a particular issue, they would have derived greater benefits. Others, however, had wonderful things to say about trainings they attended. It is evident that there is a wide range of opinions among participants on the quality and relevance of the training they received. These data suggest that university-based leadership or professional development training programs may be improved by focusing on a particular audience and its unique challenges. Several interviewees also indicated that if university-based training was required, then they would prefer a dedicated curriculum that fully addressed an issue, as opposed to a fleeting, one-time workshop that provided few practical solutions to problems faced.

Few people, much less bench-trained scientists, are taught how to deal with angry parents who are emotionally charged and feel as though their child has been wronged in some way. The experiences shared during the interviews gave a resounding cry that something needed to be done to assist extension specialists in their interactions with parents and the public. These specialists are responsible for influencing an industry, organizing competitions, and creating positive youth development opportunities, however, most only possess a degree in equine nutrition or a similar specialization (Cornell, University, 2017; Purdue University, 2017; University of New Hampshire,

2017). Data gathered as part of the qualitative portion of this study make a strong case for added training in the areas of relationship building and conflict resolution.

When interviews shifted to a focus on challenges faced in their respective positions, more information was obtained about needed skills within this field. Although the initial goal was to stick strictly to leadership topics and focus on gathering data to answer the four research questions, at the conclusion of the first interview, the participant recommended that a question be added about work related challenges. As a result, the question of main challenges experienced in the position was asked. This led to an additional eight and a half minutes of discussion. It was clear that this group appreciated someone taking an interest in their profession, and wanted to share their thoughts. The open-ended question allowed participants to express their feelings and frustrations. It also provided insight into the obstacles faced by specialists both related to the nature of leadership as well as situations where leadership skills were lacking. When coding the transcripts (Creswell, 2009), several themes emerged related to challenges that were shared among the specialists. Even though some of the themes may not be directly correlated to the original research questions, it was important to include the information so that future researchers may benefit from data gathered.

Learned and Developed Leadership Methods

It was encouraging that when asked if participants felt that the position of extension specialist was a leadership role, there were no responses of *Probably No* or *Definitely No*. Only two people indicated that they were uncertain. A majority of survey respondents (84.8%) thought that being a specialist was a leadership role. It should be noted that the survey instrument did not provide participants with a definition of

leadership. The interview data suggests that many of the participants were not familiar with leadership definitions and principles. When the following definition used in this study was read to the interview participants, "Leadership is an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes" (Rost, 1991, p. 102), all agreed that a specialist was a leadership position. This notion of extension personnel holding vague or competing definitions of leadership supports conclusions from earlier studies (Paxson et al., 1993).

It was not surprising that the percentage of people who had not received leadership training was almost 50%. During the interview, it was learned that some people took it upon themselves to seek out opportunities to participate in leadership training. Others expressed that they felt leadership training, for the most part, was not relevant based on negative personal experiences. Some participants spoke of general extension training, noting that they typically excluded specialists or catered to county agents. Several interviewees mentioned that they wished that their respective universities provided an orientation session when they began their job.

Of the people who had attended leadership training, 68% reported that it was part of coursework. It was assumed that coursework would indicate multiple sessions over a period of time, however, without providing a definition of *coursework*, participant responses were not clear. It was assumed that most of the training experiences would have been in the form of a clinic or workshop, as that is the typical format of professional development trainings at universities. However, only 43.8% reported having attended a clinic or workshop. Three people indicated that they had participated in a university leadership program, or LEAD21 (a national extension leadership program). One

interviewee described a university leadership program that was an intensive year long program that required many hours but was incentivized by a salary increase. Upon further discussion with extension personnel, it was found that the LEAD21 program is a selective experience through extension that requires a yearlong commitment as well, but involves people from across the country traveling to locations for experiential leadership workshops and projects. LEAD21 also requires people to provide their own funding. As the National Impact Study of Leadership Development in Extension (Michael, 1990) indicated that extension personnel believe it is their job to teach leadership skills to the clientele, an obvious paradox exists in that people with little or no leadership training are expected to teach others leadership skills.

For the most part, participants seemed to have mixed feelings about leadership training and their individual experiences. However, a theme that was repeated numerous times during the interview was mentorship. Many people referred to a particular person, usually within extension, who served as a mentor for them. The participants credited these mentors with how they acquired their leadership skills, and more importantly, how they navigated the extension system. All participants who mentioned a mentor held positive feelings towards that person and the overall idea of mentorship. Mentorship programs have been implemented at some universities, or in extension systems, however, most of the mentorships mentioned during the interview were unstructured.

Having a mentor who could not only aid in situational issues, but could also provide guidance with how to deal with extension structure and organization seemed to be the most effective way interview participants gained skills needed to perform their job. It was also reiterated by several of the participants that a significant hurdle to the

profession was the pressure to stay up-to-date on the most current information as well as broadening their own knowledge base. For example, a question from a person regarding plants that are toxic to horses is foreign to a person who completed a PhD. in equine reproduction, however, the state specialists are supposed to have an answer for any situation that may arise. Consequently, this may lead to a stressful situation and erode the confidence many participants reported as being central to performing their job.

Implications for Practice

The findings of this study support the notion that the role expectations for extension specialists is, in fact, a leadership position; however, few of these professionals are equipped with the necessary tools to perform that leadership role well. This gap in skill set could potentially be the cause for some of the conflict which specialists experienced between, agents, parents, and the other clientele with whom they interact. Based on the data collected in this study, three areas are worthy of focus: Leadership training, mentorships, and improved hiring process.

Leadership Training

Interview data suggest that equine specialists who participated in the study had a limited knowledge of leadership theory, which affirmed the findings reported by other authors (Paxson et al., 1993). As discussed previously, participants indicated that extension specialists might benefit from education and trainings tailored to issues experienced by specialists, which could consequently improve their capacity to act as transformational leaders. Bass and Riggio (2006) concluded that organizations may benefit from transformational leadership, a perspective supported by Brown et al. (1996).

Brown and colleagues argued that not only could transformational leadership benefit organizations in general but also specifically improve cooperative extension programs. In this regard, administrators and leaders may benefit from in-service education programs that enhance their capacity to understand and use transformational leadership techniques. Applying these skills in practice may also inspire followers, helping to create a shared vision, improve extension programs, and benefit clients. Bass and Riggio (2006) noted that transformational leadership provides opportunities for teamwork, development, recruitment, and improving the organization's image. Studies concur that when leaders participate in transformational leadership training, their organizations and programs benefit (Barling et al., 1996; Dvir et al., 2002; Kelloway et al., 2000). Higher levels of self-efficacy, a more collective approach, increased intellectual stimulation, were all reported results of transformational leadership training (Barling et al., 1996; Dvir, et al., 2002).

Mentorship Opportunities

Many participants in this study repeatedly indicated the importance of a mentor in helping them navigate the extension system and learn how to become a better leader. Although the University of Kentucky Cooperative Extension System has a mentorship program, it only serves county agents. Unfortunately, specialists are not involved in the program. However, this program indicates that the University administration values mentoring new people in the organization; and has the potential expand this program to a broader audience. Bass and Riggio (2006) not only reiterate the value of mentorship, but also observe, that transformational leaders were more likely to provide career development advice to mentees, create networking opportunities, and help buffer stress

among followers. Scholars also have found that followers of transformational leaders were more likely to seek feedback to aid in their development. Any mentorship program by itself would be an improvement over none at all, however, research seems to indicate that transformational leadership training for the mentors may have beneficial outcomes (Bass & Riggio, 2006).

Improved Hiring Process

It was evident that many of those participating in the interview portion of the study felt unprepared for their job. One interviewee even questioned the necessity of earning a higher degree to serve in this position. Another indicated that they only used their animal science training about 5% of the time, while the other 95% of the time involved interpersonal relationship work. This would indicate the need for an alignment between who universities are hiring to fill these positions and the actual skills needed to perform their assigned duties. This does not suggest that an advanced degree is not important, or that extensive knowledge of the subject matter is not a priority, but may suggest the need to place greater emphasis on interpersonal skills, communication, and experience in leading and organizing groups of people (Moore & Rudd, 2004). Comments of study participants indicate that they did not have the necessary knowledge, skills, and experience required to be successful when they began their jobs. Although many learned to adapt by acquiring the knowledge and developing skills, these circumstances suggest a very steep learning curve for equine extension specialists.

Implications for Future Research

The small sample size and the nonparametric nature of the data in the quantitative portion of the study gave rise to the potential of the occurrence of Type I errors. This problem could be easily remedied by increasing the sample population. In order to parallel the scope and parameters set in this study, future studies could include data from similar species specific extension specialists, including those of beef cattle, dairy cattle, swine, and poultry specializations. This could be the next step in testing the hypothesis. Further studies may also include; forage specialists, forestry specialists, and soil specialists as a way to compare animal-based agriculture to plant-based agriculture specialists. An assumption was made in this study that those in bench science fields would see a bigger disconnect in leadership skills and training for the position than other extension specialists such as specialists for volunteerism or specialist for youth development. It would be interesting to see if these assumptions hold true or if there is a lack of leadership skills across extension specialists.

The group of specialists who took part in the qualitative portion of the study were eager to participate and engage, and had a desire to learn more about others in their position. All of the participants asked to see the results of the study once completed. Possibly, this indicates not only an interest but also a need for further research with this group of people. A promising line of future inquiry may involve equine specialists participating in an experimental study in which they undergo leadership training that includes pre and post leadership assessments of specialists, supervisors, and clients.

Summary

The purpose of this study was to understand the leadership skills of equine extension specialists that were necessary to be successful in their position. Transformational leadership theory was found to be a suitable framework for examining leadership in university-based extension (Brown et al., 1996); because the nature of their work focusses less on exercising direct authority over others than on influencing people to adopt new methods that may improve agriculture (Bass & Riggio, 2006). This and other studies suggest the need for cooperative extension not only to model transformational leadership practices, but also to teach leadership to those in the profession as well as to their constituents (Sandmann & Vanderberg, 1995). Brown, Birnstihl, and Wheeler (1996) concluded that since the landscape of extension is changing from its origin, and that most of the work is now completed by work-groups and teams, extension leadership may benefit from a transformational leadership style to enhance effectiveness. It is hoped that findings from this study may contribute to the implementation of policies or procedures within cooperative extension systems, particularly those related to leadership for the benefit of extension specialists. It is evident that a thorough analysis of hiring practices should be made to ensure that the position requirements are aligned with the needs of the job responsibilities. And, since mentoring appeared to be the most effective way people learned about actual job responsibilities and acquired the skills to be successful, mentorship programs may be an appropriate part of future training programs.

APPENDIX A

COVER LETTER

Dear Equine Extension Personnel,

As the Equine Extension Associate at the University of Kentucky I am inviting you to participate in this unique leadership study of equine extension specialist and state personnel at land grant universities. During recent years there has been a growing interest in in understanding, defining, and helping to find solutions to common problems facing leaders in cooperative extension programs. Although county-level educations and extension administrators have been studied extensively, there are currently no studies that address the demands and leadership characteristics of extension specialists. It is the goal of this study to explore the leadership responsibilities of extension specialists across the nation and to identify their background, leadership characteristics, and leadership training of individuals currently serving in these positions.

This survey will consist of basic demographic and background questions, followed by the Multifactor Leadership Questionnaire (MLQ). The MLQ is considered to be the gold standard in evaluating transformational or transactional leadership characteristics. The MLQ is made up of 45 questions, with the entire survey taking approximately 15 minutes to complete. A second component to this study is a voluntary individual interview. There will be an option to give your email address at the end of the survey if you would be willing to participate in the interview as well, however you are in no way obligated to participate in the interview if you fill out the survey. There will be no personal identifying information attached to your survey response. If you choose to participate in the interview phase you will have the option to be re-directed to a separate survey that will collect your contact information, leaving no identifying information on your survey responses. Data collected in this survey will be used as the initial quantitative phase of my PhD dissertation.

If you choose to participate in the survey, please follow the link bellow.

(Hyperlink to Qualtrics survey)

Thank you for your time, if you have any questions about this study or are in anyway not satisfied with the manner in which this study is being conducted you may contact me directly at amy.lawyer@uky.edu.

Sincerely,

K. Amy Lawyer, MS PhD Candidate

APPENDIX B

SURVEY CONSENT

To Equine Extension Specialists:

Thank you for your interest in this study. This survey will serve as part of my dissertation research for my PhD in Educational Leadership at the University of Kentucky. This research is being supervised by my advisor, Dr. Lars Bjork, Professor Educational Leadership, University of Kentucky.

Although you will not get personal benefit from taking part in this research study, your responses may help us understand more about the leadership characteristics of specialists, the need for training in certain areas, and how universities can help specialist be more productive and effective.

We hope to receive competed questionnaires from about 65 people, so your answers are important to us. Of course, you have a choice about whether or not to complete the survey, but if you do participate, you are free to skip any questions or discontinue at any time.

The survey will take about 15 minutes to complete. At the end of the survey your will be asked if you are willing to also participate in a personal interview. This is entirely optional and will have no bearing on your survey responses. If you are willing to also participate in the interview portion, you will be asked to enter your email address. You will then receive an email at a later date to schedule the interview. You may discontinue your participation in both the survey and/or the interview at any time.

There are no known risks to participating in this study. Your response to the survey is anonymous which means no names will appear or be used on research documents, or be used in presentations or publications. The research team will not know that any information you provided came from you. If you choose to participate in the interview portion, a link will appear once your survey is completed that will redirect you to a different survey form to enter your contact information. That information is in no way linked to your survey responses.

Please be aware, while we make every effort to safeguard your data once received from the online survey company, given the nature of online surveys, as with anything involving the Internet, we can never guarantee the confidentiality of the data while still on the survey company's servers, or while en route to either them or us. It is also possible the raw data collected for research purposes will be used for marketing or reporting purposes by the survey/data gathering company after the research is concluded, depending on the company's Terms of Service and Privacy policies.

If you have questions about the study, please feel free to ask; my contact information is given below. If you have complaints, suggestions, or questions about your rights as a research volunteer, contact the staff in the University of Kentucky Office of Research Integrity at 859-257-9428 or toll-free at 1-866-400-9428.

Thank you in advance for your assistance with this important project.

Sincerely,

Amy Lawyer

Educational Leadership Studies/College of Education PhD Candidate
Equine Extension Associate/Animal & Food Sciences
University of Kentucky
859-257-7501
Amy.lawyer@uky.edu

APPENDIX C

QUALTRICS SURVEY

Default Question Block

What is your highest level of education completed?

- ◯ Bachelor's degree
- ◯ Master's degree
- ◯ Doctoral degree
- ◯ Other

In what field of study did you earn your degrees? (Please check all that apply)

- ☐ Animal Science
- ☐ Agricultural Economics
- ☐ Agricultural Education
- ☐ Biomedical Science
- ☐ Biology
- ☐ Business
- ☐ Chemistry
- ☐ Education
- ☐ Veterinary Science
- ☐ Other

How many years have you worked in your current position?

How many years have you worked within the cooperative extension system?

[___]

Whal percent oryour job duties arc allocated towards extension?

10 20 30 40 50 60 70 80 90 100

Pcrcnt C)l1cnsion

What percent of your job duties involve youth extension?

10 20 30 40 50 60 70 80 90 100

Percent you1h extension

Do you consider the role of extension specialist to be a leadership position?

Q Definitely yes
Q Probably yes
Q Might or might not
Q Probably not
Q Definitely not

Ilave you ever received any fonnal leadership training?

Q **Yes**
Q J\o

If you answered yes to having received leadership training. please indicate the fonnat of the training. (Please check all that apply)

Q **Course \Work**
Q Clinic/workshops
Q Books/readings

APPENDIX D

MLQ PERMISSION LETTER

Multifactor Leadership Questionnaire™

Instrument (Leader and Rater Form)

and Scoring Guide
(Form 5X-Short)

by Bruce Avolio and Bernard Bass

Published by Mind Garden, Inc.

info@mindgarden.com
www.mindgarden.com

APPENDIX E

INTERVIEW PROTOCOL

Interview Script/Protocol:

The following is a format, timeline, and foundation questions to be used during the interview portion of the study.

1) **Acquiring participants:**

   These interviews will be held with current equine extension specialists. This is a group of people that I personally work with on a daily basis, therefore I feel that most will be willing to participate, as well as have a personal interest in the outcomes of the study. Since the nature of the position of equine extension specialist lends itself for only having one or two equine specialists per state, most of the interviews will be conducted via phone interview.

2) **Building rapport and understanding:**

   The interview will begin with a brief explanation of the purpose of the study and specifically the interview portion that will reflect the comments made in the introductory letter.

3) **Background information:**

   Questions will begin with gathering information similar to the demographic portion of the survey.
   How many years have you been at your current position? Have you held other positions within cooperative extension? What percent of your current distribution of responsibilities is allocated to extension? What percent is allocated to youth extension? Please tell me about your educational background. How has your educational background influenced your career path?

4) **Leadership questioning:**

   Leadership has been defined in many different ways, one of the more widely accepted definitions is that by Rost which states "Leadership is an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes". Using this definition, would you describe your current job as a leadership role? Can you describe some ways in which your job requires you to provide leadership?

   When you were first hired for your job, did you feel prepared for all of your responsibilities? Which components of the job were you least prepared for and why?

5) **Connecting leadership and preparedness:**

   How did your educational background prepare you for this job? What are some skills or knowledge you wish you had learned prior to you beginning your career in extension?

   What skills have you improved or acquired since beginning your job in extension? How have you gained these skills? (ie. Trainings, books, trial and error). Has your leadership style changed since you first began your job?

6) **Theoreticalframework:**

Many studies have indicated that a transformational approach to leadership bestfits the intension of extension programing. Transformational leadership consists of inspiring and stimulating followers to achieve outcomes as well as develop their own leadership capacity. This theory of leadership is usuallyjuxtaposed with transactional leadership, which consists of give and take relationships, i.e.rewards and punishments based onperformance. Which do you feel is most relevant to leading extension programing and why?

(Give information concerning transformational and transactional leadership theory when necessary to probe participant to expand answer in more depth.)

7) **The structure of extension:**

The origin of the specialist position was to have a person well versed in a specific area of agriculture who teaches extension agents content, and for them to then relay the information to their clientele. How has this model changed, how is information disseminated in today's extension programs? Is this method effective? Are there ways it could be improved?

8) **Improvements:**

Are trainings and continuing education opportunities offered and encouraged at your university? (If trainings are offered, ask what type, how often, if theperson utilizes them, and if there is something that would make them attend more) (If trainings are not offered, do you feel that trainings would help you perform yourjob better, what type, what could be done to promote attendance).

Do you feel that the organizational structure of extension is efficient? What would you change, 1/anything to improve the use of resources, or to expand the reach and scope of extension programing?

APPENDIX F

INTERVIEW CONSENT

Consent to Participate in a Research Study

KEY INFORMATION FOR
A MIXED METHODOLOGICAL ANALYSIS OF LEADERSHIP STYLES OF STATE EXTENSION SPECIALIST

You are being invited to take part in a research study about leadership styles and characteristics of state equine extension specialists.

WHAT IS THE PURPOSE, PROCEDURES, AND DURATION OF THIS STUDY?

The purpose of this study is to create a knowledge base for understanding leadership practices of specialist so that universities can better prepare and equip them for the challenges of the position. This portion of the study will consist individual interviews to gain a better understanding of the leadership roles of specialist. By doing this study, we hope to learn where there are needs for training and assistance, and how to better support specialist in their work. Your participation in this research will last about 45 minutes.

WHAT ARE REASONS YOU MIGHT CHOOSE TO VOLUNTEER FOR THIS STUDY?

Specialist would volunteer for this study if they are interested in contributing to finding solutions to improve cooperative extension programs and to explore ways universities and administration can support growing in leadership positions.

WHAT ARE REASONS YOU MIGHT CHOOSE NOT TO VOLUNTEER FOR THIS STUDY?

There are no apparent risks tied to participating in this study.

DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any services, benefits, or rights you would normally have if you choose not to volunteer.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS OR CONCERNS?

The person in charge of this study is Amy Lawyer of the University of Kentucky, Department of Educational Leadership and Animal & Food Sciences. If you have questions, suggestions, or concerns regarding this study or you want to withdraw from the study her contact information is:

Amy Lawyer

amy.lawyer@uky.edu

859-257-7501

If you have any questions, suggestions or concerns about your rights as a volunteer in this research, contact staff in the University of Kentucky (UK) Office of Research Integrity (ORI) between the business hours of 8am and 5pm EST, Monday-Friday at 859-257-9428 or toll free at 1-866-400-9428.

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DETAILED CONSENT:

ARE THERE REASONS WHY YOU WOULD NOT QUALIFY FOR THIS STUDY?

The study is looking at equine extension specialist, or people at land grant universities with an equine extension appointment. People who do not meet this criteria should not participate.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

The interview portion of this study will be conducted via phone. Each participate will have one individual phone interview lasting approximately 45 minutes.

WHAT WILL YOU BE ASKED TO DO?

During the phone interview you will be asked a series of semi-structured open-ended questions concerning your job, responsibilities of your job, your opinion of your leadership role, and other related questions.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

There are no known risks associated with participation in this study.

WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?

You will not get any personal benefit from taking part in this study.

WHAT WILL IT COST YOU TO PARTICIPATE?

There are no costs associated with taking part in this study.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?

When we write about or share the results from the study, we will write about the combined information. We will keep your name and other identifying information private.

We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. All voice recordings will be destroyed after transcription. The transcribed interviews will be kept on a private, pass-word protected computer.

You should know that there are some circumstances in which we may have to show your information to other people. For example, the law may require us to share your information with authorities if you report information about a child being abused or if you pose a danger to yourself or someone else.

We may be required to show information which identifies you to people who need to be sure we have done the research correctly; these would be people from such organizations as the University of Kentucky.

CAN YOU CHOOSE TO WITHDRAW FROM THE STUDY EARLY?

You can choose to leave the study at any time. You will not be treated differently if you decide to stop taking part in the study.

If you choose to leave the study early, data collected until that point will remain in the study database and may not be removed.

WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?

You will not receive any rewards or payment for taking part in the study.

WHAT IF NEW INFORMATION IS LEARNED DURING THE STUDY THAT MIGHT AFFECT YOUR DECISION TO PARTICIPATE?

You will be informed if the investigators learn new information that could change your mind about staying in the study. You may be asked to sign a new informed consent form if the information is provided to you after you have joined the study.

WILL YOU BE GIVEN INDIVIDUAL RESULTS FROM THE RESEARCH TESTS/SURVEYS?

Generally, tests/surveys done for research purposes are not meant to provide clinical information/diagnoses. Because the investigators may not have access to information that identifies you, the research findings will not be provided to you.

WHAT ELSE DO YOU NEED TO KNOW?

If you volunteer to take part in this study, you will be one of about 65 people nationally to do so.

The PI of this study is Amy Lawyer. She is being guided in this research by Dr. Lars Bjork. There may be other people on the research team assisting at different times during the study.

FUTURE USE OF YOUR INFORMATION:

Identifiable information such as your name, clinical record number, or date of birth may be removed from the information collected in this study. After removal, the information may be used for future research or shared with other researchers without your additional informed consent.

In addition to the main study, you are being asked to allow us to keep and use your information for future research that involves leadership in cooperative extension services.

APPENDIX G

CODING CATEGORIES FOR QUALITATIVE ANALYSIS

- Background information-education, years in position, pathway to extension, allocation of extension duties.
- Leadership
    - Specialists and leadership responsibilities
    - Personal leadership style
    - Leadership skills acquired since starting work
    - How were leadership styles learned
    - Training
    - Transformational leadership and extension
- Challenges
    - Expanded knowledge
    - Funding
    - People
- Organizational Structure of Extension
    - Modern extension
    - Reduction of manpower
    - Hierarchy of extension

APPENDIX H
IRB APPROVAL LETTER

University of Kentucky Office of Research Integrity
IRB, ADRC

Initial Review

Approval Ends:	IRB Number:
2/19/2019	43178

TO: Katharine Lawyer, Master's
Animal and Food Sciences
PI phone #: 8592577501

PI email: amy.lawyer@uky.edu

FROM: Chairperson/Vice Chairperson
Non Medical Institutional Review Board (IRB)

SUBJECT: Approval of Protocol

DATE: 2/20/2018

On 2/20/2018, the Non Medical Institutional Review Board approved your protocol entitled:

A mixed methodological analysis of leadership styles of state extension specialists

Approval is effective from 2/20/2018 until 2/19/2019 and extends to any consent/assent form, cover letter, and/or phone script. If applicable, the IRB approved consent/assent document(s) to be used when enrolling subjects can be found in the "All Attachments" menu item of your E-IRB application. [Note, subjects can only be enrolled using consent/assent forms which have a valid "IRB Approval" stamp unless special waiver has been obtained from the IRB.] Prior to the end of this period, you will be sent a Continuation Review Report Form which must be completed and submitted to the Office of Research Integrity so that the protocol can be reviewed and approved for the next period.

In implementing the research activities, you are responsible for complying with IRB decisions, conditions and requirements. The research procedures should be implemented as approved in the IRB protocol. It is the principal investigator's responsibility to ensure any changes planned for the research are submitted for review and approval by the IRB prior to implementation. Protocol changes made without prior IRB approval to eliminate apparent hazards to the subject(s) should be reported in writing immediately to the IRB. Furthermore, discontinuing a study or completion of a study is considered a change in the protocol's status and therefore the IRB should be promptly notified in writing.

For information describing investigator responsibilities after obtaining IRB approval, download and read the document "PI Guidance to Responsibilities, Qualifications, Records and Documentation of Human Subjects Research" available in the online Office of Research Integrity's IRB Survival Handbook. Additional information regarding IRB review, federal regulations, and institutional policies may be found through ORI's web site. If you have questions, need additional information, or would like a paper copy of the above mentioned document, contact the Office of Research Integrity at 859-257-9428.

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EDUCATION

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Master of Science in Animal Science
Concentration in Equine Reproduction
Thesis: The possible replication and transmission of the modified-live Equine Viral Arteritis vaccine virus to non-vaccinated animals

University of Louisville, 2006
Bachelors of Science in Business Administration with Honors
Concentration in Equine Business with a Marketing Minor

PROFESSIONAL EXPERIENCE

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Equine Extension Associate
Lecturer: ASC 310 Equine Anatomy 2013-2018

University of Louisville 2009-2011
Sr. Program Coordinator-Outreach Equine Industry Program
Lecturer: Equine Science 101

Hagyard Equine Medical Institute 2009
Veterinary Technician

Three Chimneys Farm 2008-2009
Broodmare Foreman

Colorado State University 2006-2008
Teaching/Graduate Assistant

AWARDS AND HONORS

2nd Place Swift Seminar, Competition for Original Graduate Research, Colorado State University

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PUBLICATIONS

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Saddle Up Safely, Pasture Safety Manual, Contributing Author

Horse Smarts: An Equine Reference and Youth Activity Guide. American Youth Horse Council, Contributing Author