

Examination of Leadership and 4-H Experiences Among 4-H Participants

by

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Abstract

The future of the nation, and the future of world civilization, will soon rest in the hands of today's youth (Kleon & Rinhart, 1998). Youth organizations such as Boy Scouts, Girl Scouts, and 4-H provide lifelong leadership and life skills that youth of all ages will continue to use throughout their life. Leadership and positive youth development both play a significant role in youth development organizations throughout the world. Life skills are learned competencies known to support individuals in leading productive and rewarding lives, and include decision-making, accepting differences, teamwork, self-responsibility, cooperation, and communication (Culen, Jordan, Maass, Place, & Wilken, 2006).

The purpose of this study was to examine the relationship between 4-H members whose project area is 4-H Leadership and Citizenship, and the following three binary pairs: rural verses urban counties, elementary/middle school verses high school, and in-school verses out-of-school participation. Knowing more about the 4-H members' leadership qualities will enhance current research on youth 4-H experience. For this study, the research sample included 2,110 active 4-H members ranging from ages 9–18; 913 male and 1,197 female 4-H members; 165 high school 4-H members and 1,946 elementary/middle school students; and 1,681 in-school 4-H members and 430 out-of-school 4-H members. The ethnicity of the group included 1,227 White and 885 persons of color. The sample also included 833 urban 4-H members and 1,278 rural 4-H members.

Based on the results of this study, over a three-year time frame, there was a statistically significant difference among 4-H members who reside in urban counties verses 4-H members who resides in rural counties. The data revealed that 4-H members who reside in urban counties demonstrated more of the 4-H Essential Elements skills (Belonging, Independence, Generosity

and Mastery) than youth in rural counties. Results also indicated that over a three-year time frame, there was a statistically significant difference among 4-H members who were in high school verses those who were in elementary/middle school. The data revealed high school 4-H members consistently demonstrated stronger 4-H Essential Elements involvement than elementary/middle school members. The data likewise indicated a statistically significant difference among 4-H members who were involved in in-school verses out-of-school 4-H programs. The data specified 4-H members who were involved in in-school 4-H programs had higher 4-H Essential Elements leadership skills than out-of-school 4-H members.

In summary, the results indicated 4-H members who participated in Leadership and Citizenship programs with the connections to the following three binary pairs: rural verses urban counties, elementary/middle school verses high school and in-school verses out-of-school participation, all had different outcomes than expected. Within this study, the life skills and 4-H Essential Elements (Belonging, Independence, Generosity and Mastery) gained by the youth allow them to prosper and grow into outstanding 4-H Alumni as well as productive adults.

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CHAPTER I. INTRODUCTION

The youth of today will be the leaders of tomorrow. It is recognized, refrained, and often invoked to validate investment in youth leadership training. Increasingly, however, organizations, agencies, and political institutions are recognizing the role youth can play, not in the future but at the present moment, as leaders and change agents (Conner & Strobel, 2007). One of the most persistent issues facing the United States and its youth organizations today is how to best facilitate the development and prepare youth to be leaders for the future (Kleon & Rinehart, 1998). The future of the nation, and the future of world civilization, will soon rest in the hands of today's youth (Kleon & Rinehart, 1998). Youth organizations such as Boy Scouts, Girl Scouts, and 4-H provide lifelong leadership and life skills that youth of all ages will continue to use throughout their lives. Leadership and positive youth development both play a significant role in youth development organizations throughout the world. Life skills are learned competencies known to support individuals with leading productive and rewarding lives along with decision-making, accepting differences, teamwork, self-responsibility, cooperation, and communication (Culen, Jordan, Maass, Place, & Wilken, 2006). Leadership means different things to different people as there are numerous definitions. Ciulla (2004) discussed leadership from an ethical perspective stating: "Leadership is not a person or a position. It is a complex moral relationship between people, based on trust, obligation, commitment, emotion, and a shared vision of the good" (p. 23).

Norman and Jordan (2018) stated that,

Positive youth development programs identify skills within the five targeted competency areas that are appropriate to the age of youth in the program and offer experiences to teach these skills. Because skills are best learned through practice, many experiences that

teach or reinforce skills must be provided. Mastery of any skill requires opportunities to try, make mistakes, and try again (p.1).

Through the variety of youth-serving organizations throughout the United States 4-H has become the nation's largest youth development program and one of the largest in the world. 4-H provides meaningful opportunities for young people to reach their complete potential through experiential learning and engagement strategies. Participation in 4-H has the potential to increase positive outcomes for young people and build assets in key areas identified through Search Institute research (Benson, Scales, Hamilton, & Sesma, 2006).

The following paragraph provides background information on the creation and early development of 4-H programs in the U.S. (National 4-H Council ,2018). 4-H is the gateway for young people to learn leadership skills and revolutionized how youth connected to practical, hands-on learning experiences outside the classroom. A. B. Graham started a youth program in Clark County, Ohio, in 1902, which is considered the birth of 4-H in the United States. The first club was called "The Tomato Club" or the "Corn Growing Club". T. A. Erickson of Douglas County, Minnesota, started local agricultural after-school clubs and fairs that same year. Jessie Field Shambaugh developed the clover pin with an H on each leaf in 1910, and by 1912 they were called 4-H clubs. The four Hs represent Head, Heart, Hands, and Health. The passage of the Smith-Lever Act in 1914 created the Cooperative Extension System at USDA and nationalized 4-H. By 1924, 4-H clubs were formed and the clover emblem was adopted.

The Cooperative Extension System is a partnership of the National Institute of Food and Agriculture (NIFA) within the U.S. Department of Agriculture (USDA), more than 100 land-grant universities, and more than 3,000 county offices across the nation. Cooperative Extension combines the expertise and resources of federal, state, and local governments and is designed to

meet the need for research, knowledge and educational programs. Today, 4-H serves youth in rural, urban, and suburban communities in every state across the nation, tackling the nation's top issues, from global food security, climate change and sustainable energy, to childhood obesity and food safety. 4-H out-of-school programming, in-school enrichment programs, clubs and camps offer a wide variety of STEM opportunities – from agricultural and animal sciences to rocketry, robotics, environmental protection and computer science – to improve the nation's ability to compete in key scientific fields and take on the leading challenges of the 21st century. 4-H is delivered by Cooperative Extension—a community of more than 100 public universities across the nation that provide experiences where young people learn by doing. Children complete hands-on projects in areas such as health, science, agriculture, and citizenship in a positive environment where they receive guidance from adult mentors and are encouraged to take on proactive leadership roles. Youth experience 4-H in every county or parish in the country through in-school, after-school programs, school and community clubs as well 4-H camps (National 4-H Council, 2018).

The 4-H program has strived to provide youth opportunities to practice leadership skills through leadership conferences and meaningful youth leadership roles. Leadership development is entrenched in an extensive framework of positive youth development (PYD). The National Research Council and Institute of Medicine (2002) suggested that engaging teenagers in leadership activities that promote increased agency, a sense of belonging, and development of competence promotes physical, intellectual, psychological, and social development. Martz, Mincemoyer, and McNeely (2009) suggested that 4-H has provided positive youth development through the eight essential elements often summarized into four key concepts known as the BIG M. The BIG M concepts include belonging, independence, generosity, and

mastery. The BIG M are considered necessary attributes of youth programs striving to create environments conducive to optimizing youth development. Martz et al. (2009) stated “The four concepts known as the BIG M were introduced by Brendtro, Broklenleg and Van Bockern (2002) as a part of the Native American philosophy of rearing children.”

Definitions for the BIG M attributes are Belonging: In Native American and First Nations cultures, significance was nurtured in communities as belonging; Independence: Power in Western culture was based on dominance, but in tribal tradition it meant respecting the right for independence; Generosity: Competence in traditional cultures is ensured by guaranteed opportunity for mastery; and finally Mastery: virtue was reflected in the pre-eminent value of generosity. The central goal in Native American child-rearing is to teach the importance of being generous and unselfish (Brendton, Brokenley, & Bockern, 2002).

Reclaiming Youth Network (2007) stated “Anthropologists have long known that Native Americans reared courageous, respectful children without harsh coercive controls” (para.1). All the same, Europeans colonizing North America tried to civilize indigenous children in punitive boarding schools, unaware that Natives possessed a sophisticated philosophy that treated children with deep respect. These traditional values are confirmed by contemporary child research and are consistent with findings of Stanley Coopersmith who identified four foundations for self-worth: significance, competence, power, and virtue.

The Tuft *4-H Study of Positive Youth Development* researched and evaluated positive youth development for more than 7,000 adolescents across diverse backgrounds in 42 U.S. states. Researchers from the Tuft study concluded that when the strengths of youth are aligned with family, school, and community throughout adolescence, positive youth development will occur (Lerner & Lerner, 2013). The study revealed that positive involvement in quality youth

development programs such as 4-H leads to positive outcomes for youth called the 5 “C’s” — competence, confidence, connection, character and caring. A 6th C, contribution, is the culmination of all five. The 4-H formula of success is positive 4-H youth development plus outcomes which equals positive impact within the five “C’s” (See Figure 1).

4-H FORMULA FOR SUCCESS

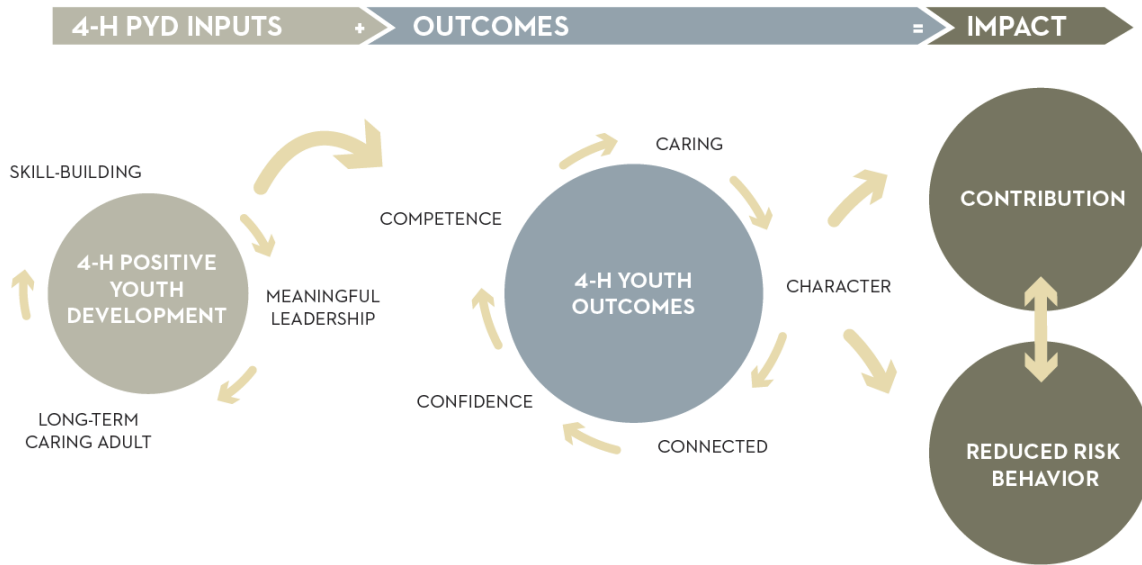


Figure 1. Lerner & Lerner, 2013 4-H Formula for Success

The life skills along with positive youth development within diverse 4-H programs prepares youth to transition to adulthood and the workforce. Norman and Jordan (2018) defined life skills as competencies that assist people in functioning well in the environments in which they live. Youth that participate in 4-H throughout the world have the opportunity to obtain the necessary life skills through a variety of 4-H programs such as health, science, agriculture, and citizenship. 4-H uses the framework based on the four Hs which are Head, Heart, Hands, and Health.

The 4-H pledge emphasizes life skills within 4-H (See Figures 2 and 3). Head, Heart, Hands, and Health are the four Hs that represent the four values that 4-H members work on

through fun and engaging programs (National 4-H Council, 2018). For over 116 years, youth from all over the United States have recited the 4-H pledge as follows: I pledge my head to clearer thinking, my heart to greater loyalty, my hands to larger service, and my health to better living, for my club, my community, my country, and my world.

Life Skills Developed Through 4-H

The following chart lists the specific skills that lead to mastery in the four categories and eight subcategories of the 4-H Targeting Life Skills Model.

<p>HEAD <i>Thinking</i> Learning to learn Decision-making Problem solving Critical thinking Service learning</p> <p>Managing Goal setting Planning/organizing Wise use of resources Keeping Records Resiliency</p>	<p>HEART <i>Relating</i> Communications Cooperation Social Skills Conflict Resolution Accepting Differences</p> <p>Caring Concern for others Empathy Sharing Nurturing relationships</p>	<p>HANDS <i>Giving</i> Community Service-volunteering Leadership Responsible Contribution to group</p> <p>Working Marketable/useful skills Teamwork Self-motivation</p>	<p>HEALTH <i>Living</i> Healthy life-style choices Stress Management Disease Prevention Personal Safety</p> <p>Being Self Esteem Self responsibility Character Managing feelings Self Discipline</p>
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Figure 2. Norman and Jordan (2018) 4-H Targeting Life Skills Model

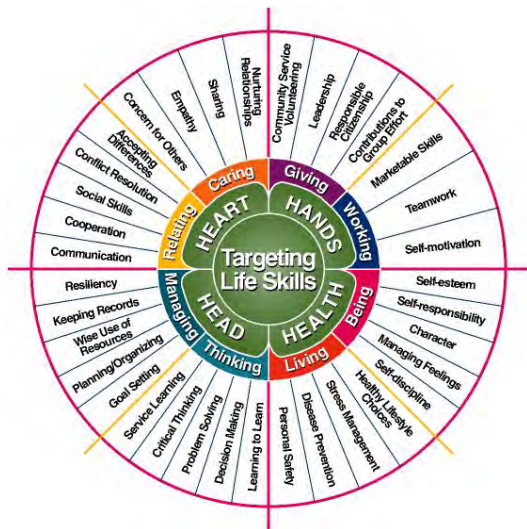


Figure 3. Targeting Life Skills Model for 4-H

Statement of the Problem

The future of the nation, and the future of world civilization, will soon rest in the hands of today's youth (Kleon & Rinhart, 1998). Today's young adults, those between 16 and 26, lack leadership skills to be effective in the work force and in the community (Shepherd 2019). Several youth organizations are providing leadership and life skills programs to enhance the development of leaders for the future. 4-H is one of many youth organizations that is paving the way for future leaders. In addition, the limited number of studies in this area indicates a need for further research in leadership and the youth 4-H experience in Alabama. Thus, a study on the leadership and 4-H experience used by 4-H youth council members is considered timely.

Purpose of the Study

The purpose of this study is to examine the relationship between 4-H members whose project area is 4-H Leadership and Citizenship and the following three binary pairs: rural verses urban counties, elementary/middle school verses high school and in-school verses out-of-school participation. The future of the nation, and the future of world civilization, will soon rest in the hands of today's youth (Kleon & Rinhart, 1998). Youth today are lacking life skills and leadership skills. Several youth organizations are providing leadership and life skills programs to enhance the development of leaders for the future. 4-H is one of the youth organizations that is paving the way for future leaders.

4-H is one of the largest youth organizations in the nation with more than seven million youth. Within Alabama, the 4-H program is growing tremendously, but the growth of the leadership programs is lacking involvement. In the past three years, Alabama 4-H has implemented 4-H Youth Council within every county in the state. The county 4-H Youth Council provides members with an opportunity to develop enhanced citizenship and leadership

skills, serve as local 4-H ambassadors, function as youth-client advisors, and leverage 4-H programming with their peers. The youth council program is growing, but the connection between the youth 4-H experience and leadership is missing. This study will help examine the relationship of leadership and Alabama 4-H youth council members along with examining the relationship between a traditional 4-H program model and the 4-H Essential Elements.

The National 4-H Curriculum Collection is designed to engage youth in learning opportunities that promote positive youth development. In 4-H, the critical components of a successful learning experience are a sense of Belonging, Independence, Generosity, and Mastery. Across each curriculum, the 4-H Essential Elements (Belonging, Independence, Generosity, and Mastery) are embedded through the learning experience (Kress, 2004).

Research Questions

The following research questions were used in this study:

1. What are the differences, if any between 4-H members who participate in Leadership and Citizenship programs in rural verses urban counties?
2. What are the differences, if any between 4-H members who participate in Leadership and Citizenship programs in middle school verses high school?
3. What are the differences, if any between 4-H members who participate in Leadership and Citizenship Programs in in-school verses out of school programs?

Significance of the Study

4-H is one of the largest youth organization in the nation with more than seven million youth. Within Alabama, the 4-H program is growing tremendously, but the growth of the leadership programs is lacking involvement. Within the past three years, Alabama 4-H has implemented 4-H Youth Council within every county in the state. The youth council program is

growing, but the connection between the youth 4-H experience and leadership is missing. The research will increase 4-H Youth Council participation in Alabama 4-H and increase the leadership experience in 4-H.

Assumptions of the Study

Several assumptions were made prior to the study. First, it was assumed that 4-H Youth Council members will openly express their concerns about their leadership experience and 4-H, and that members will answer to the best of their ability when responding to the 4-H Leadership and Citizenship survey. Secondly, it is assumed that data collection administrators performed in a manner that does not include bias in the results. Finally, it is assumed that the results of the 4-H Leadership and Citizenship surveys will be valid and reliable.

Limitations of the Study

The findings were limited to 4-H youth that were a part of the 4-H Youth Council in their community. Future research could include findings of all youth in Alabama 4-H. Another limitation was the populations' size as well as the 4-H reporting information being imported manually in the 4HOnline system.

Definitions of Terms

1. 4-H and Youth Development – a learning-by-doing education program for boys and girls in kindergarten through 12th grade. It can involve “any kid any time anywhere” through one-time events, camps, organized 4-H clubs (with officers and membership cards), or activities.
2. 4-H Essential Elements- The essential elements of a 4-H experience are the “best practices” that help staff and volunteers address the four basic developmental needs of youth - belonging, independence, generosity, and mastery. These elements were derived from the work of the National 4-H Impact Design Implementation Team, who

- reviewed the basic and applied research on characteristics of effective programs for youth development.
3. Contribution – Youth positively impacting self, family, community, and institutions of civil society.
 4. Leadership – the action of leading a group of people or an organization. Leadership is also a relational process combining ability (knowledge, skills, and talents) with authority (voice, influence, and decision-making power) to positively influence and impact diverse individuals, organizations, and communities (MacNeil, 2006).
 5. Youth Council – The county youth council is a committee appointed by the county 4-H team. The youth council consists of active 4-H members between the ages of 10–18 years old who have at least one year of 4-H experience. The county 4-H Youth Council provides members with an opportunity to develop enhanced citizenship and leadership skills, serve as local 4-H ambassadors, function as youth-client advisors, and leverage 4-H programming with their peers.
 6. National 4-H Council – National 4-H Council supports national and state 4-H programs with a focus on fundraising, brand management, communications, and legal and fiduciary services. The Council also oversees the National 4-H Conference Center, and the National 4-H Supply Service, the authorized agent for items bearing the 4-H Name and Emblem.
 7. United States Department of Agriculture – The United States Department of Agriculture (USDA) is the federal agency that proposes programs and implements policies and regulations related to American farming, forestry, ranching, food quality, and nutrition.

8. Alabama Cooperative Extension – operates as the primary outreach organization for the land-grant functions of Alabama A&M and Auburn Universities.
9. Positive youth development – an intentional, pro-social approach that engages youth within their communities, schools, organizations, peer groups, and families in a manner that is productive and constructive; recognizes, utilizes, and enhances youths' strengths; and promotes positive outcomes for young people by providing opportunities, fostering positive relationships, and furnishing the support needed to build on their leadership strengths (Cassels, Nestor, & Post, 2015).
10. Positive Youth Development – Youth thriving and healthy development measured in the 4-H Study as competence, confidence, character, connection, and caring,
11. 4HOnline – a fully integrated management system that brings together all levels of the 4-H experience. Whether it is a member logging in to manage his or her record, a club leader printing mailing labels, or a county agent approving a member's enrollment, 4HOnline brings the 4-H community together and keeps everyone involved.
12. Essential elements – critical to effective youth development programs. These elements help youth become competent, contributing citizens. Created from traditional and applied research characteristics that contribute to positive youth development, they help professionals and volunteers who work with youth view the whole young person, rather than focus on a single aspect of life or development. These elements focus on social, physical, and emotional well-being which are necessary for positive youth development. Each individual element is important. However, it is the combination of these elements that create an environment that

promotes positive youth development. It is important to be aware of these elements when designing activities because they help professionals and volunteers ensure that experiences, programs, and activities intentionally offer opportunities for hands-on, experiential learning in environments where youth feel safe, can master new skills and abilities, and develop the confidence they need to contribute to their local communities in a positive way.

13. Life Skills – those competencies that assist people in functioning well in the environments in which they live.

14. Five “C’s” – competence, confidence, connection, character and caring.

Competence – a positive view of one’s action in domain-specific areas including the social and academic domains

Confidence – an internal sense of overall positive self-worth, identity, and feelings about one’s physical appearance.

Connection – involves a positive bond with people and institutions that are reflected in healthy, bidirectional exchanges between the individual and peers, family, school, and community in which both parties contribute to the relationship.

Character – involves respect for societal and cultural rules, possession of standards for correct behaviors a sense of right, wrong, and integrity.

Caring – the degree of sympathy and empathy, the degree to which participants feel sorry for the distress of others.

(Lerner & Lerner, 2013).

14. Rural County – Rural areas have low population density and large amounts of undeveloped land. According to the Census Bureau, rural is defined as the area that

encompasses all population, housing, and territory not included within an urban area (United States Census Bureau, 2010). The United States Census Bureau labels counties as rural and urban based on Census data. The explanation of rural and urban counties was identified by the demographics of the United States Census Bureau.

15. Urban County – An urban area is the region surrounding a city. Most inhabitants of urban areas have nonagricultural jobs. Urban areas are very developed, meaning there is a density of human structures such as houses, commercial buildings, roads, bridges, and railways. “Urban area” can refer to towns, cities, and suburbs. An urban area includes the city itself, as well as the surrounding areas. The 2010 Census Bureau suggested an urban area will comprise a densely settled core of census tracts and/or census blocks that meet minimum population density requirements, along with adjacent territory containing non-residential urban land uses as well as territory with low population density included to link outlying densely settled territory with the densely settled core (United States Census Bureau, 2010).

Organization of the Study

Chapter 1 introduced the study, the problem, its purpose, research questions, significance, assumptions, limitations, and definitions of terms. Chapter 2 consists of a literature review of youth leadership, leadership within 4-H and Youth Development and youth organizations. Chapter 3 reports the procedures utilized in this study, data collection, and data analysis of the research. The findings of the study are presented in Chapter 4. Chapter 5 includes a summary of the study, conclusions, implications, and recommendations for future studies.

CHAPTER II: LITERATURE REVIEW

In this chapter, research in the area of Alabama Cooperative Extension System, 4-H programs, Alabama 4-H, Essential Elements of 4-H Youth Development and Leadership within youth programs will be reviewed. This chapter will provide details supporting the relationship of leadership programs and Alabama 4-H Youth Council members along with examining the relationship between a traditional 4-H model and the 4-H Essential Elements.

Purpose of the Study

The purpose of this study is to examine the relationship between 4-H members whose project area is 4-H Leadership and Citizenship and the following three binary pairs: rural verses urban counties, elementary/middle school verses high school and in-school verses out-of-school participation. The future of the nation, and the future of world civilization, will soon rest in the hands of today's youth (Kleon & Rinhart, 1998). Youth today are lacking life skills and leadership skills. Several youth organizations are providing leadership and life skills programs to enhance the development of leaders for the future. 4-H is one of the youth organizations that is paving the way for future leaders.

4-H is one of the largest youth organizations in the nation with more than seven million youth. Within Alabama, the 4-H program is growing tremendously, but the growth of the leadership programs is lacking involvement. In the past three years, Alabama 4-H has implemented 4-H Youth Council within every county in the state. The county 4-H Youth Council provides members with an opportunity to develop enhanced citizenship and leadership skills, serve as local 4-H ambassadors, function as youth-client advisors, and leverage 4-H programming with their peers. The youth council program is growing, but the connection between the youth 4-H experience and leadership is missing. This study will help examine the

relationship of leadership and Alabama 4-H youth council members along with examining the relationship between a traditional 4-H program model and the 4-H Essential Elements.

The National 4-H Curriculum Collection is designed to engage youth in learning opportunities that promote positive youth development. In 4-H, the critical components of a successful learning experience are a sense of Belonging, Independence, Generosity, and Mastery. Across each curriculum, the 4-H Essential Elements (Belonging, Independence, Generosity, and Mastery) are embedded through the learning experience (Kress, 2004).

Research Questions

1. What are the differences, if any between 4-H members who participate in Leadership and Citizenship programs in rural versus urban counties?
2. What are the differences, if any between 4-H members who participate in Leadership and Citizenship programs in middle school versus high school?
3. What are the differences, if any between 4-H members who participate in Leadership and Citizenship Programs in in-school versus out-of-school programs?

Adult Education

According to Ruth Kotinsky (1933), adult education must look into schooling as one of the common experiences of its students, which has helped to make them what they are—there are exclamations on every side on how complacent, passive, comparatively, uneducable, submissive, anti-socially minded and vocationally, civically and personally ineffective the average adult is. (p.117)

Furthermore, the incremental growth of the adult learner's population has significant implications in a variety of areas included but not limited to economic development, occupational trends, governmental policy, educational programs, and practice (Galbraith, 2004).

Karagianni and Montgomery (2018) suggested it is useful to examine leadership during childhood and adolescence as what occurs during the developmental years can have an impact on the leadership behaviors exhibited later in the workplace as an adult. Additionally, adolescent leaders are more likely to take up managerial positions as adults, and leadership skills developed early on can have a positive impact on future wages (Kuhn & Weinberger, 2005). Sarver, Johnson, and Verma (2000) indicated that youth organizations, especially 4-H programs, help prepare youth to be contributing members of society, provide family support, and satisfy developmental needs of youth.

MacNeil (2006) suggested one's leadership may be influenced by processes of human development; it is also influenced by one's individual pathway of leadership development. MacNeil (2006) also believed that a teenager may have more significant leadership experience than a thirty-nine-year old. MacNeil (2006) suggested that developmental stage alone cannot serve as an indicator or guideline for youth development. Cooper, Healy, and Simpson (1994) reported that students who possess leadership positions in student organizations achieve better; than non-leaders on scales such as educational participation and career development.

Finally, Kotinsky (1933) emphasized that Adult Education would be liberated through the quickening of persons *growing into adulthood*. Kotinsky (1933) "Reciprocally as a traditionalist and untrammelled arrival in the general education field it can point a better conception of education for the young" (pg. 47). Ruth Kotinsky summed up adult education and youth best by saying "Making school into life, and life into education summarizes the way toward eradicating the break between youth and adulthood" (Kotinsky, 1933, p. 45).

The next section will highlight youth development as it relates to youth programming within 4-H and other youth organizations. In addition, how youth engage within their communities, schools, organizations, and peer groups will be explored.

Youth Development

Youth development has been defined as “the process of growing up and developing one’s capacities in positive ways” (Walker & Dunham, 1994). Research studies reveal essential criteria that need to be present to meet the needs of youth. These criteria then become the essential elements for quality programs for youth to attain positive outcomes leading to less risky behavior, helping youth to be fully prepared to enter into society (Astroth, 2001; Brendtro, Brokenleg, & VanBockern, 1992; Eccles, & Gootman, 2002; Minnesota Extension Service, 1996; National 4-H Impact Assessment, 2001; Pittman, 2003; Search Institute, 2004). In order to understand and grasp the concept of youth development, it is important to define youth development. Roth and Brooks-Gunn (2003) defined youth development as the philosophy guiding youth development programs – that resilience and competency building are central to helping young people navigate adolescence in healthy ways and it provides the groundwork for an exciting and promising array of programs for adolescents. According to the United States Department of Agriculture (2018), positive youth development is a well-researched, intentional, pro-social systematic approach. Similarly, Youth Government (2008), a partnership of 12 federal departments and agencies that support youth, created a definition of positive youth development. Positive Youth Development is an envision, pro-social approach that engages youth within their communities, school, organizations, peer groups, and families in a manner that is productive and constructive; recognizes, utilizes, and enhances youth’s strengths; and promotes positive outcomes for young people by providing opportunities, fostering positive relationships, and

furnishing the support needed to build on their leadership strengths (Youth Government, 2018). Furthermore, positive youth development is intentional the combination of positive experiences, positive relationships, and positive environments (youth.gov, n.d.). Krinke and Scott (2018) stated, “When programs are able to include positive experiences, positive relationships and positive environments, youth are more likely to stay involved. As a result, youth experience the essential elements that serve as the foundation of positive youth development programming” (Krinke & Scott, 2018, para.1). Other studies indicate that positive youth development is best delivered through experiences that help young people develop competencies in social, ethical, emotional, physical, and cognitive domains (Eccles & Gootman; Roth & Brooks-Gunn, 2003). Delgado (2002) suggested the true meaning of youth development can be achieved only through partnerships, particularly those that have youth increasing critical and decision-making roles. Lerner (2005) suggested the 4-H Study of Positive Youth Development is a longitudinal investment that seeks to identify the individual and ecological bases of healthy and positive development among diverse adolescents.

Hayes (1982) applied Kohlberg’s theory of moral development to youth development consists of three stages used to evaluate an individual’s choices in moral conflict. The first stage, preconventional, is when moral judgment is based on fear of punishment. Those in this stage do not consider the effects of their behavior on others, only discerning right from wrong based on the consequences to them (Anderson, Bruce, Jones, & Flowers, 2015). In the next stage, conventional, individuals desire traditionalism and approval, while maintaining a respect for authority. In the last stage, postconventional, individuals consider moral judgments based on a philosophical view of society and begin the process of self-actualization. It is only in this last

stage that youth make decisions based on universal ethics and with the thought of all people in mind (Anderson, Bruce, Jones, & Flowers, 2015).

In the same way, a study titled *The Impact of Livestock Exhibition on Youth Leadership Life Skill Development: Youth Agricultural Organizations* provided input on how youth are influenced by their environment, and suggested positive activities give them a way to be successful by allowing them to positively contribute to their family, out-of-school activities, neighborhoods, and communities (Lerner, 2007). Lerner indicated when the strengths of youth are nurtured, they can develop life skills and apply the life skills to other contexts (Lerner et al., 2008). However, the path to positive youth development is the Five C's: competence, confidence, connection, character, and caring. If all five of these skills of youth development are met in an individual, then a sixth C will develop—contribution (Lerner, 2007).

In addition, Lerner (2007) specified there are three ways to promote the Five C's of positive youth development within adolescents. Lerner (2007) stated, “Youth must be: given the opportunity to have sustained, positive interactions with adults; involved in structured activities that nurture the development of life skills; given the opportunity to become leaders in their local communities.”

Norman and Jordan (2018) suggested that positive youth development programs identify the skills within the four targeted competency areas that are appropriate to the age of the youth in the program and offer experiences to teach these skills. 4-H focuses on the four youth competencies of Head, Heart, Hands and Health:

- (1) Head: knowledge, reasoning, and creativity competencies,
- (2) Heart: personal/social competencies relating connection between two people that is wholesome and meaningful to both,

(3) Hands: vocational/citizenship competencies of giving: providing, supplying, or causing to happen social responsibility,

(4) Health: physical competencies of living: acting or behaving; the manner or style of daily life.

Overall, the positive elements embedded in youth development programming prepare youth to be successful, contributing adults in society (Martz, Mincemoyer, & McNeely, 2016). To help professionals understand the importance of positive development, a team of evaluators from the National 4-H Impact Design Implementation Team adopted a list of eight essential elements critical for positive youth development (Martz et al., 2016). These eight elements serve as the framework for developing effective programs, as they help create optimal environments for youth development. Each of the eight elements can be categorized into one of four key concepts: belonging, independence, generosity and mastery (Kress, 2004). By intentionally including these four key concepts in all 4-H programming, opportunities and environments are created that provide positive youth development (Martz et al., 2016).

The next section will address 4-H Essential Elements and the impact the essential elements have on 4-H. Essential elements are critical for youth development programs. The essential elements also help youth become competent and contributing citizens.

Essential Elements of 4-H

The foundation of 4-H programming is engrained in four essential elements including belonging, independence, generosity, and mastery (National 4-H Headquarters, 2009). The National 4-H Organization suggests that a sense of belonging may be the single most powerful positive ingredient programs can add to the lives of children and youth. Youth need to know they are cared about and accepted by others. The essential element, independence, allows youth the

opportunity to gain valuable life skills such as personal responsibility and discipline. Mastery invokes not only skill and knowledge acquisition, but self-efficacy to take positive risks and accept challenges to focus on self-improvement. Generosity is most often used as a synonym for service: however, generosity goes beyond service to include the development of personal values such as compassion and tolerance (4-H National Headquarters, 2009).

According to a study conducted by Baldwin (2010), Belonging, Independence, Generosity, and Mastery are foundational program features or key concepts that guide our work with youth in 4-H. They are the cornerstones. As researchers continue to study 4-H and other youth development programs, more key ideas will emerge, but for now we are focusing on BIG M and the 8 Essential Elements defining BIG-M (Baldwin, 2010). Belonging, Independence, Generosity, and Mastery are intervening concepts that apply to a lot of different things that youth are involved in daily. For example, mastery is not just related to completing and exhibiting a project. Also, generosity is not just participating in a service project. While these activities are important, BIG-M focuses youth attention on more than just activities and our common practices. According to a study conducted by Baldwin (2010), the key concepts have implications for creating meaningful learning experiences for youth. The BIG M applies to how people do the following:

- How people talk and coach youth
- How people focus in- club meetings and activities
- How people help youth express their interests
- How people help youth relate to each other
- How people create opportunities for youth

National 4-H promotes eight essential elements as the cornerstone for positive youth development principles. Nevertheless, youth development professionals still need guidance on applying the concepts. The article *Promoting the Essential Elements of 4-H Youth Development through an Experiential Learning Model* offers insight on how youth can be engaged in learning through the essential elements, which are often categorized under four key concepts: belonging, independence, generosity and mastery (Kress, 2004). Figure 4 illustrates how the elements are associated with the four concepts.



Figure 4. How the Elements are Associated with The Four Concepts (Kress, 2004).

In order to achieve experiences that aid in positive development, it is essential for youth to be engaged learners. Researchers and practitioners have identified core competencies for quality programming (Eccles & Gootman, 2002; National 4-H Impact Assessment, 2001; Search Institute, 2004). In addition, Experiential Learning Theory has been applied to a variety of contexts. Although a number of models exist, the common foundational theme is that the human experience aids significantly in the learning process (Dewey, 1938; Kolb, 1984). However, it is

critical to note that learning is enriched when educators provide learning environments that allow reflection and application (Enfield, Schmitt-McQuitty, & Smith, 2007).

“Experiential learning” is a buzzword within Extension. The educational philosophy of the 4-H program is “learning by doing,” and agriculture and natural resources. As well as family and consumer sciences, community and economic development program areas have adopted similar educational methods (National 4-H Headquarters, 2006). No matter the state, no matter the program area, Cooperative Extension vows to educate through experience.

“Learning theories assist in understanding the ways in which people learn and process information (United States Department of Agriculture & National Institute of Food and Agriculture, 2016, para 2)”. Experiential learning is a development during which young people learn skills and develop knowledge through real-world, hands-on experiences. For instance, experiential learning is one of many ways young people learn and grow.

The *Experiential Learning Model* study found that since the early 1900s, 4-H was influenced by the learning theory of John Dewey (1900, 1938) who advocated for grounding learning in real-world experiences within the local community. Dewey’s theory identified the natural interests of children that influence the process of learning such as the following: a constructive instinct to make and shape real-world materials; an inquiry or investigation instinct – do and see what happens; a social instinct and the desire for conversation and communication; an artistic instinct that grows out of communicating and constructing (Experiential Learning Model). Within the Experiential Learning Model study, Dewey attempted to create a connection between the home and school to engage children in actual practice. Furthermore, it is apparent to see the influence of Dewey’s theory of learning in 4-H’s experiential approach to hands-on, real-world learning that takes place in the community.

Experiential learning has been around nearly as long as Cooperative Extension. Seaman Knapp, considered the father of Cooperative Extension, wrote, “What a man hears, he may doubt; what he sees, he may possibly doubt; but what he does himself, he cannot doubt” (International Adult & Continuing Education Hall of Fame, 1997). This idea evolved into a conceptual model Cooperative Extension would continue to use to transfer agricultural knowledge and research. The Smith-Lever Act of 1914 brought Extension to life and outlined a two-fold mission: “developing practical applications of research knowledge and giving instruction and practical demonstrations of existing or improved practices or technology in agriculture” (United States Department of Agriculture, 2008, para 2).

The *Experiential Learning Model* study informed readers that as 4-H advanced toward a youth development focus in 4-H project work during the 1980s, 4-H curriculum began to be exhibited after David Kolb’s (1984) theory of experiential learning. In Kolb’s model, the experiential learning process begins with a concrete experience, followed by learner reflection. The apprentice processes the learning experience and applies the knowledge or skills in new situations. The study *Experiential Learning Model* suggested the experiential learning model was adapted for 4-H youth development. The model has three basic phases: an experience or problem situation; a reflective phase in which the learner examines the experience and creates learning from his/her reflection; and an application phase in which the new knowledge or skills are applied to a new problem or situation (See Figure 5).



Figure 5. An Outline of the Experiential Learning Model

In a like manner, the development of such skills through experiential learning is the cornerstone of 4-H youth programming. 4-H programming intervenes in a youth's life before the seeds of irresponsible behavior are planted. As Ladewig and Thomas (1987) discovered, skills and attitudes formed during youth carry over into adulthood. 4-H's affiliation with land grant universities and the opportunities provided for parent-child interaction make it a unique youth development program. The next paragraphs focus on Alabama Cooperative Extension System and its transformation throughout the years along with the relationship Alabama Cooperative Extension has with 4-H.

Alabama Cooperative Extension System

According to the Alabama Cooperative Extension website:

The Alabama Cooperative Extension System is the primary outreach and engagement organization for the land-grant mission of Alabama A&M University and Auburn University in cooperation with Tuskegee University. The concept of

extension work traces its roots to the federal Morrill Act of 1862, which granted each state 30,000 acres of public land for each member of its congressional delegation. The lands were sold and the funds were used to endow colleges to teach agriculture and other practical arts.

The Act made possible the establishment of Auburn University (then known as the Agricultural and Mechanical College of Alabama), which became the first headquarters of the statewide Alabama Extension program. The Morrill Act of 1890 secured continuing funding for land-grant schools and enabled the Huntsville Normal School, initially a teacher-training institution for African Americans, in becoming the state's second land-grant institution, Alabama A&M University, in 1891.

There are Extension Offices in all 67 Alabama counties, supported by Regional Extension Agents across the state, and Specialists at both partner universities.

Extension's core values differentiate Extension in today's education marketplace (Alabama Cooperative Extension System, 2020).

Extension values:

- Research-based programs, materials, and educational activities
- Positive relationships with clients, communities, partners, and stakeholders
- Relevant programming that addresses current societal challenges and opportunities

The 1914 Smith-Lever Act formalized the national Cooperative Extension System and provided federal matching funds to states to establish a network of county agent offices. The Act also stipulated that all extension work associated with the USDA would

be carried out through land-grant schools. Over time, Extension programs expanded to include dairying, livestock production, agronomy, horticulture, farm marketing, food preservation, home-related improvements and 4-H.

In addition, the Alabama Extension Service was formed in 1915 to teach practical and technical skills to farmers and to generally improve the lives of rural residents. In 1995, the Alabama Cooperative Extension System (ACES) was created. Alabama became the first state to combine the Extension programs from its 1862 and 1890 land-grant universities, Alabama A&M and Auburn University. ACES became the primary educational outreach organization for the land grant colleges of Alabama A&M and Auburn University (Alabama Cooperative Extension System, 2020).

Alabama Cooperative Extension System operates a network of offices in each county through Alabama A&M and Auburn Universities. The vision of ACES is to be a world-class education organization providing real-life solutions to improve the lives of all Alabamians (Alabama Cooperative Extension System, 2020). Figure 6 describes the Alabama Cooperative Extension Organization outline from the two land-grant universities directors to the local and county offices staff.

Organizational Relationships Alabama Cooperative Extension System

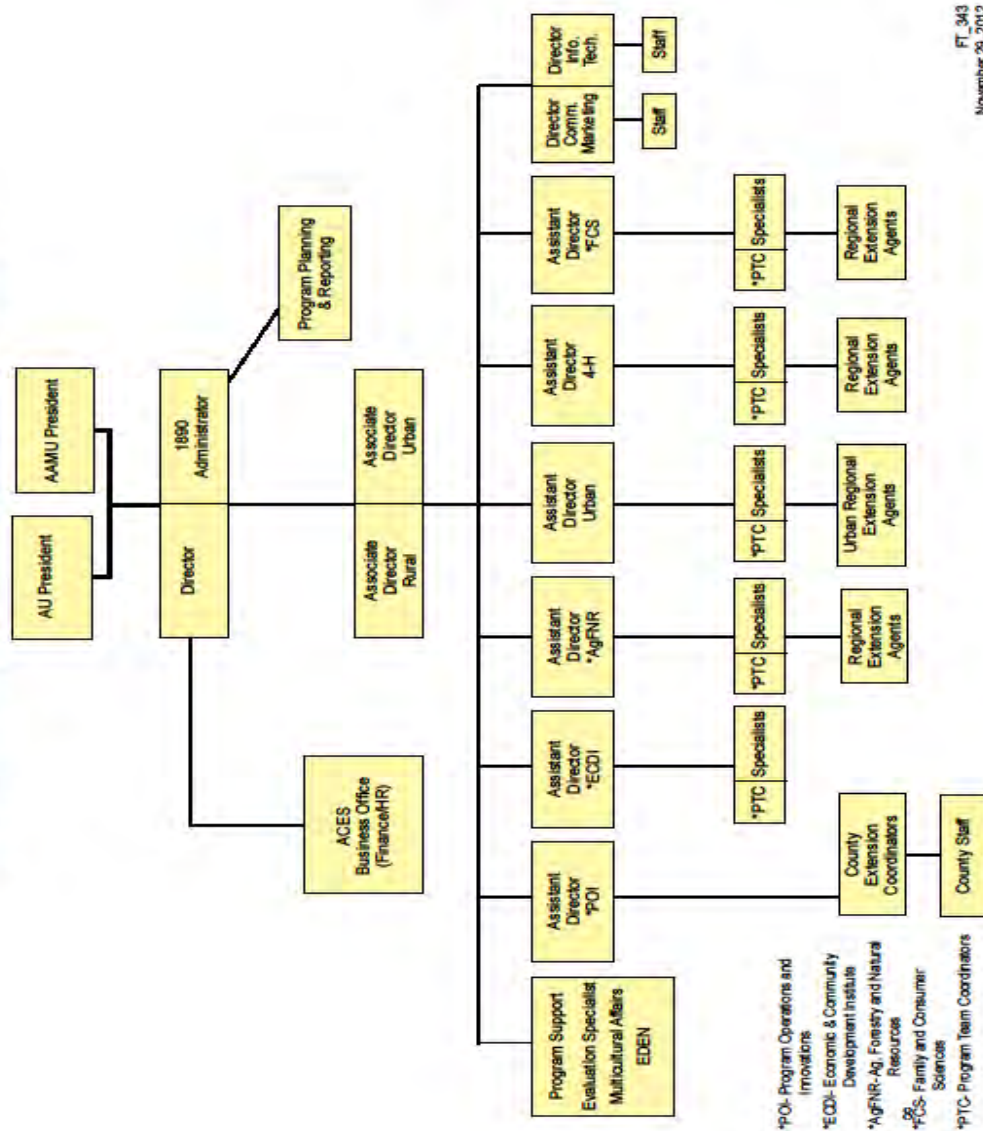


Figure 6. Organizational Relations chart for Alabama Cooperative Extension System

Furthermore, Alabama Cooperative Extension System has more than 660 full- and part-time employees across 67 counties, and nine urban centers, six research extension centers, three plant diagnostic laboratories, and a state-of-the-art youth environmental education center. In addition, Regional Extension Agents, County Extension Coordinators and County Agents focus on educational combinations of the 3'R's: resource, relationship and relevancy. Alabama

Cooperative Extension System use contributions such as expert personnel, funding, and stakeholder buy-in, research results, education materials and technology (Alabama Cooperative Extension, 2020). For instance, the information is used to generate outputs in the form of workshops, publications, websites and partnerships. For the organization to continue the great work, Alabama Cooperative Extension System formed a logic model that will help keep the organization focused on the vision and mission which is to be a world-class educational organization. Figure 7 is the logic model which provides the short-, mid- and long-term goals for Alabama Cooperative Extension System (Alabama Cooperative Extension System, 2020).



Figure 7. Alabama Cooperative Extension Logic Model (Alabama Cooperative Extension System, 2020)

Lastly, the mission of Alabama Cooperative Extension System collaborates with many partners to help people and communities improve their quality of life and economic well-being. Alabama Cooperative Extension System accomplishes the mission by providing educational opportunities and information focused on research-based science in six program areas. The program areas are Agriculture, Economic Development, Family and Consumer Sciences, Forestry, Wildlife & Natural Resources, Urban and Nontraditional Programs and 4-H & Youth Development (Alabama Cooperative Extension System, 2020).

The next section will focus on 4-H programs and the effects it has on youth all around the world. According to the National 4-H Council (2008), today's 4-H program is a community of young people across America who are learning leadership, citizenship, and life skills.

4-H Programs

“I pledge my head to clear thinking, my heart to greater loyalty, my hands to larger service and my healthy to better living. For my club, my community, my country and my world.” The 4-H pledge has been recited by over 6 million 4-H members. 4-H has long been the flagship youth organization of the United State and is known as the most recognizable part of the Cooperative Extension Service (Radhakrishna, 2005). At 118 years old, 4-H has a long history of preparing the youth of the United States of America by developing life skills through projects and educational activities. Youth, ages 5–19, benefit greatly from the development provided though the 4-H program that extends into their adult lives (Radhakrishna, 2005). Astroth and Haynes (2002) found that “4-H kids are more likely to contribute to their community by taking on leadership roles in their school and community” (p. 7). In 4-H programs, youth, and adolescents complete hands-on projects in areas such as health, science, agriculture and civic engagement in a positive environment where they receive guidance from adult mentors and are

encouraged to take on proactive leadership roles (National 4-H.org). Youth experience 4-H in every county and parish in the country through in-school and after-school programs, school and community clubs and 4-H camps.

4-H reach and depth are unmatched, reaching youth in every corner of America – from urban neighborhoods to suburban schoolyards to rural farming communities. The 4-H network of 500,000 volunteers and 3,500 4-H professionals provides caring and supportive mentoring to all 6 million 4-H'ers, assisting them to grow into true leaders today and in life (National 4-H.org).

4-H is a learning by doing education program for boys and girls in kindergarten through 12th grade (Alabama 4-H, 2018). In addition, the 4-H program was created in the late 1890s and early 1900s in response to the need for better agriculture education; the program started as an innovative outreach program for the land-grant universities' Cooperative Extension Service (Borden, Perkins, & Hawkey, 2014). The 4-H Youth Development Program is the youth outreach program from the land-grant institutions' Cooperative Extension Services and the U.S. Department of Agriculture (United States Department of Agriculture, 2018). 4-H serves as a model program for the practice of positive youth development by creating positive learning experiences; positive relationships between youth and adults; positive, safe environments, and opportunities for positive risk taking (United States Department of Agriculture, 2018).

Furthermore, the 4-H program has grown from a simple idea to the nation's largest youth serving organization, reaching more than seven million youth in rural farming communities, urban neighborhoods, and suburban school yards, with more than 60 million alumni (National 4-H Council, 2014). 4-H has become the nation's largest youth development program and one of the largest in the world (National 4-H Council, 2014). 4-H provides meaningful opportunities for young people to reach their full potential, improve outcomes for young people and build assets in

key areas identified through Search Institute research (Benson, Scales, Hamilton, & Sesma, 2006). Radhakrishna and Sinasky (2005) indicated that for the past 102 years, 4-H has helped children and youth reach their fullest potential through learning new life skills, meeting new people, learning responsibility, and building self-confidence. Norman and Jordan (2018) suggested 4-H uses a framework based upon the 4-H pledge to organize the delivery of experiences that support the growth and development of youth.

In the same way, with the support of adult mentors, youth select a hands-on project to complete. For instance, 4-H programs are available for children ages 9–18; 4-H Clover Bud programs are available for children ages 5–8 (National 4-H Council, 2018). The diversity of the youth who participate in 4-H continues to grow, families continue to become less traditional, potential volunteers' time continues to shrink, and the growing number of digital devices steal time (Borden, Perkins, & Hawkey, 2014). 4-H programs are available through local 4-H clubs, 4-H camps, in-school and after-school programs. Youth who participate in 4-H programs develop life skills, academic skills, self-esteem, resiliency, and citizenship; they also lower risky behaviors (Garton, Miltenberge, & Pruett, 2017; Hedrick, Homan, & Dick, 2009; Li, Bebiroglu, Phelps, Lerner, & Lerner, 2008) and contribute to the development of their communities (Barnett & Brennan, 2006). Other researchers such as Asthroth and Haynes (2002) agreed that participation in 4-H fosters core objectives, such as knowledge and skills, leadership and personal development, and citizenship skills through projects, activities, and programs.

Nevertheless, the National 4-H Council (2018) suggest 4-H programs that are offered in science, healthy living and citizenship are backed by a network of 100 public universities and a robust community of 4-H volunteers and professionals. Through hands-on learning, children build not only confidence, creativity and curiosity, but also life skills such as leadership and

resiliency to help them thrive today and tomorrow. The National 4-H Council (2018), which serves as the center of operations for 4-H programs, provides research-based programs that are grounded in the belief that youth learn best by doing. Youth complete hands-on projects in areas like science, health, agriculture, and citizenship, in a positive environment where they receive guidance from adult mentors and are encouraged to take on proactive leadership roles. Youth can concentrate on one focus area or can try a variety of programs throughout their 4-H experience. Regardless of the project area, all 4-H programs include mentoring and career readiness as core elements. 4-H programs are available in every county and parish in the United States (National 4-H Council, 2018).

Borden, Perkins, and Hawkey (2014) suggested that the 4-H program is grounded in experiential learning principles that provide a hands-on approach to learning. Borden, Perkins, and Hawkey (2014) emphasized this type of learning provides the opportunity to transfer key learning from the young people who participate in the 4-H programs to their families. In addition, the approach of learning by doing continues throughout the 4-H programs today as programs evolve and grow to fit the ever-changing needs of youth and families living in the 21st century (National 4-H Council, Press Release, 2014). Borden, Perkins, and Hawkey (2014) suggested that 4-H programs offer important opportunities for learning skills related to science, math, technology, and socialization. Programs offer young people a context in which to develop critical life skills, foster citizenship, and promote leadership.

The following section will directly focus on Alabama 4-H programs and the impact the program has on Alabama youth. Alabama 4-H seeks to empower youth with the skills to lead our communities, our state, our nation, and our world.

Alabama 4-H

Alabama 4-H is a community of young people across Alabama who are learning leadership, citizenship, and life skills. 4-H is the flagship youth development and education program of the Alabama Cooperative Extension System. Alabama 4-H believes in the power of young people; for over 100 years Alabama 4-H has ensured that every child has valuable strengths and real influence to improve the world around them. Auburn University organized “corn clubs” in 1909. These clubs were early forerunners of the 4-H clubs later developed by the USDA to involve youth in farming. Their purpose was to instruct school-age boys in advanced scientific farming methods so that they would pass along these practices to their fathers. Likewise, “tomato clubs” were organized so that girls could pass along new canning and other food-preservation techniques to their mothers (Alabama Cooperative Extension System, 2020). For more than 100 years, Alabama 4-H welcomed young people of all beliefs and backgrounds, giving youth a voice to express who they are and how they make their lives and communities better. Even more, Alabama 4-H has helped young people develop into resourceful citizens as well as responsible leaders.

At nearly 160,000 members and participants strong, Alabama 4-H is the largest youth development organization in the state of Alabama. Supported by families, partners, staff, volunteers, and youth, Alabama 4-H has the strength and capacity to grow young people with the confidence, curiosity, and life skills to become college, career, and family ready (Alabama 4-H Foundation.org).

Alabama 4-H, part of the Alabama Cooperative Extension System, has expanded its resources to include not only traditional programs, such as 4-H livestock judging and 4-H competitive events, but also new opportunities as well. 4-H offers an after-school robotics club

and opportunities to fly drones. 4-H members can explore Alabama's 132,419 miles of rivers and streams to examine the health of local water bodies.

Alabama 4-H focuses on a strong 4-H vision that empowers youth from across the state. Alabama 4-H is an innovative, responsive leader in developing youth to be productive citizens and leaders in a complex and dynamic society. Alabama 4-H vision is supported through the collaborative, committed efforts of Extension professionals, youth, and volunteers (Alabama Cooperative Extension System, 2020).

In Figure 8, Alabama 4-H provides data from the 2018–2019 4-H Statewide Impact Report. The data indicate the number of 4-H members who participated as club members, 4-H volunteers, and the number of clubs. The impact report also breaks down the statistical data of the 4-H members by school, residence, and race.



Figure 8. Alabama 4-H Statewide impact report that focuses the 2018–2019 data of the 4-H members, volunteers, and 4-H Clubs

In Figure 9, Alabama 4-H provides data from the 2018–2019 Citizenship and Leadership impact report. The data indicates the number of 4-H members who participated in clubs, who

held club officer positions as well as the number of 4-H Youth Council clubs. The impact report also provides statistical data of the 4-H members perspectives of Citizenship and Leadership.



Figure 9. Alabama 4-H Statewide Impact Report that focuses the 2018–2019 Data of the 4-H Clubs, Club Officers and Youth Council Clubs.

With the guidance of research-based 4-H programs that focus on 4-H Youth Council members, club officers, and the Citizenship and Leadership curriculum, Alabama 4-H is the youth development component of the Alabama Cooperative Extension System. 4-H helps young people from rural and urban areas explore their interests and expand their awareness of our world while providing opportunities to develop a greater sense of who they are and who they can

become as contributing citizens of our communities, our state, our nation, and our world. This mission is achieved through the research-based educational programs of Alabama A&M University and Auburn University and the ongoing tradition of applied, hands-on/minds-on experiences, which develop the heads, hearts, hands, and health of Alabama youth ([www.aces.edu/Alabama 4-H](http://www.aces.edu/Alabama-4-H)). Finally, the Alabama 4-H promise to every 4-H member is to provide 4-H programs that reflect the population demographics, vulnerable populations diverse needs, and social conditions of the state.

Self-perceived leadership skills. Further, several studies have documented a relationship between participation in youth leadership activities (programs such as 4-H and FFA) and self-perceived leadership skills as measured by the Youth Leadership Life Skills Development Scale (YLLSDS). The number of 4-H leadership activities senior youth participated in positively predicted 12.6% of the variance in YLLSDS scores (Seevers & Dormody, 1994). Participation in FFA leadership activities also positively predicted 2.3% of the variance in YLLSDS scores (Dormody & Seevers, 1994). Duncan (2000) reported a 0.27 correlation ($p < 0.05$) between the number of years participating in 4-H camp and YLLSDS scores in West Virginia. Also, serving as a 4-H Ambassador, gender, and district predicted YLLSDS scores in youth from Montana (Flynn, Igo, & Frick, 2009).

Preparing today's youth for their roles as tomorrow's leaders is a challenge, we all face (Cox, 1996). Seevers and Dormody (1995) suggested leadership development has been and remains a major goal of most youth programs. As the world enters the 21st century, many youth programs, including 4-H, are focusing on the effectiveness of their leadership training. Moreover, Miller (1987) recommended youth leadership life skills development as the development of life skills necessary to perform leadership functions in real life. Radhakrishna

and Sinasky (2005) conducted a study focusing on *4-H Experiences Contributing to Leadership and Personal Development of 4-H Alumni*. The study found that alumni felt that their 4-H experience greatly contributed to developing group interaction skills, leadership skills, and decision-making skills.

Many studies have been conducted to determine the role of 4-H on leadership and life skill development (Boyd, Herring, & Briers, 1992; Fitzpatrick, et al., 2005; Goodwin, et al., 2005; Ladewig & Thomas, 1987; Meyers, 1978; Radhakrishna, 2005; Seever & Dormody, 1995). Leadership and life skill development, as defined by Miller (1976), is the development skills necessary for life to perform leadership functions in daily living. These studies cumulatively conclude that 4-H members have developed critical life skills through the program including social skills, personal development, leadership, and responsibility (Anderson, Bruce, & Mounon 2010). By the same token, there has been considerable research concentrating on the impact of 4-H on youth. Research has shown that participation in 4-H leadership activities has a positive relationship with youth life skills development (Severs & Dormody, 1995), 4-H youth are more likely to be involved in community service than non-4-H youth (Parrish & Igo, 2006), and 4-H youth have higher skill development in working with groups, communication, and decision making than non-4-H youth (Boyd, Herring, & Briers, 1992). Research in Montana concluded that 4-H youth were less likely to participate in “high risk” activities and more likely to do better in school than non-4-H youth (Astroth & Hayes, 2002). These studies showed the impact of 4-H on youth but didn’t answer the question of whether these skills and attitudes carry on into adulthood.

A study comparing 4-H and non 4-H members in Idaho was conducted by Goodwin, et al. (2005). Specifically, at-risk behaviors such as cheating on a test, alcohol use, shoplifting, drug

use, smoking, etc., were examined. School performance, community participation, and leadership roles were also examined. Findings revealed that 4-H members were less likely to exhibit these at-risk behaviors than non 4-H members. Regarding school performance, 4-H members were more likely to succeed in school, help others within their communities, participate in leadership activities, and hold leadership positions such as secretary, committee chair, etc. Goodwin et al. (2005) argued for increased awareness of 4-H programs at the local and state level.

Leadership development. Likewise, Maass and colleagues (2006), using a cross-sectional, quasi-experimental design, linked the influence of 4-H programs to other youth development organizations on the development of 36 life skills. Maass and colleagues sampled high-achieving 4-H alumni in Oklahoma who participated in programs between 1969 and 1998. Findings revealed that the 4-H influence was evident on majority of life skills. The top five life skills most influenced by participating in 4-H programs were public speaking, community service volunteering, self-discipline, self-responsibility, and teamwork. At the same time, other organizations also had some influence on the development of different life skills. Participation in other youth programs also influenced development of character, self-discipline, accepting differences, cooperation, and social skills. They recommended enhancing 4-H programming through the development of collaborations with other youth development organizations (Maass, 2006).

Leadership life skills. In the same way, Radhakrishna and Doamekpor (2009) found that teaching youth to learn and develop life and leadership skills is very essential. Such developments have been accomplished through several programs by 4-H and other youth development organizations. It is therefore imperative to evaluate the contributions of 4-H and

other youth development programs on leadership development, communications, and teaching responsibilities.

Cooperative Extension states that the 4-H program develops leadership and life skills among its members (as cited in Bruce, Boyd, & Dooley, 2005). Goodwin et al. (2007) found that 4-H youth were more likely to demonstrate life skills than their peers. In the same manner, Meyers (1978) specifically looked at leadership skills and found that participation in 4-H programs significantly increased leadership performance in 4-H youth. Seevers and Dormody (1995) conducted a study that found that participation in 4-H leadership activities had a positive relationship with youth leadership life skill development. Seevers and Dormody also found that most 4-H members participated in a variety of leadership activities. Boyd, Herring, and Briers (1992) found that participation in 4-H programs positively relates to perceived leadership life skill development.

A study titled *The Impact of Livestock Exhibition on Youth Leadership Life Skill Development: Youth Agricultural Organizations* spoke on the number of our nation's youth exhibiting at-risk behavior points to a lack of skills necessary for adulthood (Boyd, Herring, & Briers, 1992). Authors Leffert, Saito, Blyth, and Kroenke (1996) found the experiences young people have during early adolescence provide the foundation on which they develop their personalities and life skills. However, early adolescence is a time of rapid transformation in young people; this is often an excellent opportunity to make a positive impact upon their development (Fox, Schroeder, & Lodl, 2003). The development of life skills is said to allow youth to cope with their environment by making responsible decisions, having a better understanding of their values, and being better able to communicate and get along with others (Boyd, Herring, & Briers, 1992). Furthermore, one of the instruments of life skill development is

participation in youth-serving organizations, including 4-H and FFA (Anderson, Bruce, Jones, & Flowers, 2015).

From the article *The Impact of Livestock Exhibition on Youth Leadership Life Skill Development: Youth Agricultural Organizations*, authors Anderson, Bruce, Jones, and Flowers (2015) researched a study focusing on leadership development through the 4-H program conducted by Seevers and Dormody (1995). The authors found that participation in 4-H activities had a positive relationship with youth leadership skill development. They also found that most 4-H members participated in many different leadership activities (Seevers & Dormody, 1995). Boyd, Herring, and Briers (1992) stated that “participation in the 4-H program positively relates to perceived leadership skill development.” In addition, the level of leadership life skill development was found to increase as the level of 4-H participation increased (Boyd, Herring, & Briers, 1992).

Leadership predictors. Dormody and Seevers (1994) attempted to determine the predictors of youth leadership and life skills development from among participation in FFA leadership activities. Within their study the three major findings indicated that three variables were achievement expectancy, participation in FFA leadership activities, and gender described significant amounts of the variance in youth leadership life skill development (Seevers & Dormody, 1994). Furthermore, Wingenbach (1995) conducted a study to determine if meaningful relationships existed between Iowa FFA members’ self-perceived youth leadership skills development scores and their participation in youth leadership activities. Wingenbach’s (1995) findings concluded that members’ self-perceived leadership skills development levels gained as a result of FFA experiences should be considered only a moderate gain. Within the study, the researchers caution agriculture educators to not be overenthusiastic in their

simplifications about the total impact of the FFA program in developing leadership skills. As expected, the level of leadership life skill development was found to increase as the level of 4-H participation increased.

Furthermore, a study conducted by National Collaborative on Workforce and Disability for Youth observed research of youth leadership programming by studying available studies and surveys of practitioners and young people who participated in leadership programs (Edelman, Gill, Comerford, Larson & Hare, 2004). Woyach and Cox (1996) surveyed 25 leading practitioners of youth leadership programs and established a list of 12 agreed-upon principles important for youth leadership programs (Woyach, 1996). The following principles speak to both the outcomes and the content of leadership programs as well to the process of leadership development (Edelman, Gill, Comerford, Larson & Hare, 2004).

- Help youth learn specific knowledge and skills related to leadership.
- Enable youth to understand the history, values, and beliefs of their society.
- Facilitate the development of individual strengths and leadership styles.
- Facilitate the development of ethics, values, and ethical reasons.
- Promote awareness, understanding, and tolerance of other people, cultures, and societies.
- Embody high expectations of, confidence in, and respect for youth served.
- Emphasize experiential learning and provide opportunities for genuine leadership.
- Involve youth in service to others—to their community, their country, and their world.
- Facilitate self-reflection and processing of learning both individually and cooperatively.
- Involve youth in collaborative experiences, teamwork, and networking with peers.

- Involve youth in significant relationships with mentors, positive role models, and other nurturing adults.
- Be developed around stated purposes and goals.

In a 2001 study, Boyd looked at the impact of a 4-H teen leadership program in Fort Worth, Texas, which engaged youth in weekly sessions on different concepts related to leadership followed by experiential learning activities (Edelman, Gill, Comerford, Larson & Hare, 2004). Through the course of the program, youth applied their newly acquired skills and concepts, while completing service projects in the community. Boyd (2001) describes experiential learning as “when a person is involved in an activity, looks back at it critically, determines what was useful or important to remember, and uses this information to perform another activity”. Boyd found that the combination of experiential learning and service learning significantly increased youth participants’ knowledge of leadership skills, such as community service, working as a team, setting, and reaching goals, and decision-making (Edelman, Gill, Comerford, Larson & Hare, 2004).

Leadership program effects. Additionally, a study conducted by National Collaborative on Workforce and Disability for Youth observed research of youth leadership programming by reviewing available studies and surveys of practitioners and young people who participated in leadership programs (Edelman, Gill, Comerford, Larson & Hare, 2004). Leading is the arena of development that centers on positive skills, attitudes and behaviors around civic contribution and personal goal setting (Ferber, Pittmann & Marshall, 2002). Within the study, Edelman, Gill, Comerford, Larson and Hare provided program activities that would increase a young person’s development in leading and providing leadership development in programs.

The following activities will prepare a young person's development in directing leadership programs or events:

- Development of a personal plan with goals, action steps, and deadlines
- Resource-mapping activities in which youth take the lead in planning and carrying out a search of community resources for youth
- Voter registration and voting in local, state, and federal elections
- Participation in town hall meetings
- Community volunteerism such as organizing a park clean-up or building a playground
- Participation in a debate on an issue
- Training to be a peer mediator
- Participation in a letter-writing campaign
- Opportunities to meet with local and state official and legislators
- Participation in a youth advisory committee within the program, school or community
- Learning activities or courses about leadership principles and styles
- Participation in group activities that promote collaboration and teamwork
- Mentoring relationships with positive role model
- Opportunities to serve in leadership roles such as club officer, board member, team captain or coach

Additionally, a study conducted by Sipe, Ma, and Gambone (1998) found that youth who participated in the highest number of leadership activities also reported the highest level of self-efficacy and youth with no leadership activities reported the lowest level of self-efficacy.

Research also indicates young people often develop leadership skills during organized

extracurricular activities, such as clubs, service organizations, sports programs and fine arts (Wehman, 1996).

In a study titled *Leading, Learning, and Unleashing Potential: Youth Leadership and Civic Engagement* conducted by Wendy Wheeler and Carolyn Edlebeck (2006), the authors emphasized that leadership is about learning, listening, dreaming, and working together to unleash the potential of people's time, talent, and treasure for the common good. So many times, young people are excluded from community leadership roles, or relegated to age-segregated opportunities such as service learning and youth commissions. Young people are not only key stakeholders of a community, but they also represent a huge and often untapped reservoir of human energy, talent, and vision. Youth civic engagement works to unleash this potential to create individual, local, and society-level change.

In the same way, Wheeler and Eldebeck (2006) spoke on how several civic activism organizations have become effective youth leadership programs. Working outside the realm of the traditional youth development world, they have developed creative ways of engaging young people, challenging them, and spurring them to achieve more than either the organization or the young person might have accomplished alone. Youth leadership programs that achieve great outcomes with youth employ the following four strategies for success:

- Build young people's connections to their own identity, culture, and community.
- Recognize that young people are assets to and experts about their own communities.
- Engage young people as community leaders on issues that matter to them.
- Create developmental opportunities that are sustained and supported over time.

The final section focuses on leadership and the impact leadership has on youth. In a study conducted by Radhakrishna and Doamekpor (2009) they proposed teaching youth to learn and

develop life and leadership skills is very essential for all youth. Such developments have been accomplished through a number of programs by 4-H and other youth development organizations Radhakrishna and Doamekpor (2009). The final section will address leadership and how leadership connects with youth development programs.

Leadership as a Whole

Brazeau (2008) suggested in a speech prepared for John F. Kennedy to be given on that fateful day in Dallas in 1963, we were to be reminded that “Leadership and learning are indispensable to each other.” Leadership means different things to different people (Kleon & Rinehart, 1998). Most definitions of leadership reflect the assumption that it involves an influence process whereby intentional influence is exerted by the leader over followers (Kleon & Rinehart, 1998). The term ‘leadership’ is often confusing because of imprecise terms used such as power, authority, management, administration, control, and supervision to describe the same phenomena (Yukl, 1979). Most definitions of leadership reflect the assumption that it involves an influence process whereby intentional influence is exerted by the leader over followers (Kleon & Rinehart, 1998). Furthermore, leadership is a role that leads toward goal achievement, involves interactions of influence, and usually results in some form of changes of structure or behavior of groups, organizations or communities (Lassey, 1976). The expectations of the individuals making the judgment of leadership effectiveness is highly important (Kleon & Rinehart, 1998). Molding the expectations of those enabled to make such judgement may be a prime function of leadership. An age-old question is “Are successful leaders born or made?” Prior to the 1930s it was believed that leadership was a property of the individual, that a limited number of people were uniquely endowed with abilities and traits which made it possible for them to become leaders. These abilities and traits were believed to be inherited rather than acquired (Kleon &

Rinehart 1998). Leadership development is a process that extends over many years. The realities of life require selection and training that occur early in the individual's career, but that is only the first step (Kleon & Rinhert, 1998). Leadership development calls for repeated assessments and recurring opportunities for training. All talent develops through interplay, sometimes over many years, between native gifts on the one hand and opportunities and challenges on the other (Gardner, 1990). Stodgill (1974) suggested eleven perspectives of leadership may be defined as (1) personality or effectiveness of personality, (2) the art of inducing compliance, (3) the exercise of influence, (4) a function of group process, (5) a form of persuasion, (6) a set of acts of behavior, (7) a power of relationship, (8) an instrument of goal achievement, (9) an effective interaction, (10) a differentiated role, and (11) the initiation of structure. Leadership skills are essential for young people to feel satisfied and contribute to society (Scheer, 1997). Kleon and Rinehart (1998) suggested that in order to become productive and contributing individuals who can be effective and proactive in determining the course of tomorrow's world, today's youth must develop positive leadership knowledge, attitudes, skills, and aspirations.

Summary

Chapter II provided a review of literature related to the history of Alabama Cooperative Extension System and Alabama 4-H. Along with connecting youth 4-H programs and the connection with adult education especially connecting growing youth as they utilize leadership skills which will allow them to be productive adults.

Specific articles provided information as well as partnerships between 4-H and other youth development programs across the nation. Additionally, this chapter discussed the qualities of 4-H essential elements along with the necessary qualities of leadership skills.

CHAPTER III: METHODS

In this chapter, the research methods are identified through a review of the purpose for the study, a description of the population, along with an explanation of the project design and data collection procedures.

Purpose of the Study

The future of the nation, and the future of world civilization, will soon rest in the hands of today's youth (Kleon & Rinhart, 1998). Youth today are lacking life skills and leadership skills. Several youth organizations are providing leadership and life skills programs to enhance the development of leaders for the future. 4-H is one of the youth organizations that is paving the way for future leaders. The purpose of this study was to examine the relationship between 4-H members whose project area is 4-H Leadership and Citizenship, and their connection to the following three binary pairs: rural verses urban counties, elementary/middle school verses high school and in-school verses out-of-school participation. This question was addressed by examination of three binary pairs: *rural verses urban counties, elementary/middle school verses high school, and in-school verses out-of-school participation.*

4-H is one of the largest youth organizations in the nation with more than seven million young members. Within Alabama, the 4-H program has grown tremendously, but the growth of associated 4-H the leadership programs is lacking involvement. To help address this issue, Alabama 4-H has recently implemented the 4-H Youth Council program within every county in the state. County 4-H Youth Councils provide members with an opportunity to develop enhanced citizenship and leadership skills, serve as local 4-H ambassadors, function as youth-client advisors, and leverage 4-H programming with their peers. The youth council program is

growing, but the connection between the youth 4-H experience and leadership is missing. This study was implanted to help examine the relationship of leadership and Alabama 4-H youth council members along with examining the relationship between a traditional 4-H program model and the 4-H Essential Elements.

The National 4-H Curriculum Collection is designed to engage youth in learning opportunities that promote positive youth development. In 4-H, the critical components of a successful learning experience are a sense of Belonging, Independence, Generosity, and Mastery. Across each curriculum, the 4-H Essential Elements (Belonging, Independence, Generosity, and Mastery) are embedded through the learning experience (Kress, 2004).

Research Questions

The following questions were used to guide this study:

1. What are the differences, if any, between 4-H members who participate in Leadership and Citizenship programs in rural versus urban counties?
2. What are the differences, if any, between 4-H members who participate in Leadership and Citizenship programs in middle school versus high school?
3. What are the differences, if any, between 4-H members who participate in Leadership and Citizenship Programs in in-school versus out of school programs?

Methods

Secondary data used in this study were obtained with permission from Dr. Molly Gregg, Alabama 4-H Assistant Director. The methodology of this study was quantitative with the data sources selected for this study being secondary, existing data, which did not involve any direct interaction with the participants.

Participants

The participants in the original study are/were active Alabama 4-H members within an age range of 9–18 years. These subjects represented diverse ages, genders, and races along with representation from rural and urban counties within the 67 counties in Alabama. A total of 2,115 youth participated in the 4-H Leadership and Citizenship survey between 2015–2017. The youth that contributed in the study participated in 4-H through either a 4-H in-school program or 4-H community club. The youth participated in a variety of Alabama 4-H leadership and citizenship programs within a 4-H club year which runs from August 1st – July 31st. Research-based 4-H leadership and citizenship programs were presented to the subjects by 4-H staff which included 4-H Foundation Regional Extension Agents, 4-H County Agents, or County Extension Coordinators. Throughout the state, all 4-H youth that participate in leadership and citizenship programs were offered the same research-based leadership programs. In order to ensure efficacy within the curriculum, 4-H staff were trained on the identical 4-H leadership and citizenship curriculum.

Data Collection Procedures

Permission for the researcher to perform the study was requested from the Alabama 4-H state headquarters via official letter (see Appendix 10) and was granted. Moreover, based on paperwork submitted by the researcher using the Application for External Research Approval, the Auburn Institutional Review Board provided approval in the fall of 2018 (see Appendix 11) All individual identifying information was removed from the data set before transmission from Alabama 4-H.

Preexisting data were analyzed from active 4-H members ranging from ages 9–18. The data were collected from a three-year period and involved active 4-H members completing an

eighteen-question survey focusing on the 4-H members' participation in a 4-H Leadership and Citizenship club. The questions centered on the 4-H Essential Elements also known as the BIG M (Belonging, Independence, Generosity and Mastery) at the end of their 4-H club year. While 4-H members' names were not included, the survey was coded based on counties. Designation of counties as *rural* or *urban* were determined by demographics data from the Rural Health Association that was obtained from the United States Census Bureau information. Of the 67 counties that yielded data for this study, 55 were classified as *rural* and 12 as *urban* (Alabama Rural Health Association, 2021).

Alabama 4-H assistant director Dr. Molly Gregg provided an excel file with survey evaluations data from the 2015-2017 4-H club years. Data provided for the research was provided from pre-existing 4-H survey data, which was collected from Alabama 4-H members from the 2015–2017. Additional information such as demographics were obtained from 4HOnline; the official reporting system for Alabama 4-H. 4HOnline is a fully integrated management system that brings together all levels of 4-H experiences which included tracking of such activities as 4-H member log-ins to managing records, a club leader printing mailing labels, or a county agent approving a member's enrollment. As a central repository of activities, 4HOnline brings the 4-H community together and keeps everyone involved.

The pre-existing data were analyzed through the Statistical Package for the Social Sciences (SPSS). Analysis methods were selected based on research questions.

Data Analysis

All data were maintained on an Auburn University encrypted computer located in Duncan Hall on the Auburn University campus. Data were analyzed through the Statistical Package for the Social Science (SPSS). Analysis methods were chosen and employed based on

the specific research question. Because of the multivariate nature of the survey response data, MANOVA tests were run to test for differences between each of the binary categories (i.e. *rural* versus *urban*).

In the initial MANOVA tests, potential differences between 4-H participants in Leadership and Citizenship programs in *rural* and *urban* counties were analyzed. A One-Way MANOVA was used to determine if there were differences in 4-H participants utilizing the BIG M which is Belonging, Independence, Generosity and Mastery between those from *rural* and *urban* counties. Box's M test indicated heterogeneity of variance-covariance is not assumed suggesting that the variance structure between the two dependent classes was not equal. However, Box's M statistic is well known to be sensitive to small or unequal samples sizes was present in these data. Bartlett's test of sphericity indicated sufficient correlation between the dependent measures to proceed with the analysis.

A MANOVA test was also completed to determine if there were any differences between 4-H members who participate in Leadership and Citizenship programs in middle school verses high school as well as in-school verses out of school programs. The MANOVA was used to test the hypotheses regarding the effect of one or more independent variables on two or more dependent variables (<https://statisticsbyjim.com/anova/multivariate-anova-manova-benefits-use/>).

The overall leadership and citizenship survey results and demographics were analyzed using factorial/two-way MANOVA to determine the overall results. The Levene's test of equality was conducted to determine any error of variances, between the overall survey results and the demographics. The Bartlett's test was conducted as well to check if there was any redundancy between the variables that could possibly be summarized with some factors. Finally,

a Box's M test was done to determine sufficient correlation between the dependent measures in order to proceed with the analysis.

Summary

This chapter provided a review of the methods used to investigate whether there are differences if any, between 4-H members who participate in Leadership and Citizenship programs in rural or urban counties, middle or high school, or in-school or out of school programs. The population represented a diverse group of 4-H members with respect to age, gender, race along with representation from rural and urban counties within the 67 counties in Alabama. The datasets used for this study were all pre-existing data, which did not require and specific instrument to develop or create the dataset prior to analysis.

CHAPTER IV: RESULTS

In the previous chapter, the methods for the research is described including the method of study, population, and research design, and data analysis. Chapter IV will provide the reader the purpose of study and the research questions. Furthermore, Chapter IV provides a strong explanation of the data screening and a description of the demographics of the population studied. Lastly, data analysis is included in Chapter IV.

Purpose of the Study

The future of the nation, and the future of world civilization, will soon rest in the hands of today's youth (Kleon & Rinhart, 1998). Youth today are lacking life skills and leadership skills. Several youth organizations are providing leadership and life skills programs to enhance the development of leaders for the future. 4-H is one of the youth organizations that is paving the way for future leaders. The purpose of this study was to examine the relationship between 4-H members whose project area is 4-H Leadership and Citizenship, and their connection to the following three binary pairs: rural verses urban counties, elementary/middle school verses high school and in-school verses out-of-school participation. This question was addressed by examination of three binary pairs: *rural verses urban counties, elementary/middle school verses high school, and in-school verses out-of-school participation.*

4-H is one of the largest youth organizations in the nation with more than seven million young members. Within Alabama, the 4-H program has grown tremendously, but the growth of associated 4-H the leadership programs is lacking involvement. To help address this issue, Alabama 4-H has recently implemented the 4-H Youth Council program within every county in the state. County 4-H Youth Councils provide members with an opportunity to develop enhanced

citizenship and leadership skills, serve as local 4-H ambassadors, function as youth-client advisors, and leverage 4-H programming with their peers. The youth council program is growing, but the connection between the youth 4-H experience and leadership is missing. This study was implanted to help examine the relationship of leadership and Alabama 4-H youth council members along with examining the relationship between a traditional 4-H program model and the 4-H Essential Elements.

The National 4-H Curriculum Collection is designed to engage youth in learning opportunities that promote positive youth development. In 4-H, the critical components of a successful learning experience are a sense of Belonging, Independence, Generosity, and Mastery. Across each curriculum, the 4-H Essential Elements (Belonging, Independence, Generosity, and Mastery) are embedded through the learning experience (Kress, 2004).

Research Questions

1. What are the differences, if any between 4-H members who participate in Leadership and Citizenship programs in rural verses urban counties?
2. What are the differences, if any between 4-H members who participate in Leadership and Citizenship programs in elementary/middle school verses high school?
3. What are the differences, if any between 4-H members who participate in Leadership and Citizenship Programs in in-school verses out of school programs?

Demographic Profile

For this study, the research sample size included 2,110 active 4-H members ranging from ages 9–18. The sample included 913 male and 1,197 female 4-H members. Of these, 165 were identified as high school 4-H members and 1,946 as lower grade/middle school students. For the third binary grouping, 1,681 respondents were in-school 4-H members and 430 were out of

school 4-H members. The ethnicity of the group was defined as 1,227 White and 885 persons of color. The sample included 833 urban 4-H members and 1,278 rural 4-H members.

Below are tables that represent the sample population for this study over a three year time frame. The tables include 4-H members' populations by gender, club type, ethnicity and race, as well as 4-H information on 4-H members in elementary/middle school and high school and members who participated in-school and out-of-school 4-H programs.

Table 1

4-H Member Population by Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
2015–2016					
Valid	0	2	.2	.2	.2
	Male	394	44.7	44.7	44.9
	Female	485	55.1	55.1	100.0
	Total	881	100.0	100.0	
2016–2017					
Valid	Male	183	46.2	46.2	46.2
	Female	213	53.8	53.8	100.0
	Total	396	100.0	100.0	
2017–2018					
Valid	Male	338	40.3	40.3	40.3
	Female	500	59.7	59.7	100.0
	Total	838	100.0	100.0	

Table 2

4-H Member Population by Club Type

		Frequency	Percent	Valid Percent	Cumulative Percent
2015–2016					
Valid	In-school	547	62.1	62.1	62.4
	After School	22	2.5	2.5	64.9
	Enrichment	252	28.6	28.6	93.5
	Community	20	2.3	2.3	95.8
	Special Interest	17	1.9	1.9	97.7
	Camp	2	.2	.2	98.0
	Other	18	2.0	2.0	100.0
	Total	881	100.0	100.0	
2016–2017					
Valid	In-school	374	94.4	94.4	94.4
	After School	7	1.8	1.8	96.2
	Enrichment	1	.3	.3	96.5
	Community	3	.8	.8	97.2
	Special Interest	4	1.0	1.0	98.2
	Camp	4	1.0	1.0	99.2
	Other	3	.8	.8	100.0
	Total	396	100.0	100.0	
2017–2018					
Valid	In-school	761	90.8	90.8	90.8
	After School	14	1.7	1.7	92.5
	Community Club	34	4.1	4.1	96.5
	Special Interest	2	.2	.2	96.8
	Camp	8	1.0	1.0	97.7
	Other	19	2.3	2.3	100.0
	Total	838	100.0	100.0	

Table 3

4-H Population by Ethnicity

		Frequency	Percent	Valid Percent	Cumulative Percent
2015–2016					
Valid	0	6	.7	.7	.7
	Hispanic/Latino	57	6.5	6.5	7.2
	Non-Hispanic/Latino	818	92.8	92.8	100.0
	Total	881	100.0	100.0	
2016–2017					
Valid	Hispanic/Latino	15	3.8	3.8	3.8
	Non-Hispanic/Latino	381	96.2	96.2	100.0
	Total	396	100.0	100.0	
2017–2018					
Valid	Hispanic/Latino	57	6.8	6.8	6.8
	Not-Hispanic/Latino	781	93.2	93.2	100.0
	Total	838	100.0	100.0	

Table 4

4-H Population by Race

		Frequency	Percent	Valid Percent	Cumulative Percent
2015–2016					
Valid	0	18	2.0	2.0	2.0
	American Indian or Alaskan Native	39	4.4	4.4	6.5
	Asian	7	.8	.8	7.3
	Black	178	20.2	20.2	27.5
	Native Hawaiian or Pacific Islander	1	.1	.1	27.6
	White	581	65.9	65.9	93.5
	2 or More Races	57	6.5	6.5	100.0
	Total	881	100.0	100.0	
2016–2017					
Valid	American Indian or Alaskan Native	15	3.8	3.8	3.8
	Black	138	34.8	34.8	38.6
	Native Hawaiian or Pacific Islander	1	.3	.3	38.9
	White	212	53.5	53.5	92.4
	2 or more races	30	7.6	7.6	100.0
	Total	396	100.0	100.0	

(table continues)

Table 4 (continued)

		Frequency	Percent	Valid Percent	Cumulative Percent
2017–2018					
Valid	American Indian or Alaskan Native	30	3.6	3.6	3.6
	Asian	11	1.3	1.3	4.9
	Black	285	34.0	34.0	38.9
	Native Hawaiian or Pacific Islander	8	1.0	1.0	39.9
	White	436	52.0	52.0	91.9
	2 or more Races	68	8.1	8.1	100.0
	Total	838	100.0	100.0	

Table 5

4-H Member by School Type

		Frequency	Percent	Valid Percent	Cumulative Percent
2015–2016					
Valid	High School	53	6.0	6.0	6.0
	Elementary/Middle School	828	94.0	94.0	100.0
	Total	881	100.0	100.0	
2016–2017					
Valid	High School	58	14.6	14.6	14.6
	Elementary/Middle School	338	85.4	85.4	100.0
	Total	396	100.0	100.0	
2017–2018					
Valid	High School	54	6.4	6.4	6.4
	Elementary/Middle School	784	93.6	93.6	100.0
	Total	838	100.0	100.0	

Table 6

4-H Member Population by Club Location

		Frequency	Percent	Valid Percent	Cumulative Percent
2015–2016					
Valid	In-School	547	62.1	62.1	62.1
	Out-of-School	334	37.9	37.9	100.0
	Total	881	100.0	100.0	
2016–2017					
Valid	In-School	374	94.4	94.4	94.4
	Out-of-School	22	5.6	5.6	100.0
	Total	396	100.0	100.0	
2017–2018					
Valid	In-School	761	90.8	90.8	90.8
	Out-of-School	77	9.2	9.2	100.0
	Total	838	100.0	100.0	

Analysis of Research Questions

The overall purpose of this study was to examine the relationship among three binary classifications of 4-H youth who participate in 4-H Leadership and Citizenship programs across Alabama for a three-year period. The next section reviews the data analyses of three specific questions regarding 4-H participation in 4-H Leadership and Citizenship programs.

Research Question One: What are the differences, if any, between 4-H members who participate in Leadership and Citizenship programs in rural verses urban counties?

To examine the differences between 4-H members who participated in Leadership and Citizenship programs between a traditional 4-H program model and the 4-H Essential Elements, the comparison of respondents in rural counties verses urban counties were reviewed over a period of three years. The four categories of Belonging, Independence, Generosity, and Mastery had varying averages depending on the county type and Essential Elements from rural and urban counties for (See Table 7).

Table 7

4-H Population by Urban vs Rural

		Frequency	Percent	Valid Percent	Cumulative Percent
2015–2016					
Valid	Urban	490	55.6	55.6	55.6
	Rural	391	44.4	44.4	100.0
	Total	881	100.0	100.0	
2016–2017					
Valid	Urban	253	63.9	63.9	63.9
	Rural	143	36.1	36.1	100.0
	Total	396	100.0	100.0	
2017–2018					
Valid	Urban	538	64.2	64.2	64.2
	Rural	300	35.8	35.8	100.0
	Total	838	100.0	100.0	

A one-way MANOVA was used to determine if there were differences in 4-H participants' Mastery, Generosity, Belongings, and Independence between those from rural and urban counties in 2015–2016. Box's M test indicated that the covariances of the two dependent variables were unequal (See Table 8). However, samples sizes in each dependent variable were >100 which is generally considered adequate to minimize the impact of inequalities of variance on MANOVAs.

Table 8

Urban and Rural Counties 4-H Participation Box's Test of Equality of Covariance Matrices^a, 2015–2016

Box's M	33.453
F	3.329
df1	10
df2	3306521.461
Sig.	.000

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

^a Design: Intercept + CountyType

Bartlett's Test of Sphericity indicated sufficient correlation between the dependent measures to proceed with the analysis: 1288.32 $p < .001$ (See Table 9).

Table 9

Urban and Rural Counties 4-H Participation Bartlett's Test of Sphericity^a

2015–2016

Likelihood Ratio	.000
Approx. Chi-Square	1288.320
Df	9
Sig.	.000

The multivariate effect of participants county type indicated a statistically significant difference in the linear combination of DVs with large effect size, $\Lambda = .93$, $F(4,876) = 15.29$, $p < .001$, partial $\eta^2 = .07$. According to Salkind (2007), a large effect size is any value above 0.05; the effect size for the county type effect size of .07, is categorized as large (See Table 10).

Table 10

Urban and Rural Counties 4-H Participation Multivariate Tests^a 2015–2016

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter
Intercept	Pillai's Trace	.983	12495.367 ^b	4.000	876.000	.000	.983	49981.470
	Wilks' Lambda	.017	12495.367 ^b	4.000	876.000	.000	.983	49981.470
	Hotelling's Trace	57.056	12495.367 ^b	4.000	876.000	.000	.983	49981.470
	Roy's Largest Root	57.056	12495.367 ^b	4.000	876.000	.000	.983	49981.470
	County Type	Pillai's Trace	.065	15.292 ^b	4.000	876.000	.000	.065
Wilks' Lambda		.935	15.292 ^b	4.000	876.000	.000	.065	61.169
Hotelling's Trace		.070	15.292 ^b	4.000	876.000	.000	.065	61.169
Roy's Largest Root		.070	15.292 ^b	4.000	876.000	.000	.065	61.169

a. Design: Intercept + County Type

b. Exact statistic

c. Computed using alpha = .05

The data indicate 4-H members county geographic had a statistically significant effect on the 4-H members that participated in Leadership and Citizenship programs. The 4-H Essential Elements, which include the BIG M (belonging, independence, generosity, and mastery) indicate the 4-H members' overall experience in Leadership and Citizenship. The data below specify the geographical area's outcome about the 4-H Essential Elements from the 2015–2016 club year. The county type (urban or rural) had a statistically significant effect on mastery ($F(1,879) = 30.58$; $p < .001$; partial $\eta^2 = .34$). The data reveal participants in urban counties ($M = 4.23$) demonstrated more mastery than participants in rural counties ($M = 3.990$).

The county type (urban or rural) had a statistically significant effect on generosity as well ($F(1,879) = 50.82$; $p < .001$; partial $\eta^2 = .55$) with participants in urban counties ($M = 4.26$) demonstrating more generosity than participants in rural counties ($M = 3.94$). The county type (urban or rural) had a statistically significant effect on belonging ($F(1,879) = 36.91$; $p < .001$; partial $\eta^2 = .40$) with participants in urban counties ($M = 4.28$) demonstrating more belonging than participants in rural counties ($M = 4.00$).

Finally the county type (urban or rural) had a statistically significant effect on independence ($F(1,879) = 38.35$; $p < .001$; partial $\eta^2 = .42$). The data reveal participants in urban counties ($M = 4.02$) demonstrated more independence than participants in rural counties ($M = 4.00$) (See Tables 11 and 12).

Table 11

Urban and Rural Counties 4-H Participation Descriptive Statistics 2015–2016

	County Type	Mean	Std. Deviation	N
Mastery	Urban	4.23	.604	490
	Rural	3.99	.687	391
	Total	4.12	.653	881
Generosity	Urban	4.26	.598	490
	Rural	3.94	.723	391
	Total	4.12	.675	881
Belonging	Urban	4.28	.603	490
	Rural	4.00	.752	391
	Total	4.16	.687	881
Independence	Urban	4.02	.612	490
	Rural	3.75	.718	391
	Total	3.90	.675	881

Table 12

Urban and Rural Counties 4-H Participation Test of Between Subject Effects 2015–2016

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Mastery	12.615 ^a	1	12.615	30.578	.000	.034
	Generosity	21.887 ^b	1	21.887	50.820	.000	.055
	Belonging	16.721 ^c	1	16.721	36.909	.000	.040
	Independence	16.773 ^d	1	16.773	38.349	.000	.042
Intercept	Mastery	14683.210	1	14683.210	35591.570	.000	.976
	Generosity	14612.048	1	14612.048	33928.313	.000	.975
	Belonging	14908.773	1	14908.773	32908.110	.000	.974
	Independence	13122.456	1	13122.456	30002.980	.000	.972
County Type	Mastery	12.615	1	12.615	30.578	.000	.034
	Generosity	21.887	1	21.887	50.820	.000	.055
	Belonging	16.721	1	16.721	36.909	.000	.040
	Independence	16.773	1	16.773	38.349	.000	.042
Error	Mastery	362.629	879	.413			
	Generosity	378.563	879	.431			
	Belonging	398.224	879	.453			
	Independence	384.450	879	.437			

(table continues)

Table 12 (continued)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Total	Mastery	15344.361	881				
	Generosity	15328.375	881				
	Belonging	15628.250	881				
	Independence	13798.502	881				
Corrected Total	Mastery	375.244	880				
	Generosity	400.450	880				
	Belonging	414.946	880				
	Independence	401.222	880				

^a R Squared = .034 (Adjusted R Squared = .033)

^b R Squared = .055 (Adjusted R Squared = .054)

^c R Squared = .040 (Adjusted R Squared = .039)

^d R Squared = .042 (Adjusted R Squared = .041)

The dataset was compiled for the 2016–2017 year as well. A one-way MANOVA was used to determine if there are differences in 4-H participants’ Belonging, Independence, Generosity, and Mastery between those from rural and urban counties in 2016–2017. Box’s M test indicated sufficient covariance between the dependent measures to proceed with the analysis (See Table 13).

Table 13

Urban and Rural Counties 4-H Participation Box’s Test of Equality of Covariance Matrices^a, 2015-2016

Box’s M	29.963
F	2.960
df1	10
df2	410632.512
Sig.	.001

Bartlett’s Test of Sphericity indicated sufficient correlation between the dependent measures to proceed with the analysis: 786.117 $p < .001$ (See Table 14).

Table 14

Urban and Rural Counties 4-H Participation Bartlett’s Test of Sphericity^a, 2016–2017

Likelihood Ratio	.000
Approx. Chi-Square	786.117
Df	9
Sig.	.000

The multivariate effect of participants county type indicated a statistically significant difference in the linear combination of DVs with large effect size, $\Lambda = .92$, $F(4,391) = 7.42$, $p < .001$, partial $\eta^2 = .07$. According to Salkind (2007), a large effect size is any value above .05; the effect size for the county type effect size of .07, is categorized as large (See Table 15)

Table 15

Urban and Rural Counties 4-H Participation Multivariate Tests^a 2016-2017

Effect		Value	F	Hypothesis		Sig.	Partial Eta Squared
				df	Error df		
Intercept	Pillai's Trace	.984	5969.760 ^b	4.000	391.000	.000	.984
	Wilks' Lambda	.016	5969.760 ^b	4.000	391.000	.000	.984
	Hotelling's Trace	61.072	5969.760 ^b	4.000	391.000	.000	.984
	Roy's Largest Root	61.072	5969.760 ^b	4.000	391.000	.000	.984
CountyType	Pillai's Trace	.071	7.426 ^b	4.000	391.000	.000	.071
	Wilks' Lambda	.929	7.426 ^b	4.000	391.000	.000	.071
	Hotelling's Trace	.076	7.426 ^b	4.000	391.000	.000	.071
	Roy's Largest Root	.076	7.426 ^b	4.000	391.000	.000	.071

a. Design: Intercept + CountyType

b. Exact statistic

The data indicates 4-H members county category had a statistically significant effect on the 4-H members that participated in Leadership and Citizenship programs. The 4-H Essential Elements which includes the BIG M (belonging, independence, generosity, and mastery) indicates the 4-H members' overall experience in Leadership and Citizenship. The data below specify the geographical area's outcome about the 4-H Essential Elements from the 2016–2017 club year. The county type (urban or rural) had a statistically significant effect on mastery ($F(1.394) = 11.306$; $p < .001$; partial $\eta^2 = .028$).

The data disclose that participants in rural counties ($M = 26.67$) demonstrated more mastery than participants in urban counties ($M = 25.32$). The county type (urban or rural) had a

statistically significant effect on generosity ($F(1,394) = 7.544$; $p < .001$; partial $\eta^2 = .019$) with participants in rural counties ($M = 17.63$) demonstrating more generosity than participants in urban counties ($M = 16.89$). The county type (urban or rural) had a statistically significant effect on belonging ($F(1,394) = 4.052$; $p < .001$; partial $\eta^2 = .010$) with participants in rural counties ($M = 17.79$) demonstrating more belonging than participants in urban counties ($M = 17.28$).

As a final point, the county type (urban or rural) had a statistically significant effect on independence ($F(1,394) = 27.617$; $p < .001$; partial $\eta^2 = .066$) with participants in rural counties ($M = 21.45$) demonstrating more independence than participants in urban counties ($M = 19.53$) (See Tables 16 and 17).

Table 16

Urban and Rural Counties 4-H Participation Descriptive Statistics 2016–2017

	County Type	Mean	Standard Deviation	N
Mastery	Urban	25.32	4.060	253
	Rural	26.67	3.419	143
	Total	25.81	3.891	396
Generosity	Urban	16.89	2.774	253
	Rural	17.63	2.222	143
	Total	17.15	2.610	396
Belonging	Urban	17.28	2.433	253
	Rural	17.79	2.343	143
	Total	17.47	2.410	396
Independence	Urban	19.53	3.717	253
	Rural	21.45	3.041	143
	Total	20.22	3.604	396

Table 17

Urban and Rural Counties 4-H Participation Test of Between-Subject Effects 2016-2017

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Mastery	166.795 ^a	1	166.795	11.306	.001	.028
	Generosity	50.571 ^b	1	50.571	7.544	.006	.019
	Belonging	23.357 ^c	1	23.357	4.052	.045	.010
	Independence	336.060 ^d	1	336.060	27.617	.000	.066
Intercept	Mastery	246959.562	1	246959.562	16739.796	.000	.977
	Generosity	108835.541	1	108835.541	16236.530	.000	.976
	Belonging	112396.206	1	112396.206	19497.970	.000	.980
	Independence	153407.242	1	153407.242	12606.927	.000	.970
County Type	Mastery	166.795	1	166.795	11.306	.001	.028
	Generosity	50.571	1	50.571	7.544	.006	.019
	Belonging	23.357	1	23.357	4.052	.045	.010
	Independence	336.060	1	336.060	27.617	.000	.066
Error	Mastery	5812.620	394	14.753			
	Generosity	2641.033	394	6.703			
	Belonging	2271.216	394	5.765			
	Independence	4794.384	394	12.168			

(table continues)

Table 17 (continued)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Total	Mastery	269738.000	396				
	Generosity	119219.000	396				
	Belonging	123115.000	396				
	Independence	167070.000	396				
Corrected Total	Mastery	5979.414	395				
	Generosity	2691.604	395				
	Belonging	2294.573	395				
	Independence	5130.444	395				

^a R Squared = .028 (Adjusted R Squared = .025)

^b R Squared = .019 (Adjusted R Squared = .016)

^c R Squared = .010 (Adjusted R Squared = .008)

^d R Squared = .066 (Adjusted R Squared = .063)

The final dataset was analyzed for 2017–2018 for the 4-H members who participated in Leadership and Citizenship programs in rural versus urban counties. A one-way MANOVA was used to determine if there are differences in 4-H participants’ Belonging, Independence, Generosity, and Mastery between those from rural and urban counties in 2017–2018. Box’s M test indicated sufficient covariance between the dependent measures to proceed with the analysis (Table 18).

Table 18

Urban and Rural Counties 4-H Participation Box’s Test of Equality of Covariance Matrices^a, 2017–2018

Box’s M	18.543
F	1.844
df1	10
df2	1811730.219
Sig.	.048

Bartlett’s Test of Sphericity indicated sufficient correlation between the dependent measures to proceed with the analysis: 2064.059, $p < .001$ (See Table 19).

Table 19

Urban and Rural Counties 4-H Participation Bartlett’s Test of Sphericity^a, 2017–2018

Likelihood Ratio	.000
Approx. Chi-Square	2064.059
df	9
Sig.	.000

The multivariate effect of participants county location indicated a statistically significant difference in the linear combination of DVs with medium effect size, $\Lambda = .98$, $F(4,833) = 4.17$, $p < .002$, partial $\eta^2 = .02$. According to Salkind (2007), a medium effect size is any ranging from .20 to .50; the effect size for the county type effect size of .02 is categorized as medium (See Table 20).

Table 20

Urban and Rural Counties 4-H Participation Multivariate Tests^a 2017–2018

Effect		Value	F	Hypothesis		Sig.	Partial Eta Squared
				df	Error df		
Intercept	Pillai's Trace	.959	4822.776 ^b	4.000	833.000	.000	.959
	Wilks' Lambda	.041	4822.776 ^b	4.000	833.000	.000	.959
	Hotelling's Trace	23.159	4822.776 ^b	4.000	833.000	.000	.959
	Roy's Largest Root	23.159	4822.776 ^b	4.000	833.000	.000	.959
County Type	Pillai's Trace	.020	4.173 ^b	4.000	833.000	.002	.020
	Wilks' Lambda	.980	4.173 ^b	4.000	833.000	.002	.020
	Hotelling's Trace	.020	4.173 ^b	4.000	833.000	.002	.020
	Roy's Largest Root	.020	4.173 ^b	4.000	833.000	.002	.020

a. Design: Intercept + County Type

b. Exact statistic

The data specifies 4-H Members county geographic had a statistically significant effect on the 4-H members that participated in Leadership and Citizenship programs. The 4-H Essential Elements which includes the BIG M (belonging, independence, generosity, and mastery) indicates the 4-H members' overall experience in Leadership and Citizenship. The data below specify the geographical area's outcome about the 4-H Essential Elements from the 2017–2018 club year. The county type had a statistically significant effect on mastery ($F(1,836) = 5.444$; $p < .001$; partial $\eta^2 = .006$). The data discloses participants in urban counties with participants in rural counties ($M = 3.33$) demonstrated more mastery than participants in urban counties ($M = 3.18$).

The county type (urban or rural) had a statistically significant effect on generosity as well generosity ($F(1,836) = .156; p < .001; \text{partial } \eta^2 = .000$) with participants in rural counties ($M = 6.39$) demonstrating more generosity than participants in urban counties ($M = 6.34$). The county type (urban or rural) had a statistically significant effect on belonging ($F(1,836) = 11.5121; p < .001; \text{partial } \eta^2 = .014$) with participants in rural counties ($M = 13.25$) demonstrating more belonging than participants in urban counties ($M = 12.55$). Lastly, the county type (urban or rural) had a statistically significant effect on independence ($F(1,836) = 1.398; p < .001; \text{partial } \eta^2 = .002$) with participants in rural counties ($M = 5.67$) demonstrating more independence than participants in urban counties ($M = 5.52$) (See Tables 21 and 22).

Table 21

Urban and Rural Counties 4-H Participation Descriptive Statistics 2017–2018

	County Type	Mean	Std. Deviation	N
Mastery	Urban	3.18	.926	538
	Rural	3.33	.789	300
	Total	3.24	.882	838
Generosity	Urban	6.34	1.590	538
	Rural	6.39	1.525	300
	Total	6.36	1.566	838
Independence	Urban	5.52	1.772	538
	Rural	5.67	1.712	300
	Total	5.58	1.751	838
Belonging	Urban	12.55	2.957	538
	Rural	13.25	2.598	300
	Total	12.80	2.851	838

Table 22

Urban and Rural Counties 4-H Participation Tests of Between-Subjects Effects 2017–2018

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Mastery	4.210 ^a	1	4.210	5.444	.020	.006
	Generosity	.384 ^b	1	.384	.156	.693	.000
	Independence	4.286 ^c	1	4.286	1.398	.237	.002
	Belonging	92.433 ^d	1	92.433	11.512	.001	.014
Intercept	Mastery	8167.876	1	8167.876	10562.365	.000	.927
	Generosity	31205.119	1	31205.119	12711.851	.000	.938
	Independence	24149.126	1	24149.126	7879.512	.000	.904
	Belonging	128208.882	1	128208.882	15967.180	.000	.950
County Type	Mastery	4.210	1	4.210	5.444	.020	.006
	Generosity	.384	1	.384	.156	.693	.000
	Independence	4.286	1	4.286	1.398	.237	.002
	Belonging	92.433	1	92.433	11.512	.001	.014
Error	Mastery	646.479	836	.773			
	Generosity	2052.217	836	2.455			
	Independence	2562.173	836	3.065			
	Belonging	6712.683	836	8.030			

(table continues)

Table 22 (continued)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Total	Mastery	9421.000	838				
	Generosity	35928.000	838				
	Independence	28636.000	838				
	Belonging	144144.000	838				
Corrected Total	Mastery	650.689	837				
	Generosity	2052.601	837				
	Independence	2566.458	837				
	Belonging	6805.117	837				

^a R Squared = .006 (Adjusted R Squared = .005)

^b R Squared = .000 (Adjusted R Squared = -.001)

^c R Squared = .002 (Adjusted R Squared = .000)

^d R Squared = .014 (Adjusted R Squared = .012)

Research Question Two: What are the differences, if any between 4-H members who participate in Leadership and Citizenship programs in elementary/middle school verses high school?

A one-way MANOVA was used to determine if there are differences in 4-H participants' Belonging, Independence, Generosity, and Mastery between those from elementary/middle school and high school. Box's M test indicated sufficient covariance between the dependent measures to proceed with the analysis (See Table 23).

Table 23

Elementary/Middle School verses High School 4-H Participation Box's Test of Equality of Covariance Matrices 2015–2016

Box's M	38.281
F	3.721
df1	10
df2	34830.214
Sig.	.000

Bartlett's Test of Sphericity indicated sufficient correlation between the dependent measures to proceed with the analysis: 1368.39 $p < .001$ (See Table 24).

Table 24

Elementary/Middle School versus High School 4-H Participation Bartlett's Test of Sphericity

2015–2016

Likelihood Ratio	.000
Approx. Chi-Square	1368.395
Df	9
Sig.	.000

The multivariate effect of participants county location indicated a statistically significant difference in the linear combination of DVs with medium effect size, $\Lambda = .98$, $F(4,876) = 3.85$, $p < .004$, partial $\eta^2 = .02$. According to Salkind (2007), a medium effect size is any ranging from .20 to .50; the effect size for the county type effect size of .02, is categorized as medium (See Table 25)

Table 25

Elementary/Middle School versus High School 4-H Participation Multivariate Tests^a 2015-2016

Effect	Value	F	Hypothesis		Sig.	Partial Eta Squared	Noncent. Parameter	
			df	Error df				
Intercept	Pillai's Trace	.929	2874.755 ^b	4.000	876.000	.000	.929	11499.021
	Wilks' Lambda	.071	2874.755 ^b	4.000	876.000	.000	.929	11499.021
	Hotelling's Trace	13.127	2874.755 ^b	4.000	876.000	.000	.929	11499.021
	Roy's Largest Root	13.127	2874.755 ^b	4.000	876.000	.000	.929	11499.021
SchoolLevel	Pillai's Trace	.017	3.835 ^b	4.000	876.000	.004	.017	15.339
	Wilks' Lambda	.983	3.835 ^b	4.000	876.000	.004	.017	15.339
	Hotelling's Trace	.018	3.835 ^b	4.000	876.000	.004	.017	15.339
	Roy's Largest Root	.018	3.835 ^b	4.000	876.000	.004	.017	15.339

a. Design: Intercept + School Level

b. Exact statistic

c. Computed using alpha = .05

The data indicate that 4-H members school grade had a statistically significant effect on the 4-H members that participated in Leadership and Citizenship programs. The 4-H Essential Elements which includes the BIG M (belonging, independence, generosity, and mastery) indicate the 4-H members' overall experience in Leadership and Citizenship. The data below specify the school grade outcome about the 4-H Essential Elements from the 2015–2016 club year. The data revealed participants school grade (elementary/middle or high school) had a statistically significant effect on mastery ($F(1,879) = 4.295$; $p < .001$; partial $\eta^2 = .005$) with participants in high school ($M = 4.30$) demonstrates more mastery than participants in elementary/middle school ($M = 4.11$).

The school grade (elementary/middle or high school) had a statistically significant effect on generosity as well ($F(1,879) = 6.482$; $p < .001$; partial $\eta^2 = .007$) with participants in elementary/middle school ($M = 4.34$) demonstrated more generosity than participants in high school ($M = 4.10$). The school grade (elementary/middle or high school) had an effect on belonging ($F(1,879) = 3.862$; $p < .001$; partial $\eta^2 = .004$) with participants in high school ($M = 4.33$) demonstrates more belonging than participants in elementary/middle school ($M = 4.14$). Finally the school grade (elementary/middle or high school) had a statistically significant effect on independence ($F(1,879) = 14.684$; $p < .001$; partial $\eta^2 = .016$). The data revealed participants in high school ($M = 4.24$) demonstrated more independence than participants in elementary/middle school ($M = 3.88$) (See Tables 26 and 27).

Table 26

Elementary/Middle School versus High School 4-H Participation Descriptive Statistics 2015–2016

	School Type	Mean	Std. Deviation	N
Mastery	High School	4.30	.664	53
	Middle/Elementary School	4.11	.651	828
	Total	4.12	.653	881
Generosity	High School	4.34	.647	53
	Middle/Elementary School	4.10	.674	828
	Total	4.12	.675	881
Belonging	High School	4.33	.530	53
	Middle/Elementary School	4.14	.694	828
	Total	4.16	.687	881
Independence	High School	4.24	.597	53
	Middle/Elementary School	3.88	.674	828
	Total	3.90	.675	881

Table 27

Elementary/Middle School versus High School 4-H Participation Tests of Between-Subjects Effects 2015–2016

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Mastery	1.824 ^a	1	1.824	4.295	.039	.005
	Generosity	2.931 ^b	1	2.931	6.482	.011	.007
	Belonging	1.815 ^c	1	1.815	3.862	.050	.004
	Independence	6.592 ^d	1	6.592	14.684	.000	.016
Intercept	Mastery	3525.084	1	3525.084	8297.770	.000	.904
	Generosity	3553.381	1	3553.381	7857.304	.000	.899
	Belonging	3581.064	1	3581.064	7619.271	.000	.897
	Independence	3283.671	1	3283.671	7314.057	.000	.893
School Level	Mastery	1.824	1	1.824	4.295	.039	.005
	Generosity	2.931	1	2.931	6.482	.011	.007
	Belonging	1.815	1	1.815	3.862	.050	.004
	Independence	6.592	1	6.592	14.684	.000	.016
Error	Mastery	373.420	879	.425			
	Generosity	397.518	879	.452			
	Belonging	413.131	879	.470			
	Independence	394.630	879	.449			

(table continues)

Table 27 (continued)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Total	Mastery	15344.361	881				
	Generosity	15328.375	881				
	Belonging	15628.250	881				
	Independence	13798.502	881				
Corrected Total	Mastery	375.244	880				
	Generosity	400.450	880				
	Belonging	414.946	880				
	Independence	401.222	880				

^a R Squared = .005 (Adjusted R Squared = .004)

^b R Squared = .007 (Adjusted R Squared = .006)

^c R Squared = .004 (Adjusted R Squared = .003)

^d R Squared = .016 (Adjusted R Squared = .015)

^e Computed using alpha = .05

The dataset was compiled for the 2016–2017 year as well. A one-way MANOVA was used to determine if there are differences in 4-H participants’ Mastery, Generosity, Belongings, and Independence between those from elementary/middle school and high school in 2016–2017. Box’s M test indicated sufficient covariance between the dependent measures to proceed with the analysis (See Table 28).

Table 28

Elementary/Middle School versus High School 4-H Participation Box’s Test of Equality of Covariance Matrices^a, 2016–2017

Box’s M	38.174
F	3.718
df1	10
df2	44978.219
Sig.	.000

Bartlett’s Test of Sphericity indicated sufficient correlation between the dependent measures to proceed with the analysis: 814.921, $p < .001$ (See Table 29).

Table 29

Elementary/Middle School versus High School 4-H Participation Bartlett's Test of Sphericity

2016–2017

Likelihood Ratio	.000
Approx. Chi-Square	814.921
Df	9
Sig.	.000

The multivariate effect of participants county location indicated a statistically significant difference in the linear combination of DVs with medium effect size, $\Lambda = .96$, $F(4,391) = 3.96$, $p < .004$, partial $\eta^2 = .04$. According to Salkind (2007), a medium effect size is any ranging from .20 to .50; the effect size for the county type effect size of .02 is categorized as medium (See Table 30).

Table 30

Elementary/Middle School versus High School 4-H Participation Multivariate Tests 2016–2017

Effect	Value	F	Hypothesis		Sig.	Partial Eta Squared	
			df	Error df			
Intercept	Pillai's Trace	.970	3181.866 ^b	4.000	391.000	.000	.970
	Wilks' Lambda	.030	3181.866 ^b	4.000	391.000	.000	.970
	Hotelling's Trace	32.551	3181.866 ^b	4.000	391.000	.000	.970
	Roy's Largest Root	32.551	3181.866 ^b	4.000	391.000	.000	.970
SchoolLevel	Pillai's Trace	.039	3.965 ^b	4.000	391.000	.004	.039
	Wilks' Lambda	.961	3.965 ^b	4.000	391.000	.004	.039
	Hotelling's Trace	.041	3.965 ^b	4.000	391.000	.004	.039
	Roy's Largest Root	.041	3.965 ^b	4.000	391.000	.004	.039

a. Design: Intercept + SchoolLevel

b. Exact statistic

The data indicate 4-H members school grade had a statistically significant effect on the 4-H members that participated in Leadership and Citizenship programs. The 4-H Essential Elements which includes the BIG M (belonging, independence, generosity, and mastery) indicates the 4-H members' overall experience in Leadership and Citizenship. The data below specify the school grade outcome about the 4-H Essential Elements from the 2016–2017 club year. The data revealed participants' school grade (elementary/middle or high school) had a statistically significant effect on mastery ($F(1,394) = 1.745$; $p < .001$; partial $\eta^2 = .004$) with participants in high school ($M = 26.43$) demonstrating more mastery than participants in elementary/middle school ($M = 25.70$).

The school grade (elementary/middle or high school) had a statistically significant effect on generosity ($F(1,394) = 5.827$; $p < .001$; partial $\eta^2 = .015$) with participants in high school ($M = 17.91$) demonstrating more generosity than participants in elementary/middle school ($M = 17.02$). The school grade (elementary/middle or high school) had an effect on belonging ($F(1,394) = .000$; $p < .001$; partial $\eta^2 = .000$) with participants in elementary/middle school and high school demonstrating equal amounts of belonging ($M = 17.47$). Lastly the school grade (elementary/middle or high school) had a statistically important effect on independence ($F(1,394) = 7.113$; $p < .001$; partial $\eta^2 = .018$) with participants in high school ($M = 21.38$) demonstrating more independence than participants in elementary/middle school ($M = 20.02$) (See Tables 31 and 32).

Table 31

Elementary/Middle School versus High School 4-H Participation Descriptive Statistics 2016–2017

	Middle/Elementary vs High School	Mean	Std. Deviation	N
Mastery	High School	26.43	3.858	58
	Middle/Elementary School	25.70	3.892	338
	Total	25.81	3.891	396
Generosity	High School	17.91	2.054	58
	Middle/Elementary School	17.02	2.675	338
	Total	17.15	2.610	396
Belonging	High School	17.47	2.933	58
	Middle/Elementary School	17.47	2.314	338
	Total	17.47	2.410	396
Independence	High School	21.38	3.764	58
	Middle/Elementary School	20.02	3.544	338
	Total	20.22	3.604	396

Table 32

Elementary/Middle School versus High School 4-H Participation Tests of Between-Subjects Effects 2016–2017

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Mastery	26.370 ^a	1	26.370	1.745	.187	.004
	Generosity	39.224 ^b	1	39.224	5.827	.016	.015
	Belonging	.000 ^c	1	.000	.000	.995	.000
	Independence	90.979 ^d	1	90.979	7.113	.008	.018
Intercept	Mastery	134543.249	1	134543.249	8904.695	.000	.958
	Generosity	60427.163	1	60427.163	8976.205	.000	.958
	Belonging	60411.637	1	60411.637	10373.252	.000	.963
	Independence	84861.888	1	84861.888	6634.748	.000	.944
School Level	Mastery	26.370	1	26.370	1.745	.187	.004
	Generosity	39.224	1	39.224	5.827	.016	.015
	Belonging	.000	1	.000	.000	.995	.000
	Independence	90.979	1	90.979	7.113	.008	.018
Error	Mastery	5953.044	394	15.109			
	Generosity	2652.380	394	6.732			
	Belonging	2294.573	394	5.824			
	Independence	5039.466	394	12.791			

(table continues)

Table 32 (continued)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Total	Mastery	269738.000	396				
	Generosity	119219.000	396				
	Belonging	123115.000	396				
	Independence	167070.000	396				
Corrected Total	Mastery	5979.414	395				
	Generosity	2691.604	395				
	Belonging	2294.573	395				
	Independence	5130.444	395				

^a R Squared = .004 (Adjusted R Squared = .002)

^b R Squared = .015 (Adjusted R Squared = .012)

^c R Squared = .000 (Adjusted R Squared = -.003)

^d R Squared = .018 (Adjusted R Squared = .015)

The final dataset was compiled for 2017–2018 for the 4-H members who participated in Leadership and Citizenship programs in elementary/middle school verses high school. A one-way MANOVA was used to determine if there are differences in 4-H participants’ Mastery, Generosity, Belongings, and Independence between those 4-H members in elementary/middle school verses high school in 2017–2018. (See Table 33).

Table 33

Elementary/Middle School verses High School 4-H Participation Box’s Test of Equality of Covariance Matrices^a, 2017–2018

Box’s M	51.575
F	5.016
df1	10
df2	36261.810
Sig.	.000

Bartlett’s Test of Sphericity indicated sufficient correlation between the dependent measures to proceed with the analysis: 2067.050 $p < .001$ (See Table 34).

Table 34

Elementary/Middle School verses High School 4-H Participation Bartlett’s Test of Sphericity 2017–2018

Likelihood Ratio	.000
Approx. Chi-Square	2067.050
Df	9
Sig.	.000

The multivariate effect of participants county location indicated a statistically significant difference in the linear combination of DVs with medium effect size, $\Lambda = .97$, $F(4,833) = 5.830$, $p < .000$, partial $\eta^2 = .03$. According to Salkind (2007), a medium effect size is any ranging from .20 to .50; the effect size for the county type effect size of .03, is categorized as medium (See Table 35).

Table 35

Elementary/Middle School versus High School 4-H Participation Multivariate Tests^a 2017–2018

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.867	1362.595 ^b	4.000	833.000	.000	.867
	Wilks' Lambda	.133	1362.595 ^b	4.000	833.000	.000	.867
	Hotelling's Trace	6.543	1362.595 ^b	4.000	833.000	.000	.867
	Roy's Largest Root	6.543	1362.595 ^b	4.000	833.000	.000	.867
SchoolLevel	Pillai's Trace	.027	5.830 ^b	4.000	833.000	.000	.027
	Wilks' Lambda	.973	5.830 ^b	4.000	833.000	.000	.027
	Hotelling's Trace	.028	5.830 ^b	4.000	833.000	.000	.027
	Roy's Largest Root	.028	5.830 ^b	4.000	833.000	.000	.027

a. Design: Intercept + SchoolLevel

b. Exact statistic

The data indicate 4-H Members school grade had a statistically significant effect on the 4-H members that participated in Leadership and Citizenship programs. The 4-H Essential Elements which includes the BIG M (belonging, independence, generosity, and mastery) indicates the 4-H members' overall experience in Leadership and Citizenship. The data below specify the school grade outcome about the 4-H Essential Elements from the 2017–2018 club year. The data revealed participants school grade (elementary/middle or high school) had a statistically significant effect on mastery ($F(1,836) = 3.263$; $p < .001$; partial $\eta^2 = .004$) with

participants in high school ($M = 3.44$) demonstrated more mastery than participants in elementary/middle school ($M = 3.22$).

The school grade (elementary/middle or high school) had a statistically significant effect on generosity as well ($F(1,836) = 17.935$; $p < .001$; partial $\eta^2 = .021$) with participants in high school ($M = 7.22$) demonstrating more generosity than participants in elementary/middle school ($M = 6.30$). The school grade (elementary/middle or high school) had an effect on belonging ($F(1,836) = 3.288$; $p < .001$; partial $\eta^2 = .004$) with participants in high school ($M = 13.48$) demonstrating more belonging than participants in elementary/middle school ($M = 12.76$).

Finally the school grade (elementary/middle or high school) had a statistically significant effect on independence ($F(1,836) = 13.754$; $p < .001$; partial $\eta^2 = .016$) with participants in high school ($M = 6.43$) demonstrated more independence than participants in elementary/middle school ($M = 5.52$) (See Tables 36 and 37).

Table 36

Elementary/Middle School versus High School 4-H Participation Descriptive Statistics 2017–2018

	Middle/Elementary vs High School	Mean	Std. Deviation	N
Mastery	High School	3.44	.718	54
	Middle/Elementary School	3.22	.890	784
	Total	3.24	.882	838
Generosity	High School	7.22	.904	54
	Middle/Elementary School	6.30	1.585	784
	Total	6.36	1.566	838
Independence	High School	6.43	1.368	54
	Middle/Elementary School	5.52	1.760	784
	Total	5.58	1.751	838
Belonging	High School	13.48	2.745	54
	Middle/Elementary School	12.76	2.854	784
	Total	12.80	2.851	838

Table 37

Elementary/Middle School versus High School 4-H Participation Tests of Between-Subjects Effects 2017–2018

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Mastery	2.530 ^a	1	2.530	3.263	.071	.004
	Generosity	43.110 ^b	1	43.110	17.935	.000	.021
	Independence	41.542 ^c	1	41.542	13.754	.000	.016
	Belonging	26.656 ^d	1	26.656	3.288	.070	.004
Intercept	Mastery	2244.296	1	2244.296	2894.711	.000	.776
	Generosity	9235.568	1	9235.568	3842.233	.000	.821
	Independence	7208.458	1	7208.458	2386.721	.000	.741
	Belonging	34776.059	1	34776.059	4288.995	.000	.837
School Level	Mastery	2.530	1	2.530	3.263	.071	.004
	Generosity	43.110	1	43.110	17.935	.000	.021
	Independence	41.542	1	41.542	13.754	.000	.016
	Belonging	26.656	1	26.656	3.288	.070	.004
Error	Mastery	648.159	836	.775			
	Generosity	2009.491	836	2.404			
	Independence	2524.917	836	3.020			
	Belonging	6778.461	836	8.108			

(table continues)

Table 37 (continued)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Total	Mastery	9421.000	838				
	Generosity	35928.000	838				
	Independence	28636.000	838				
	Belonging	144144.000	838				
Corrected Total	Mastery	650.689	837				
	Generosity	2052.601	837				
	Independence	2566.458	837				
	Belonging	6805.117	837				

^a R Squared = .004 (Adjusted R Squared = .003)

^b R Squared = .021 (Adjusted R Squared = .020)

^c R Squared = .016 (Adjusted R Squared = .015)

^d R Squared = .004 (Adjusted R Squared = .003)

Research Question Three: What are the differences, if any between 4-H members who participate in Leadership and Citizenship Programs in in-school verses out of school programs?

The four categories of Belonging, Independence, Generosity and Mastery had varying averages depending on the grade level and Essential Elements from counties for 2015–2016, 2016–2017, and 2017–2018.

A one-way MANOVA was used to determine if there are differences in 4-H participants Belonging, Independence, Generosity and Mastery between those from in-school verses out of school 4-H club type. Box’s M test indicated sufficient covariance between the dependent measures to proceed with the analysis (See Table 38).

Table 38

4-H Participation Through In-school versus Out-of-School Programs Box’s Test of Equality of Covariance Matrices^a, 2015–2016

Box’s M	20.967
F	2.086
df1	10
df2	2326916.209
Sig.	.022

Bartlett’s Test of Sphericity indicated sufficient correlation between the dependent measures to proceed with the analysis: 1355.161 $p < .001$ (See Table 39).

Table 39

*4-H Participation Through In-school versus Out-of-School Programs Bartlett's Test of**Sphericity 2015–2016*

Likelihood Ratio	.000
Approx. Chi-Square	1355.161
Df	9
Sig.	.000

The multivariate effect of participants county location indicated a statistically significant difference in the linear combination of DVs with medium effect size, $\Lambda = .97$, $F(4,876) = 4.904$, $p < .001$, partial $\eta^2 = .02$. According to Salkind (2007), a medium effect size is any ranging from .20 to .50; the effect size for the county type effect size of .02, is categorized as medium (See Table 40).

Table 40

*4-H Participation Through In-school versus Out-of-School Programs Multivariate Tests 2015–**2016*

Effect	Value	F	Hypothesis		Sig.	Partial Eta Squared	Noncent. Parameter	
			df	Error df				
Intercept	Pillai's Trace	.981	11395.772 ^b	4.000	876.000	.000	.981	45583.089
	Wilks' Lambda	.019	11395.772 ^b	4.000	876.000	.000	.981	45583.089
	Hotelling's Trace	52.035	11395.772 ^b	4.000	876.000	.000	.981	45583.089
	Roy's Largest Root	52.035	11395.772 ^b	4.000	876.000	.000	.981	45583.089
Club	Pillai's Trace	.022	4.904 ^b	4.000	876.000	.001	.022	19.616
	Wilks' Lambda	.978	4.904 ^b	4.000	876.000	.001	.022	19.616
	Hotelling's Trace	.022	4.904 ^b	4.000	876.000	.001	.022	19.616
	Roy's Largest Root	.022	4.904 ^b	4.000	876.000	.001	.022	19.616

a. Design: Intercept + Club location

b. Exact statistic

c. Computed using alpha = .05

The dataset indicate 4-H Members 4-H program involvement had a statistically significant effect on the 4-H members that participated in Leadership and Citizenship programs. The 4-H Essential Elements which includes the BIG M (belonging, independence, generosity, and mastery) indicates the 4-H members' overall experience in Leadership and Citizenship. The data below specify the 4-H members' club involvement location (in-school or out of school) and the relationship with the 4-H Essential Elements from the 2015–2016 club year.

The data revealed 4-H Members 4-H program involvement had a statistically significant effect on mastery ($F(1,879) = 16.255; p < .001; \text{partial } \eta^2 = .018$) with participants in in-school ($M = 4.19$) demonstrating more mastery than participants in out of school ($M = 4.01$). The 4-H members 4-H program involvement location (in-school or out of school) had a statistically significant effect on generosity ($F(1,879) = 14.822; p < .001; \text{partial } \eta^2 = .017$) with participants in in-school ($M = 4.18$) demonstrating more generosity than participants in out of school ($M = 4.01$). Likewise the 4-H Members, 4-H program involvement location (in-school or out of school) had a statistically significant effect belonging ($F(1,879) = 8.639; p < .001; \text{partial } \eta^2 = .010$) with participants in in-school ($M = 4.21$) demonstrating more belonging than participants in out of school ($M = 4.07$). Finally, 4-H program involvement location (in-school or out of school) had a statistically significant effect on independence ($F(1,879) = 7.722; p < .001; \text{partial } \eta^2 = .009$). The data revealed participants in in-school ($M = 3.95$) demonstrated more independence than participants in out of school ($M = 3.82$) (See Tables 41 and 42).

Table 41

*4-H Participation through In-school versus Out of School Programs Descriptive Statistics**2015–2016*

	Club Location	Mean	Std. Deviation	N
Mastery	In School	4.19	.647	547
	Out of School	4.01	.647	334
	Total	4.12	.653	881
Generosity	In School	4.18	.672	547
	Out of School	4.01	.665	334
	Total	4.12	.675	881
Belonging	In School	4.21	.692	547
	Out of School	4.07	.670	334
	Total	4.16	.687	881
Independence	In School	3.95	.661	547
	Out of School	3.82	.692	334
	Total	3.90	.675	881

Table 42

4-H Participation through In-school versus Out-of-School Programs Test of Between-Subject Effects 2015–2016

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Mastery	6.813 ^a	1	6.813	16.255	.000	.018
	Generosity	6.641 ^b	1	6.641	14.822	.000	.017
	Belonging	4.038 ^c	1	4.038	8.639	.003	.010
	Independence	3.494 ^d	1	3.494	7.722	.006	.009
Intercept	Mastery	13944.685	1	13944.685	33269.145	.000	.974
	Generosity	13908.004	1	13908.004	31043.308	.000	.972
	Belonging	14207.979	1	14207.979	30393.250	.000	.972
	Independence	12512.860	1	12512.860	27654.051	.000	.969
Club Location	Mastery	6.813	1	6.813	16.255	.000	.018
	Generosity	6.641	1	6.641	14.822	.000	.017
	Belonging	4.038	1	4.038	8.639	.003	.010
	Independence	3.494	1	3.494	7.722	.006	.009
Error	Mastery	368.431	879	.419			
	Generosity	393.809	879	.448			
	Belonging	410.907	879	.467			
	Independence	397.729	879	.452			

(table continues)

Table 42 (continued)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Total	Mastery	15344.361	881				
	Generosity	15328.375	881				
	Belonging	15628.250	881				
	Independence	13798.502	881				
Corrected Total	Mastery	375.244	880				
	Generosity	400.450	880				
	Belonging	414.946	880				
	Independence	401.222	880				

^a R Squared = .018 (Adjusted R Squared = .017)

^b R Squared = .017 (Adjusted R Squared = .015)

^c R Squared = .010 (Adjusted R Squared = .009)

^d R Squared = .009 (Adjusted R Squared = .008)

^e Computed using alpha = .05

A one-way MANOVA was used to determine if there are differences 4-H participants Mastery, Generosity, Belongings, and Independence between those 4-H members in in-school versus out of school. Box's M test indicated sufficient covariance between the dependent measures to proceed with the analysis (See Table 43).

Table 43

4-H Participation through In-school versus Out-of-School Programs Box's Test of Equality of Covariance Matrices^a, 2016–2017

Box's M	38.174
F	3.718
df1	10
df2	44978.219
Sig.	.000

Bartlett's Test of Sphericity indicated sufficient correlation between the dependent measures to proceed with the analysis: 815.953 $p < .001$ (See Table 44).

Table 44

4-H Participation through In-school versus Out-of-School Programs Bartlett's Test of Sphericity^a 2016–2017

Likelihood Ratio	.000
Approx. Chi-Square	815.953
Df	9
Sig.	.000

The multivariate effect of participants county location indicated a statistically significant difference in the linear combination of DVs with medium effect size, $\Lambda = .99$, $F(4,391) = .470$, $p < .758$, partial $\eta^2 = .05$. According to Salkind (2007), a medium effect size is any ranging from .20 to .50; the effect size for the county type effect size of .05, is categorized as medium (See Table 45).

Table 45

4-H Participation Through In-school versus Out-of-School Programs Multivariate Tests 2016-2017

Effect	Value	F	Hypothesis		Sig.	Partial Eta Squared	
			df	Error df			
Intercept	Pillai's Trace	.930	1292.279 ^b	4.000	391.000	.000	.930
	Wilks' Lambda	.070	1292.279 ^b	4.000	391.000	.000	.930
	Hotelling's Trace	13.220	1292.279 ^b	4.000	391.000	.000	.930
	Roy's Largest Root	13.220	1292.279 ^b	4.000	391.000	.000	.930
ClubLocation	Pillai's Trace	.005	.470 ^b	4.000	391.000	.758	.005
	Wilks' Lambda	.995	.470 ^b	4.000	391.000	.758	.005
	Hotelling's Trace	.005	.470 ^b	4.000	391.000	.758	.005
	Roy's Largest Root	.005	.470 ^b	4.000	391.000	.758	.005

a. Design: Intercept + ClubLocation

b. Exact statistic

The data indicates 4-H Members 4-H program involvement had a statistically significant effect on the 4-H members that participated in Leadership and Citizenship programs. The 4-H Essential Elements which includes the BIG M (belonging, independence, generosity, and mastery) indicates the 4-H members' overall experience in Leadership and Citizenship. The data below specify the 4-H members club involvement location (in-school or out of school) and the relationship with the 4-H Essential Elements from the 2016–2017 club year.

The data revealed 4-H Members 4-H program involvement had a statistically significant effect on mastery ($F(1,394) = .002$; $p < .001$; partial $\eta^2 = .000$) with participants in-school ($M = 25.81$) demonstrated more mastery than participants out of school ($M = 25.77$). The 4-H members 4-H program involvement location (in-school or out of school) had a statistically significant effect on generosity ($F(1,394) = .014$; $p < .001$; partial $\eta^2 = .000$) with participants in-school ($M = 17.16$) demonstrating more generosity than participants out of school ($M = 17.09$).

Similarly the 4-H members 4-H program involvement location (in-school or out of school) had a statistically significant effect belonging ($F(1,394) = .731$; $p < .001$; partial $\eta^2 = .002$) with participants in-school ($M = 17.49$) demonstrating more belonging than participants out of school ($M = 17.05$). To finish, 4-H program involvement location (in-school or out of school) had a statistically significant effect independence ($F(1,394) = .138$; $p < .001$; partial $\eta^2 = .000$) with participants out of school ($M = 20.50$) demonstrating more independence than participants in-school ($M = 20.21$) (See Tables 46 and 47).

Table 46

*4-H Participation through In-school versus Out-of-School Programs Descriptive Statistics**2016–2017*

	In-School vs Out-of-School	Mean	Std. Deviation	N
Mastery	In-School	25.81	3.901	374
	Out-of-School	25.77	3.804	22
	Total	25.81	3.891	396
Generosity	In-School	17.16	2.613	374
	Out-of-School	17.09	2.617	22
	Total	17.15	2.610	396
Belonging	In-School	17.49	2.413	374
	Out-of-School	17.05	2.380	22
	Total	17.47	2.410	396
Independence	In-School	20.21	3.632	374
	Out-of-School	20.50	3.159	22
	Total	20.22	3.604	396

Table 47

4-H Participation through In-school versus Out-of-School Programs Tests of Between-Subjects Effects 2016–2017

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Mastery	.029 ^a	1	.029	.002	.965	.000
	Generosity	.093 ^b	1	.093	.014	.907	.000
	Belonging	4.143 ^c	1	4.143	.713	.399	.002
	Independence	1.797 ^d	1	1.797	.138	.710	.000
Intercept	Mastery	55285.393	1	55285.393	3642.924	.000	.902
	Generosity	24371.729	1	24371.729	3567.685	.000	.901
	Belonging	24784.446	1	24784.446	4263.422	.000	.915
	Independence	34428.131	1	34428.131	2644.885	.000	.870
Club Location	Mastery	.029	1	.029	.002	.965	.000
	Generosity	.093	1	.093	.014	.907	.000
	Belonging	4.143	1	4.143	.713	.399	.002
	Independence	1.797	1	1.797	.138	.710	.000
Error	Mastery	5979.385	394	15.176			
	Generosity	2691.511	394	6.831			
	Belonging	2290.430	394	5.813			
	Independence	5128.647	394	13.017			

(table continues)

Table 47 (continued)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Total	Mastery	269738.000	396				
	Generosity	119219.000	396				
	Belonging	123115.000	396				
	Independence	167070.000	396				
Corrected Total	Mastery	5979.414	395				
	Generosity	2691.604	395				
	Belonging	2294.573	395				
	Independence	5130.444	395				

^a R Squared = .000 (Adjusted R Squared = -.003)

^b R Squared = .000 (Adjusted R Squared = -.003)

^c R Squared = .002 (Adjusted R Squared = -.001)

^d R Squared = .000 (Adjusted R Squared = -.002)

The final data set was compiled for 2017–2018 for the 4-H members who participated in Leadership and Citizenship programs in in-school verses out of school. A one-way MANOVA was used to determine if there are differences in 4-H participants Mastery, Generosity, Belongings, and Independence between those from in-school versus out of school 20 club types in 2017–2018. Box’s M test indicated sufficient covariance between the dependent measures to proceed with the analysis (See Table 48).

Table 48

4-H Participation Through In-school versus Out-of-School Programs Box’s Tests of Equality of Covariance Matrices^a 2017–2018

Box’s M	20.257
F	1.987
df1	10
df2	75896.903
Sig.	.031

Bartlett’s Test of Sphericity indicated sufficient correlation between the dependent measures to proceed with the analysis: 2078.354 $p < .001$ (See Table 49).

Table 49

4-H Participation through In-school versus Out-of-School Programs Bartlett’s Test of Sphericity^a 2017–2018

Likelihood Ratio	.000
Approx. Chi-Square	2078.354
Df	9
Sig.	.000

The multivariate effect of participants county location indicated a statistically significant difference in the linear combination of DVs with large effect size, $\Lambda = .99$, $F(4,833) = 1.521$, $p < .194$, partial $\eta^2 = .07$. According to Salkind (2007), a large effect size is any value above .05; the effect size for the county type effect size of .07, is categorized as large (See Table 50).

Table 50

4-H Participation Through In-school versus Out-of-School Programs Multivariate Tests 2017–2018

Effect	Value	F	Hypothesis			Sig.	Partial Eta Squared
			df	Error df			
Intercept	Pillai's Trace	.893	1737.475 ^b	4.000	833.000	.000	.893
	Wilks' Lambda	.107	1737.475 ^b	4.000	833.000	.000	.893
	Hotelling's Trace	8.343	1737.475 ^b	4.000	833.000	.000	.893
	Roy's Largest Root	8.343	1737.475 ^b	4.000	833.000	.000	.893
ClubLocation	Pillai's Trace	.007	1.521 ^b	4.000	833.000	.194	.007
	Wilks' Lambda	.993	1.521 ^b	4.000	833.000	.194	.007
	Hotelling's Trace	.007	1.521 ^b	4.000	833.000	.194	.007
	Roy's Largest Root	.007	1.521 ^b	4.000	833.000	.194	.007

a. Design: Intercept + ClubLocation

b. Exact statistic

The data indicates 4-H Members 4-H program involvement had a statistically significant effect on the 4-H members that participated in Leadership and Citizenship programs. The 4-H Essential Elements which includes the BIG M (belonging, independence, generosity, and mastery) indicates the 4-H members' overall experience in Leadership and Citizenship. The data below specify the 4-H members club involvement location (in-school or out of school) and the relationship with the 4-H Essential Elements from the 2017–2018 club year.

The data revealed 4-H Members 4-H program involvement had a statistically significant effect on mastery ($F(1,836) = .441$; $p < .001$; partial $\eta^2 = .001$) with participants out of school ($M = 3.30$) demonstrating more mastery than participants in-school ($M = 3.23$). The 4-H members 4-H program involvement location (in-school or out of school) had a statistically significant effect on generosity ($F(1,836) = 1.984$; $p < .001$; partial $\eta^2 = .002$) with participants out of school ($M = 6.30$) demonstrating more generosity than participants in in-school ($M = 6.33$). Similarly the 4-H members 4-H program involvement location (in-school or out of school) had a statistically significant effect belonging ($F(1,836) = .243$; $p < .001$; partial $\eta^2 = .000$) with participants in in-school ($M = 12.82$) demonstrating more belonging than participants in out of school ($M = 12.65$). To end, 4-H program involvement location (in-school or out of school) had a statistically significant effect on independence ($F(1,836) = 1.602$; $p < .001$; partial $\eta^2 = .002$) with participants out of school ($M = 5.82$) demonstrating more independence than participants in in-school ($M = 5.55$) (See Tables 51 and 52).

Table 51

4-H Participation through In-school versus Out-of-School Programs Descriptive Statistics

2017–2018

	In-school vs Out-of-School	Mean	Std. Deviation	N
Mastery	In-School	3.23	.887	761
	Out-of-School	3.30	.828	77
	Total	3.24	.882	838
Generosity	In-School	6.33	1.554	761
	Out-of-School	6.60	1.672	77
	Total	6.36	1.566	838
Independence	In-School	5.55	1.752	761
	Out-of-School	5.82	1.738	77
	Total	5.58	1.751	838
Belonging	In-School	12.82	2.794	761
	Out-of-School	12.65	3.386	77
	Total	12.80	2.851	838

Table 52

4-H Participation through In-school versus Out-of-School Programs Tests of Between-Subjects Effects 2017–2018

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Mastery	.343 ^a	1	.343	.441	.507	.001
	Generosity	4.860 ^b	1	4.860	1.984	.159	.002
	Independence	4.909 ^c	1	4.909	1.602	.206	.002
	Belonging	1.973 ^d	1	1.973	.243	.623	.000
Intercept	Mastery	2979.236	1	2979.236	3829.721	.000	.821
	Generosity	11692.497	1	11692.497	4773.516	.000	.851
	Independence	9041.892	1	9041.892	2950.957	.000	.779
	Belonging	45349.926	1	45349.926	5572.797	.000	.870
Club Location	Mastery	.343	1	.343	.441	.507	.001
	Generosity	4.860	1	4.860	1.984	.159	.002
	Independence	4.909	1	4.909	1.602	.206	.002
	Belonging	1.973	1	1.973	.243	.623	.000
Error	Mastery	650.345	836	.778			
	Generosity	2047.742	836	2.449			
	Independence	2561.549	836	3.064			
	Belonging	6803.144	836	8.138			

(table continues)

Table 52 (continued)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Total	Mastery	9421.000	838				
	Generosity	35928.000	838				
	Independence	28636.000	838				
	Belonging	144144.000	838				
Corrected Total	Mastery	650.689	837				
	Generosity	2052.601	837				
	Independence	2566.458	837				
	Belonging	6805.117	837				

^a R Squared = .001 (Adjusted R Squared = -.001)

^b R Squared = .002 (Adjusted R Squared = .001)

^c R Squared = .002 (Adjusted R Squared = .001)

^d R Squared = .000 (Adjusted R Squared = -.001)

Summary

The purpose of this study is to examine the relationship between 4-H members whose project area is 4-H Leadership and Citizenship. In addition to the following three binary pairs; will be examined rural verses urban counties, elementary/middle school verses high school and in-school verses out-of-school participation.

Based on the results of this study, over a three-year time frame, 4-H members who reside in urban counties demonstrated more of the 4-H Essential Elements skills (Belonging, Independence, Generosity and Mastery) than youth in rural counties. Results indicated that over a three-year time frame 4-H members who were in high school consistently demonstrated stronger 4-H Essential Elements involvement than elementary/middle school members. The data specified 4-H members who were involved in in-school 4-H programs had higher 4-H Essential Elements leadership skills than out-of-school 4-H members.

CHAPTER V: CONCLUSION

Chapter I introduced the study while Chapter II provided a literature review of Alabama Cooperative Extension System, 4-H programs, Alabama 4-H, Essential Elements of 4-H and Youth Development. Chapter III provided the methods for the research while Chapter IV included the collection of data and results for the study. The final chapter, Chapter V, will provide a brief overview of the study, results, discussion, implications, limitations, and future recommendations for research.

Purpose of the Study

The purpose of this study is to examine the relationship between 4-H members whose project area is 4-H Leadership and Citizenship. In addition to the following three binary pairs; will be examined rural verses urban counties, elementary/middle school verses high school and in-school verses out – of- school participation. The future of the nation, and the future of world civilization, will soon rest in the hands of today’s youth (Kleon & Rinhart, 1998). Youth today are lacking life skills and leadership skills. Several youth organizations are providing leadership and life skills programs to enhance the development of leaders for the future. 4-H is one of the youth organizations that is paving the way for future leaders.

4-H is one of the largest youth organizations in the nation with more than seven million youth. Within Alabama, the 4-H program is growing tremendously, but the growth of the leadership programs is lacking involvement. In the past three years, Alabama 4-H has implemented 4-H Youth Council within every county in the state. The county 4-H Youth Council provides members with an opportunity to develop enhanced citizenship and leadership skills, serve as local 4-H ambassadors, function as youth-client advisors, and leverage 4-H

programming with their peers. The youth council program is growing, but the connection between the youth 4-H experience and leadership is missing. This study will help examine the relationship of leadership and Alabama 4-H youth council members along with examining the relationship between a traditional 4-H program model and the 4-H Essential Elements.

The National 4-H Curriculum Collection is designed to engage youth in learning opportunities that promote positive youth development. In 4-H, the critical components of a successful learning experience are a sense of Belonging, Independence, Generosity, and Mastery. Across each curriculum, the 4-H Essential Elements (Belonging, Independence, Generosity, and Mastery) are embedded through the learning experience (Kress, 2004).

Research Questions

1. What are the differences, if any between 4-H members who participate in Leadership and Citizenship programs in rural verses urban counties?
2. What are the differences, if any between 4-H members who participate in Leadership and Citizenship programs in middle school verses high school?
3. What are the differences, if any between 4-H members who participate in Leadership and Citizenship Programs in in-school verses out-of-school programs?

Overview

“Leadership and life skill development is defined by Miller as the development skills necessary for life to perform leadership functions in daily living” (Miller, 1976, p 1). Anderson, Bruce, and Mouton (2010) suggests that a variety of 4-H studies cumulatively conclude that 4-H members have developed critical life skills through the program including social skills, personal development, leadership, and responsibility.

The purpose of this study was to examine the relationship between 4-H members whose project area is 4-H Leadership and Citizenship, and their connection to the following three binary pairs: rural verses urban counties, elementary/middle school verses high school and in-school verses out-of-school participation. This study was conducted with Alabama 4-H youth from across rural and urban counties which included a diverse population of 4-H members.

For this study, the research sample size included 2,110 active 4-H members ranging from ages 9–18. The sample included 913 male and 1,197 female 4-H members, as well as 165 high school 4-H members and 1,946 lower grade/middle school students. The sample also included 1,681 in-school 4-H members and 430 out-of-school 4-H members. The ethnicity of the group was defined as 1,227 White and 885 persons of color. The sample included 833 urban 4-H members and 1,278 rural 4-H members.

The study also identified the relationship of 4-H members from rural versus urban counties as well as elementary/middle school versus high school members along with in-school and out-of-school 4-H programs for over a three-year period of time. These data are critical for the future of Alabama 4-H programming.

In this study, the four categories of Belonging, Independence, Generosity and Mastery had varying averages depending on the county type. 4-H members who participated in the time frame of 2015–2018 from rural and urban counties included 2,115 youth. Based on the data collection and analysis over a three-year time frame, 4-H members who reside in rural counties demonstrated more of the 4-H Essential Elements skills than youth in urban counties.

There were differences between 4-H members who participated in Leadership and Citizenship programs in elementary/middle school verses high school from 2015–2018. The four categories of Mastery, Generosity, Belonging, and Independence had varying averages

depending on the grade level and Essential Elements from counties for 2015–2016, 2016–2017, and 2017–2018. The data from the study indicated that over a three-year time frame 4-H members who were in high school consistently demonstrated stronger 4-H Essential Elements involvement than elementary/middle school members. As well, 4-H members in rural counties and 4-H members who participated in out-of-school 4-H programs demonstrated a strong understanding and implication of the 4-H Essential Elements.

Discussion

Research Question 1

This study has shown that there are differences between 4-H members who participated in Leadership and Citizenship programs in rural versus urban counties. 4-H members that participated in this study had varying averages depending on the county location and their involvement in leadership and citizenship programs. 4-H members who identified as urban gained more knowledge and understanding of the leadership and citizenship program, than the 4-H members who identified as rural. A common assumption in the Extension community is that youth that live in urban counties are not as actively involved in 4-H programs due to the vast amount of additional extracurricular activities and resources outside of 4-H. The additional activities outside of 4-H would potentially not allow them time to dedicate a vast amount of time to be fully engaged in 4-H.

It was surprising that initial expectations that 4-H members in rural counties would have a better understanding and knowledge of leadership and citizenship were not met in this study. Since those expectations were based on many years of professional work in the field. The reason for this assumption was that youth in rural counties have limited extracurricular resources that would allow them to be fully engage in 4-H leadership and citizenship programs. The results of this study imply that 4-H members who identified as urban gained more knowledge and

understanding of the leadership and citizenship program, than the 4-H members who identified as rural. One possible reason that urban youth may gain more knowledge and understanding than rural youth is that youth in urban counties could possibly rely on their additional extracurricular activities experiences, life experiences or surroundings to help them understand the leadership and citizenship knowledge in 4-H.

An understanding of the results from research question one is vital for the growth of 4-H programs across Alabama. The research data can assist 4-H staff in planning future 4-H events that would allow 4-H members from rural and urban counties the opportunity to equally have the knowledge and understanding of 4-H leadership and citizenship. As well as allow 4-H staff the opportunity to closely modify 4-H programs to urban and rural settings. Additionally, the differences in findings from the initial expectations is important because in the absence of the data that a study such as this provides, decisions are made based on those assumptions and expectations. Having data from this study can inform related decisions and drive future research in an effort to provide further clarification.

Research Question 2

The results in question two did show a difference between elementary/middle school verses high the results were statistically significant. The Box's test of equality of covariance matrices and the Levene's test assumptions were not met. Data from the study specified that over a three-year time frame 4-H members who were in high school demonstrated stronger 4-H leadership and citizenship involvement than elementary/middle school members. Conventional thinking by those in Extension is, 4-H staff assume that high school students are more mature, outgoing, and involved in a variety of additional extracurricular activities than to be exclusively involved in 4-H. One reason to have this assumption is that in the past, 4-H participation from

older 4-H members began to decline once youth entered high school, due to additional involvement in other extracurricular activities or obtaining an afterschool job.

It was interesting that initial expectations that elementary and middle school aged 4-H members would consistently demonstrate stronger 4-H leadership and citizenship involvement turned out not to be indicated by the results. This may be due to the participants being younger and not being as involved in a variety of extracurricular activities as high school 4-H members. This may especially be the case since those expectations were based on many years of profession work in the field of 4-H and youth development. Additionally, the differences in findings from the initial expectations is important because in the absence of the data that a study such as this provides, decisions are made based on those assumptions and expectations. Having data from this study can inform related decisions and drive future research in an effort to provide further clarification. The next section will provide an insight and analysis of the elementary/middle and high school participation data set.

The research data from this study implies that from the 2015–2018 club year, an average of 55 4-H members in high school completed the survey whereas an average of 686 elementary/middle school 4-H members participated in the survey. Throughout the 2015–2018 4-H club years, there was an increase of 4-H employment turnover across the state which could have skewed the numbers due to 4-H employees not presenting or conducting the survey to older 4-H members. The findings indicated throughout the three-year time from 4-H members who participated in high school expressed a higher knowledge of 4-H understanding in Leadership and Citizenship.

The results from research question two are important for the growth of 4-H programs across Alabama. The data from this study can help 4-H staff in planning future 4-H programs

that would allow 4-H members from elementary/middle and high school the opportunity to equally have the knowledge and understanding of 4-H leadership and citizenship. Additionally, it would allow 4-H staff the opportunity to closely modify the delivery of programs to elementary/middle and high school students.

Research Questions 3

The results in question three did show a difference between in-school verses out-of-school were statistically significant. The Box's test of equality of covariance matrices and the Levene's test assumptions were not met. In-school 4-H members gained more knowledge and understanding of the leadership and citizenship program, rather than 4-H members who participated out-of-school.

A common assumption among those involved in the management of 4-H programs is 4-H members that participate in out-of-school are more involved with leadership and citizenship than in-school 4-H members. The reason for this assumption is that it is thought that being out of school. 4-H members can attend additional leadership and citizenship programs that are held after school hours at the Extension Office or attend Leadership and Citizenship Conferences. Conversely, those 4-H members who are involved within the in-school program may be unable to attend out-of-school leadership programs due to transportation or lack of 4-H interest outside of school.

The findings indicated that throughout the three-year time, 4-H members who participated in-school expressed a higher knowledge of 4-H understanding in Leadership and Citizenship, than did 4-H members who participated in out-of-school programming. In keeping with conventional wisdom, at the outset of this study, it was surprising that the initial expectations that 4-H members in out-of-school 4-H programs would have a better understanding and knowledge of leadership and citizenship were not met in this study. Since those expectations

were based on many years of professional work in the field of 4-H and youth development. Also, youth in out-of-school 4-H programs would potentially have more opportunities to participate in additional 4-H leadership and citizenship programs than in-school 4-H members. Furthermore, in-school 4-H members are only allotted the designated classroom time for club meetings, which hinders their ability to experience the full 4-H leadership and citizenship program knowledge. Additionally, the differences in findings from the initial expectations is important because in the absence of the data that a study such as this provides, decisions are made based on those assumptions and expectations. Having data from this study can inform related decisions and drive future research in an effort to provide further clarification. The next section will provide an insight and analysis of the in-school and out-of-school participation data set.

The results from research question three are important for the growth of 4-H programs across Alabama. The data from this study can help 4-H staff in planning future 4-H events that would allow 4-H members from in-school and out-of-school the opportunity to equally have the knowledge and understanding of 4-H leadership and citizenship. As well, it would allow 4-H staff the opportunity to closely modify the delivery of programs to in-school and out-of-school 4-H members.

Implications

One of the most noteworthy outcomes of this study was with all three of the research questions, the data suggested the exact opposite of the outcomes that were expected by those who consider themselves the most knowledgeable about the field. 4-H youth in urban counties gained more knowledge and understanding of leadership and citizenship. To help increase 4-H understanding and knowledge in both rural and urban counties, 4-H programs need to be more closely tailored to urban and rural settings, respectively. In addition, 4-H could provide

supplementary resources such as additional 4-H staff to help conduct 4-H programs to youth in unreached rural counties or areas as well as highly populated urban counties. The additional staff could travel where the youth are such as churches, community centers, libraries, or low-income housing.

The study implies that 4-H members in high school gained more knowledge and understanding of leadership and citizenship than elementary/middle school youth. To provide an equal amount of knowledge for both elementary/middle and high school 4-H members, 4-H staff could recruit high school 4-H members to be ambassadors or mentors for the elementary/middle school youth. The high school members could attend 4-H meetings with 4-H staff and share their 4-H leadership and citizenship experience with the younger youth. If older youth are unable to attend in person, the 4-H staff could utilize technology and allow older youth an opportunity to provide leadership skills via technology. Allowing the older 4-H members to assist 4-H staff provides leadership skills for the older youth and allows younger 4-H youth an opportunity to observe hands-on leadership and citizenship skills.

While a vast number of 4-H programs are conducted within the school setting, not all youth can participate within the school setting. 4-H programming in schools or out-of-schools, needs to be closely examined to ensure that programs are maximizing the context as well as they can. For 4-H staff to provide the necessary 4-H programming to both in-school and out-of-school 4-H members and 4-H staff could offer virtual 4-H leadership programs. Additionally, staff could utilize local 4-H volunteers to provide additional 4-H programming in the evenings or on weekends. This would allow both in-school and out-of-school 4-H members the opportunity to gain additional 4-H programming.

Limitations

The purpose of this study was to examine the relationship of 4-H youth who participate in 4-H Leadership and Citizenship programs across Alabama. While conducting this study, there were a lack of previous research studies of 4-H Leadership and Citizenship. Also, during the 2016–2017 year, Alabama 4-H experienced high employee turnover in both rural and urban counties which hindered the 2016–2017 data collection. The employment turnover across the state could have skewed the data collection process. There was also an insufficient sample size throughout this study. The assumption of variance was not met which could have impacted the results of unequal sample sizes.

Recommendations for Future Research

The purpose of this research was to examine the relationship of 4-H youth who participate in 4-H Leadership and Citizenship programs across Alabama. Based on the findings from this study, future research might:

1. Compare 4-H members Leadership and Citizenship involvement with neighboring states.
2. Evaluate the same 4-H members from elementary/middle school to high school to gather more clear data.
3. Survey 4-H members' reasons why they continue to participate in Alabama 4-H.
4. Collect four years of 4-H youth instead of three.
5. Increase the sample size of elementary/middle school youth.
6. Collect data for middle and high school youth instead of combining data from elementary and middle school.

Summary

The purpose of this study was to examine the relationship between 4-H members whose project area is 4-H Leadership and Citizenship and their connection to the following three binary pairs: rural versus urban counties, elementary/middle school versus high school, and in-school versus out-of-school participation across Alabama. 4-H participation levels were identified through 4-H members who resided in rural and urban counties, elementary/middle school or high school, as well as in-school and out-of-school 4-H programs. Within this study, one of the most noteworthy outcomes of this study was that in all three research questions, the data suggested the exact opposite of the outcomes that were expected by those who consider themselves the most knowledgeable about the field.

As the nation's largest youth development organization, 4-H's purpose is to grow young people with the skills to lead in life and career (National 4-H Council 2019 Annual Report). In this study, over 2,115 youth from across the state of Alabama engaged in 4-H Leadership and Citizenship programs within a three-year period.

While the body of scholarly literature on the 4-H experience and 4-H programs in general are growing, there is a large gap in research regarding Leadership and Citizenship as well the 4-H Essential Elements. 4-H matches the needs, interests, abilities and cultural norms for young people, their families, and their communities. 4-H believes that all young people, as members of families and communities and citizens of global society, should have the opportunity to reach their full potential. Alabama 4-H builds a culturally competent workforce engaging adults and youth from diverse backgrounds.

Furthermore, the youth involvement and participation of Alabama 4-H play an essential role in the growth of the Alabama 4-H program; the Alabama 4-H Vision statement says it all:

“Growing Alabama’s Future.” The life skills and 4-H Essential Elements (Belonging, Independence, Generosity and Mastery) gained by the youth allow them to prosper and grow into outstanding 4-H Alumni as well as productive adults. Alabama 4-H seeks to empower youth with the skills to lead our communities, state, nation, and world (4-H Curriculum & Program Resource Guide 2020–2021). In closing, as far back as 1926 Adult Education proponent Eduard Lindeman laid the foundation for the newly budding field of Adult Education. He wrote that there was “a fresh spirit astir” and went on to point out that the field “is not called Adult Education because it is limited only to adults, but because adulthood marks the outer boundaries” (p. 6). His contemporary Ruth Kotinsky (1933) understood the profoundly important connection between the youth of today and the adults of tomorrow, and laid the foundation for a field that, adult education must look into schooling as one of the common experiences of its students, which has helped to make them what they are — there are exclamations on every side on how complacent, passive, comparatively uneducable, submissive, anti-socially minded and vocationally, civically and personally ineffective the average adult is. (p. 117)

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Appendix

Auburn University Institutional Review Board Approval

**AUBURN UNIVERSITY INSTITUTIONAL REVIEW BOARD for RESEARCH INVOLVING HUMAN SUBJECTS
REQUEST FOR EXEMPT CATEGORY RESEARCH**

For information or help completing this form, contact: THE OFFICE OF RESEARCH COMPLIANCE, 115 Ramsay Hall
Phone: 334-844-5966 e-mail: IRBAdmin@auburn.edu Web Address: <http://www.auburn.edu/research/vpr/ohs/index.htm>

Revised 2/1/2014 Submit completed form to IRBsubmit@auburn.edu or 115 Ramsay Hall, Auburn University 36849.
Form must be populated using Adobe Acrobat / Pro 9 or greater standalone program (do not fill out in browser). Hand written forms will not be accepted.
Project activities may not begin until you have received approval from the Auburn University IRB.

1. PROJECT PERSONNEL & TRAINING

PRINCIPAL INVESTIGATOR (PI):

Name Shnovia Joy Scott Title Doctoral Student Dept./School Adut Education
Address 211 Duncan Hall Auburn University AU Email maxwesj@aces.edu
Phone 205-612-2790 Dept. Head Dr. Sherida Downer

FACULTY ADVISOR (if applicable):

Name Dr. Maria Witte Title Associate Dean Dept./School Grad School
Address 104 B Hargis Hall
Phone 334-844-0299 AU Email wittemm@auburn.edu

KEY PERSONNEL: List Key Personnel (other than PI and FA). Additional personnel may be listed in an attachment.

Name	Title	Institution	Responsibilities
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

KEY PERSONNEL TRAINING: Have all Key Personnel completed CITI Human Research Training (including elective modules related to this research) within the last 3 years? YES NO
TRAINING CERTIFICATES: Please attach CITI completion certificates for all Key Personnel.

2. PROJECT INFORMATION

Title: Examination of Leadership and 4-H Experiences among Alabama 4-H Participants

Source of Funding: Investigator Internal External

List External Agency & Grant Number: _____

List any contractors, sub-contractors, or other entities associate with this project.

List any other IRBs associated with this project (including those involved with reviewing, deferring, or determinations).

FOR ORC OFFICE USE ONLY			
DATE RECEIVED IN ORC:	_____	by _____	APPROVAL # _____
DATE OF IRB REVIEW:	_____	by _____	APPROVAL CATEGORY: _____
DATE OF ORC REVIEW:	_____	by _____	INTERVAL FOR CONTINUING REVIEW: _____
DATE OF APPROVAL:	_____	by _____	
COMMENTS:			

The Auburn University Institutional Review Board has approved this Document for use from 01/20/2019 to _____ Protocol # 18-517 EX 1901

3. **PROJECT SUMMARY**

a. Does the research involve any special populations?

- YES NO Minors (under age 19)
 YES NO Pregnant women, fetuses, or any products of conception
 YES NO Prisoners or Wards
 YES NO Individuals with compromised autonomy and/or decisional capacity

b. Does the research pose more than minimal risk to participants? YES NO

Minimal risk means that the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests. 42 CFR 46.102(i)

c. Does the study involve any of the following?

- YES NO Procedures subject to FDA Regulation Ex. Drugs, biological products, medical devices, etc.
 YES NO Use of school records of identifiable students or information from instructors about specific students
 YES NO Protected health or medical information when there is a direct or indirect link that could identify the participant
 YES NO Collection of sensitive aspects of the participant's own behavior, such as illegal conduct, drug use, sexual behavior or use of alcohol
 YES NO Deception of participants

If you checked "YES" to any response in Question #3 STOP. It is likely that your study does not meet the "EXEMPT" requirements. Please complete a PROTOCOL FORM for Expedited or Full Board Review.

You may contact IRB Administration for more information. (Phone: 334-844-5966 or Email: IRBAdmin@auburn.edu)

4. **PROJECT DESCRIPTION**

a. Subject Population (Describe, include age, special population characteristics, etc.)

The subject population is limited to active Alabama 4-H members within an age range of 9-18 years. Youth represent a diverse age, gender, race, and counties within the 67 counties of Alabama.

b. Describe, step by step, all procedures and methods that will be used to consent participants.

- N/A (Existing data will be used)

- c. **Brief summary of project.** (Include the research question(s) and a brief description of the methodology, including recruitment and how data will be collected and protected.)

The research questions for this study are as follows:

1. What are the differences, if any between 4-H members who participate in Leadership and Citizenship programs in rural verses urban counties?
2. What are the differences, if any between 4-H members who participate in Leadership and Citizenship programs in middle school verses high school?
3. What are the differences, if any between 4-H members who participate in Leadership and Citizenship programs in in-school verses out of school programs?

The methods of this study will be quantitative with the data being analyzed via analysis of variances process. The data sources selected for this study are existing data, which does not involve any direct interaction with the participants to acquire said data. The data sources include 4-H members age, race, and county. No names or other identifying variables will be utilized or discussed in the research beyond being an active Alabama 4-H member age 9-18 as a collective group as the data source will come via a de-identified dataset provided by Alabama 4-H State Office.

Data are currently entered in SPSS on an AU encrypted computer. The computer is housed in a locked office in Duncan Hall on the Auburn University Campus. Hard copies of the surveys were shredded after data were entered and cleaned.

- d. **Waivers.** Check any waivers that apply and describe how the project meets the criteria for the waiver.

- Waiver of Consent (Including existing de-identified data)
 Waiver of Documentation of Consent (Use of Information Letter)
 Waiver of Parental Permission (for college students)

Existing data will be used.

- e. **Attachments.** Please attach Informed Consents, Information Letters, data collection instrument(s), advertisements/recruiting materials, or permission letters/site authorizations as appropriate.

Signature of Investigator *Shirley Scott* Date 12/4/18
Signature of Faculty Advisor *Maria M. Witte* Date Dec 12, 2018
Signature of Department Head *Sherida Downer* Date 12/14/2018



Dr. Molly Gregg
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November 15, 2018

Human Research Protection Program
115 Ramsey Hall
Auburn University, AL 36849

To Whom It May Concern:

I, Dr. Molly Gregg, Assistant Director of 4-H Programs, give Shnovia Joy Maxwell Scott permission to use pre-existing data sets from 4-H Citizenship and Leadership surveys from to complete her study for Auburn University in pursuit of her doctoral degree.

If you have any questions or concerns, please feel free to contact me.

Respectfully,

A handwritten signature in black ink, appearing to read "Molly Gregg". The signature is written in a cursive, flowing style.

Dr. Molly Gregg
Asst. Director for 4-H Programs

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)

COMPLETION REPORT - PART 1 OF 2 COURSEWORK REQUIREMENTS*

* NOTE: Scores on this [Requirements Report](#) reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- **Name:** Shnovia Maxwell (ID: 3087141)
- **Institution Affiliation:** Auburn University (ID: 964)
- **Institution Email:** maxwesj@aces.edu
- **Institution Unit:** Auburn
- **Phone:** 205-612-2790

- **Curriculum Group:** IRB Additional Modules
- **Course Learner Group:** Social, Behavioral and Education Sciences
- **Stage:** Stage 1 - Basic Course
- **Description:** Choose this group to satisfy CITI training requirements for Investigators and staff involved primarily in biomedical research with human subjects.

- **Record ID:** 19281129
- **Completion Date:** 08-Jul-2017
- **Expiration Date:** 07-Jul-2020
- **Minimum Passing:** 80
- **Reported Score*:** 86

REQUIRED AND ELECTIVE MODULES ONLY	DATE COMPLETED	SCORE
Belmont Report and CITI Course Introduction (ID: 1127)	08-Jul-2017	3/3 (100%)
Students In Research (ID: 1321)	08-Jul-2017	4/5 (80%)
History and Ethical Principles - SBE (ID: 490)	08-Jul-2017	4/5 (80%)
Defining Research with Human Subjects - SBE (ID: 491)	08-Jul-2017	4/5 (80%)
Assessing Risk - SBE (ID: 503)	08-Jul-2017	5/5 (100%)
Informed Consent - SBE (ID: 504)	08-Jul-2017	5/5 (100%)
Privacy and Confidentiality - SBE (ID: 505)	08-Jul-2017	4/5 (80%)
Research with Children - SBE (ID: 507)	08-Jul-2017	4/5 (80%)
Internet-Based Research - SBE (ID: 510)	08-Jul-2017	4/5 (80%)
Auburn University (ID: 12239)	08-Jul-2017	No Quiz

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing Institution identified above or have been a paid Independent Learner.

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COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)

COMPLETION REPORT - PART 2 OF 2

COURSEWORK TRANSCRIPT**

** NOTE: Scores on this Transcript Report reflect the most current quiz completions, including quizzes on optional (supplemental) elements of the course. See list below for details. See separate Requirements Report for the reported scores at the time all requirements for the course were met.

- **Name:** Shnovia Maxwell (ID: 3087141)
- **Institution Affiliation:** Auburn University (ID: 964)
- **Institution Email:** maxwesj@aces.edu
- **Institution Unit:** Auburn
- **Phone:** 205-612-2790

- **Curriculum Group:** IRB Additional Modules
- **Course Learner Group:** Social, Behavioral and Education Sciences
- **Stage:** Stage 1 - Basic Course
- **Description:** Choose this group to satisfy CITI training requirements for Investigators and staff involved primarily in biomedical research with human subjects.

- **Record ID:** 19281129
- **Report Date:** 08-Jul-2017
- **Current Score**:** 86

REQUIRED, ELECTIVE, AND SUPPLEMENTAL MODULES	MOST RECENT	SCORE
Students in Research (ID: 1321)	08-Jul-2017	4/5 (80%)
History and Ethical Principles - SBE (ID: 490)	08-Jul-2017	4/5 (80%)
Defining Research with Human Subjects - SBE (ID: 491)	08-Jul-2017	4/5 (80%)
Belmont Report and CITI Course Introduction (ID: 1127)	08-Jul-2017	3/3 (100%)
Assessing Risk - SBE (ID: 503)	08-Jul-2017	5/5 (100%)
Informed Consent - SBE (ID: 504)	08-Jul-2017	5/5 (100%)
Privacy and Confidentiality - SBE (ID: 505)	08-Jul-2017	4/5 (80%)
Research with Children - SBE (ID: 507)	08-Jul-2017	4/5 (80%)
Internet-Based Research - SBE (ID: 510)	08-Jul-2017	4/5 (80%)
Auburn University (ID: 12239)	08-Jul-2017	No Quiz

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing Institution identified above or have been a paid Independent Learner.

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Enter County Name Here

Program or Activity: Leadership and Citizenship Date: Date

Location/County Location/County

Mark the box that shows how you feel about each item. When you are done, return this to your 4-H leader and don't forget to complete the back side!

<i>Because of my 4-H experience, . . .</i>	Strongly Disagree	Disagree	Not Applicable	Agree	Strong Agree
I use information to make decisions.					
I set goals for myself.					
I am respectful of others.					
I am comfortable making my own decisions.					
I can explain my decisions to others.					
I know who I can go to if I need help with a problem.					
I can work successfully with adults.					
I like to work with others to solve problems.					
I learned things that help me make a difference in my community.					

One thing I've done in my community through 4-H is:

How would you describe 4-H to your best friend?



Enter County Name Here

Because of my 4-H experience,...	Very Low	Low	I Don't Know	High	Very High
My ability to listen to different ideas is...					
My ability to speak and present in front of others is...					
My ability to participate in 4-H community service activities is...					
My ability to express myself and communicate verbally is...					
My ability to gain skills to be a leader is...					
My ability to lead a successful 4-H program is...					
My ability to learn different styles of leadership for different situations is...					
My ability to be a leader among my peers is...					
My ability to set goals and plan is...					
My ability to delegate or share responsibilities with others is...					

What's one thing you have learned through 4-H?

Tell us your grade and age. Then, circle what describes you.

Grade	Age	Gender	Ethnicity	Race	Type of 4-H Club
		Male Female	Hispanic/Latino Not Hispanic/Latino	American Indian or Alaskan Native Asian Black Native Hawaiian or Pacific Islander White 2 or More Races	In-School After School Enrichment Community Club Special Interest Camp Other



Completion Date 24-Nov-2017
Expiration Date 23-Nov-2020
Record ID 16433215

This is to certify that:

Maria Witte

Has completed the following CITI Program course:

IRB # 2 Social and Behavioral Emphasis - AU Personnel - Basic/Refresher (Curriculum Group)
IRB # 2 Social and Behavioral Emphasis - AU Personnel (Course Learner Group)
1 - Basic Course (Stage)

Under requirements set by:

Auburn University



Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?we2b309e2-c99e-4d30-b084-65d4fa406c8c-16433215