THE DEVELOPMENT OF YOUTH LEADERSHIP LIFE SKILLS

INCLUDING

CRITICAL THINKING DISPOSITIONS AS A RESULT OF

COMMERCIAL DAIRY HEIFER EXHIBITION

by

ASHLEY SEAMON

(Under the Direction of John C. Ricketts)

ABSTRACT

The primary purpose of this study was to assess the development of youth leadership and life skills (YLLSD) and critical thinking dispositions of students and determine if there is a relationship between the development of critical thinking, YLLSD and participating in the commercial dairy heifer project. The study was conducted using survey research which employed mostly descriptive analysis. It was a census study, but it used inferential statistics to make generalizations to the population. A subsample of 103 students were selected from a sample of all dairy exhibitors from the Georgia Junior Livestock Commercial Dairy Heifer Exhibitors database ranging from grades ninth through eleventh. A total of 62 were returned for analysis. Exhibitors' YLLSD scores ranged from 39 to 90 with a composite mean of 70.16. The EMI scores showed an increase of development of the *Engagement* (8.02), *Cognitive Maturity* (6.24), and *Innovativeness* (5.49) constructs post dairy exhibition suggest that dairy exhibition increases critical thinking dispositions among students.

INDEX WORDS: Georgia Junior Livestock Commercial Dairy Heifer Project, Youth Leadership and Life Skill Development, Critical Thinking

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DEDICATION

‘Cause when push comes to shove, you taste what you’re made of. You might bend til you break ‘cause it’s all you can take. On your knees you look up, decide you’ve had enough. You get mad, you get strong, wipe your head, shake it off, then you stand.

- Rascal Flatts

This work is dedicated to those who persevere though challenges to achieve greatness.

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Finally, I would like to recognize my family and special friends whose support helped me to achieve my goals and dreams. Much of my success is attributed to my parents for their never-ending support and encouragement through all of my educational years. My husband is the strength in which I am able to pursue my dreams and to him, I am grateful.

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CHAPTER 1

INTRODUCTION

Leadership and life skill development are extremely important to today's youth. "Assuming responsibility and accountability for developing youth leadership life skills today, assures the promise for effective leadership tomorrow" (Clason, Dormody, Seevers 1995, p 28). Key to effective leadership and life skills is the ability to make decisions and think critically. The following study was conducted to examine the perceived youth leadership, life skill, and critical thinking development for students who exhibit commercial dairy heifers in Georgia – a popular agricultural education activity soaking up many resources.

What exactly is youth leadership life skills? What is critical thinking? And what do they both have in common with exhibiting commercial dairy heifers? Miller has defined youth leadership life skills development as the "development of life skills necessary to perform leadership functions in real life" (1972 p. 6). Also, Miller breaks down leadership life skills development into seven categories in the article by Bruce, Boyd and Dooley (2004) into decision making, relationships, learning, management, understanding self, group processes and communications.

Critical thinking is a crucial component of youth leadership development. According to Ricketts (2005) it is possible that the more leadership development opportunities a student is exposed to, the more the student uses their mind and develops and fosters thinking critically. Paul (1995) believed that critical thinking skills are a necessity because it could help students take total control of their lives by allowing them to constantly improve the quality of their life.

Dairy exhibition is a productive means of developing leadership development, especially the leadership skill of critical thinking. Georgia Agriculture Educator Dr. Ronald Thomas states that dairy exhibition develops a students' "work ethic, [level of] responsibility, [and is a] continuous project where everyone can participate all the time (personal communication, November 12, 2009) Mississippi State University Extension Service (2009) states that exhibiting dairy heifers plays "a major role in helping youth become self-directed, productive and contributing adult citizens by developing valuable life skills" such as responsibility, sportsmanship, communication, critical thinking and working with other people (¶ 1).

There are several key elements when exhibiting dairy animals. An exhibitor must always select the best animal that he or she possibly can. In this aspect of exhibiting, an exhibitor must be aware of proper livestock judging techniques. A small aspect of showing livestock is being able to evaluate the conformation of the animal. This will help the exhibitor better develop his or her show skills. Georgia Agriculture Educator, Dr. Ronald Thomas discusses that good show skills are necessary for life beyond the showring. "The harder [a student will] work, the more [the student will] get out of it including life learning skills. When working with calves, it makes [the students] better parents when they get older (personal communication, December 2, 2009).

Next, the exhibitor must develop a feeding ration for the dairy animal. Mississippi State Extension Service (2009) states that "Nutritional needs of your show animal are of major importance. If an animal's nutrient needs are not met, it will not grow at an acceptable rate and, therefore, will be smaller than other animals in the show class" (¶ 14). The exhibitor must feed the dairy animal a balanced ration throughout the duration of the project. Following the development of a feeding program, an exhibitor must also wash, brush and clip the animal. This

promotes not only a clean and nice coat, but also allows the heifer to acquire a sense of comfort in unusual surroundings, touches and sounds.

Also, one of the most important aspects of exhibiting livestock is training the animal to lead and pose. Mississippi State University Extension Service (2009) suggests that it's "best to begin with a rope halter" when teaching the animal how to lead (¶ 36). Tying the animal against a solid surface on a well-bedded place will allow the animal to get accustomed to the halter in a safe and comfortable setting. Within the first two days, the exhibitor should lead the animal to water and around familiar surroundings. Soon after the animal is broken to lead, the exhibitor will begin to lead it for exercise and train it to pose. The posing of the animal is to have it set up in the best way that it exhibits its' best conformational qualities or hides its' worst conformational qualities. When the exhibitor is practicing or in the show ring, he or she must walk "slowly backward, facing the animal and holding the lead strap" (¶ 40).

Exhibitors should be dressed in white pants and a white shirt. The exhibitor should always be aware of the animal and the judge and should keep the animal under complete control. During the exhibition process, a judge might ask questions pertaining to the "feeding practices, age of the animal, the animal's name, sire, and dam and production" (¶ 52). With all of the factors that play into exhibiting a dairy animal, the development of leadership, life skills and critical thinking dispositions are inevitable in the process.

Miller (1987) states that leadership life skills development is the "development of life skills necessary to perform leadership functions in real life" (p. 2). Brock (1992), Chairman of the Labor Secretary's Commission on Achieving Necessary Skills comments that "there is much more to life than earning a living and we want more from education than productive workers. We

want citizens who can discharge the responsibilities that go with living in a democratic society and with becoming parents" (p.4).

The goal of many leadership development programs is to create a more perfect leader. According to Bennis and Nanus (1985) claim that every person in our society has the potential to be a leader. The National FFA Organization's mission is dedicated "to making a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agriculture education" (p. 5). 4-H (2009) is another agricultural organization that has over "6 million young people across America learning leadership, citizenship and life skills" (4-H homepage, bottom of page). Many researchers found that through exhibiting livestock, students that were part of these organizations had the wonderful opportunity to gain leadership skills, life skills and decision making skills (Rusk, Summerlot-Early, Machtmes, Talber & Balschweid, 2003; Astroth, 1996; Fox, Schroeder & Lodl, 2003; Nash & Sant 2005; Guthrie & Majeskie 1997; Boleman, Cummings & Briers 2005).

For instance, Sawer (1987) was able to identify six key life skills that included responsibility, decision making, communication, getting along with others and leadership (as cited in Rusk, Machtmes, Talbert & Balschweid 2003). In relation, it was found by Boleman, Cummings and Briers (2005) that "work[ing] in teams" and "decision making" were increased by participating in livestock projects (p. 398). These were found to be a tremendous help to the academic community because there was relatively a small amount of research on these topics.

Rusk, Summerlot-Early, Machtmes, Talbert and Balschweid (2003) conducted a study that evaluated the perceived level of project skill of livestock exhibitors. The researchers were also interested in learning about life skills developed by the participants. The areas which the researchers focused on were animal healthcare, animal grooming, safety, selection of livestock

and sportsmanship. They found that students increased self confidence, people skills, decision making skills, problem solving skills and responsibility during the project and used them in many areas of their life outside of the show ring.

After an investigation of the research involving critical thinking skills, the development of youth leadership life skills and commercial dairy heifer exhibition, there seems to be very little research documenting these subjects and their relationship. Georgia Educator, Melissa Moulton states that millions of dollars are spent every year on programs such as the National FFA Organization, 4-H and Agriculture Education to provide leadership training, leadership opportunities and practical training to students (personal communication, December 17, 2009). These students that are members of these organizations will long reap the personal and professional benefits that they provide through experiential learning. Research is a necessity for taxpayers and policy makers that do not get the opportunity to witness these wonderful programs to provide feedback and validity of the program.

There are several goals established with this research. One of which is to provide our taxpayers and policy makers as well as key educational authorities viable data to ensure that the grants and monies received for these programs are allowing for growth and development of our future leaders through livestock projects. With the data collected from this study, it will help provide our agricultural community with insight into the effectiveness of the commercial dairy heifer project.

The primary purpose of this study was to determine youth leadership and critical thinking development and the relationship between these and the participation of students in the commercial dairy heifer project in Georgia. Specifically, the researcher sought to:

- Describe the Georgia National Junior Livestock Commercial Dairy Heifer participants by their gender, grade, FFA and or 4-H affiliation in the showring .
- Describe the self-perceived youth leadership and life skills development of the Georgia National Junior Livestock participants as a result of the commercial dairy heifer project.
- Describe the change in critical thinking disposition of the Georgia National Junior Livestock participants as a result of the commercial dairy heifer project.
- Determine the relationship between the self-perceived youth leadership and life skills development and critical thinking skills of the Georgia National Junior Livestock Commercial Dairy Heifer project participants and grade, gender, FFA participation and 4-H participation.

BACKGROUND

The focus of this study was to measure the youth leadership and life skill development as well as the development of critical thinking disposition; however it is through the context and the framework of the commercial dairy heifer project in which it was accomplished. Even though there is not an exact date of when youth livestock projects were established, there is a good idea. During the late 1800's many rural families were disappointed in the amount of practical education their children were receiving in formal school. An educator in the early 1900's, Dr. Liberty Hyde Bailey, wrote how rural schools seemed to "unfit the child to live in its normal and natural environment" (Reck, 1951 p.7). He began to educate students on the surroundings using educational supplements that were not being taught in school. These supplements became very popular and the first Nature and Study clubs were established.

Bailey also was quite persistent about "practical agricultural education for young people and the development of new, young rural leadership" (Enfield 2001). It wasn't long after that,

that several agricultural clubs were established, which were the predecessors to 4-H and the National FFA Organization. Many of the agricultural clubs served as the basis for Extension. Seaman A. Knapp became what is known as the "Father of Extension" (Richardson 1994; Enfield 2001) and wrote about the value of practical learning. He recognized the need for demonstrations among the clubs to promote innovations in agriculture. The students in these clubs would often relay the information to their parents, encouraging them to try the new innovations in agriculture to have a more productive farm.

It was with the help from people like Knapp who envisioned a world of experiential learning that the diffusions of innovations process began to take affect. Rasmussen quotes Knapp (as cited in Enfield, 2001) stating that "What a man hears, he may doubt; what he sees, he may possibly doubt; but what he does, he cannot doubt" (¶ 11). These demonstrations were a start of new revolution that encouraged students to learn practical skills and apply them. These demonstrations not only included farm management and efficiency practices, but also included livestock projects as well.

"The tradition of 'Learning by doing' stemming from the original demonstration projects in 4-H continued through the decades and is still the backbone of the 4-H Youth Development Program in the 21st century (Enfield, 2001 ¶ 15). "Learning to Do, Doing to Learn, Earning to Live, Living to Serve" is the National FFA Motto ("National FFA Organization" 2009, About FFA Section, FFA Motto). This embodies the exact basis for which Agriculture Education and 4-H were founded upon. "Through practice and experience students apply what they have learned in real situations, thus the material becomes understandable and usable" (Cheek, et. al 1994, p.1). John Dewey further states that "an ounce of experience is better than a ton of theory simply

because it is only in experience that any theory has a vital and verifiable significance" (as cited in Cheek et. al 1994).

"Supervised agriculture experiences (SAE) in agricultural education programs incorporate experiential learning and direct application of knowledge into the students' curriculum to enhance learning" (Cheek, et al 1994, p.1). "A SAE program is the actual, hands-on application of concepts and principles learned in the agricultural education classroom. Students are supervised by agricultural education teachers in cooperation with parents, employers and other adults who assist them in the development and achievement of their educational and career goals" (National FFA Organization 2009). One of the many SAE's in which students can participate is the dairy heifer exhibition. A competitive educational activity, or livestock exhibition, accomplishes the mission of both agricultural education and agricultural youth leadership organizations.

Research Problem

Sawer (1987) thought that gaining knowledge and skill in the livestock projects were the most important aspects of raising and exhibiting livestock (as found in Rusk, et al ¶ 3 2003). But during the same study, there were several life skills that were found to be developing. Those life skills included critical thinking, responsibility, communication and leadership (Rusk et al. 2003). Hammatt (as cited in Rusk & Machtmes, 2003) stated that "one purpose of the 4-H animal project is to teach young people how to feed, fit and show their animals. The more important purpose is to provide an opportunity for personal growth and development of the young person" (p. 1).

A thorough examination of the research indicates that there is little information regarding the critical thinking and youth leadership and life skills development through commercial dairy

heifer exhibition available. There are several questions that need to be answered regarding these topics. What is the affect of commercial dairy heifer exhibition on critical thinking disposition? What youth leadership life skills are learned while showing commercial dairy heifers? What is the relationship between youth leadership life skills and critical thinking dispositions of students who exhibit commercial dairy heifers? Why is this information important to our society? Although there have been several studies conducted regarding the development of youth leadership life skills within organizations (Seevers & Dormody, 1995; Wingenbach & Kahler, 1997; Rusk, Martin, Talbert & Balshweid, 2002; Boyd, Herring & Briers, 1992) and critical thinking studies critical thinking studies that what? (Ricketts & Rudd, 2004a; Ricketts & Rudd 2004b; Ricketts & Rudd 2004c; Ricketts, 2003), there is still not enough evidence to conclude that YLLSD and critical thinking are correlated with commercial dairy heifer exhibition. Therefore, a study is needed that would validate to the community, taxpayers and legislators the exhibition of commercial dairy heifers because of the development of youth leadership and life skills and critical thinking dispositions.

Researchers determined that leadership and life skills are extremely important for today's youth to be effective leaders for tomorrow. Fox, Schroeder and Lodl (2003) stated that "one of the most pressing issues facing youth-serving organizations such as 4-H is how to best support youth in becoming productive, contributing individuals of society" (¶ 1). The Labor Secretary's Commission on Achieving Necessary Skills believes that it is imperative that students learn how to become responsible and productive while living in a democratic society (Brock, 1992). Boyd, Herring and Briers (1992) said that "high risk" activities, such as alcohol and tobacco consumption, are allowing youth to burden our society instead of becoming contributing members. Boyd et al. (1992) also stated "It's estimated 25% of our nation's youth engage in

'high risks' activities-heavy alcohol, tobacco or use, delinquency, and poor school performance or non-attendance" (¶ 1). Organizations such as 4-H and FFA are helping students to disengage in some of those "at risk" behaviors.

Researchers believe that programs such as 4-H, which provides an outlet for students to exhibit commercial dairy heifers were founded upon the concept of experiential learning and are a necessity for those youth to gain leadership and life skills (Boyd, et al., 1992; Enfield, 2001). Another program that provides an outlet for students to exhibit livestock is the National FFA Organization which aims to develop leadership skills (Wingenbach & Kahler, 1997). These programs not only provide viable opportunities for students to exhibit livestock and grow with information, it also promotes leadership and life skill development as well as critical thinking (Dr. Ronald Thomas, personal communication, November 12, 2009). If a primary aim of these organizations and programs are to promote leadership, life skills, and decision making, then there is a need to study the impact of the exhibition of commercial dairy heifers.

Purpose of the Study

Specifically, the main purpose of this study is to determine the critical thinking and youth leadership life skills development of students who exhibit commercial dairy heifers in Georgia. The research questions for this study are as follows:

1. "What changes in critical thinking dispositions occurred in students who exhibited commercial dairy heifers?"
2. "Were the youth leadership and life skills that were developed in students who exhibit commercial dairy heifers?"
3. "What demographic variables are related to youth leadership life skills and critical thinking development?"

4. “What is the relationship between the self-perceived youth leadership and life skills development and critical thinking skills of the participants and grade, gender, FFA participation and 4-H participation?”

The researcher’s primary hypothesis was that there will be a significant relationship between the development of youth leadership life skills and critical thinking dispositions of students and commercial dairy heifer exhibition. The study has a potential to present factual information to lawmakers and policy makers who do not get to directly see how the money set aside for agriculture education programs and extension services promotes critical thinking and youth leadership life skills.

Specifically, the researcher sought to:

- Describe the Georgia National Junior Livestock Commercial Dairy Heifer participants by their gender, grade, FFA and or 4-H affiliation in the showring.
- Describe the self-perceived youth leadership and life skills development of the Georgia National Junior Livestock participants as a result of the commercial dairy heifer project.
- Describe the change in critical thinking disposition of the Georgia National Junior Livestock participants as a result of the commercial dairy heifer project.
- Determine the relationship between the self-perceived youth leadership and life skills development and critical thinking skills of the Georgia National Junior Livestock Commercial Dairy Heifer project participants and grade, gender, FFA and or 4-H affiliation in the showring.

Limitations

The conclusions and implications drawn from this study were subjected to the following limitations. These data were limited to individuals obtained from the sample of exhibitors in the

Georgia National Junior Livestock Association, grades ninth through eleventh. Therefore, generalization of the results of this study to other youth livestock exhibitors is limited to the population and sample used in this study.

Operational Definitions

For the purpose of our study, the following items were defined operationally:

- **4-H:** "A program set up by the United States Department of Agriculture originally in rural areas to help young people become productive citizens by instructing them in useful skills (as in agriculture, animal husbandry and carpentry), community service, and personal development" (*Merriam-Webster Online, 2009*).**Agricultural education:** a term used to represent the profession of teaching students about all areas of agriculture including experiential learning.
- **Critical thinking:** Ricketts (2003) devised that the definition developed by a national panel of experts using Delphi inquiry is "purposeful, self-regulatory judgment that results in interpretation, analysis, evaluation and interference, as well as explanation of the evidential, conceptual, methodological, criteriological or contextual considerations upon which that judgment is based" (Facione, 1990). More simply, "critical thinking is thinking that has a purpose…" (Facione, et al 1998b).
- **Critical thinking skill:** the competency level of utilizing the components of critical thinking (Ricketts 2003).
- **Critical thinking disposition:** the pre-disposed attitude one innately possesses regarding critical thinking (Ricketts 2003).
- **Commerical dairy heifer project:** A project in which an individual raises and cares for a dairy heifer for the purpose of exhibition at the local or state level.

- **Gender:** a variable that is known to show variance in YLLSD scores (Seevers & Dormody, 1995). Gender was used as a variable to determine the differences between male and female leadership life skills development and critical thinking disposition as influenced by involvement in the commercial dairy heifer project.
- **Grade:** a variable not usually found to be associated with critical thinking and YLLSD was included in the study to help account for the leadership experience level of students. The grades for this study ranged from ninth to eleventh grades.
- **National FFA Organization:** "The National FFA is dedicated to making a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education" (*National FFA Organization, 2009*).
- **Youth:** "The time of life when one is young, *especially* the period between childhood and maturity" (*Merriam-Webster Online, 2009*). Youth in study ranged from 14-19 years.
- **Youth Leadership Life Skills Development:** Miller (as cited in Dormody & Seevers, 1994) has defined youth leadership life skills development as the "development of life skills necessary to perform leadership functions in real life" (¶ 2).
- **Youth Leadership Life Skills Development Scale (YLLSDS):** "The Youth Leadership Life Skill Development Scale (YLLSDS) was developed to provide youth organization leaders and others concerned with youth development with an evaluation and research tool for measuring leadership life skills development" (Dormody, Seevers & Clason, 1993 ¶ 1).

Chapter Summary

The primary purpose of this study was to determine critical thinking and youth leadership and the relationship between these and the participation of students in the commercial dairy heifer project in Georgia. A summary of the research study was provided in this chapter to give the reader an overview of the research content. It provided an explanation and background for the research study. Within the explanation provided a description of youth leadership life skills, critical thinking dairy heifer exhibition. The overall purpose and need for the study was also discussed. Young people need to develop leadership and life skills to become contributing members to society. Youth who are involved with livestock projects have the opportunity to develop leadership and life skills as well as critical thinking.

As a result of this study, lawmakers and policy makers will have access to viable data that ensures the integrity of the commercial dairy heifer project in order to continue the program. The next chapter will discuss the literature related to the specific theoretical and conceptual framework of this study, other studies conducted that relate to the subject and studies related to livestock exhibitions' impact on youth leadership life skills development and critical thinking dispositions.

CHAPTER 2

THE REVIEW OF LITERATURE

Chapter 1 introduced the study of youth leadership life skills and critical thinking disposition of students who exhibit commercial dairy heifers. It also stated the importance and rationale of why exactly we would investigate these specific impacts. The primary purpose of this study was to determine critical thinking and youth leadership development and to describe the relationship between these and the participation of students in the commercial dairy heifer project in Georgia. Specifically, the researcher sought to:

- Describe the Georgia National Junior Livestock Commercial Dairy Heifer participants by their gender, grade, FFA and or 4-H affiliation in the showring.
- Describe the self-perceived youth leadership and life skills development of the Georgia National Junior Livestock participants as a result of the commercial dairy heifer project.
- Describe the change in critical thinking disposition of the Georgia National Junior Livestock participants as a result of the commercial dairy heifer project.
- Determine the relationship between the self-perceived youth leadership and life skills development and critical thinking skills of the Georgia National Junior Livestock Commercial Dairy Heifer project participants and grade, gender, FFA and or 4-H affiliation.

Conceptual Framework

A thorough review of the literature provided this chapter with the conceptual and theoretical framework that are significant to this study. The review of literature contains

publications, doctoral dissertations and governmental references for relevant works. Basic to this study is that leadership development and critical thinking are somewhat related (Ricketts, 2005). Concomitantly, a review of livestock exhibition studies (Rusk, Martin, Talbert, & Balschweid, 2002; Walker, 2006) could lead to an assumption that dairy projects may also lead to important youth developments (e.g. critical thinking development, leadership development).

This study of critical thinking and youth leadership development as result of the commercial dairy project is first of all, built on the experiential learning tradition and this theory base will be described. Secondly, leadership and life skills development (YLLSD), as a research area, is discussed as it is relative to the commercial dairy heifer project. In addition, critical thinking theories are explained. Finally, literature was examined that regarded livestock exhibition variables that may influence youth leadership and life skill development.

The researcher primarily focused on a specific group (Georgia National Junior Livestock exhibitors who exhibit commercial dairy heifers) and an explicit context (dairy project effectiveness). Literature was reviewed that focused specifically on leadership and critical thinking impacts of exhibiting commercial dairy heifers, but the identifiable research was limited at best with only a few studies which investigated leadership and critical thinking impacts of exhibiting livestock.

Leadership and Life Skill Development

Definition of Leadership

Seevers and Dormody (1995) state that "leadership development has been and continues to be a major goal of most youth programs" (¶ 1). But what exactly is leadership? Throughout history, there have been several researchers and authors who have contemplated, studied and analyzed many different theories on the definition of leadership. Bennis and Nanus (1985) state

that “decades of academic analysis have given us more that 350 definitions of leadership” (p. 4). Kleon and Rinehart (1998) state that “it is difficult to determine a single definition and depends on the objective and purpose of the researcher” (¶ 7).

John C. Maxwell defines leadership as influence (p.1), but a fellow agricultural education researcher, Ricketts (2005), cited a more a more comprehensive definition from vanLinden and Fertman (1998). They said, “ leaders are those who think for themselves, can communicate their thoughts and feelings effectively and help others to understand and be able to act on their own beliefs” (¶ 4). Bennis and Nannus continue to state that “Leadership is what gives an organization its vision into reality” (1985, p.20). Carlson and Maxa (as cited in Enfield 2001) say that “youth can be stimulated to embrace lifelong learning by effective leaders” (¶ 37).

But who exactly can be leaders? According to Bennis and Nanus (1985) and vanLinden and Fertman (1998), every person in our society has the potential to be a leader. They are people who have a shared vision, challenge people, set a good example and encourage others to be successful (Kouzes & Posner, 2003).

Youth Leadership Life Skills Development

Developing youth is paramount in Agricultural Education and subsequent programs like the dairy project. Two agricultural educators from the University of Georgia and Virginia Tech University, Ricketts and Rudd (2002), developed a model of youth leadership development. According to them, the primary dimensions of leadership development in youth are as follows: *Leadership Knowledge and Information, Leadership Attitude Will and Desire, Intrapersonal and Interpersonal Skills, Oral and Written Communication Skills, and Decision-making Reasoning and Critical Thinking*.

Youth leadership life skills development, as a concept and construct, is a "self-assessed and organization-specific 'development of life skills necessary to perform leadership functions in real life'" (Dormody & Seevers 1994, ¶ 4). Boyd, Herring and Briers (1992) state that these skills are the abilities students learn that help make them succeed in leading a productive life. Also, Miller (1976) breaks down leadership life skills development into seven categories in the article by Bruce, Boyd and Dooley (2004) into decision making, relationships, learning, management, understanding self, group processes and communications. Because of Millers' seven categories of leadership life skills, Seevers, Dormody and Clason (1995) developed the Youth Leadership Life Skills Development Scale (YLLSDS).

Researchers Boyd et al. (1994) found that the level at which Texas 4-H members participated was an indicator of the leadership life skills development scores. In 1993, Seevers and Dormody found that participation from 4-H members in Arizona, Colorado and New Mexico in leadership activities were an indicator of youth leadership life skills development as well. Mueller (as stated in Dormody & Seevers 1994) determined that there was a relationship between youth leadership life skill development and 4-H leadership activities.

Life Skills

Guthrie and Majeskie (1997) state that there are critical life skills that are learned when judging dairy cattle. Some of those include "critical thinking, self-discipline, situation analysis, decision-making, organization, verbal expression and defense of decisions" (¶ 1). Boyd et al. (1992) describe some leadership life skills as communication, decision-making and self-understanding. According to Enfield (2001), an important focus of the 4-H club is to develop leadership and citizenship skills. Researchers conclude that these are skills in which will enable youth to make the change to adulthood and be a functional part of society.

Fox, Schroeder and Lodl (2003) stated that “one of the most pressing issues facing youth-serving organizations such as 4-H is how to best support youth in becoming productive, contributing individuals to society” (¶ 2). Boyd, Herring and Briers determined that adult skills include working with others, communicating and leadership. The development of these adult skills, otherwise known as leadership life skills will “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” (¶ 3). Also Boyd et al (1992) stated that there is an estimated 25% of the Unites States youth engage in “high risk” behaviors including heavy alcohol consumption, tobacco use, delinquency and poor school performance. These juvenile delinquents are a burden to society rather than a contribution. This is indicates a lack of leadership and life skills among our youth.

Critical Thinking

Definitions of Critical Thinking

What is critical thinking? There are several definitions of critical thinking to consider. According to Abrami, Bernard, Borokhovski, Wade, Surkes, Tamim and Zhang (2006), critical thinking is “the ability to engage in purposeful, self-regulatory judgment, [and] is widely recognized as an important, even essential, skill” (¶ 1). Norris and Ennis (1989) state that "critical thinking is reasonable and reflective thinking that is focused upon deciding what to believe or do" (p. 1).

Murphy argues that “CT [critical thinking] is viewed by some researchers as a generic skill (e.g. Halpern, 1989), while others view this construct as subject specific (eg. McPeck, 1992), and still others consider the associated dispositions, or affective realm (eg. Dewey, 1933; Paul, 1993)” (¶ 6).

Halpern (1989) states that critical thinking is “thinking that is purposeful, reasoned and goal directed. It is the king of thinking involved, in solving problems, formulating inferences, calculating likelihoods, and making decisions” (p.5).

Richard Paul (1995) defines critical thinking as, “A unique and purposeful thinking in which the thinker systematically and habitually imposes criteria and intellectual standards upon the thinking, taking charge of the construction of thinking, guiding the construction of thinking according to [the critical thinking] standards, and assessing the effectiveness of the thinking according to the purpose, criteria, and the standards [of thinking]” (p.21).

Peter Facione (1990) conducted a Delphi study that contributed to research of critical thinking. Experts in the critical thinking field devised the following definition of critical thinking. The researchers concluded that:

> “We understand critical thinking to be purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based. Critical thinking is essential as a tool of inquiry. As such, critical thinking is a liberating force in education and a powerful resource in one's personal and civic life. While not synonymous with good thinking, critical thinking is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent is seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and circumstances will permit. Thus, educating good critical thinkers means working toward this ideal. It

combines developing critical thinking skills with nurturing those dispositions which consistently yield useful insights and which are the basis of a rational and democratic society" (p. 3).

Building on the previously stated definitions, Rudd, Baker and Hoover (2000) combined all of the definitions of critical thinking into one easy to understand definition. The researchers state that "critical thinking is a reasoned, purposive, and introspective approach to solving problems or addressing questions with incomplete evidence and information and for which an incontrovertible solution is unlikely" (¶ 17).

Developing a Conceptualization of Critical Thinking

Developing a functional and accurate view of conceptualization of critical thinking, the research and work of many individuals was reviewed. However, it is to Dewey that we look to for this study. According to Ricketts (2003), "Formal educational philosophy and epistemic origins of critical thinking in the United States can be traced back to Dewey (1933), who believed that there were three attitudes necessary to reflective action (critical thinking); open mindedness, responsibility, and wholeheartedness" (p.19). Ricketts (2003) also states that Dewey (1933) also believed that reflective action was a combination of attitudes and skills with methods of critical thoughts. Through a review of the literature on this topic, several other researchers also believed it as well.

Glaser (1941) developed the Watson-Glaser Critical Thinking Appraisal defined critical thinking as the

- "attitude of being disposed to consider in a thoughtful way the problems and subjects that come within the range of one's experiences,
- knowledge of the methods of logical inquiry and reasoning, and
- some skill in applying those methods (p. 5-6)" (Ricketts 2003, p. 20).

According to Ennis (1989), “critical thinking is reasonable and reflective thinking focused on deciding what to believe or do” (p.18). Ennis, the developer of the Cornell Critical Thinking Tests, was an advocator for researching the methods teaching and assessing critical thinking.

These previously mentioned researchers made exceptional contributions to the scholastic community in the area of critical thinking and followed Dewey’s (1933) belief that critical thinking was a combination of skills and attitude. However, it wasn’t until 1990 when Peter Facione conducted a nationwide Dephi study that actually described critical thinking. This study is detailed below.

The Delphi Study

Because there are several definitions and some confusion concerning critical thinking, there was a need to refine everything that involves critical thinking. Peter Facione (1990) developed a group of 40 scholarly individuals that were noted by their colleagues to be an expert in their said field on everything from instruction, assessement and theory (52% from Philosophy, 22% from Education, 20% from Social Sciences and 6% from Physical Sciences). Facione (1990) decided to utilize the qualitative research method also known as the Delphi method to develop the theoretical framework for this particular study. This study started in February 1988 and lasted until November 1989 consisting of six rounds of questions and reactions. The results of the Facione (1990) Delphi study:

- Critical thinking includes the dimensions of skill and disposition.
- There was consensus that critical thinking could be improved in several ways. The experts agreed that a person could critically examine and evaluate one's own reasoning processes, that they could learn how to think more objectively and logically, that they

could expand their repertoire of those more specialized procedures and criteria used in different areas of human thought and inquiry, and that they could increase their base of information and life experience (p. 4).

- While critical thinking skills themselves transcend specific subjects or disciplines, exercising them successfully in certain contexts demands domain-specific knowledge, some of which may concern specific methods and techniques used to make reasonable judgments in those specific contexts (p. 5).
- There is a critical spirit, a probing inquisitiveness, a keenness of mind, a zealous dedication to reason, and a hunger or eagerness for reliable information which good critical thinkers possess but weak critical thinkers do not seem to have. . . the affective dispositions are necessary for the critical thinking skills identified to take root and to flourish in students (p. 11).
- It is inappropriate use of the term to deny that someone is engaged in critical thinking on the grounds that one disapproves ethically of what the person is doing. What 'critical thinking' means, why it is of value, and the ethics of its use are best regarded as three distinct concerns (p. 12).
- A good critical thinker . . . is habitually disposed to engage in, and to encourage others to engage in a wide range of contexts and for a wide variety of purposes. Although perhaps not always uppermost in mind, the rational justification for cultivating those affective dispositions which characterize the paradigm critical thinker are soundly grounded in critical thinking's personal and civic value. Critical thinking is known to contribute to the fair-minded analysis and resolution of questions. Critical thinking is a powerful tool in the search for knowledge. Critical thinking can help people overcome the blind, sophistic,

> or irrational defense of intellectually defective or biased opinions. Critical thinking promotes rational autonomy, intellectual freedom and the objective, reasoned and evidence- based investigation of a very wide range of personal and social issues and concerns (p. 13).

During this study, Facione (1990) not only reiterated that critical thinking included skill and dispositions, he took it one step further with his study. He and his group of experts identified very specific skills and subskills for the skills area and a very specific set of attitudes for the area of disposition (Facione 1990).

Critical Thinking Skills

The panel of experts in Facione's (1990) study concluded that critical thinking skills were Interpretation, Analysis, Evaluation, Inference, Explanation and Self-Regulation. Ricketts (2003) states that interpretation involves "comprehending and expressing meaning about a wide variety of experiences, beliefs, procedures, rules, etc. Analysis was found to be about identifying the relationship between statements, questions, concepts or descriptions to express beliefs, judgments, or reasons" (p.22). Evaluation dealt with the testing of the credibility of statements and representations and testing the logical strength of statements. The ability to draw conclusions based on facts or other forms of representation is inference. Finally, self-regulation was the ability of one to observe whether they are engaged in critical thinking.

Facione (2006) poses the question, "What kind of a person would be apt to use their critical thinking skills?" and answers that the panel of experts "poetically describe such a person as having a 'critical spirit' meaning 'a probing inquisitiveness, a keenness of mind, a zealous dedication to reason, and a hunger or eagerness for reliable information'"(p.8). Experts believe

that critical thinking does not only happen in school. Facione (2006) states that "critical thinking came before schooling was ever invented, it lies at the very roots of civilization" (p.9).

There have been several studies since the 1990 Delphi study (Facione) to confirm the findings. Gianccarlo (1996) put the Delphi study to the test when a national expert panel sorted 100 Q-sort items that would describe the model critical thinker, using the California-Q sort method. The results validate the critical thinking skills identified in the theoretical framework of this study.

Critical Thinking Dispositions

Peter Facione's 1990 Delphi study not only provided a complete list of critical thinking skills, but also provided a complete list of critical thinking dispositions. Facione (1998a, 2006) has referred to the dispositions as approaches to life that describe critical thinking. The dispositions are below:

- inquisitiveness with regard to a wide range of issues,
- concern to become and remain well-informed,
- alertness to opportunities to use critical thinking,
- trust in the processes of reasoned inquiry,
- open-mindedness regarding divergent world views,
- flexibility in considering alternatives and opinions,
- understanding of the opinions of other people,
- fair-mindedness in appraising reasoning,
- honesty in facing one's own biases, prejudices, stereotypes, or egocentric tendencies,
- prudence in suspending, making or altering judgments,

- willingness to reconsider and revise views where honest reflection suggest that change is warranted (p.9).

Not only did experts develop the dispositions towards critical thinking, they also described that critical thinkers can also be identified by the way they approach specific issues. Some of these characteristics include:

- clarity in stating the question or concern,
- orderliness in working with complexity,
- diligence in seeking relevant information,
- reasonableness, in selecting and applying criteria,
- care in focusing attention on the concern at hand,
- persistence through difficulties are encountered,
- precision to the degree permitted by the subject and the circumstances (Facione 2006, p.9).

There are several pieces of literature that outline the critical thinking dispositions and their relationship to critical thinking skills. Facione (1998b) comments on several studies (Facione, Facione, & Giancarlo, 1996; Jones, Ratliff, Tibbetts, & Glick, 1994; Giancarlo & Facione, N., 1994; Facione & Facione, 1997) stating that a relatively low, but significant relationship between critical thinking skills and dispositions. Facione (1998b) described the attitude towards critical thinking as the "consistent internal motivation to engage problems and make decisions by using critical thinking" (p.5). In 1998 Facione (b) determined that "educational and professional success required nurturing one's consistent internal motivation to think s well as developing one's thinking skills" (p.16).

In 1997, Facione and Facione conducted a five-year study of 7,926 students from 50 college level programs. This is the largest study conducted to date to identify relationships between critical thinking skills and dispositions as well as other demographic factors. There was a positive correlation found between disposition and strength of critical thinking.

In 2001, Rapps, Riegel, et al. conducted a study to determine a model of cognitive development which determined which of the following four variables were used to predict cognitive development:

- knowledge base
- critical thinking skills
- critical thinking dispositions
- experience

It was found that critical thinking dispositions significantly contributed to all of the levels of Perry's scheme of intellectual development (dualism, relativism and commitment). Experience only predicted the commitment stage.

In 2008, Profetto-McGrath, et al. conducted a study reporting research utilization behaviors and critical thinking dispositions among a random sample of nurse educators in Alberta, Canada. Almost all participants in the study scored above the target score of 280 on the California Critical Thinking Dispositions Inventory (CCTDI). These scores indicated high levels of critical thinking dispositions. These data indicate that there is a significant correlation between nurse educators' total critical thinking dispositions and all measures of research utilization.

Theoretical Framework

Experiential Learning

Experiential Learning is the theory base for this study. It is through hands-on activities that we can accomplish experiential learning. Dewey (1938) states that experiential learning is the "intimate process of actual experience and education" (p.7). Boyd, et al. (1992) determined that the 4-H youth organization sees the development of life skills though experiential learning as the basis for its programming. FFA and 4-H as well as other youth organizations are a wonderful learning avenue for experiential learning to take place as well as to develop life and leadership skills including critical thinking dispositions.

Experiential learning is not a new concept. John Dewey is revered as one of the most influential scholars on the subject of experiential learning (Smith, 1997) – especially in Agricultural Education. He is hailed as the "greatest educational thinker of the 20th Century" (¶ 1) and he became the "philosophical father of experiential education" (¶ 6). Dewey (1938) stated:

…all principals by themselves are abstract. They become concrete only in the consequences which result from their application. Just because the principles set forth are so fundamental and far-reaching, everything depends upon the interpretation given them as they are put into practice in the school and the home. (p.6).

Another researcher also takes an interest in experiential learning. According to Healey and Jenkins (2000), "Kolb's experiential learning theory is one of the best know educational theories in higher education (¶ 1)… Learning is the process whereby knowledge is created through the transformation of experience" (¶ 3). We can understand that these students are

having these experiences and “self-evaluation is the principal method of assessing progress or success” (Kearsley, 2006, ¶ 3).

An attempt to measure the experiences that a student encounters in learning Gibbins and Hopkins (as cited in Neill, 2005) devised the Scale of Experientiality. This scale includes five standards in which Priest and Gass (as cited in Neill, 2005) have summarized. They include

- the experience was more experiential, meaning more “direct”
- the individual was involved in both the planning and execution of the experience
- the individual was held accountable for what occurred during the experience
- the individual was responsible for fully comprehending the experience to the fullest extent
- experience allowed individuals to grow in directions that were helpful to them (¶ 7).

The Experiential Learning Cycle

There are many stages in the learning cycle that can be broken down in experiential education. For this reason, the Experiential Learning Cycles were developed and adopted. These models stress the philosophy of Dewey concerning the experiential nature of learning as a primary concern in education. This model, Kolb suggests that it can begin during any one of the four points but the sequence must be observed. This model shows that experiential learning is continuous.

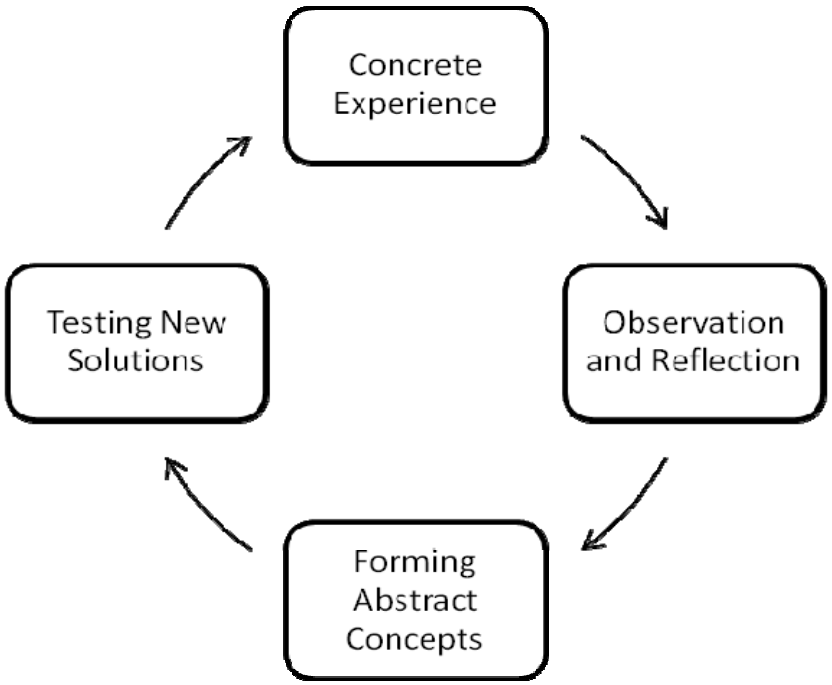

Figure 2-4: The Experiential Learning Cycle (Kolb, 1984)

The above model suggests that effective learning posses the abilities of concrete experience, observation and reflection, abstract conceptualization and experimentation. Kolb states that "Learning is a process whereby knowledge is created through the transformation of experience" which is the theoretical base for the model (Healey & Jenkins, 2000, p.185). Healey and Jenkins (2000) further elaborate that "the experiential learning theory affirms the importance of experiential activities, such as field work and laboratory sessions; however, it does not prioritize those forms of learning" (p.186).

Impacts of Livestock Exhibition

Youth organizations such as FFA and 4-H promote life skills though experiential learning and leadership activities. "Leadership of the 4-H organization wants its members to receive more from their projects than ribbon, trophies and trips, and monetary gains. More importantly, the 4-H leadership wants its members to acquire project and life skills" (Rusk, et al. 2003, ¶ 2). Wingenbach and Kahler (1997) state that "Among the primary purposes of this agricultural

youth organization is the development of skills in communications, human relations, social abilities, citizenship, cooperation, and resource management" (¶ 1).

Rusk, Martin, Talbert and Balshwied (2002) performed a study to observe the life skills gained from youth who exhibited livestock through 4-H in the Indiana livestock judging program. A questionnaire was mailed to one hundred eighty five former livestock judging participants that competed during the years of 1975-1995. Ten life skills were found as a result including decision making, ability to verbally defend a decision, livestock industry knowledge, oral communication, organizational skills, problem solving, self-confidence, self-discipline, self-motivation and teamwork. These life skills were selected from the Secretary's Commission on Achieving Life Skills (SCANS) report (Brock 1992). McCann and McCann (as cited in Boleman, Cummings & Briers, 2005) developed a scale that was used to evaluate the influence the livestock judging program in Indiana had on life skills of youth. "The five points were: 1 = *not influential at all,* 2 = *mildly influential,* 3 = *moderately influential,* 4 = *highly influential,* 5 = *almost essential* to the ultimate development of this attribute" (Boleman et al., 2005). The mean scores were calculated for each group and ranked. The order of the skills were as follows:

1. verbally defend decisions
2. industry knowledge
3. oral communication
4. decision making
5. self-confidence
6. problem solving
7. teamwork
8. self-motivation

9. self-discipline
10. organizational skills

Along those same lines, Boleman, et al (2005) sought to determine the life skills gained by youth who participate in the beef project through the 4-H program in Texas. A questionnaire was sent to participants who exhibited beef, goats, swine and sheep through the 4-H program. Through exhibiting beef participants felt that they mostly gained three life skills including accepting responsibility, setting goals and developing self-discipline.

Davis, Akers, Doefert, McGregor and Kieth (2005) conducted a case study involving an autistic child and competitive livestock projects. The researchers found that there are similarities between main stream exhibitors and special needs exhibitors. The three broad themes that emerged throughout the study included social relations, family and responsibility/knowledge and care of animals. In this study, Davis, et al. (2005) suggested that "competitive livestock exhibition as a vocational outlet for life skill development to special needs students lacking skills" (¶ 1).

In 1996, Carol K. Ward studied New Jersey 4-H alumni responding to their self-perceived impacts of livestock exhibition on the development of life skills. Those life skills included spirit of inquiry, decision making, ability to accept responsibility, record keeping and public speaking. The ability to accept responsibility was the life skill that received the highest score by the participants. This particular study indicated from the participants that the 4-H Animal Science program in New Jersey does have a positive impact on life skill development.

Rusk, et al. (2003) cited a study by Sawer concerning the 4-H members in Oregon who exhibit beef, swine and sheep. These 4-H members recognized several life skills that are

developed while exhibiting livestock including responsibility, communication, decision making, people relations, and leadership.

Gamon and Gehegehus-Hetzel (1994) sought to determine how the Iowa 4-H swine project effected life skill development. The researchers found that exhibitors felt that their involvement with the swine project positively impacted their life skill development. Throughout the study, participants pointed out that their top source of information about the swine project came from their parents. Also found in the study, the participants found that the parents were highly influential in students' involvement in the project.

Related Livestock Activities

There have been several studies that have academically correlated livestock activities and youth leadership life skills and critical thinking. As previously mentioned, the 2002 study conducted by Rusk, Martin, Talbert and Balshweid stated that though livestock evaluation, participants developed life skills including decision making. Guthrie and Majeskie (1997) state that there are critical life skills that are learned when judging dairy cattle. Some of those include "critical thinking, self-discipline, situation analysis, decision-making, organization, verbal expression and defense of decisions" (¶ 1).

Nash and Sant (2005) conducted a study to determine the impact of 4-H animal judging program in Idaho on the life skills of former participants. Participants rated specific life skills that influenced their lives. Respondents were those who participated in livestock judging, horse judging and dairy judging. Nash and Sant stated that "skills developed though the evaluation process of the judging activity can be utilized in real-life situations" (¶ 3). They concluded that the program most benefitted animal industry knowledge and had a moderate influence on the development of life skills.

Exhibitor Demographic Variables

Grade

Wingenbach and Kahler (1997) described significant correlations between self-perceived leadership life skills development and age among Iowa FFA members. The researchers reported that age ($r = .27$) ranked third in significance behind FFA leadership activities ($r = .37$, $p. < .05$) and length of membership in the FFA ($r = .31$).

Gender

Ricketts (2003) sought to determine the critical thinking skills of youth leaders in the FFA. Females scored a bit higher than males on the critical thinking subskills analysis and inference. Gamon and Dehegedus-Hetzel (1994) conducted two studies that researched skill development by participating in the swine project. In the study, female respondents scored their acquired life skills higher than their swine-knowledge acquired from the project. Males on the other hand, scored the swine-knowledge that they acquired above the life skills they acquired.

Seevers and Dormody (1994) conducted a study involving FFA members in the tri-state area of Arizona, Colorado and New Mexico and found that gender explained 0.9 percent of variance in dealing with the Youth Leadership Life Skills Development Scale. In 1995, Seevers and Dormody conducted a study with senior 4-H members from Arizona, Colorado and New Mexico. During this study, the researchers found that a 1.8% variance in YLLSDS scores. Seevers and Dormody concluded that gender was the justification for the variance.

4-H Affiliation

The tradition of “learning by doing” is the backbone of the 4-H Youth Development Program (Enfield, 2001). Many researchers have found viable information for the development

of leadership life skills and critical thinking through this experiential learning program. Boyd, et al. (1992) determined that students who participated in the 4-H program had a positive correlation to leadership life skills of Texas members. They also found that the 4-H members rated leadership life skills development above students who were not members of 4-H.

FFA Affiliation

"FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education" ("National FFA Organization" 2009, About FFA Section, Mission Statement). There have been several researchers that identify this organization as developing and harboring youth leadership life skills and critical thinking through experiential activities (Ricketts & Newcomb, 1982; Townsend & Carter, 1983; Wingenbach & Kahler, 1997). Wingenbach and Kahler (1997) cites that Ricketts and Newcomb found that "vocational agriculture students/FFA members from both superior and non-superior chapters possessed significantly more leadership and personal development abilities than nonvocational agriculture students" (¶ 7).

Chapter Summary

This chapter sought to explain operational definitions including youth leadership life skill development and critical thinking skills as well as determine the conceptual and theoretical framework for the study. A review of literature was completed to provide a foundation of research and a basis for the study.

CHAPTER 3

METHODS AND PROCEDURES

This chapter introduces the methods that were used during this study. Specifically, this chapter discusses the population of the study and the sample selection. It also entails the description and measurement of the variables, instrumentation, data collection and data analysis. The primary purpose of this study was to determine critical thinking and youth leadership development and the relationship between these and the participation of students in the commercial dairy heifer project in Georgia. Moreover, the researcher sought to determine demographic variables that impact youth leadership life skill development and critical thinking development among Georgia Junior Commercial Dairy Heifer exhibitors.

Population and Sample

Data from this descriptive census survey (Appendix A) were obtained from a sample (N = 103) of Georgia Junior Livestock Commercial Dairy Heifer exhibitors. Exhibitors from the 2009 show year, were 9^{th}, 10^{th}, or 11^{th} grade students. Sixty-two participated in the study for a 60.19% response rate.

Description and Measurement of Variables

This study sought to identify the development of youth leadership life skills and critical thinking of students as a result of commercial dairy heifer exhibition. Specifically, it sought to:

- Describe the Georgia National Junior Livestock Commercial Dairy Heifer participants by their gender, grade, and FFA and/or 4-H affiliation for showing dairy.

- Describe the self-perceived youth leadership and life skills development of the Georgia National Junior Livestock participants as a result of the commercial dairy heifer project.
- Describe the change in critical thinking disposition of the Georgia National Junior Livestock participants as a result of the commercial dairy heifer project.
- Determine the relationship between the self-perceived youth leadership and life skills development and critical thinking skills of the Georgia National Junior Livestock Commercial Dairy Heifer project participants and grade, gender, and FFA and/or 4-H affiliation for showing dairy.

There were several independent variables within this study. These independent variables include grade, gender, FFA and/or 4-H affiliation during showing. These independent variables were derived from various theses, dissertations and an extensive review of the relating literature.

The dependent variables represented during this study were youth leadership life skills development (YLLSD) level and critical thinking disposition development.

Research Design

This study was conducted using descriptive census design. The independent variables in this study were age, gender, affiliation with FFA and/or 4H for showing. The dependent variables represented in this study were the perceived development of youth leadership life skills and critical thinking dispositions. This YLLSD was determined by using the Youth Leadership Life Skills Development (YLLSD) scale by Dormody, Seevers, and Clason (1993). YLLSDS scores were calculated by determining the summated mean and a retrospective-post version of the EMI was employed to determine change in critical thinking disposition.

Data Collection

Data collection followed Dillman's (2000) Tailored Design Method. Procedures for distributing instruments and collecting data were done by the researcher via postal mail. On August 6, 2009, the pre-post card mailing occurred. On August 24, 2009, 18 days later, the first survey packet was sent out containing Youth Leadership Life Skills Development Scale (YLLSD) (Dormody, Seevers & Clason 1993) survey, an EMI: Critical Thinking Disposition Development Assessment (Irani, Rudd, Gallo, Ricketts, Friedel, & Rhoades 2007), consent forms and a stamped addressed return envelope. Two weeks later, on September 8, 2009, a reminder post card was sent out to the selected participants. On September 28, 2009, a second survey packet was mailed to non-responders. A "Thank you" post card was sent to all respondents. The final data collection was achieved on November 12, 2009. The complete study lasted from July 29, 2009 to December 17, 2009.

Instrumentation

This research documented several issues including the demographic variables of students who exhibited commercial dairy heifers in Georgia, their self-perceived youth leadership life skills, critical thinking dispositions, and the relationship between the self-perceived youth leadership and life skills development and critical thinking development of the Georgia National Junior Livestock Commercial Dairy Heifer project participants and grade, gender, organization affiliation.

There were three different instruments used when collecting data for this study. The first instrument was used to measure the Youth Leadership Life Skill Development of students who exhibited commercial dairy heifers in Georgia. The instrument was a closed-ended questionnaire developed by Dormody, Seevers and Clason (1993). This instrument is referred to as the Youth

Leadership Life Skill Development Scale (YLLSDS). Next, a retrospective-post version (Ricketts, Pringle, & Douglas, 2007) of the EMI: Critical Thinking Disposition Assessment (Irani, et al., 2010) was used to measure the students' critical thinking dispositions development. The third and final instrument that was used was a demographic survey which the researcher developed. This survey consisted of questions that related to the livestock variables (gender, grade, FFA and or 4-H affiliation for showing dairy). Enclosed with the three instruments were a cover letter explaining the primary purpose of the study, along with parental and student consent forms and a self-addressed stamped envelope.

Youth Leadership Life Skills Instrument

This scale (YLLSDS) was developed by Dormody, Seevers and Clason in 1993. During this study it was used to collect data from students who exhibited commercial dairy heifers in Georgia on their self-perceived youth leadership and life skills development. This particular instrument encompassed 30 specific leadership life skills and used a summated rating scale, rating the leadership life skills on a four-point scale from zero to three representing No Gain to A Lot of Gain. This was to measure the amount of leadership skill improvement as a result of the students' commercial dairy heifer project. Reliability was reported by Seever, Dormody, and Clason (1995) with a Cronbach's alpha of .98, and Cronbach's alpha for reliability in our study was .91.

EMI: Engagement, Maturity and Innovativeness Critical Thinking Disposition Inventory

As previously mentioned in the review of literature, Facione's (1990) Delphi study was the basis on which Ricketts (2003) devised the Engagement, Maturity and Innovativeness (EMI) Critical Thinking Disposition. The researcher took Facione's seven critical thinking skills and combined them into 3 constructs including Engagement, Maturity and Innovativeness. To prove

validity of the instrument, Ricketts (2003) pilot tested it online with students from Tennessee. Upon analyzing the results of the pilot test, the researcher added items to the Maturity construct and removed a number of items from the Innovativeness, Maturity and Engagement constructs. The instrument's validity and reliability strengthened tremendously upon these changes. Reported Cronbach's alpha reliabilities for the three constructs of Engagement, Cognitive Maturity, and Innovativeness are .91, .79, and .80 respectively, and total reliability for the EMI is estimated at .94 for the standard EMI (Irani, Rudd, Allo, Ricketts, Friedel, & Rhoades, 2007, p.10). For our retrospective-post version of the EMI, the retrospective/post reliabilities were as follows: Engagement (.67/.76), Maturity (.61/.73), Innovativeness (.64/.70), and total EMI (.84/.89).

Demographic Instrument

The instrument used to collect demographic information was developed by the researcher. This instrument measured, grade, gender, and FFA and/or 4-H affiliation during showing. These were specific questions that required the participants to respond accordingly.

Data Analysis

Surveys (n=62) that were returned were coded and entered into an Excel spreadsheet and then transferred into SPSS® for Windows™ statistical package for analysis. There were a total of n=62 responders for a .60 response rate. To account for non-response error, key dependent variables for early responders (*Wave* 1 = 27) were compared to late responders (*Wave 2* = 35) via independent samples *t*- tests, and there were no differences between early and late responders (Linder, Murphy & Briers, 2001). The researcher utilized SPSS to calculate Frequencies and Percentages for demographic variables for objective one. Summated Means and Standard Deviation were calculated for the 30-item YLLSDS. Summated Means and Standard Deviation

were also calculated for each construct and total EMI score for both the retrospective and post EMI questions. In addition, a development score was calculated by subtracting the retrospective mean from the post mean for each EMI construct and total score. A *t*-test was also calculated to determine mean differences between retrospective and post EMI scores. For the last objective, One-Way ANOVA was calculated to determine dependent variable differences among grade levels, and again *t*-tests were employed to determine differences between genders and FFA or 4-H show affiliation.

Chapter Summary

The main purpose of this chapter was to discuss the methods and procedures during the study. It has examined and explained the methods and procedures to which this study was conducted. The sample population, variables, instruments used, research questions and designed were also addressed. This was a study used a retrospective randomized correlational design to accomplish the said goals. A total of 62 students participated in the study out of 103 possible participants for a response rate of 60.19%.

CHAPTER 4

RESULTS

Chapter 1 described background, significance and purpose for analyzing critical thinking dispositions and youth leadership life skills development among students who exhibit commercial dairy heifers in Georgia. The primary purpose of this study was to determine youth leadership and critical thinking development and the relationship between these and the participation of students in the commercial dairy heifer project in Georgia. Specifically, the researcher sought to:

- Describe the Georgia National Junior Livestock Commercial Dairy Heifer participants by their gender, grade, FFA participation and 4-H participation.
- Describe the self-perceived youth leadership and life skills development of the Georgia National Junior Livestock participants as a result of the commercial dairy heifer project.
- Describe the change in critical thinking disposition of the Georgia National Junior Livestock participants as a result of the commercial dairy heifer project.
- Determine the relationship between the self-perceived youth leadership and life skills development and critical thinking skills of the Georgia National Junior Livestock Commercial Dairy Heifer project participants and grade, gender, FFA participation and 4-H participation.

Chapter 2 illustrated theoretical and conceptual frameworks for critical thinking dispositions and youth leadership life skill development as well as experiential research significant to this study. Literature related to experiential learning, leadership life skill development, critical thinking dispositions and livestock exhibition were discussed in this

chapter. Also, literature discussing the relationships between youth leadership life skill development and various livestock exhibition variables, critical thinking research and exhibitor demographics were addressed in chapter 2.

Chapter 3 discussed the methods in addressing the research questions encompassed in the study. Specifically, a review of the study population, sample selection, description and measurement of variables, instrumentation, data collection and data analysis was addressed. The independent variables in this study were gender, age, FFA participation, 4-H participation and years of project involvement. The dependent variables in this study were total youth leadership life skill development level and critical thinking dispositions. The study was conducted using correlational and causal-comparative research methods.

Chapter 4 contains the findings related to the specific objectives of the study. The findings are organized in to five sections. The first section describes study participants using specific demographical information. The second section reports total youth leadership life skill development scores of study participants. The third section reports retrospectively on the critical thinking dispositions as a result of exhibiting commercial dairy heifers. Furthermore, the fourth and fifth sections report relationships between youth leadership life skills development level, critical thinking dispositions and grade, gender, FFA participation and 4-H participation.

Objective One: Describe the Georgia National Junior Livestock Commercial Dairy Heifer participants by their gender, grade, FFA and/or 4-H affiliation.

Demographics

Georgia National Junior Livestock Commercial Dairy Heifer participants reported grade range from ninth through eleventh, *f*= 9.95, %= 0.75 (Table 4-1). Of 62 respondents, 19 were in ninth grade (30.65%), 27 were in tenth grade (43.55%), 16 were in eleventh grade (25.8%). The

tenth grade represented the highest percentage age group (43.4%) (Table 4-2). The majority of participants in this study were females (*n* = 35*)* 56.45%. Males (*n* = 27) made up 43.55% of the sample. Respondents reported his or her affiliation in either FFA or 4-H. The number of students reporting their involvement through FFA was higher than those who reported 4-H affiliation. 83.87% (*n* = 52) of participants reported being affiliated with FFA, while 16.13% (*n* = 10) reported being affiliated in 4-H.

Table 4-1

Objective 1: Demographic Frequencies of Dairy Heifer Exhibitors (*n* = 62)

	f	*%*
9th Grade	19	30.60
10th Grade	27	43.50
11th Grade	16	25.80
Total	62	100.00
Male	27	43.50
Female	35	56.50
Total	62	100.00
FFA affiliation during show	52	83.90
4-H affiliation during show	10	16.10
Total	62	100.00

Objective Two: Describe the self-perceived youth leadership and life skills development of the Georgia National Junior Livestock participants as a result of the commercial dairy heifer project.

The composite mean Youth Leadership Life Skills Development Scale (YLLSDS) score was *M* = 70.16, *SD* = 11.91 (Table 4-5). Youth Leadership Life Skill Development Scale scores ranged from a low score of 39 to maximum score of 90. The developers of the YLLSDS note that scale

values from 0 to 30 might be considered no to slight leadership life skills development, 31 to 60 moderate development and 61 to 90 high development (Dormody et. al 1993).

Table 4-2

Objective 2: Summated Mean for Youth Leadership Life Skill Development Scale (YLLSDS) (*n* = 62)

	Min.	*Max.*	*M*	*SD*
Youth Leadership Life Skill Development Scale (YLLSDS) Score	39	90	70.16	11.91

Note: Possible scale values: 0-30 = no to slight leadership development. 31-60 = moderate leadership development. 61-90 = high leadership development. From "The Youth Leadership Life Skill Development Scale: An Evaluation and Research Tool for Youth Organizations," by Dormody et. al 1993.

Objective Three: Describe the change in critical thinking dispositions of the Georgia National Junior Livestock participants as a result of the commercial dairy heifer project.

Table 4-3 below describes the mean and standard deviation of the participants' retrospectively and post dairy exhibition EMI scores. The retrospective and post test for EMI scores for dairy exhibition were all within typically reported ranges for each construct. For every construct, there was a significant amount of development from the retrospective assessment to the post assessment within the context of dairy exhibition.

Table 4-3

Objective 3: Critical Thinking Development from Dairy Exhibition

	Engagement (*SD*)	*Cognitive Maturity* (*SD*)	*Innovativeness* (*SD*)	*EMI Total* (*SD*)
Before Dairy Exhibition	36.34 (5.73)	26.73 (4.61)	22.27 (4.60)	85.34 (13.06)
After Dairy Exhibition	44.36 (5.67)	32.97 (4.45)	27.82 (4.30)	105.15 (13.06)
Development	8.02* (6.36)	6.24* (5.10)	5.49* (5.23)	19.81* (15.04)

Note: Possible ranges: Engagement 11-55, Maturity 8-40, Innovativeness 7-35, and total 26-130. Typical ranges: Engagement 28-55, Maturity 16-40, Innovativeness 15-35, and total 59-130. From "Critical Thinking Instrumentation Manual," by Irani, et. al 2007.
*Development from before to the end of dairy exhibition was significant at the $p<.05$ level.

Objective Four: Determine the relationship between the self-perceived youth leadership and life skill development and critical thinking dispositions of the Georgia National Junior Livestock Commercial Dairy Heifer project participants and grade, gender, FFA and/or 4-H affiliation during the showing season.

One-Way ANOVA and Bonferroni comparisons were calculated with SPSS, and there were no leadership development or critical thinking disposition development differences among grade levels. An independent samples *t*-test was determined to calculate leadership and critical thinking development relationships between males and females. There were no differences. *T*-tests were also calculated to determine any differences between FFA and 4-H exhibitors for the dependent variables. Largely, there were no differences, however, exhibitors who showed for FFA (M = 33.58, SD = 4.08) were more cognitively mature than 4-H exhibitors (M = 29.80, SD = 5.20) for the post-test measure, $t(60) = 2.57$, $p<.05$.

Summary

This chapter was composed to illustrated the four research specific objectives outlined in chapter one. This chapter reported findings of participants by their gender, grade, FFA and/or 4-H affiliation; the self-perceived youth leadership and life skills development; the change in critical thinking dispositions; and the relationship between the self-perceived youth leadership and life skill development and critical thinking dispositions as a result of the Dairy heifer project. Details of the findings will be presented in chapter 5.

CHAPTER 5

SUMMARY AND DISCUSSION

The primary purpose of this study was to determine the self-perceived youth leadership life skill development level and critical thinking dispositions of individuals as a result of exhibiting commercial dairy heifers. This study also sought to describe the Georgia National Junior Livestock Commercial Dairy Heifer participants by their gender, grade, and FFA and/or 4-H affiliation during judging. Relationships between these key demographic variables and the dependent variables of YLLSD and retrospective, post, and development scores on the EMI were also explored.

Chapter 2 illustrated theoretical and conceptual frameworks for critical thinking dispositions and youth leadership life skill development. Literature related to experiential learning, leadership life skill development, critical thinking dispositions and livestock exhibition (limited dairy exhibition research was identified) were discussed in this chapter. Also, literature discussing the relationships between youth leadership life skill development and various livestock exhibition variables, critical thinking research and exhibitor demographics were addressed in chapter 2.

Chapter 3 discussed the methods in addressing the research questions encompassed in the study. Specifically, a review of the study population, sample selection, description and measurement of variables, instrumentation, data collection and data analysis was addressed. The independent variables in this study were gender, grade, FFA participation, 4-H participation and years of project involvement. The dependent variables in this study were total youth leadership

life skill development level and critical thinking dispositions. The study was conducted using correlational and causal-comparative research methods. Chapter 4 reported the results related to the specific objectives of the study.

Conclusions / Implications / Recommendations

Objective One: Describe the Georgia National Junior Livestock Commercial Dairy Heifer participants by their gender, grade, FFA and/or 4-H affiliation.

There was a nice proportion of participation from the different grade levels indicating that participants found the activity useful and at the least, one they wish to continue to participant in. Participation percentages include ninth grade at 30.65%, tenth grade at 43.55%, and eleventh grade at 25.8% of the total population.

The majority of dairy exhibition participants were female (56.50%). This differs from similar YLLSD livestock studies. Walker's (2006) study reveals that 56.43% of respondents were male and 43.56% were female. The question arises, "why were there more female dairy participants?". Possibly, females find the dairy heifers easier to manage than other species of livestock (Dr. Ronald Thomas, personal communication, February 23, 2010). Ricketts (2005) found that males were falling behind females in leadership development. This could mean that males are not taking full advantage of the learning opportunities afforded to them through leadership development activities such as the dairy heifer project.

There is more participation from FFA (83.90%) than 4-H (16.10). This could be due a number of factors, one of which might be the economic downturn which could possibly impact the number of agents concentrating on dairy production of livestock in general for the state of Georgia. Hollis (2010) refers to budget cuts proposed for the Cooperative Extension Service saying "It would appear that agriculture is being asked to take a disproportionately large hit from

a state that is trying desperately to make up for a $1 billion deficit… It would mean [by cutting the Cooperative Extension Service] the elimination of 116 4-H positions and 169 Extension staff positions" (¶ 4).

Recommendations:

- Knowing why females are attracted to exhibiting dairy heifers is a key in understanding why females show, thus researching the question of why more females participate in dairy exhibition is an important. Therefore it is recommended that further research to determine if specific genders are attracted to dairy exhibition.
- Recruiting male participants to exhibit commercial dairy heifers. This is because there is an imbalance of gender participants and is an opportunity for leadership development.
- It is also recommended that stakeholders market the benefits of YLLSD and even critical thinking development to 4-H programs and students across the state of Georgia.
- As it appears in our study, there were more participants affiliated with FFA than 4-H. Further research should be conducted to see just how many students are affiliated with both organizations under the livestock exhibition context.

Objective Two: Describe the self-perceived youth leadership and life skills development of the Georgia National Junior Livestock participa**nts as a result of the commercial dairy heifer project.**

Because of the involvement in dairy exhibition, the self-reported YLLSDS indicated that participants enjoyed a high amount of leadership development. All participants scored 39 and above (M =70.16, SD = 11.91) for the possible range of 0-90 on the YLLSDS. According to Dormody, et al. (1993), "scale values from 0 and 30 might be considered no to slight leadership life skills development, from 31 to 60 moderate development, and from 61 to 90 high

development" (p. 2). Dormody and Seevers (1994) reported YLLSDS scores of Arizona, Colorado, and New Mexico FFA members having a mean of *M* = 64.2, *SD* = 17.7 while Wingenbach and Kahler (1997) reported an overall YLLSDS mean score of *M* = 62.65, *SD* = 17.83 for Iowa FFA members. More recently, Walker (2006) found that members of the National Junior Angus Association that participated in the beef project reported having a mean of M = 73.02, *SD* = 13.77, providing a score above 8 points compared to similar studies.

Total YLLSDS totaled just less than 3 points below Walker's (2006) study YLLSD with the beef project and totaled more than 6 points above in the aforementioned studies. Though leadership life skills cannot be based on solely on the exhibition of dairy heifers, the leadership development scores may indicate that dairy exhibition plays a role in the youth leadership life skills that researchers (Brock, 1992; Fox, Schroeder, and Lodl, 2003; Boyd et al.,1992) find important.

Recommendations:

- Because students scored high range for YLLSD, dairy exhibition should be offered as an option for youth leadership development.
- Though students who exhibit commercial dairy heifers have higher YLLSDS than that of other similar studies, research needs to be conducted on the specific basis of youth leadership development as a direct effect of dairy exhibition.

Objective Three: Describe the change in critical thinking dispositions of the Georgia National Junior Livestock participants as a result of the commercial dairy heifer project.

Students who participated in dairy exhibition showed an increase of development of the total EMI score post dairy exhibition (105.15) as compared to pre-dairy exhibition (85.34). Increases in development of the *Engagement* (8.02), *Cognitive Maturity* (6.24), and

Innovativeness (5.49) constructs post dairy exhibition suggest that dairy exhibition increases critical thinking dispositions among students.

Recommendations:

- It is recommended that the academic impact of dairy exhibition should be promoted. This study revealed that every form of critical thinking dispositions were positively influenced from the perceived influence of dairy exhibition. It is important that parents, participants as well as policy makers and school / education decision makers know the impact that dairy exhibition has on critical thinking dispositions.
- Students who participate in dairy exhibition not only develop leadership, they also develop important critical thinking dispositions. Ricketts (2003) found that students that had more leadership experiences had high critical thinking scores. Therefore leadership and critical thinking are not only reinforced in the commercial dairy heifer project but also further developed. This information could be a useful tool for the dairy industry when promoting the industry and providing employment opportunities.
- Because there were increases in all constructs post dairy exhibition, it is recommended that more research should be conducted more specifically using the EMI through the context on livestock. Little to no research was found on the topic pertaining to livestock exhibition or dairy exhibition in particular.

Objective Four: Determine the relationship between the self-perceived youth leadership and life skill development and critical thinking dispositions of the Georgia National Junior Livestock Commercial Dairy Heifer project participants and grade, gender, FFA and/or 4-H affiliation during the showing season.

Largely, there were no leadership or critical thinking development differences between FFA and 4-H affiliation. However, exhibitors who showed for FFA (M = 33.58, SD = 4.08) were more cognitively mature than 4-H exhibitors (M = 29.80, SD = 5.20).

There were no leadership development or critical thinking disposition development differences among grade levels.

There were no leadership and critical thinking development differences between males and females. Other studies such as Ricketts (2003), Gamon & Dehegedus-Hetzel (1994), Seevers & Dormody (1994, 1995) concluded a difference in either critical thinking skills or youth leadership life skills among genders. This means that males and females during this study are on the same leadership and critical thinking levels.

Recommendation:

- It is recommended that further research should be completed to answer the question of why participants were affiliated with FFA were more cognitively mature than those participants who were affiliated with 4-H.

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APPPENDIX A

QUESTIONAIRE PACKET

EMI: Critical Thinking Disposition Assessment

Directions: There are 2 columns beside each statement below. The first column asks you to select a level of agreement with the statement that you had before taking this course. The second column asks you to select your level of agreement with the statement after completing this course. Level of agreement responses are as follows: SD = Strongly disagree, D = Disagree, U = Uncertain, A = Agree, SA = Strongly agree. Please check one box for each column for each of the 26 items.

		Thinking back, **BEFORE** you started showing livestock – Please check the box that would best describe your level of agreement with each statement.						**NOW** that you've completed this year of showing – Please check the box that currently describes your level of agreement with each statement.				
		SD	**D**	**U**	**A**	**SA**		**SD**	**D**	**U**	**A**	**SA**
1.	I listen carefully to the opinions of others even when they disagree with me.											
2.	I look for opportunities to solve problems.											
3.	I am interested in many issues.											
4.	I enjoy learning about many topics.											
5.	I am able to relate to a wide variety of issues.											
6.	I ask lots of questions in a learning environment.											
7.	I enjoy finding answers to challenging questions.											
8.	I am a good problem solver.											
9.	I am confident that I can reach a reasonable conclusion.											
10.	I strive to be well informed.											
11.	I am likely to change my opinion when I am given new information that conflicts with my current opinion.											
12.	I enjoy solving problems.											
13.	I try to consider the facts and not let my biases affect my decisions.											
14.	I am able to apply my knowledge to a wide variety of issues.											
15.	I enjoy learning even when I am not in school.											
16.	I can get along with people who do not share my opinions.											
17.	I am able to explain things clearly.											
18.	I ask good questions when trying to clarify a solution.											
19.	I present issues in a clear and precise manner.											
20.	I consider how my own biases affect my opinions.											
21.	I search for the truth even when it makes me uncomfortable.											
22.	I keep on working on things until I get them right.											
23.	I will go out of my way to find the right answers to a problem.											
24.	I try to find multiple solutions to problems.											
25.	I ask many questions when making a decision.											
26.	I believe that most problems have more than one solution.											

Please answer the demographic questions below.

27. What grade are you in?_____

28. What is your age? _____

31. Male or Female? _____

29. How many years have you shown commercial dairy heifers? _____

30. Have you primarily shown commercial dairy heifers in 4-H, FFA or both? _____

THE YOUTH LEADERSHIP LIFE SKILLS DEVELOPMENT SCALE (Dormody, Seevers, Clason, 1993) was used in this study.

YOUTH LEADERSHIP LIFE SKILLS DEVELOPMENT SCALE

What leadership skills have you improved because of your **DAIRY PROJECT** involvement? Please answer each item by circling the number that you feel represents your gain for each skill. Please answer every question.

As a result of my **COMMERCIAL DAIRY HEIFER PROJECT** experiences, I:

	No Gain	Slight Gain	Moderate Gain	A Lot of Gain	Only for Coding
	0	1	2	3	
1. Can determine needs	0	1	3	3	_____
2. Have a positive self-concept	0	1	2	3	_____
3. Can express feelings	0	1	2	3	_____
4. Can set goals	0	1	2	3	_____
5. Can be honest with others	0	1	2	3	_____
					_____
6. Can use information to solve problems	0	1	2	3	_____
7. Can delegate responsibility	0	1	2	3	_____
8. Can set priorities	0	1	2	3	_____
9. Am sensitive to other	0	1	2	3	_____
10. Am open-minded	0	1	2	3	_____
					_____
11. Consider the needs of others	0	1	2	3	_____
12. Show a responsible attitude	0	1	2	3	_____
13. Have a friendly personality	0	1	2	3	_____
14. Consider input from all group members	0	1	2	3	_____
15. Can listen effectively	0	1	2	3	_____
					_____
16. Can select alternatives	0	1	2	3	_____
17. Recognize the worth of others	0	1	2	3	_____
18. Created an atmosphere of acceptance	0	1	2	3	_____
19. Can consider alternatives	0	1	2	3	_____
20. Respect others	0	1	2	3	_____
21. Can solve problems	0	1	2	3	_____
22. Can handle mistakes	0	1	2	3	_____
23. Can be tactful	0	1	2	3	_____
24. Can be flexible	0	1	2	3	_____
25. Get along with others	0	1	2	3	_____
26. Can clarify my values	0	1	2	3	_____
27. Use rational thinking	0	1	2	3	_____
28. Am open to change	0	1	2	3	
29. Have good manners	0	1	2	3	_____
30. Trust other people	0	1	2	3	_____
				Grand Total	_____

APPENDIX B

INSTRUCTIONAL / INFORMED CONSENT LETTER

THE UNIVERSITY OF GEORGIA
College of Agriculture
Department of Agricultural Leadership, Education and Communication
Four Towers
Athens, Georgia 30605
alseamon@gmail.com

The Development of Youth Leadership Life Skills Including Critical Thinking Dispositions

as a Result of Commercial Dairy Exhibition.

Ashley Seamon, Graduate Student
Dr. John Ricketts, Associate Professor
List other investigators and/or faculty supervisor or sponsor

INFORMED CONSENT STATEMENT

Invitation to Participate and Description of the Project
You are being asked to participate in our study of development of youth leadership life skills and critical thinking skills. We are investigating this topic in order to further our understanding development of youth leadership life skills and critical thinking skills. You were recruited to participate from the Georgia Junior Livestock database. Your participation in the research study is voluntary. Before agreeing to be part of this study, please read the following information carefully.

Description of Procedure:
If you participate in this study, you will be asked to fill out the two surveys in its entirety.

Risks and Inconveniences:
There is a possibility that some of the questions in the interviews may make you feel uncomfortable. This rarely happens, but if you do feel uncomfortable, you can do any of the following: you can choose not to answer certain questions or you can choose to stop filling out the research survey.

Benefits:
This study was not designed to benefit you directly, however, there is some possibility that you may learn about your own personal leadership triumphs through your participation. In addition, what we learn from the study may help us to better understand other participants' development in youth leadership life skills and critical thinking skills.

Financial Considerations:
There are no financial considerations that the participant must endure.

Confidentiality:
Any and all information obtained from you during the study will be confidential. Your privacy will be protected at all times. You will not be identified individually in any way as a result of your participation in this research. The data collected however, may be used as part of

publications and papers related to the development of youth leadership life skills and critical thinking skills.

Voluntary Participation:
Your participation in this study is entirely voluntary. You may refuse to participate in this research. Such refusal will not have any negative consequences for you. If you begin to participate in the research, you may at any time, for any reason, discontinue your participation without any negative consequences.

Authorization:
I have read or listened to the above information and I have decided that I will participate in the project described above. I know what will be asked of me. I understand that the purpose of the study is to study the development of youth leadership life skills and critical thinking skills. If I don't participate, there will be no penalty or loss of rights. I can stop participating at any time, even after I have started.

I agree to participate in the study. My signature below also indicates that I have received a copy of this consent form.

_____	_____
Name of Participant (Please Print)	Name of Participant (Please Print)
_____	_____
Signature of Participant Date	Signature of Parent/Guardian Date

If you have further questions about this research project, please contact the principal investigator, Ashley Seamon via email alseamon@gmail.com or faculty supervisor Dr. John Ricketts via email jcr@uga.edu.

APPENDIX C

INTRODUCTORY / PRE-POSTCARD

Ashley Seamon
PO Box 1812
Perry, Georgia 31069

August 6, 2009

<Sender's address>

A few days from now you will receive in the mail a request to fill out a brief questionnaire for an important research project being conducted by the College of Agriculture and Environmental Sciences at the University of Georgia.

It concerns the development of youth leadership life skills and critical thinking skills of students who exhibit commercial dairy heifers.

I am writing in advance because we have found many individuals appreciate knowing ahead of time that they will be contacted. This study is important because it will show the correlation of the development of leadership life skills and critical thinking skills of students who exhibit commercial dairy heifers. It is important to show growth in critical thinking skills and leadership life skills while exhibiting commercial dairy heifers.

Thank you for your time and consideration. It is only with the generous help of people like you that our research can be successful.

Sincerely,

Ashley Seamon
Graduate Research Assistant

APPENDIX D

THANK YOU / REMINDER POSTCARD

September 28, 2009

A couple of weeks ago, a questionnaire seeking your observations about your development of youth leadership life skills and critical thinking skills while exhibiting commercial dairy heifers.

If you have already completed and returned the questionnaire to us, please accept our sincere thanks. If not, please do so today. We are especially grateful for your help because it is only by asking people like you to share your observations that we can understand how exhibiting commercial dairy heifers helps to develop youth leadership life skills and critical thinking skills.

If you did not receive a questionnaire, or if it was misplaced, please call (478) 714-7884 and we will get another on in the mail to you today.

Ashley Seamon
Graduate Research Assistant
College of Agriculture and Environmental Sciences
University of Georgia
Athens, Georgia 30605