THE EFFECTIVNESS OF LEADERSHIP DEVELOPMENT PROGRAMS ON

SMALL FARM PRODUCERS

A Record of Study

by

ALLEN A. MALONE

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

August 2010

Major Subject: Agricultural Leadership, Education and Communications

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Approved by:

Co-Chairs of Committee,	Scott Cummings
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ABSTRACT

The Effectiveness of Leadership Development Programs on Small Farm Producers.

(August 2010)

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Chair of Advisory Committee: Dr. Scott Cummings

Although there were numerous leadership development programs throughout the country, most ignored the small producers located throughout the south. In order to address the needs of these traditionally underserved individuals, the "National Small Farmer Agricultural Leadership Institute" was created to address the concerns of small farmers in rural communities. This research specifically targeted the effectiveness of leadership development over a period by exploring the factors that motivate the program participants to enhance their leadership skills and the ability to transform that motivation into effective leadership.

The group involved in this study is a convenience population of small farmers and ranchers from across the Southern United States, who graduated from the National Small Farm Leadership Institute. These participants represent 2 graduating classes from 2007 and 2009. A retrospective post survey methodology was used to conduct this study. The instrument is divided into a knowledge base before they took the program (pre) and a retrospective post assessment. Each of the questions allowed the participants to rate their ability on a 5 point Likert-Type scale. The responses ranged from 1 to 5 with the

following responses Very Poor, Poor, Fair, Good and Very Good. The survey research examined four educational constructs that were covered during the leadership development program. These were Leadership Skill Development, Leadership Theory, Agricultural Skill enhancement and the Transformation of their leadership skills.

Through analysis of the four educational constructs the research reveals substantial increases in knowledge and skills such as Group Problem Solving, Consensus Building, Team Building, Group Decision Making and Obtaining information to help in decision making. Participants were definitely found to have increased their leadership skills through teaching of Leadership Philosophy, linkages to Federal and agricultural resources, the appreciation of different styles of leadership and awareness of agricultural policy issues. The study revealed that in each of the four educational construct areas of the National Small Farm Leadership Institute that there were substantial increases in knowledge and changes in behavior such as: understanding and explaining personal leadership philosophy, increased awareness of Agricultural Policy Issues and transferring the leadership back to the community.

DEDICATION

In life there are always special people you encounter who make the journey special. Each of you have done that for me.

Chase and Collin Malone, it is a blessing to have been given two sons such as yourselves. Daddy wants to blaze a path for you to show you that nothing is impossible. I leave you a legacy of hard work and accomplished goals. Each of you must build upon that legacy for your own children. Always remember...HARD WORK ...PAYS OFF!!!! (I Love you guys).

Bettye Malone – Momma, thanks so much for the love and support you provided over the years. You were the motivation for getting this done. Do you remember the promise I made you when I was a Junior in High School? I told you I was going to be a Doctor. Not quite what we had in mind but a dream and destiny fulfilled.

Tangie Anderson-Malone, you have always been there for me and in my corner telling me I can do it. I want to say thanks for being that voice of reason that kept me grounded. I Love You.

Education is the key to Leadership - W.E.B. DuBois

ACKNOWLEDGEMENTS

A sincere debt of gratitude is extended to Dr. Dawn Mellion-Patin. Thanks for allowing me to work with the Institute and for the support you gave me in the process.

My appreciation is extended to Mrs. Christie Monroe, thanks for ALL the help you gave me. I could not have made it without you.

My gratitude is also extended to Dr. Melanie Kirk, thanks for taking my calls and helping to answer the tough questions.

To the Mission Control Cohort (Larry, Sonja and Laurie), you guys made the ride fun. Thanks for all the help along the way. I could not have done it without you guys.

To my "Family" (Byron, Joycelin, Gwen, Debbie, Vicki, Melvin, Andre, Adrion, Bruce, Mytra, Chris, Kim, Derrick, Billy, Novelette, Tamara,) thanks for your support over the years. I know someone is going to say "What about me?" I love you too and thank you for your support as well.

Finally to my "Friends" that were there to support me over the years "Thank you all for being there for me. I hope to return the favor someday soon".

NOMENCLATURE

NSFLI   National Small Farm Leadership Institute

USDA   United States Department of Agriculture

HBCU   Historically Black Colleges and Universities

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Page

CHAPTER I

INTRODUCTION

The United States population grew increasingly metropolitan each decade, from 28 percent in 1910 to 80 percent in 2000 (Hobbs & Stoops, 2002). By 2000, half of the U.S. population lived in suburban areas (Hobbs & Stoops, 2002). As the population of our country continues to grow, the emphasis and attraction on urban and suburban living continues to grow as well. This focus on urban community living in many instances has adversely affected our rural communities often leaving them in decline and decay. Sometimes this leaves a void in many rural communities with regard to the number of individuals who are considered community leaders. In many of these rural communities, farmers and ranchers remain and are a vital part of these communities, yet most lack any formal leadership training. In particular, citizens must be educated and prepared with essential knowledge, skills and abilities in order to assume leadership positions that concentrate on the concerns of rural America (Kelsey & Wall, 2003).

Many small historically black colleges and universities in the south began to partner together in 2005, with the goal of developing stronger leaders for the dying communities in the rural south, of which many of these institutions are a part. Unless a solution is found to increase a farmer's net farm income and total net farm income, rural communities and their associated infrastructures will continue to decline (Patin, 2004).

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This dissertation follows the style of *Journal of Agricultural Education.*

Several universities within the 1890 university community stepped forward to seek funding opportunities to address this issue.

The 1890 community consist of several Historically Black Colleges and Universities (HBCUs) across the southern United States that was created by the second Morrill act in 1890. These universities strive to provide teaching, research and service in the area of agriculture to historically underserved audiences and populations. Men and women of all ages and ethnic groups have a vested interest in agriculture (Law & Pepple, 1990). The 1890 universities seek unique ways to address the needs of these men and women along with limited resource producers and entrepreneurs. Although there were numerous leadership development programs throughout the country, most ignored the small producers located throughout the south. In order to address the needs of these traditionally underserved communities, a partnership was developed between the 1890 institutions and the United States Department of Agriculture (USDA). The National Small Farmer Agricultural Leadership Institute was created through a grant-funding request from Southern University located in Baton Rouge, Louisiana to address the concerns of small farmers in rural communities. The goal of this project was to promote small and family farm sustainability by enhancing the leadership ability and business management skills of small producers. The program looked at eight critical components that were designed to help the small farmers develop their potential (Patin, 2004):

> ➢ Enhance understanding of agricultural infrastructure, state and federal government, agricultural economics, and effects of global agricultural or the U.S. economy.

➤ Increase the leadership, decision-making and analytical skills of Institute participants.

➤ Improve Institute participants' ability to manage a farm business in a competitive global economy.

➤ Develop and enhance the business management and marketing skills of limited resource farmers.

➤ Introduce producers to how decisions are made at county, state, regional and national levels.

➤ Build an understanding of the public policy development process and prepare individuals to participate in the process.

➤ Improve their ability to communicate to both large and small groups, while increasing confidence in working with people.

➤ Establish a basis for lifelong learning and development, by stimulating a desire for independent study and learning.

To support these initiatives each member school of the 1890 community was asked to identify two farmers for participation in the institute.

Maxwell (1999) suggests that leadership development is a process that occurs daily. This research will specifically target the effectiveness of leadership development over a period by quantitatively exploring the factors that motivate the program participants to enhance their leadership skills and our ability to transform that motivation into effective leadership. Certain types of organizations conceive of leadership training as an exclusive, even elitist venture (Lewis, 2007). However, in order for these programs

to be effective in enhancing our rural communities, there must be an opportunity for average citizens with significant motivation to participate.

Statement of the Problem

Farmers and Ranchers in many small communities are being forced into various leadership roles in their respective communities. Community and adult leadership development has long been a component of extension education programs (Connors & Swan, 2006). Connors and Swan (2006) go on to state that like much of the research within agricultural education, research into leadership development has been disjointed. This leads us to believe that the information and research regarding the effectiveness of leadership development programs in the agricultural community often lacks continuity. The framework for this study consists of two main components, androgogy and leadership effectiveness. Each of these elements will be further examined for the basis of this research, which yields the following research questions: are leadership development programs effective for small farmers and ranchers to aid them in becoming community leaders? The second research question is: what leadership skills are can be enhanced in adult farmers and ranchers to participate in leadership development programs?

What drives people to become leaders? Is it their desire to serve their community or is it for personal reasons? This study examines four constructs that seek to provide answers to these questions. The constructs are Leadership Theory, Leadership Skill Development, Agricultural Skill enhancement and Transfer of Leadership Skills. While

each of these constructs are important and relative to the study the focus of the research is to determine the effectiveness of leadership programs in developing community leaders.

The Leadership Effectiveness Framework looks at the behavior of leaders in the task they perform, in the style they use, in the situation (Sutcliffe, 1997). This framework will serve as a platform for measuring the effectiveness of the program, however it is imperative to note that transformational leadership is a key foundation for developing community leaders. According to Moore and Rudd (2006) a new paradigm of leadership has emerged from the traditional, or transactional, models of leadership toward the study of transformational. James M. Burns (1978) introduced the concept of Transformational Leadership as a result of work he was currently doing on Transactional Leadership. Bernard M Bass (1985) later refined Transformational Leadership, but often in contrast to the Burns point of view. Burns viewed transformation and transactional as two separate concepts. In transactional leadership followers and leaders interact and influence each other's behavior (Moyer, 1996). Transformational leadership is an interaction between leaders and followers which raises the actors to higher levels of motivation and morality (Moyer, 1996). Bass on the other hand viewed the two as complementary and maintained that leaders should possess elements of both. Transformational leadership is an extension of the traditional transactional leadership and leaders are most effective when they exhibit both styles (Moore & Rudd, 2006).

This research also incorporated tenants of other key conceptual frameworks that aid in the development of the research. One such framework is that of Andragogy. Andragogy suggest that adults learn based on a core set of principles that eventually lead

to self-directed learning and transformation of the knowledge gained (Knowles, Holton III, & Swanson, 2005).

The lack of effective leadership development programs does not afford rural communities the same strong leaders that can be found in many urban and suburban environments. Rural Louisiana producers requested that Southern University assist them in making the transition from small farmers to small businessmen (Patin, 2004). For this reason it is important to study the effectiveness of these programs in developing leaders for rural communities.

Purpose and Objectives

The purpose of the study was to determine the effectiveness of leadership development programs for farmers and ranchers. It also contributed to the general body of knowledge and understanding of contemporary leadership in the agricultural industry.

The basis of this research yielded two main research questions. The first question to be explored was; are leadership development programs effective for small farmers and ranchers to aid them in becoming community leaders? The second research question was; are Leadership Development programs effective in increasing the skills of potential leaders? In order to address these proposed research questions, the following Objectives were designed for this study:

1. Examine if the program participants in the NSFLI increased their Leadership Skills.

2. Examine if the participants in the NSFLI increased their understanding of Leadership Theory.

3. Examine if the participants in the NSFLI enhanced their agricultural business skills by participating in the program.

4. Determine if program participants of the NSFLI transform their leadership skills to become leaders in their communities after completion of the program.

5. Determine the program participant's perceived effectiveness of the leadership development program.

6. Compare if gender, education and cohort were any different as they relate to objective 1, 2, 3, and 4.

Definition of Terms

Agricultural Business Skills – Business roles that any particular individual might fill including production, marketing, financial and legal management, or labor (Bevers, Borchardt, Duckworth, Daniels, Malone and Bennett, 2006). It is primarily a set of skills

used in the agricultural business sector such a resource inventory, balance sheet, record keeping and estate planning.

Andragogy - a core set of principles that eventually lead to self-directed learning and transformation of the knowledge gained (Knowles, Holton and Swanson, 2005).

Leadership - a process whereby an individual influences a group of individuals to achieve a common goal (Northhouse, 2010).

Leadership Effectiveness – the knowledge gained and ability to lead others (Sutcliffe, 1997).

Leadership Skill Development –the development of life skills necessary to perform leadership functions in real life (Seevers, Dormody, and Clason, 1995, and Miller 1976). It also represents the core set of skills that a leader must possess to be effective such as communication, responsible, trustworthy, etc.

Leadership Theory – the set of principals such as leadership styles, leadership philosophy etc.

Leadership Transformation – When leaders alter or expand the wants and needs of followers, and get the followers to transcend their own self interest for the sake of the group (Bass, 1985). In essence it seeks to transfer of the leadership skills and knowledge gained to other situations, or individuals.

Limitations of the Study

The purpose of this study was to investigate the impact the National Small Farm Leadership Institute had on its participants; however there are few limitations.

1. This study was limited to only those individuals who participated and graduated from the National Small Farmer Leadership Institute.

2. The individuals represented participated in a national program but are geographically restricted to the southern United States due to their affiliation with the 1890 serving institutions.

3. Responses from participants are subject to lapses from the end of the session until they received the survey instrument.

4. Responses from participants are reliable forms of self reported data.

Basic Assumptions

- Those individuals selected for the program are representative of small farmers and ranchers throughout the southeastern United States.

- The Leadership Development program is comparable to other leadership development programs that serve other agricultural producers.

- The survey instrument is reliable and valid.

- All research participants were truthful in their responses.

Significance of the Study

The National Research Agenda for Agricultural Education outlines several research priorities areas. This research falls under the scope of the priority emphasis for Agricultural Leadership. The scope of this study will focus on two priority areas: Engage citizens in community action through leadership education and development and develop and disseminate effective leadership education programs (Association of Agricultural Education, 2007).

It is the belief of many researchers that leadership development is a process that occurs daily (Maxwell, 1999). This research specifically targeted the effectiveness of leadership development over a period by exploring the factors that allow program participants to enhance their leadership skills and their ability to develop the necessary skills to transform themselves into effective leader. Certain types of organizations conceive of leadership training as an exclusive, even elitist venture (Lewis, 2007). However, the study of leadership training programs for average farmers and ranchers are significant for developing our rural leaders to build stronger communities.

Summary

In 2005, Southern University's Extension Service sought funding from the United States Department of Agriculture (USDA) to provide leadership development training for small and limited resource farmers and ranchers. Southern collaborated with several other 1890 universities to create the "National Small Farmer Agricultural Leadership Institute."

The Institute is patterned after those that exist at several other 1862 land-grant institutions; however, its uniqueness is that it specifically targets small and limited resource producers. Various factors were looked at to determine what motivated the program participants to seek leadership development opportunities. This research also examined if the participants use their newly developed leadership skills to improve their communities. The research looked to determine if many of the participants in the group do value the importance of leadership development and are motivated by their personal need to improve their leadership skills. This motivation also serves to aid in the improve quality of their families, businesses and communities.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

The review of related literature is designed to establish the effectiveness of leadership development programs on farmers who are traditionally from small rural communities. This review will provide linkages to rural communities who are in need of community leaders. A number of studies have researched relevant leadership foundation theories, small farmers' background, previous leadership development programs, community development and the associated research variables. Small Farmers remain small framers because many are not able to increase their net farm income. Unless a solution is found to increase a farmers' net farm income and total net farm income, rural communities and their associated infrastructures will continue to decline (Patin, 2004).

Leadership

Bass professed that leadership is one of the world's oldest preoccupations (Bass, 1990). Leadership is an abstract concept that is often hard to grasp or even define. Although there are numerous definitions, Northhouse (2010) describes leadership as a process whereby an individual influences a group of individuals to achieve a common

goal. Developing small farmers and ranchers into future leaders for, is a key aspect of the NSFLI.

There are numerous leadership theories from the Great Man Theory to Transactional and Transformational. A review of the NSFLI's training matrix revealed the need to discuss leadership theory to help participants connect to their own leadership styles. The Institute touches on motivational, behavioral and situational leadership theories.

For the purpose of this study the leadership must be transferable in order to be effective. James Burns (1978) sought to bridge the roles of leaders and followers though transactional leadership. The transactional leader helps followers achieve their goals through an exchange of wants between the two (Shriberg, Shriberg & Kumari, 2005). In contrast transformational leaders motivate followers to do more than originally expected towards accomplishing desired outcomes (Moore & Rudd, 2006). Transformational leadership occurs when the leader: increases the awareness about the desired outcomes, and alters or expands the wants and needs of followers, then gets followers to transcend their own self interest for the sake of the group (Bass, 1985). Moyer (1996) documented that Transformational leaders 1) inspire commitment, 2) Champion innovation, 3) improve quality, 4) reduce conflict, 5) increase autonomy, empower interpersonal relations and 7) encourage citizenship. Transformational leadership is about the changing of the consciousness of the program participants, to make better community leaders.

Transformational and Transactional styles of leadership can often be seen by gender differences. Northhouse (2010) outlined 3 factors that hinder women in leadership

positions as, Organizational factors, Interpersonal factors and Personal Factors. Women tend to use a more participative and inclusive style while men tend to use a more directive and controlling style (Eagly & Johnson, 1990). Eagly and Karau (1991) state that the importance of studying leader emergence in small groups can provide, whether men gain leadership roles in part because they engage in certain types of leadership behaviors more than women do. The NSFLI provided an optimal environment to determine if any differences in gender (Objective 6) were recognized.

For rural communities faced with insufficient community leaders and resources, community leadership is a model that must be explored. Beaulieu (2002) stated that rural communities will depend on 1) expanding the quality of human capital; 2) building a spirit for economic development; 3) enhancing digital capacity of rural communities and 4) promoting broad-based involvement of local individuals in civic life. These communities must remain poised to address these challenges by finding leaders that are well equipped to face such challenges. Shared leadership models seek to involve more than one individual to address challenges or problems in a particular community. Pigg (2002) concludes that the empowerment of community residents is an important function of leaders and leadership education. The NSFLI seeks to empower its participants to become community leaders who unite the local residents.

Relevant Foundation Theories

During his career, Donald Kirkpatrick developed the 4 Levels of Evaluation Model. The model outlines the four levels as Reactions, Learning, Transfer and Results, as seen in Figure 1. This model is relevant to this study to help the investigator achieve a deeper level of evaluation to determine program impacts.

Figure 1. Kirkpatrick's 4 levels of evaluation model.

At Level 1, results are the *reactions* or satisfaction levels of the training program participants. Measurements at this level are simply looking at how satisfied are the

participants with the program. A trainer has every right to feel good about the positive reactions of participants, however, regardless of their reaction, there is no proof that any knowledge was gained or any of the participants' behaviors changed because of that program (Kirkpatrick, 1959a). At level 2 or *Learning*, the evaluation looks to assess how much the participants have advanced in skills, knowledge, or attitude. To help explain this Kirkpatrick wrote guidelines for evaluating the learning:

"1) the learning of each conferee should be measured so that quantitative results can be determined. 2) A before-and-after approach should be used so that any learning can be related to the program. 3) As far as possible, the learning should be measured on an objective basis. 4) as far as possible, a control group should be used to compare with the experimental group, which received the training. 5) Where possible, the evaluation results should be analyzed statistically so that learning can be proven in terms of correlation or level of confidence" (Kirkpatrick, 1959b, p. 22).

Level 3 measures if any *transfer* of knowledge or skills has occurred in the learner's behavior due to the training program. For many trainers this level represents the truest assessment of a program's effectiveness (Winfrey, 1999). Level 4 represents the *results* oriented level. Here the researcher is looking to determine what outcomes are direct results of an effective training program.

This study examined Level 3 evaluation. Are the skills gained during the Small Farm Leadership Institute being transferred to their communities? In essence it seeks to

answer the questions: "Are you more involved in leadership than before? Are you using your skills to provide leadership in your community?

      According to Malcolm Knowles (Knowles, Holton and Swanson, 2005) the concept that adults learns differently from children was introduced in the early 1970's. The theory became known as adult learning or andragogy. Pedagogy is the art and science of teaching children and andragogy is the art and science of teaching adults (Knowles, Holton and Swanson, 2005). The model of andragogy is based on 1) the need to know, 2) the learners' self-concept, 3) the role of the learners' experiences, 4) readiness to learn, 5) orientation to learning and 6) motivation (Knowles, Holton and Swanson, 2005). Each of these factors is important in assessing the Leadership Institutes participants and how they learn.

Theoretical Framework

      This research examines four constructs that were covered during the leadership development program. These were Leadership Theory, Leadership Skill Development, Agricultural Skill enhancement and the Transformation of their leadership skills. The two grand level theories that guided this research were Kirkpatrick's Training Effectiveness and Knowles's Andragogy. This approach differs from the framework that Kelsey and Wall used in 2005. Their approach was the Team Leadership framework that was outlined by Hughes, Ginnett, and Curphy in 1993 and Northouse in 2001. The Team Leadership approach relies on a leader's networks and ability to utilize them for collective community action (Kelsey & Wall, 2005).

As previously stated in Kirkpatrick's Training Effectiveness model, the trainer uses evaluation to build on deeper previous level of evaluation. According to Kirkpatrick each successive level represents a more precise measure of effectiveness in a training program. Another framework that is of relevance is that of Andragogy. Andragogy suggest that adults learn based on a core set of principles that eventually lead to self-directed learning and transformation of the knowledge gained (Knowles, Holton III, & Swanson, 2005).

Middle Level theories that support this research are Leadership Effectivness Framework, Maslow's Hierachy of Needs Theory, and Transformational Leadership Framework. The Leadership Effectiveness Framework as shown in Figure 2 looks at the behavior of leaders in the task they perform, in the style they use, in the situation (Sutcliffe, 1997, ¶ 1).

Leadership Tasks

1-Organization

2-Work
• goal emphasis
• work facilitation

3-People
• interaction facilitation
• supportive behavior
• personnel development

Situational Factors

1-Organization
• available decision time
• organization culture
• other leaders style

2-Work to be Done
• degree of task programmability

3-People Doing the Work
• potential for job autonomy

Leadership Styles

1-Directive
• autocratic
• benevolent autocratic

2-Interactive
• consultative
• participative

3-Nondirective
• consensus
• laissez-faire

Leadership Style-Situation Fit

LEADERSHIP EFFECTIVENESS

Figure 2. Flamholtz's operational leadership effectiveness overview.

E.G. Flamholtz developed the Leadership Effectiveness Framework to examine individual influences on the larger group in pursuit of a common or organizational goal. This framework, in combination with Maslow's Hierarchy of Needs, will serve as a platform for measuring the effectiveness of the program. In 1943 Abraham Maslow formulated a needs based framework for human motivation in an article *A Theory of Human Motivation*. In his article Maslow lays out what he perceives to be the basic

elements for motivating human beings based on his clinical observations as observed in Figure 3.
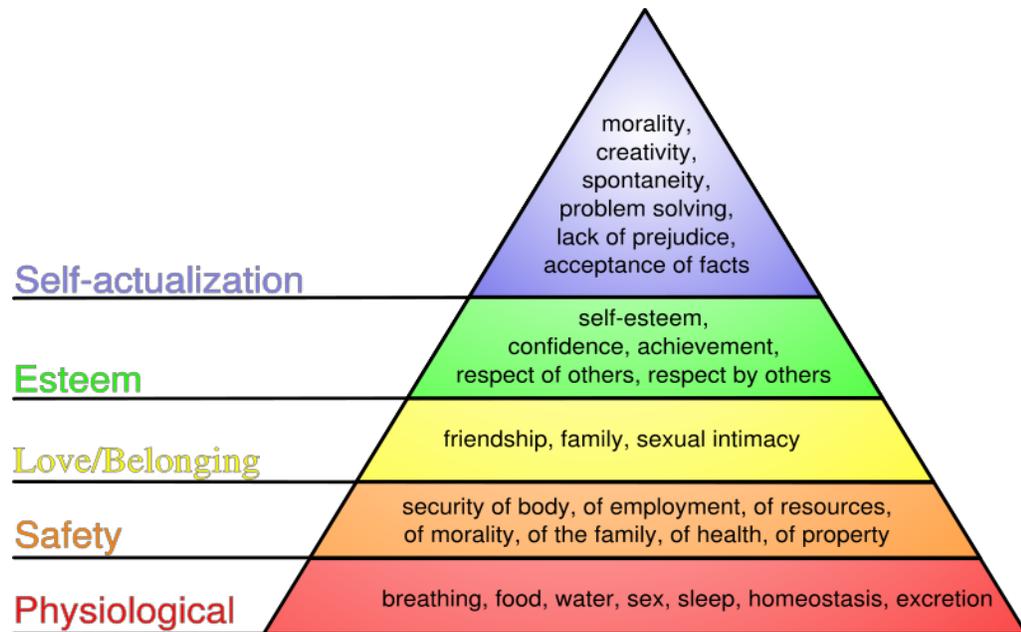
Figure 3. Maslow's hierarchy of needs framework.

He identified physiological, safety, love, esteem and self-actualization and the basic needs for all human beings (Maslow, 1943). Flamholtz's Leadership Effectiveness framework and Maslow's Hierarchy of Needs provide the basis for the development of the Malone Leadership Development and Delivery model as displayed in Figure 4.
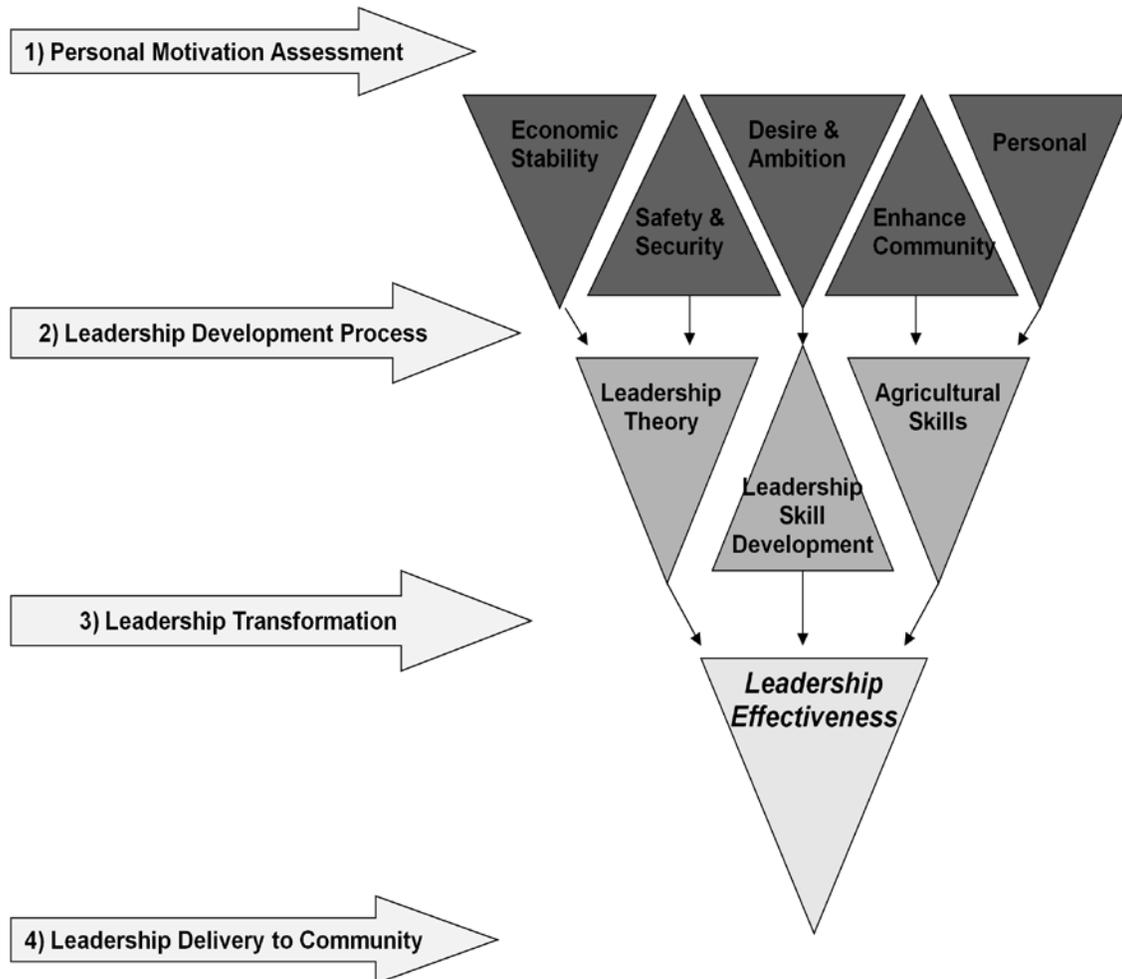
Figure 4. Malone's leadership development & delivery model.

This model fuses together the two concepts into a funnel shaped filtering process. The various elements of an individual's personal motivation provide the catalyst for the development of a potential leader. The leadership development program serves as the mechanism for refinement of the individual and the honing of their leadership skills, thus transforming the individual into a more effective leader.

Specifically, the first phase begins when the program participants assess their personal motivation and needs for beginning the Leadership Development process. Economic Stability, Safety and Security, Personal Growth and Development, Desire and Ambition for greater achievement and a desire to enhance their communities are all basic elements that stem from Maslow's Hierarchy of Needs and are essential for the initiation of the Leadership Development process (Phase 2). In the second phase the participants are introduced to various leadership attributes such as Leadership Theory, Leadership Skill Development and Agricultural Business Skills enhancement/development. These elements are parts of Flamholtz's Leadership Effectiveness framework and serves in conjunction with the attributes he outlined being Leadership Task, Leadership Styles and Situational Factors. In the Leadership Development program is where these particular skills are developed or learned. After participation in a leadership development program the participant emerges with the newly acquired or enhanced leadership skills (Phase 3). The knowledge gained must them be put to practical application thus transforming the participant into a more effective leader. The opportunity then arises for that individual to transfer their leadership skills and abilities to the community in which they reside (Phase 4), thus enhancing the community infrastructure and resources.

Agricultural Leadership Development Programs

Agricultural leadership development programs have existed in the United States for decades, with mixed motives and varying degrees of success. In 1984 the Philip

Morris Company provided funding for leadership development programs for tobacco farmers in Georgia, Florida, North Carolina, South Carolina and Virginia. According to the Philip Morris website (2002) the leadership development program was designed to provide participants with core training in public policy and business management. Texas introduced the Texas Agricultural Lifetime Leadership (TALL) program in 1987. The TALL program (2002) was designed to create a cadre of Texas leaders to help ensure effective understanding and encourage positive action on key issues, theories, policy economics that will advance the agricultural industry. The Leadership Education Action Development (LEAD) program in Nebraska is another example of agricultural leadership development programs. The program strives to add to the understanding of Nebraska's tremendous resources, people, educational institutions, cities, communities, natural resources and diversity.

These programs are a small sample of the numerous leadership development programs that exist in the agricultural community. However, the National Small Farm Leadership Training Institute was unique. The NSFLI did not limit itself to producers of one specific agricultural crop like the Philip Morris Program. The program also reached beyond economic and state and regional boundaries like similar programs in Texas and Nebraska. The NSFLI sought out a different type of farmer, one who was often over looked. Those being the "small farmers" and the "limited resource farmers" (Patin, 2004, p. 3).

Small Farms

The farmers that are targeted by the Leadership Development program in this study are considered small farmers and ranchers. Small farms can be viewed by size as well as income. While a correlation can be drawn between the size of the farm (less than 50 acres) and the value of its sales there and many farm operations that have high value crops that would extend beyond this definition. The U.S. Department of Agriculture defines small farms as those with $ 250,000 or less in sales of agricultural commodities (USDA, 2007). This classification of farms accounts for 91% of all farms in the United States which is approximately 1,995,133 farms. According to USDA approximately 1,300,000 (65%) of these farms had agricultural sales of less than $ 10,000 annually. With such a small portion of their income coming from their net farm sales, this shows a large number of individuals who may potentially need assistance with improving their net farm income. One component of these programs are specifically designed to help increase on farm profitability through enhanced market analysis, developing a business plan, better recordkeeping and many other skills.

From 2002 to 2007 the race, ethnicity and gender of farm operators continues to show increases in diversity. Of the 2.2 million farms in the United Stated 1.83 million have a white male as the principal operator. (USDA, 2007). Female operators are up nearly 30% since 2002 and Hispanic operators grew 14% during the same time frame (USDA, 2007). The 2007 Census of Agriculture also shows an increase among black

farmers of 9%, while this does not seem to be a significant increase the number of black farmers had been in steady decline prior to the 2002 Census.

These increases are significant for the National Small Farm Leadership Institute who seeks to reach out to this audience to provide educational resources and opportunities to this group. While this program specifically targets small farmers and ranchers, historically there have been a number of programs that have targeted larger more profitable farming operations.

The Leadership Institute

The Small Farm Agricultural Leadership Institute was modeled after the North Carolina State University's program and the majority of the other leadership programs targeting farmers and rural residents that was previously mentioned. It is two years in length, and comprised of several seminars and a domestic study tour to the Washington D.C. area. Unlike the leadership development programs offered primarily for majority participants, this program will not consist of an international study tour. However, the program does compensate for this loss through site visits and tours of successful, large-scale, diversified farming operations near the locations of the various seminars.

This model has been very successful for North Carolina and has been used by North Carolina Cooperative Extension for the past twenty years. Very similar models have been used with much success in several states including, but not limited to Ohio, Indiana, Washington, Iowa, Wyoming, Nebraska, New Jersey, Georgia, Kentucky, New York, Alabama, Kansas and Oklahoma. During each session, the skill sets introduced to the participants will be tri-fold, have a business management component, a leadership component and an agricultural experience component. This model and approach have proven to be of maximum benefit for the program participants.

The first session of the Small Farmer Agricultural Leadership Institute was held in October 2005 in Baton Rouge, Louisiana. Twenty-two agricultural producers from ten states participated in the session that was an overwhelming success. The themes of the sessions, dates, university host and locations are presented in Table 1.

Table 1

Class one leadership development sessions

Date	Theme	Host
Oct. 27 – 29, 2005 Baton Rouge, LA	Developing the Leader Within	Southern University Ag Center
Dec. 8 – 10, 2005 Jackson, MS	Understanding Community and Self	Alcorn State University
Jan. 19 – 21, 2006 Baton Rouge, LA	Agricultural Legal Issues and Risk	Southern University Ag Center
Feb. 16 – 18, 2006 Houston, TX	Diversity and Planning	Prairie View A & M University
Mar. 23 – 25, 2006 Greensboro, NC	Communicating for Business	North Carolina A & T State University
Oct. 12 – 14, 2006 Baton Rouge, LA	Creating an Entrepreneurial Mindset	Southern University Ag Center
Dec. 2 – 5, 2006 Tuskegee, AL	Networking	Tuskegee University Professional Agricultural Workers Conference
Jan. 11 – 13, 2007 Pine Bluff, AR	Charting Our Course	University of Arkansas at Pine Bluff
Mar. 20 – 25, 2007 Greensboro, NC Washington, DC	East Coast Agricultural Tour and Graduation Ceremony	Southern University Ag Center and North Carolina A & T State University

The second Class of the Small Farmer Agricultural Leadership Institute began in October of 2007 with 30 members from 13 states. The sessions, themes and locations are presented in Table 2.

Table 2

Class two leadership development sessions

Date	Theme	Host
October 11 – 13, 2007	Developing the Leader Within	Southern University Ag Center
December 6 – 8, 2007	A Leader in the Community	South Carolina State University
January 10 – 12, 2008	Agricultural Legal Issues and Risks	Southern University Ag Center
July 23 – 28, 2008	A Field Study in Agriculture	Florida A & M University
October 16 – 18, 2008	Opportunities Through Diversification	Southern University Ag Center
December 6 – 10, 2008	Professional Ag Workers Conference	Tuskegee University
January 15 – 17, 2009	Building Teams and Organizations	Prairie View A & M University
March 24 – 29, 2009	East Course Tour and Graduation Ceremony	North Carolina A & T State University

The targeted audience for participation in the Small Farmer Agricultural
Leadership Institute was open to minority, socially disadvantaged and limited resource
agricultural producers from each of the 17 states (Texas, Oklahoma, Louisiana, Missouri,
Delaware, Tennessee, Kentucky, Maryland, Georgia, Alabama, Florida, Mississippi,
Virginia, North Carolina, South Carolina, Arkansas and West Virginia) with a 1890
Land-grant university. Recruitment applications are mailed to the Cooperative Extension
Administrators, members of the Southern Region Program Leaders Network, all 1890

agricultural and natural resources program specialist and agents, USDA state offices in each of the states, and registered agriculturally related cooperatives. A screening committee consisting of representation from the 1890 institutions, USDA, community based organizations (CBO's) and small agricultural producers, review completed application materials and select Institute participants. The selection criteria was based on the following:

1. Leadership aspirations;

2. Status of farm operation;

3. letters of interest;

4. Two letters of recommendation; and

5. Nomination from extension agent or agricultural scientist / specialist.

Through a competitive process, up to 30 participants can be selected to enter into the Institute program.

Training seminars were designed as highly interactive, experiential learning workshops. Participants explored various seminar topics through group discussions, small and large group exercises, assessment tools, facilitator presentations, in-class exercises, pre / post seminar assignments and participant led discussions. The Institute's two year course of study consisted of training seminars, video lessons when necessary and appropriate, agricultural enterprise visits and the east coast farm study tours.

Training seminars focus on the three broad but distinct areas of farm / business management, leadership development and an agricultural experience, such as professional conferences, farm and community visits, and agricultural enterprise tours.

The training seminars were held in the months of, October, November, December, January and February. Each session consisted of 3 days of training from Thursday morning through Saturday afternoon. The seminars were held at the following participating universities, Southern University, Tuskegee University, Prairie View A & M State University and North Carolina A & T State University. Occasionally trainings are held at other 1890 institutions depending upon their relative proximity to the participants of the Institute. A training matrix was identified based upon the current research relative to leadership development and agricultural entrepreneurship. The matrix was developed and guides the competencies required of each individual participant. Using the training matrix, a curriculum was developed. The curriculum took into account the challenges faced by producers who have limited resources and opportunities. Existing educational material is incorporated into the training with minor modifications, if necessary. Topics identified for inclusion include, but are not limited to:

1. Loan application processes and completion procedures;

2. Developing your business skills;

3. Legal risk - estate planning, credit worthiness;

4. Working within your community;

5. Time management, goal setting, prioritizing;

6. Self motivation, self-esteem;

7. Communicating effectively;

8. Conflict resolution & mediation;

9.   Attributes of a leader – leadership theory and leadership styles

10.   Personal leadership assessment; and

11.   Qualifying requirements for various governmental programs.

The Small Farmer Agricultural Leadership Institute is managed by a seven member core leadership team. That team consists of the project director, three members from the original leadership team and two members from the current leadership class. The USDA, Agricultural Liaison Officer serves as an advisor to group. This program is conducted in collaboration with the following universities: North Carolina A & T State University's Cooperative Extension Program, the Cooperative Extension Program at Prairie View A&M University; Kentucky State University and the Southern University Law Center.

CHAPTER III

METHODOLOGY

In this section the researcher will address the research questions and objectives that were previously outlined. The first question to be explored was; are leadership development programs effective for small farmers and ranchers to aid them in becoming community leaders? The second research question was; are Leadership Development programs effective in increasing the skills of potential leaders? In order to address these proposed research questions, the following Objectives were designed for this study:

1. Examine if the program participants in the NSFLI increased their Leadership Skills.

2. Examine if the participants in the NSFLI increased their understanding of Leadership Theory.

3. Examine if the participants in the NSFLI enhanced their agricultural business skills by participating in the program.

4. Determine if program participants of the NSFLI transform their leadership skills to become leaders in their communities after completion of the program.

5. Determine the program participant's perceived effectiveness of the leadership development program.

6. Compare if gender, education and cohort were any different as they relate to objective 1, 2, 3, and 4.

Background

In 2005 Southern University asked the investigator to present a "Risk Management" session to a group of small farmers and ranchers in a leadership development program. Later that year the investigator was to serve a member of the Board of Directors for the National Small Farmer Leadership Institute. During the subsequent years the researcher was asked to provide several training programs that focused on Risk Management, Business Development and Leadership Development. These endeavors lead to refinement of the review and refinement of the evaluation instruments that were used at the end of each session.

The program director then asked the investigator if he would be interested in conducting additional research on the leadership participants. The survey used for this study uses several key concepts from the program and was then placed in the retrospective pre/post format.

Study Sample

The group involved in this study is a convenience sample of small farmers and ranchers from across the Southern United States, who has graduated from the National

Small Farm Leadership Institute. Although the sample size of the study is small, the implications are expandable to other farmers, leadership development programs and research studies. There were a total of 52 individuals who participated in the Institute over a 4 year span, however there were only a total of 47 who graduated from the program. The NSFLI also contained 2 distinct cohorts that graduated from the program at different times. Class 1 graduated from the program in March of 2007 and had 17 of its members respond to the survey. Class 2 graduated in March of 2009 and had 23 respondents. The two classes were analyzed collectively and separately to determine if there were any distinct differences that were contingent upon when they graduated from the program.

Protection of Human Subjects

This survey research on human subjects, met the approval of the Institutional Review Board (IRB) of Texas A&M University. For the purpose of obtaining consent a cover letter was mailed with each survey. The cover letter informed each participant that they had the option to either agree or disagree to participate in the research. If they chose to abstain from the research they were simply to not complete the instrument and not return it.

Instrumentation

A retrospective post survey methodology was used to conduct this study. The instrument used to collect the data was developed from The National Small Farm Leadership Institute Program (NSFLI) Evaluation and the survey instrument used by Kelsey and Wall in their 2003 study. The original survey supplied by the NSFLI was formulated to obtain the level of customer satisfaction of the participants. However the Kelsey and Wall survey targeted the transfer of leadership skills to the community, specifically the knowledge gained behavior changes and the transfer of the new knowledge. The instrument used by Kelsey and Wall (2003) also contained elements of qualitative research which were not a part of this study.

The instrument used in this survey (Appendix B) consists of 5 different sections for a total of 39 questions. Each of the sections was designed to reflect various components of NSFLI. The instrument was divided into a knowledge base before they took the program (pre) and a retrospective post assessment. The first section is comprised of 13 questions related to Leadership Skill Development as shown in Table 3. This construct examined the individual leadership skills of each participant and different ways to develop their skills. The questions related to communication, team work, problem solving and analyzing facts.

Table 3

Leadership Skill Development Questions

Question
How would you rate your ability to participate in group problem solving
How would you rate your ability to participate in consensus building
How would you rate your ability to build a team
How would you rate your ability to participate in group decision making
How would you rate your ability to obtain information to help in making decisions
How would you rate your ability to conduct a meeting
How would you rate your ability to identify issues of concern within a community
How would you rate your ability to analyze facts and opinions to make an informed decision
How would you rate your ability to assume a leadership position
How would you rate your ability to motivate your peers
How would you rate your ability to communicate effectively
How would you rate your ability to serve as a team member
How would you rate your ability to work with others

The second section on Leadership Theory contains 7 questions as displayed in Table 4. This section examined their understanding of leadership theories such as leadership theories, philosophies and styles.

Table 4

Understanding Leadership Theory Questions

Question
How would you rate your ability to explain your philosophy of leadership
How would you rate your ability to appreciate different styles of leadership
How would you rate your ability to use brainstorming to find solutions
How would you rate your ability to define leadership
How would you rate your ability to appreciate diversity
How would you rate your ability to understand your individual Leadership Style
How would you rate your ability to understand how personal values affect decision making

The third section was on Agricultural Skill Development and contained 6 questions as shown in Table 5. The emphasis in this section was on the individual participant's individual agricultural business skills. It examined their marketing, record keeping and general business skills.

Table 5

Agricultural Skill Development Questions

Question
How would you rate your awareness of Agricultural Policy Issues
How would you rate your ability to create a resource inventory
How would you rate your Marketing Skills
How would you rate your Record Keeping Skills
How would you rate your Legal Risk Analysis – Estate Planning, Wills, etc.
How would you rate your Business Management Skills

The fourth section of the instrument is on Leadership Transformation and contained a set of 9 questions as shown in Table 6. This construct examined the dynamics associated with taking the skills and knowledge gained in the NSFLI to their local communities.

Table 6

Leadership Transformation Questions

Question
How would you rate your ability to use federal resources to meet the needs of my community
How would you rate your ability to assist others in seeking out agricultural resources in my community
How would you rate your ability to use local (City & County) resources to meet the needs of my community
How would you rate your ability to use state resources to meet the needs of my community
How would you rate your ability to improve the quality of life in your community
How would you rate your ability to assist others in seeking out educational resources in my community
How would you rate your ability to assume a leadership position in my community
How would you rate your ability to Understand the needs of my community
How would you rate your ability to identify local leaders in my community

The final area of the survey instrument consisted of 4 questions concerned with the demographics related to the program participants. Of particular note were Gender, Age, Education and Ethnicity. Because the investigator believed that the educational objectives of the NSFLI were understood by the participants at the completion of the institute, it was logical to align with the survey instrument to address the educational objectives of the institute. The stakeholders of the NSFLI assisted in the determination that the effectiveness of the educational objectives should be addressed.

Each of the questions allowed the participants to rate their ability on a 5 point Likert-Type scale. The participant's responses ranged from 1 to 5 with the following responses Very Poor, Poor, Fair, Good and Very Good.

Validity

The study used a retrospective pre/post analysis that was outlined by Mirjam Sprangers in her 1987 paper "Validity threats in Retrospective Pretest-Posttest Designs". The main threats to validity in the research are overestimation of changes in knowledge and response-shift bias. When pretest-posttest information is collected, actual changes in knowledge and behaviors may be altered if the participants overestimate their knowledge and skills on the pretest (Kelsey & Wall, 2003). Changes in participants' frame of reference due to the program is called response-shift bias (Pratt, McGuigan, & Katsev, 2000). Similarly, pretest overestimation is likely if the participants lack a clear understanding of the attitude, behavior, or skill the program is attempting to affect (Pratt, McGuigan, & Katsev, 2000). The Kelsey & Wall study also states that evaluators who use retrospective test must consider memory related problems that influence the recall process. Sometimes participants attempt to justify the program or experience through a process called effort justification. Effort Justification occurs when subjects do not experience any benefit of the training, and in an attempt to justify the effort spent, adjust their initial pre-treatment ratings in a downward direction or their post-treatment in an upward direction (Sprangers, 1987).

External Validity can also be threatened by non-response error. Dillman (2006) list non-response error as one of the sources in sample survey research. However Lindner, Murphy and Briers (2001) state that non-response error can be handled by comparing early to late respondents or comparing respondents with non-respondents. Because of the thresholds suggested in their research, this study will examine the respondents with the non-respondents.

Reliability Analysis

A reliability analysis was performed on all 70 items in the Pre and Post test survey. The reliability of the instrument and questions tells us how consistent the results are under the same set of circumstances. The items in this survey instrument yielded a Cronbach's Alpha Coefficient of .968 as depicted in Table 7 for all questions. Then all of the "Pre" questions (n=35) were selected for reliability and gave a Coefficient of .975. All the "Post" questions (n=35) gave a coefficient of .929. Then each of the questions was divided into the four corresponding constructs. The first construct, Leadership Skill development gave a Cronbach's Alpha of .946 and the Leadership Theory a coefficient of .882. The remaining constructs Agricultural Skill Development and Leadership Transformation yielded scores of .887 and .943 respectively. The Chronbach's Alpha is used to measure the level of internal consistency in the survey instrument. The coefficients displayed in Table 1 are consistently greater than .70 thus providing a high level of reliability.

Table 7

Reliability of Small Farmer Survey Questions (N = 70)

Item	Questions (*n*)	Cronbach's Alpha
All Questions (Pre/Post)	70	.96
Pre Questions	35	.97
Post Questions	35	.92
Leadership Skill Development (Construct 1)	26	.94
Leadership Theory (Construct 2)	14	.88
Agricultural Skill Development (Construct 3)	12	.88
Leadership Transformation (Construct 4)	18	.94

Data Collection

The data in this survey was collected via mail survey to graduates from the National Small Farmer Leadership Development Institute. A total of 47 Survey Instruments were mailed to all 47 graduates. The data was collected using a mail survey that was sent with a 20 day response window. At the end of the 20 day period a follow up survey was sent to all respondents who had failed to respond, and each participant was given a follow up phone call as a reminder from a non-biased third party to minimize the amount of non-response error as outlined by Lindner, Murphy and Briers in 2001. This additional measure contributed to 40 individuals responding and yielded a response rate of 85% to ensure the external validity.

The completed surveys were mailed to a Post Office Box in which only the primary researcher had access. Surveys were coded ensure the security of the individual participants and stored in a locked file cabinet to which access is limited to the primary researcher. Both of these measures will serve to protect the confidentiality of the research participants.

The main threats to validity in the research are overestimation of changes in knowledge and response-shift bias. When pretest-posttest information is collected, actual changes in knowledge and behaviors may be altered if the participants overestimate their knowledge and skills on the pretest (Kelsey & Wall, 2003). However, the researcher was not able to control the response to individual items on the questionnaires and was fortunate that the participants responded to all questions asked in the survey.

Data Analysis

The Data was analyzed using Statistical Package for the Social Sciences program version 15 (SPSS v15). Statistical analyses were performed on the descriptive statistics, Including: frequency, mean, median and mode. An alpha level of .05 was set a priori to determine if there was any significance among the different variables.

In order to determine if there are any changes in the pre and post scores, the mean score and standard deviation were calculated. Then a paired samples *t*-test was calculated for each of the individual questions, then by the four different survey constructs. To

determine if there were changes in the pre and post scores of the participants, mean scores and standard deviations were used to draw inferences based on the results. The data was also analyzed for each individual participant (Appendix A) and used to determine if the individual made minimal, moderate or substantial gains during the course. An independent sample *t*-test will also be used to determine the individuals performed in each particular construct and how sub-groups in the study were affected.

CHAPTER IV

RESULTS

The purpose of this study was to investigate the effectiveness that the Small Farmer Leadership Development Institute had on its participants, and weather the participants became more effective leaders in their respective communities. The results of the retrospective Pre and Post and Post analysis will be discussed in the following paragraphs.

Non-Respondents

In 2001 Lindner, Murphy and Briers "conclude that additional procedures for control are not necessary when a response rate of 85% is achieved (p. 51). The 85% response rate was the level that was achieved in this study; however the investigator would like to control non-response in the study to minimize external validity.

Of the seven (7) non-respondents to the survey instrument 3 were women and 4 were men. One was Caucasian (white) and the remaining six (6) were African-American (black). It is conceivable to infer that there was no difference between the responses of the respondents and the non-respondents.

Descriptive Statistics

Descriptive statistics were run to describe the composition of the individuals in the study. The statistics provided frequency, percent, means and totals for each response. Figure 5 provides a graphic representation of the gender of the participants in the Leadership Development Institute. All 40 of the participants that were surveyed responded to the question of gender. Of those responses 57% (*n*= 23) were males. The remaining 43% (*n* =17) were females.
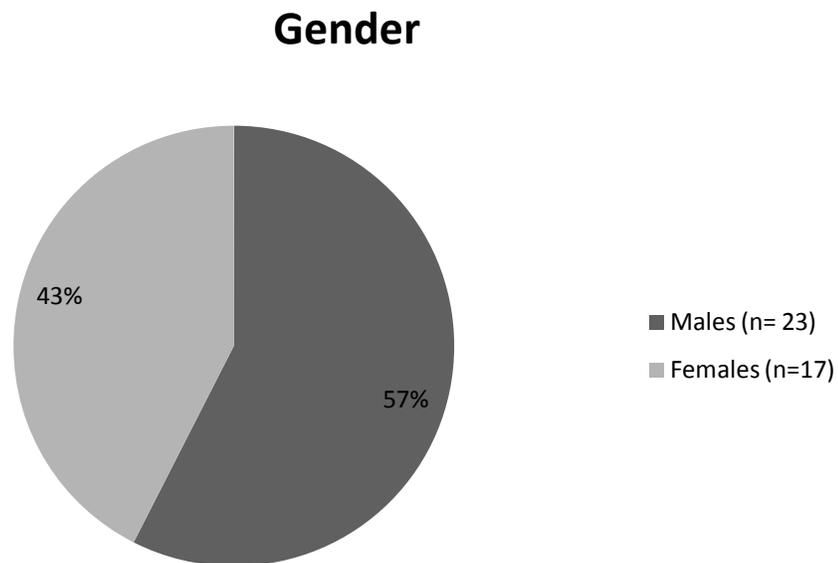
Gender

Figure 5. Gender of small farm leadership development institute (*N* = 40)

With regard to the age of the participants in the program, 38% (*n* =15) of participants identified their age group as age 60-69 or older as shown in Figure 6. There

were 33% (*n* =13) individuals who identified their age as 50 to 59 years old. When

combined these two groups accounted for 71% of the total number of participants in the

population. The number of participants who defined their age range as 40 to 49 were 15%

(*n* =6). The 30 to 39 year old age group accounted for 12 % (*n* =5). The final age range

was for those individuals between the ages of 20-29. This group contained 1 individual

and accounted for 2% of the respondents. The mean age group of the program

participants was 50 to 59 years of age.
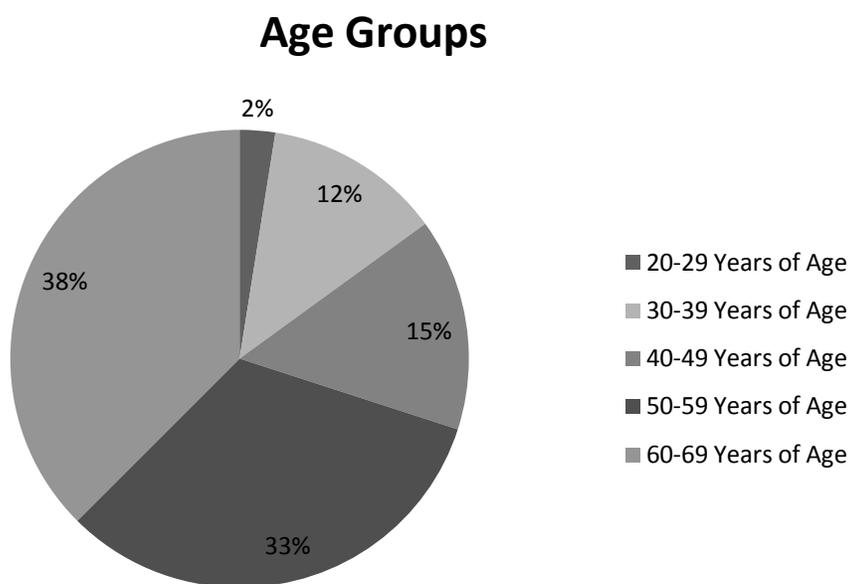
Age Groups

Figure 6. Age groups of small farm leadership development institute. (*N* = 40)

The Institute provided leadership experiences for a diverse number of clientele

and was open to all ethnicities and races. Figure 7 displays the ethnicity of the individuals

who participated in the program. Of the 40 individuals who responded, 82% (*n*=33) were

African-American. There were 10% (*n*=4) who indicated their ethnicity as Caucasian or White. Also contained in the population for the study were 5% (*n* =2) individuals who marked their ethnicity as Hispanic. The lone remaining individual accounted for 3% (*n* =1) selected "Other" as their race.
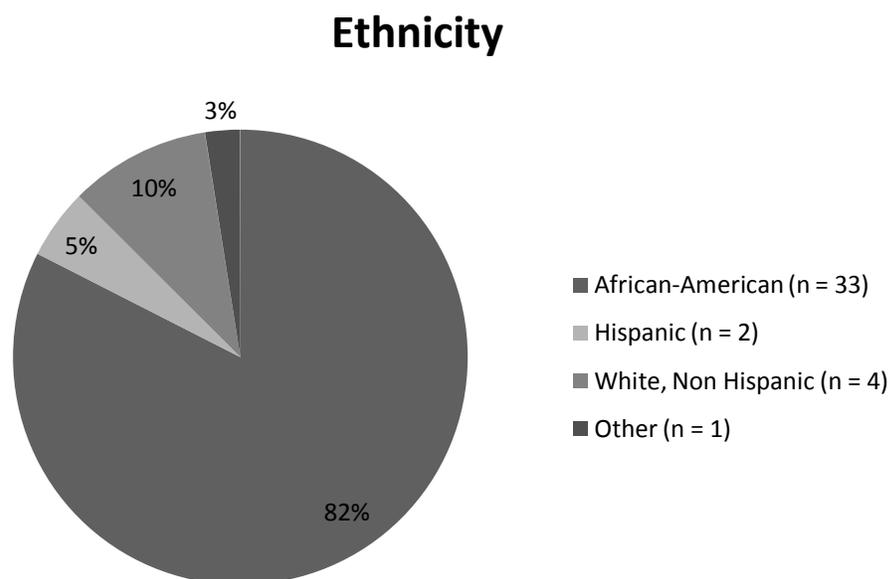
Ethnicity

Figure 7. Ethnicity of participants in the small farm leadership institute. (*N* = 40)

With regard to Education, each of the participants' indicated their highest level of educational attainment in Table 8. There were 5 (12%) who indicated that they have a High School diploma or GED and 4 (10%) who had vocational or technical training. Seven individuals (17%) have had some College but did not receive a degree. Two of the participants (5%) attained a two year college or Associates degree. There were 13 graduates (32%) who have completed a 4 year College and 9 (22%) that have a Graduate

or Professional degree. The participants in this class have an astonishing 60% of individuals who have attained a minimum of an Associate's degree. The participants in the program were highly educated with an average level of education for the group was at least a Two Year or Associate's Degree.

Table 8

Education of Participants in Small Farmer Leadership Development Institute (N = 40)

Education Type	Frequency (*n*)	Frequency Percent (%)
High School Grad/GED	5	12.5
Vocational/Technical	4	10.0
Some College (No Degree)	7	17.5
Two Year Degree	2	5.0
College Graduate	13	32.5
Graduate/Professional Degree	9	22.5

Changes in Knowledge and Behavior Results

There are six objectives of this study that were analyzed using a paired sample *t*-test. The objectives are designed to measure increases in knowledge and changes in behavior before and after their participation in the Small Farmer Leadership Development Institute. This was accomplished by calculating the difference between the

mean before (M^b) and the mean after (M^a); and the standard deviation before (SD^b) and the standard deviation after (SD^a).

> *Objective 1: Examine if the program participants in the NSFLI increased their Leadership Skills.*

This objective examined weather there were knowledge gains for the Institute participants in their individual leadership skills such as communication, problem solving and decision making. Table 9 shows the mean scores for each individual question that was asked in the Leadership Skill Development Construct. With regard to objective 1, the questions that indicate the most significant gain from "Fair" (M^b=3.10) to "Good" (M^a=4.55), an increase of 1.45 in mean score was "How would you rate your ability to participate in group problem solving?" Several other questions also indicated a significant gain with an increase in mean score of 1.37 were "How would you rate your ability to participate in consensus building, How would you rate your ability to build a team, and How would you rate your ability to participate in group decision making?". The questions at showed a minimal gain in mean score (1.05) from pre to post test were "How would you rate your ability to work with others and How would you rate your ability to serve as a member of a team?

Table 9

Pre and Post Evaluation Scores on Leadership Skill Development (N = 40)

Leadership Skill	M^b	SD^b	M^a	SD^a	Gain
How would you rate your ability to participate in group problem solving	3.10	1.03	4.55	.63	1.45
How would you rate your ability to participate in consensus building	3.02	.97	4.40	.59	1.38
How would you rate your ability to build a team	3.02	1.07	4.40	.67	1.38
How would you rate your ability to participate in group decision making	3.20	1.01	4.57	.50	1.37
How would you rate your ability to obtain information to help in making decisions	3.35	1.12	4.70	.51	1.35
How would you rate your ability to conduct a meeting	3.17	1.08	4.50	.64	1.33
How would you rate your ability to identify issues of concern within a community	3.20	.93	4.52	.50	1.32
How would you rate your ability to analyze facts and opinions to help make an informed decision	3.30	1.13	4.57	.54	1.27
How would you rate your ability to assume a leadership position	3.35	1.00	4.60	.54	1.25
How would you rate your ability to motivate your peers	3.30	.79	4.50	.55	1.20
How would you rate your ability to communicate effectively	3.35	.89	4.47	.59	1.12
How would you rate your ability to serve as a team member	3.50	.84	4.57	.54	1.07
How would you rate your ability to work with others	3.77	.80	4.82	.38	1.05

Note. M^b = Mean score before training; SD^b = Standard Deviation before training; M^a = Mean score after training; SD^a = Standard Deviation after training

The Leadership Skill Development Construct also showed some significant gains for some individual participants and little or no improvement for others. Those who

Table 10

Participants Leadership Development with Minimal Gain Scores between .00 and 1.00

Individual Participant	M^b	M^a	MLD Gain
Participant 14	5.00	5.00	.00
Participant 30	4.54	4.54	.00
Participant 1	4.54	4.69	.15
Participant 22	4.46	4.85	.38
Participant 23	3.92	4.46	.54
Participant 29	3.85	4.54	.69
Participant 13	3.92	4.69	.77
Participant 27	3.38	4.15	.77
Participant 28	3.69	4.46	.77
Participant 15	4.08	4.92	.85
Participant 19	3.38	4.23	.85
Participant 20	3.85	4.77	.92
Participant 26	2.85	3.77	.92
Participant 7	4.00	5.00	1.00
Participant 8	4.00	5.00	1.00
Participant 9	3.92	4.92	1.00
Participant 24	4.00	5.00	1.00
Participant 25	3.31	4.31	1.00

Note. M^b = Mean score for item before training; M^a = Mean score for item after training

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

showed a minimal increase are listed in Table 10. Two of the participants (number 14 and 30) indicated no increase (.00) in Leadership Development Skills and participant number 1 showed an increase of only .15.

Table 11 indicates those individual who had a moderate increase in mean scores between 1.01 and 2.00. Participants number 4 and 39 had the larger of the moderate increases with a mean score that increased by 1.92 points. Participants 32 and 33 showed the lower end of the moderate increases with mean scores that only increased by 1.08 points.

Table 11

Participants Leadership Development with Moderate Gain Scores between 1.01 and

2.00

Individual Participant	M[b]	M[a]	MLD Gain
Participant 32	3.77	4.85	1.08
Participant 33	3.46	4.54	1.08
Participant 16	3.77	4.92	1.15
Participant 31	3.08	4.31	1.23
Participant 2	2.77	4.08	1.31
Participant 3	3.08	4.38	1.31
Participant 6	3.00	4.31	1.31
Participant 34	2.46	3.92	1.46
Participant 11	3.08	4.69	1.62
Participant 17	2.77	4.38	1.62
Participant 21	2.92	4.54	1.62
Participant 10	2.54	4.23	1.69
Participant 36	2.77	4.46	1.69
Participant 37	3.31	5.00	1.69
Participant 5	2.85	4.69	1.85
Participant 4	3.08	5.00	1.92
Participant 39	1.54	3.46	1.92

Note. M[b] = Mean score for item before training; M[a]= Mean score after training

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

Table 12 shows the participants that had a substantial increase in mean score

between 2.01 and 3.50. Participant number 35 had a (M[b]=1.85) before the program and a

(M[a]=4.77) after the program for an increase of 2.92 in average score. Participant numbers

38 and 12 also showed significant gains with a (M^b=1.92) to a (M^a=4.77), an increase of

2.85 in mean score and gains with a (M^b=2.15) to a (M^a=4.77), an increase of 2.62 in

mean score respectively.

Table 12

Participants Leadership Development Substantial Gain Scores between 2 .01 and 3.50

Individual Participant	M^b	M^a	MLD Gain
Participant 18	2.15	4.23	2.08
Participant 40	2.23	4.54	2.31
Participant 12	2.15	4.77	2.62
Participant 38	1.92	4.77	2.85
Participant 35	1.85	4.77	2.92

Note. M^b = Mean score for item before training; M^a= Mean score for item after training

The second objective of the study was to determine the amount of knowledge the

participants had regarding Leadership Theories, Philosophies and processes. Specifically

the second objective was:

> *Objective 2: Examine if the participants in the NSFLI increased their*
>
> *understanding of Leadership Theory.*

The construct that examined leadership theory yielded that the most significant

gain from the question "How would you rate your ability to explain your Philosophy of

Leadership?" The scores increased from "Poor" (M^b=2.92) to "Good" (M^a=4.57), an

increase of 1.80 as shown in Table 13. The other question that showed a significant

difference between the before and after scores had an increase in mean score of 1.65 was

"How would you rate your ability to appreciate different styles of leadership?" The

question that yielded the least amount of gain in mean score (1.35) from pre to post test

was "How would you rate your ability to understand how personal values affect decision

making."

Table 13

Pre and Post Evaluation Scores on Understanding Leadership Theory (N = 40)

Leadership Theory	M^b	SD^b	M^a	SD^a	Gain
How would you rate your ability to explain your philosophy of leadership	2.65	.97	4.45	.71	1.80
How would you rate your ability to appreciate different styles of leadership	2.92	.82	4.57	.50	1.65
How would you rate your ability to use brainstorming to find solutions	3.10	1.08	4.62	.58	1.52
How would you rate your ability to define leadership	3.15	.97	4.65	.53	1.50
How would you rate your ability to appreciate diversity	3.20	1.06	4.70	.46	1.50
How would you rate your ability to understand your individual Leadership Style	2.97	.86	4.45	.55	1.48
How would you rate your ability to understand how personal values affect decision making	3.10	.77	4.45	.55	1.35

Note. M^b = Mean score for item before training; SD^b = Standard Deviation for item

before training; M^a = Mean score for item after training; SD^a = Standard Deviation for

item after training

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

In Understanding Leadership Theory some individuals showed little or no improvement. Those who showed a minimal increase are listed in Table 14. Two of the participants indicated a minimal increase of .29 from a M^b= 4.71 to M^a=5.00 (participant 1) and M^b= 3.86 to M^a=4.14 (participant 14). Participant 30 indicated no increase (.00) in Understanding Leadership Theory.

Table 14

Participants Leadership Theory with Minimal Gain Scores between .00 and 1.00

Individual Participant	M^b	M^a	MTD Gain
Participant 30	4.00	4.00	.00
Participant 1	4.71	5.00	.29
Participant 14	3.86	4.14	.29
Participant 13	3.86	4.29	.43
Participant 22	3.57	4.29	.71
Participant 7	4.00	5.00	1.00
Participant 9	4.00	5.00	1.00
Participant 15	3.29	4.29	1.00
Participant 24	4.00	5.00	1.00
Participant 27	3.29	4.29	1.00
Participant 28	3.14	4.14	1.00

Note. M^b = Mean score for item before training; M^a= Mean score for item after training

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

Table 15 indicates those individuals who had a moderate increase in mean scores between 1.01 and 2.00. Participants number 3 and 6 had the larger of the moderate increases with a mean score that increased by 2.00 points. Participants 8, 23, 25 and 32

showed the lower end of the moderate increases with mean scores that only increased by

1.14 points.

Table 15

Participants Leadership Theory with Moderate Gain Scores between 1 .01 and 2.00

Individual Participant	M[b]	M[a]	MTD Gain
Participant 8	3.86	5.00	1.14
Participant 23	3.29	4.43	1.14
Participant 25	3.00	4.14	1.14
Participant 29	3.86	5.00	1.14
Participant 2	2.71	4.00	1.29
Participant 19	3.57	4.86	1.29
Participant 32	3.29	4.57	1.29
Participant 33	3.71	5.00	1.29
Participant 10	2.43	3.86	1.43
Participant 20	3.29	4.71	1.43
Participant 11	3.29	4.86	1.57
Participant 34	2.29	3.86	1.57
Participant 37	3.43	5.00	1.57
Participant 26	1.86	3.57	1.71
Participant 18	2.29	4.14	1.86
Participant 21	3.00	4.86	1.86
Participant 3	2.43	4.43	2.00
Participant 6	2.29	4.29	2.00

Note. M[b] = Mean score for item before training; M[a]= Mean score for item after training

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

In understanding Leadership Theory several individuals showed some significant gains as indicated in Table 16. Participants' number 38 and 39 both showed an increase of 3.14. Participant 38 had a mean score of 1.86 before the program and a mean score of 5.00 after the program. Participant 39's mean score before the program was 1.43 and 4.57 afterwards. Participants' number 4 and 40 also showed substantial increases of 2.57. Participant 4 had a mean score of 2.43 before the program and a mean score of 5.00 after the program. Participant 40's mean score before the program was 1.71 and 4.29 afterwards.

Table 16

Participants Leadership Theory with Substantial Gain Scores between 2 .01 and 3.50

Individual Participant	M^b	M^a	MTD Gain
Participant 5	2.71	4.86	2.14
Participant 16	2.57	4.71	2.14
Participant 17	2.71	4.86	2.14
Participant 12	2.43	4.71	2.29
Participant 35	2.14	4.43	2.29
Participant 31	2.43	4.86	2.43
Participant 36	2.57	5.00	2.43
Participant 4	2.43	5.00	2.57
Participant 40	1.71	4.29	2.57
Participant 38	1.86	5.00	3.14
Participant 39	1.43	4.57	3.14

Note. M^b = Mean score for item before training; M^a = Mean score for item after training

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

The third construct and objective looked to see if there was any gain in the agricultural skills for the participants. The third objective is as follows:

Objective 3: Examine if the participants in the NSFLI enhanced their agricultural business skills by participating in the program.

Agricultural skill development such Marketing, Legal Risk Analysis, record keeping and Agricultural policy all contribute to the third construct and yielded a significant gain from "Poor" (M^b=2.77) to "Good" (M^a=4.35), an increase of 1.57 in mean score was "How would you rate your awareness of Agricultural Policy issues?", as shown in Table 17. One other question showing a substantial gain with an increase in mean score of 1.52 was "How would you rate your ability to create a resource inventory?" "How would you rate your Business Management skills?" showed a minimal gain in mean score (1.22) from pre to post test.

Table 17

Pre and Post Evaluation Scores on the Enhancement of Agricultural Skills (N = 40)

Agricultural Skills	M^b	SD^b	M^a	SD^a	Gain
How would you rate your awareness of Agricultural Policy Issues	2.77	1.12	4.35	.57	1.58
How would you rate your ability to create a resource inventory	2.75	1.08	4.27	.10	1.52
How would you rate your Marketing Skills	2.87	1.22	4.35	.76	1.48
How would you rate your Record Keeping Skills	2.92	1.20	4.40	.63	1.48
How would you rate your Legal Risk Analysis – Estate Planning, Wills, etc.	2.75	1.08	4.22	.11	1.47
How would you rate your Business Management Skills	3.17	.98	4.40	.59	1.23

Note. M^b = Mean score before training; SD^b = Standard Deviation before training; M^a = Mean score after training; SD^a = Standard Deviation after training

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

Many of the individual participants showed only minimal gains in mean score as indicated in Table 18. Two of the participants (number 16 and 37) indicated no increase (.00) in Agricultural skills development. Participant number 1 showed only minimal increase of .17 from pre (M^b=4.33) to post (M^a=4.50). Individual participant 30 also showed the same minimal increase with a pre mean of 3.17 to the post mean of 3.33.

Table 18

Participants Agricultural Skill Development with Minimal Gain Scores between .00

and 1.00

Individual Participant	M^b	M^a	MAS Gain
Participant 16	5.00	5.00	.00
Participant 37	5.00	5.00	.00
Participant 1	4.33	4.50	.17
Participant 30	3.17	3.33	.17
Participant 19	3.67	4.00	.33
Participant 14	4.17	4.67	.50
Participant 22	3.50	4.00	.50
Participant 23	3.17	4.00	.83
Participant 25	3.50	4.33	.83
Participant 28	3.17	4.00	.83
Participant 3	3.17	4.17	1.00
Participant 8	3.83	4.83	1.00
Participant 9	3.33	4.33	1.00
Participant 24	3.00	4.00	1.00
Participant 26	2.67	3.67	1.00
Participant 27	3.00	4.00	1.00

Note. M^b = Mean score for item before training; M^a = Mean score for item after training

Table 19 shows the results those individuals who had a moderate increase in mean scores between 1.01 and 2.00. Participants number 5, 21 and 34 had the larger of the moderate increases with a mean score that increased by 2.00 points. Participants 13, 15

and 38 showed the lower end of the moderate increases with mean scores that only increased by 1.17 points.

Table 19

Participants Agricultural Skill Development with Moderate Gain Scores between 1.01 and 2.00

Individual Participant	M^b	M^a	MAS Gain
Participant 13	3.67	4.83	1.17
Participant 15	2.50	3.67	1.17
Participant 38	3.83	5.00	1.17
Participant 7	3.67	5.00	1.33
Participant 17	2.67	4.00	1.33
Participant 10	2.00	3.50	1.50
Participant 2	2.67	4.33	1.67
Participant 11	3.00	4.67	1.67
Participant 20	2.83	4.50	1.67
Participant 40	2.67	4.33	1.67
Participant 6	2.17	4.00	1.83
Participant 29	3.17	5.00	1.83
Participant 32	2.17	4.00	1.83
Participant 5	3.00	5.00	2.00
Participant 21	2.67	4.67	2.00
Participant 34	1.67	3.67	2.00

Note. M^b = Mean score for item before training; M^a = Mean score for item after training

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

The Agricultural Skill Development Construct showed some substantial gains for many of the individual participants in Table 20. For objective 3 participants number 4 and 39 both showed an increase in mean score of 3.33. Participant 4 had a mean score of 1.67 before the program and a mean score of 5.00 after the program. Participant 39's mean score before the program was 1.17 and 4.50 afterwards. Participants' number 12, 33 and 35 also showed gains with an increase of 2.83 in mean score.

Table 20

Participants Agricultural Skill Development with Substantial Gain Scores between

2.01 and 3.50

Individual Participant	M^b	M^a	MAS Gain
Participant 18	2.33	4.50	2.17
Participant 36	1.83	4.17	2.33
Participant 31	1.33	4.00	2.67
Participant 12	1.33	4.17	2.83
Participant 33	1.17	4.00	2.83
Participant 35	2.17	5.00	2.83
Participant 4	1.67	5.00	3.33
Participant 39	1.17	4.50	3.33

Note. M^b = Mean score for item before training; M^a = Mean score for item after training

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

The fourth objective examined the primary premise of this study, which was to see if the program participants transformed the leadership skills learned in the program to improve their communities.

Objective 4: Determine if program participants of the NSFLI transform their leadership skills to become leaders in their communities after completion of the program.

Table 21 displays the gains in the area of leadership transformation. The item in the construct that shows the most significant gain was "How would you rate your ability to assist others in seeking out agricultural resources in my community" from "Poor" (M^b=2.85) to "Good" (M^a=4.57), an increase of 1.72. However, one other question that showed a substantial gain from pre and post test scores of 1.57 was "How would you rate your ability to use local (City & County) resources to meet the needs of my community?" In construct 4 there were 2 questions that yielded the least amount of gain in mean score (1.30) from pre to post test were "How would you rate your ability to understand the needs of the community" and How would you rate your ability to identify local leaders in my community?"

Table 21

Pre and Post Evaluation Scores on Leadership Transformation (N = 40)

Transformation Skill	M^b	SD^b	M^a	SD^a	Gain
How would you rate your ability to use federal resources to meet the needs of my community	2.52	1.03	4.02	.73	1.77
How would you rate your ability to assist others in seeking out agricultural resources in my community	2.85	1.07	4.57	.54	1.72
How would you rate your ability to use local (City & County) resources to meet the needs of my community	2.72	1.03	4.30	.64	1.58
How would you rate your ability to use state resources to meet the needs of my community	2.72	1.08	4.25	.70	1.53
How would you rate your ability to improve the quality of life in your community	2.87	1.04	4.35	.62	1.48
How would you rate your ability to assist others in seeking out educational resources in my community	2.92	1.04	4.40	.63	1.48
How would you rate your ability to assume a leadership position in my community	2.90	1.05	4.32	.69	1.42
How would you rate your ability to Understand the needs of my community	2.95	1.03	4.25	.63	1.30
How would you rate your ability to identify local leaders in my community	3.15	1.05	4.45	.63	1.30

Note. M^b = Mean score before training; SD^b = Standard Deviation before training; M^a = Mean score after training; SD^a = Standard Deviation after training

In the understanding and application of the principals associated with Leadership Transformation some individuals showed little or no improvement. Those who showed a minimal increase are listed in Table 22. One of the participants indicated a minimal increase of .11 from a M^b= 4.22 to M^a=4.11 (participant 1). Another indicated a minimal increase of .33 with a M^b= 3.78 to M^a=4.11 (participant 22). Participants 14 and 30 indicated no increase (.00) in Leadership Transformation.

Table 22

Participants Leadership Transformation with Minimal Gain Scores between .00 and 1.00

Individual Participant	M^b	M^a	MTRANS Gain
Participant 14	4.78	4.78	.00
Participant 30	3.56	3.56	.00
Participant 1	4.22	4.33	.11
Participant 22	3.78	4.11	.33
Participant 37	4.56	5.00	.44
Participant 28	4.22	4.89	.67
Participant 9	3.67	4.44	.78
Participant 27	3.56	4.33	.78
Participant 25	3.11	4.00	.89
Participant 29	3.33	4.22	.89
Participant 7	4.00	5.00	1.00
Participant 8	3.89	4.89	1.00

Note. M^b= Mean score for item before training; M^a= Mean score for item after training

Table 23 shows the results those individuals who had a moderate increase in mean scores between 1.01 and 2.00. Participant number 6 had the larger of the moderate increases with a mean score that increased by 2.00 points. That individual was followed closely by participant 33 whose gain in mean score was 1.89. Participants 15 and 19 showed the lower end of the moderate increases with mean scores that only increased by 1.11 points.

Table 24 shows that several individuals had significant gains in their application and understanding of Leadership Transformation. Participant 38 showed a mean score increase from 1.00 before the program to 4.44 afterwards for an increase of 3.44. Participant number 4 had a mean score of 2.22 before the program and a mean score of 5.00 after the program which yields a margin of 2.78 and participant number12 had the third largest increase of 2.67.

Table 23

Participants Leadership Transformation with Moderate Gain Scores between 1.01 and

2.00

Individual Participant	M^b	M^a	MTRANS Gain
Participant 15	3.11	4.22	1.11
Participant 19	3.00	4.11	1.11
Participant 2	2.33	3.56	1.22
Participant 24	3.00	4.22	1.22
Participant 32	3.22	4.44	1.22
Participant 11	3.22	4.56	1.33
Participant 20	3.56	5.00	1.44
Participant 3	2.89	4.44	1.56
Participant 10	2.00	3.56	1.56
Participant 23	2.11	3.67	1.56
Participant 26	2.00	3.56	1.56
Participant 40	2.33	3.89	1.56
Participant 5	3.11	4.78	1.67
Participant 13	3.22	4.89	1.67
Participant 34	2.44	4.11	1.67
Participant 33	2.33	4.22	1.89
Participant 6	2.56	4.56	2.00

Note. M^b = Mean score for item before training; M^a = Mean score after training

Table 24

Participants Leadership Transformation with Substantial Gain Scores between 2.01

and 3.50

Individual Participant	M[b]	M[a]	MTRANS Gain
Participant 16	2.22	4.33	2.11
Participant 21	2.78	4.89	2.11
Participant 35	1.33	3.44	2.11
Participant 18	1.78	4.00	2.22
Participant 31	1.89	4.11	2.22
Participant 17	2.22	4.56	2.33
Participant 36	1.00	3.44	2.44
Participant 39	2.56	5.00	2.44
Participant 12	1.78	4.44	2.67
Participant 4	2.22	5.00	2.78
Participant 38	1.00	4.44	3.44

Note. M[b] = Mean score for item before training; M[a] = Mean score for item after training

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

The fifth objective of the study looked at the perceived effectiveness of the leadership development program on the participants in the Small Farmer Leadership Institute.

Objective 5: Determine the program participants perceived effectiveness of the leadership development program.

It is important to look at the results from the previous objectives and constructs to examine the programs overall effectiveness. Table 25 shows the perceived effectiveness of the SFLI on participants through a paired samples *t-* test on the four previous objectives. The objective with the largest *t*-score was *Objective 2: Understanding of Leadership Theory* (*t*=13.05) and the objective with the lowest *t*-score was *Objective 3: Agricultural Business Skill Enhancement* (*t*=10.46). Objectives 1 through 4 all has a *p*-score of zero (0).

Table 25

Paired Samples t-test on Perceived Effectiveness on NSFLI Participants

Perceived Effectiveness	M^b	SD^b	M^a	SD^a	t	p
Understanding of Leadership Theory	3.01	.76	4.55	.40	13.05	.00
Transformation of Leadership	2.84	.92	4.32	.48	11.82	.00
Leadership Skill Enhancement	3.28	.81	4.55	.36	11.59	.00
Agricultural Skill Enhancement	2.92	1.20	4.40	.63	10.46	.00

Note. M^b= Mean score before training; SD^b= Standard Deviation before training; M^a= Mean score after training; SD^a= Standard Deviation for item after training

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

The net gain of each of the first four objectives also supports objective 5 to help determine if the participants improved their overall leadership abilities. Table 26 displays

the mean scores and standard deviation for the perceived effectiveness of the gains on score for each objective. Although all of the objectives had a positive gain score and most of them were relatively close, *Objective 2: Understanding of Leadership Theory* had the largest gain (M=1.54). The objective with the least amount of gain was *Objective 1: Leadership Skill Enhancement* (M=1.27).

Table 26

Gain Scores on Perceived Effectiveness on NSFLI Participants (N=40)

Perceived Effectiveness	*M*	*SD*
Leadership Skill Enhancement	1.27	.69
Agricultural Skill Enhancement	1.45	.88
Transformation of Leadership	1.47	.79
Understanding of Leadership Theory	1.54	.74

Note. M^b = Mean score before training; SD^b= Standard Deviation before training; M^a= Mean score after training; SD^a= Standard Deviation after training

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

The sixth objective of the study was designed to compare the changes between the various sub-groups within the study.

> ➢ *Objective 6: Compare if gender, education and cohort were any different as they relate to objective 1, 2, 3, and 4.*

The data displayed in Table 27 provides an overview comparison of the results of an independent sample *t*-test of the Leadership Skill Development constructs as they

relate to the various sub groups outlined in Objective 6. As it relates to gender, males had a M^b=3.20 and a M^a=4.57. The net gain in mean score for males is 1.37. The females had a M^b=3.38 and a M^a=4.52. The net gain in mean score for females is 1.14. The p^b=.51 and the p^a=.62 for gender. This indicates that for Leadership Skill Development, gender was not significant before or after the NSFLI.

Because of the number of educational categories the respondents were able to select from the information was recoded into College Graduates and Non-College Graduates. The participants that selected High School Graduate/G.E. D., Vocational/Technical training and Some college (No Degree) were all recoded into Non-College Graduates (n =16). The participants that selected Two year degree, College Graduate and Graduate/Professional degree were all recoded into College Graduates (n =24). For Education the Non-College Graduates had a M^b=2.76 and a M^a=4.51. The net gain in mean score for Non-College Graduates was 1.75. The College Graduates had a M^b=3.62 and a M^a=4.58. The net gain in mean score for College Graduates was .96. The p^b=.00 and the p^a=.58 for education. This indicates that for Leadership Skill Development, education was significant before the program and was not significant after the National Small Farm Leadership Institute.

The two different graduating classes or cohorts were also compared. As it relates to class groupings, Cohort 1 had a M^b=3.38 and a M^a=4.57. The net gain in mean score for Cohort 1 was 1.19. The second Cohort had a M^b=3.20 and a M^a=4.53. The net gain in mean score for Cohort 2 was 1.33. The p^b=.49 and the p^a=.76 for class groupings. This

indicates that for Leadership Skill Development, class groupings were not a significant factor before or after the NSFLI.

Table 27

Independent Samples t-test on Leadership Skill Development of Various Sub-Groups

	N	M^b	SD^b	p^b	M^a	SD^a	p^a
Gender				.51			.62
Male	23	3.20	.78		4.57	.30	
Female	17	3.38	.85		4.52	.43	
Education				.00			.58
Non-College Graduates	16	2.76	.70		4.51	.40	
College Graduates	24	3.62	.69		4.58	.34	
Group (Class)				.49			.76
Cohort 1 (2007)	17	3.38	.82		4.57	.37	
Cohort 2 (2009)	23	3.20	.80		4.53	.36	

Note. M^b = Mean score before training; SD^b = Standard Deviation before training; M^a = Mean score after training; SD^a = Standard Deviation after training.

The results displayed in Table 28 provides an overview comparison of the results of an independent samples *t*-test on the participants understanding of Leadership Theory as it relates to the various sub groups outlined in Objective 6. As it relates to gender, males had a M^b=3.01 and a M^a=4.50. The net gain in mean score for males is 1.49. The females had an M^b=3.01 and a M^a=4.62. The net gain in mean score for females is 1.61.

The p^b=.98 and the p^a=.39 for gender. This indicates that for Leadership Theory, gender was not significant before or after the NSFLI.

For Education the Non-College Graduates had an M^b=2.68 and a M^a=4.66. The net gain in mean score for Non-College Graduates was 1.98. The College Graduates had an M^b=3.23 and a M^a=4.48. The net gain in mean score for College Graduates was 1.25. The p^b=.02 and the p^a=.19 for education. This indicates that for Leadership Theory, education was significant before the program and was not significant after the National Small Farm Leadership Institute.

The two different graduating classes or cohorts were also compared. As it relates to class groupings, Cohort 1 had a M^b=3.09 and a M^a=4.52. The net gain in mean score for Cohort 1 was 1.43. Cohort 2 had a M^b=2.95 and a M^a=4.57. The net gain in mean score for Cohort 2 was 1.62. The p^b=.58 and the p^a=.71 for class groupings. This indicates that for Leadership Theory, class groupings were not a significant factor before or after the NSFLI.

Table 28

Independent Samples t-test on Understanding Leadership Theory of Various Sub-Groups

	N	M^b	SD^b	p^b	M^a	SD^a	p^a
Gender				.98			.39
Male	23	3.01	.74		4.50	.40	
Female	17	3.01	.81		4.62	.41	
Education				.02			.19
Non-College Graduates	16	2.68	.74		4.66	.39	
College Graduate	24	3.23	.71		4.48	.41	
Group (Class)				.58			.71
Group 1 (2007)	17	3.09	.81		4.52	.47	
Group 2 (2009)	23	2.95	.74		4.57	.36	

Note. M^b = Mean score for item before training; SD^b= Standard Deviation for item before; M^a= Mean score for item after training; SD^a= Standard Deviation for item after training.

The results of the data analysis for Agricultural Skill Development are displayed in Table 29. It provides an overview comparison of the results of an independent samples *t*-test. In relation to gender, males had a M^b=2.86 and a M^a=4.38. The net gain in mean score for males is 1.52. The females had a M^b=2.88 and a M^a=4.26.

The net gain in mean score for females is 1.38. The p^b=.96 and the p^a=.44 for gender. This indicates that for Agricultural Skill Development, gender was not significant before or after the NSFLI.

For Education the Non-College Graduates had a M^b=2.75 and a M^a=4.52. The net gain in mean score for Non-College Graduates was 1.77. The College Graduates had a M^b=2.95 and a M^a=4.20. The net gain in mean score for College Graduates was 1.25. The p^b=.50 and the p^a=.04 for education. This indicates that for Agricultural Skill Development, education was not significant before the program and was significant after the National Small Farm Leadership Institute.

Objective 6 also addresses the class groupings, Cohort 1 had a M^b=3.11 and a M^a=4.40. The net gain in mean score for Cohort 1 was 1.29. The second Cohort had a M^b=2.69 and a M^a=4.28. The net gain in mean score for Cohort 2 was 1.59. The p^b=.17 and the p^a=.44 for class groupings. This indicates that for Agricultural Skill Development, class groupings were not a significant factor before or after the NSFLI.

Table 29

Independent Samples t-test on Agricultural Skill Development of Various Sub-Groups

	N	M^b	SD^b	p^b	M^a	SD^a	p^a
Gender				.96			.44
Male	23	2.86	.87		4.38	.48	
Female	17	2.88	1.08		4.26	.46	
Education				.50			.04
Non-College Graduates	16	2.75	1.03		4.52	.48	
College Graduate	24	2.95	.90		4.20	.43	
Group (Class)				.17			.44
Group 1 (2007)	17	3.11	1.02		4.40	.52	
Group 2 (2009)	23	2.69	.88		4.28	.44	

Note. M^b = Mean score before training; SD^b= Standard Deviation before; M^a= Mean

score after training; SD^a= Standard Deviation after training;

Table 30 shows the results of an independent samples *t*-test of the Leadership

Transformation construct that addresses the various sub groups outlined in Objective 6.

Specifically, gender shows that the males had a M^b=2.87 and a M^a=4.32. The net gain in

mean score for males is 1.45. The females had a M^b=2.80 and a M^a=4.32.

The net gain in mean score for females is 1.52. The p^b=.80 and the p^a=.95 for gender. This indicates that for Leadership Transformation, gender was not significant before or after the NSFLI.

In relation to Education the Non-College Graduates had a M^b=2.49 and a M^a=4.27. The net gain in mean score for Non-College Graduates was 1.78. The College Graduates had a M^b=3.08 and a M^a=4.35. The net gain in mean score for College Graduates was 1.27. The p^b=.04 and the p^a=.62 for education. This indicates that for Leadership Transformation, education level was significant before the program and was not significant after the National Small Farm Leadership Institute.

As it relates to class groupings, Cohort 1 had a M^b=2.92 and a M^a=4.30. The net gain in mean score for Cohort 1 was 1.38. The second Cohort had a M^b=2.79 and a M^a=4.34. The net gain in mean score for Cohort 2 was 1.55. The p^b=.66 and the p^a=.78 for class groupings. This indicates that for Leadership Transformation, class groupings were not a significant factor before or after the NSFLI.

Table 30

Independent Samples t-test on Transformation of Leadership of Various Sub-Groups

	N	M^b	SD^b	p^b	M^a	SD^a	p^a
Gender				.80			.95
Male	23	2.87	.89		4.32	.50	
Female	17	2.80	.99		4.32	.47	
Education				.04			.62
Non-College Graduates	16	2.49	1.00		4.27	.58	
College Graduate	24	3.08	.80		4.35	.41	
Group (Class)				.66			.78
Group 1 (2007)	17	2.92	.99		4.30	.44	
Group 2 (2009)	23	2.79	.89		4.34	.52	

Note. M^b= Mean score before training; SD^b= Standard Deviation before; M^a= Mean

score after training; SD^a= Standard Deviation after training;

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This research study was designed to evaluate the effectiveness of leadership development programs. Specifically if the Small Farmer Leadership Development Institute at Southern University in Louisiana made more effective leaders in their communities and do leadership development programs increase the skills of the program participants. This focus on urban community living has adversely affected our rural communities often leaving them in decline and decay. In many instances, this leaves a void in many rural communities with regard to community leaders. In many of these rural communities, farmers and ranchers remain and are a vital part of these communities, yet most lack any formal leadership training. The goal of the National Small Farm Leadership Institute was to promote small and family farm sustainability by enhancing the leadership ability and business management skills of small producers. The objectives were to Examine the effectiveness of Leadership Development programs on their participants, examine if the participants increased their understanding of Leadership Theory, examine if the participants increased their agricultural business skills, determine if program participants become leaders in their communities after completion of the program, determine if program participants improved their overall leadership ability by participating in the leadership development program and determine if there were any

differences between Education, Gender and the 2 sub-groups. These objectives were achieved by evaluating the institute's participant's pre and post knowledge base. A retrospective post analysis was used to measure the participant's baseline perspective and knowledge gains. The retrospective pretest at the end of the program is more accurate because it's answered in the same frame of reference as the posttest (Rockwell, 1989). This approach minimizes the response shift bias. The retrospective post analysis allows us to explore how effective the training was at reaching the participants. Donald Kirkpatrick in his 4 Levels of evaluation theory explored the deeper levels of evaluation. Level 3 measures if any transfer of knowledge or skills has occurred in the learner's behavior due to the training program (Kirkpatrick 1994). This was the focus of the research in this program. The larger theories that guided this research were Kirkpatrick's Training Effectiveness and Knowles's Andragogy. These two theories were largely supported by Flamholtz's Leadership Effectivness Framework and Maslow's Hierachy of Needs Theory. These works served as the catalyist for the development of the Malone conceptual model for leadership development and delivery. This model fuses together the two concepts into a funnel shaped filtering process. The various elements of an individual's personal motivation provide the catalyst for the development of a potential leader. The leadership development program serves as the mechanism for refinement of the individual and the honing of their leadership skills, thus transforming the individual into a more effective leader.

The group involved in this study is a convenience population of small farmers and ranchers from across the Southern United States. There were 47 individuals who had

graduated from the Small Farmer Leadership Institute at the time of this study, all of which were invited to participate in this study. There were 2 graduating classes from 2007 and 2009 who made up the population for this study. A mail survey was sent to each of the members who completed the class. The 40 participants included in the study were both male (n=23) and female (n=17). The instrument used in this survey consists of 5 different sections for a total of 39 questions.

The survey research examined four educational constructs that were covered during the leadership development program. These were Leadership Skill Development, Leadership Theory, Agricultural Skill enhancement and the Transformation of their leadership skills.

The Data was analyzed using Statistical Package for the Social Sciences program version 15 (SPSS v15). Statistical analyses were performed on the descriptive statistics, Including: frequency, mean, median and mode. A paired sample and one sample t-test were run to measure any gains in mean scores.

Conclusions

The primary focus of this research was to measure the increase in leadership skills and knowledge as a direct result of the Small Farm Leadership Institute. The Malone Leadership Development and delivery model provided a good conceptual framework to guide this study. This model is generalizable to other groups and research studies in the

field. Through analysis of the six objectives the research reveals substantial increases in knowledge and skills.

With regard to Objective 1: Several questions indicated a gain in knowledge and skills as they relate to Leadership Skills Development. The skills in which the participants showed the highest gain were Group Problem Solving, Consensus Building, Team Building, Group Decision Making and Obtaining information to help in decision making. Thirty-Eight of the 40 participants indicated some increase in Leadership Skill Development with the greatest gains exhibited by Participants 35, 38, 12, 40 and 18.

With regard to Objective 2: Many of the questions indicate a gain in knowledge and skills as they relate to Understanding Leadership Theory. The highest increases in understanding the leadership theory were understanding and explaining personal leadership philosophy, appreciating different leadership styles, brainstorming to find solutions and defining leadership. Of the individuals in the study, 39 of the 40 participants indicated some increase in their understanding of Leadership Theory and its applications. The greatest individual gains were shown by Participants 38, 39, 4, 31, 36 and 40.

With regard to Objective 3: There were numerous questions that indicated a gain in knowledge and skills as they relate to increasing participants Agricultural Business Skills. The skills in which the participants showed the highest amount of gain were increased awareness of Agricultural Policy Issues, their ability to create a resource inventory, better Marketing Skills and better Record Keeping Skills. Thirty-Eight of the

40 participants indicated some increase in Agricultural Business Skill Development with the greatest gains exhibited by Participants 39, 4, 35, 33 and 12.

With regard to Objective 4: Several questions indicated a gain in knowledge and skills as they relate to Leadership Transformation. The greatest increases in understanding the concept of transferring the leadership back to the community were exhibited in their ability to meet the needs of their community through use of federal resources, agricultural resources, local (city& county) resources and state resources. Of the individuals in the study, 38 of the 40 participants indicated some increase in the Transformation of their Leadership skills to their community. The greatest individual gains were shown by Participants 38, 4, 12, 36 and 39.

With regard to Objective 5: This objective examined if the perceived effectiveness of the leadership development program by the 4 educational constructs. Understanding of Leadership Theory was perceived to be the most effective of the constructs and had the most impact on the participants. The Leadership Transformation construct was the second most effective followed by Leadership Skill Development and Agricultural Skill Development.

With regard to Objective 6: Gender was not found to be significant which concludes that there was no difference observed between males and females. However, education did indicate significance in each of the educational constructs and concludes that there are differences based on the educational level (college graduates compared to non-college graduates). As for the class groupings or cohorts the findings were not

significant and conclude that there was no difference between the 2007 Graduates and the 2009 graduates.

Overall Conclusions

Three of the participants (4, 12, and 39) scored in the top 5 individual gains in mean score in 3 of the 4 educational constructs. Also participants 35, 36, 38 and 40 were in the top five in 2 of the 5 constructs. This leads the investigator to conclude that for these individuals the National Small Farm Leadership Institute was effective and impactful. The data does not state that the program was not impactful to other participants, only that these individuals indicated substantial increases in knowledge and behavior.

It is conceivable to conclude that the educational strengths of the NSFLI are its teaching of Leadership Philosophy, Linkages to Federal and agricultural resources, appreciation of different styles of leadership and awareness of agricultural policy issues. Each of these items showed the greatest gain in mean score from the pre-test to the post-test indicating an effective gain in knowledge and skills. Those areas that showed the least amount of gain from pre-test to post-test were; ability to work with others, serve as a team member, communicate effectively and motivate your peers.

This study looked to explore and address several questions, the first of which was; are leadership development programs effective in increasing the skills of potential leaders? Participants were definitely found to have increased their leadership skills through the leadership development program. The study revealed that in each of the four

educational construct areas of the National Small Farm Leadership Institute that there were increases in knowledge and changes in behavior.

The second question sought to address are leadership development programs effective for small farmers and ranchers to aid them in becoming community leaders? The Transformation of Leadership construct had the second highest gain in mean score of the four constructs. It increased by 1.47 from M^b=2.84 (Poor) before to M^a=4.32 (Good) afterwards. This indicates that there is an increase in the participant's skill level that would enable them to become effective community leaders. However, this study does not address whether they actually *become* community leaders only that the program equip them with the skills necessary to become community leaders. The Kelsey & Wall (2003) study states that the Leadership development program failed to move participants into action by producing community leaders. This study supports the findings of their study with the exception of the qualitative aspects which were not addressed here.

Recommendations

The findings, conclusions, and results provide us with the following recommendations for actions and further research:

Programmatic Recommendations

1. The perceived effectiveness of the NSFLI on participants through a paired samples *t-* test showed t-scores of 13.05 for Understanding of Leadership Theory, 11.82 for Transformation of Leadership, 11.59 for Leadership

Skill Development and 10.46 for Agricultural Business Skill Enhancement. Due to the perceived effectiveness the National Small Farmer Leadership Institute had on its participants, more strategies and funding opportunities should be created to expand leadership development opportunities for small and limited resource producers.

2. The area of Leadership Transformation, showed some of the highest gains in mean score (1.77, 1.72, 1.58) in the study, which can be interpreted as an increase in the knowledge and skills to become community leaders. In order to support the desire of program participants to want to become community leaders, more in-depth curriculum and training should be provided on accessing local, state and federal resources.

3. To increase the efforts of more program participants who want to become community leaders, more workshops should be offered regarding the specifics of embracing the role and how to become a community leader. This could be addressed by incorporating community leadership projects into the programs.

4. Questions regarding Leadership Philosophy, use of federal and agricultural resources to assist in the development of their local communities and awareness agricultural policy were all determined to be strengths of the program due the substantial gains in mean score by the program participants. Future National Small Farmer Leadership Institutes should continue to provide training on Leadership Philosophy, Linkages to

Federal and agricultural resources, appreciation of different styles of leadership and awareness of agricultural policy issues.

5. To be able to make the programs more accessible to small producers everywhere, program expansion should be offered in more regional and state programs.

6. Because of the low mean scores of some of the questions, those educational components may not be perceived as effective by some program participants and stakeholders. Therefore, the stakeholders of the program should assess current program curriculum in areas that are considered weak such as: ability to work with others, serve as a team member, communicate effectively and motivate your peers and determine if these topics can be strengthened or if they should be eliminated from the program.

Recommendations for Additional Research

1. The instrument used in this study should be revamped to assess program participants more in-depth. In support of Kelsey and Wall's 2005 study, qualitative methodologies should be explored to establish a mechanism to better associate the participants' community leadership aspirations.

2. In order to determine if leadership development programs have long term effectiveness on its participants and to determine if program participant's transition into becoming community leaders, more longitudinal research on leadership development programs is needed.

3. More results from the evaluation of Leadership development programs should be published to advance the knowledge in the fields of Agricultural Education and Agricultural leadership.

4. Future research studies should be designed to explore different components of leadership, different leadership development programs, groups other than farmers and ranchers, and other variables should be published and shared as a resource for educators in our field.

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APPENDIX A

Table A1

Pre/Post Leadership Development for Males (n=23)

Assessment Item	M^b	M^a
How would you rate your ability to communicate effectively	3.26	4.52
How would you rate your ability to motivate your peers	3.30	4.60
How would you rate your ability to work with others	3.60	4.82
How would you rate your ability to assume a leadership position	3.26	4.69
How would you rate your ability to conduct a meeting	2.95	4.60
How would you rate your ability to participate in consensus building	3.00	4.43
How would you rate your ability to serve as a team member	3.34	4.52
How would you rate your ability to build a team	3.00	4.52
How would you rate your ability to participate in group problem solving	3.08	4.52
How would you rate your ability to identify issues of concern within a community	3.17	4.56
How would you rate your ability to participate in group decision making	3.13	4.47
How would you rate your ability to obtain information to help in making decisions	3.30	4.69
How would you rate your ability to analyze facts and opinions to help make an informed decision	3.26	4.52
How would you rate your ability to Define Leadership	3.17	4.65
How would you rate your ability to Understand your individual Leadership Style	3.04	4.47
How would you rate your ability to Understand how personal values affect decision making	3.08	4.43
How would you rate your ability to appreciate diversity	3.13	4.60
How would you rate your ability to use brainstorming to find solutions	3.08	4.52
How would you rate your ability to appreciate different styles of leadership	2.91	4.47
How would you rate your ability to explain your philosophy of leadership	2.65	4.39
How would you rate your Business Management Skills	3.26	4.56
How would you rate your Marketing Skills	3.00	4.47
How would you rate your Record Keeping Skills	2.73	4.34
How would you rate your awareness of Agricultural Policy Issues	2.78	4.39
How would you rate your Legal Risk Analysis – Estate Planning, Wills, etc.	2.60	4.13
How would you rate your ability to create a resource inventory	2.82	4.39
How would you rate your ability to Understand the needs of my community	3.00	4.34
How would you rate your ability to identify local leaders in my community	3.13	4.43
How would you rate your ability to assume a leadership position in my community	2.82	4.30
How would you rate your ability to use local (City & County) resources to meet the needs of my community	2.82	4.21
How would you rate your ability to state resources to meet the needs of my community	2.78	4.21
How would you rate your ability to federal resources to meet the needs of my community	2.69	4.08
How would you rate your ability to improve the quality of life in your community	2.91	4.47
How would you rate your ability to assist others in seeking out agricultural resources in my community	2.86	4.56
How would you rate your ability to assist others in seeking out educational resources in my community	2.86	4.30

Note. M^b = Mean score for item before training; M^a = Mean score for item after training;

Table A2

Pre/Post Leadership Skill Development for Females (n=17)

Assessment Item	M^b	M^a
How would you rate your ability to communicate effectively	3.47	4.41
How would you rate your ability to motivate your peers	3.29	4.35
How would you rate your ability to work with others	4.00	4.82
How would you rate your ability to assume a leadership position	3.47	4.47
How would you rate your ability to conduct a meeting	3.47	4.35
How would you rate your ability to participate in consensus building	3.05	4.35
How would you rate your ability to serve as a team member	3.70	4.64
How would you rate your ability to build a team	3.05	4.23
How would you rate your ability to participate in group problem solving	3.11	4.58
How would you rate your ability to identify issues of concern within a community	3.23	4.47
How would you rate your ability to participate in group decision making	3.29	4.70
How would you rate your ability to obtain information to help in making decisions	3.41	4.70
How would you rate your ability to analyze facts and opinions to help make an informed decision	3.35	4.64
How would you rate your ability to Define Leadership	3.11	4.64
How would you rate your ability to Understand your individual Leadership Style	2.88	4.41
How would you rate your ability to Understand how personal values affect decision making	3.11	4.47
How would you rate your ability to appreciate diversity	3.29	4.82
How would you rate your ability to use brainstorming to find solutions	3.11	4.76
How would you rate your ability to appreciate different styles of leadership	2.94	4.70
How would you rate your ability to explain your philosophy of leadership	2.64	4.52
How would you rate your Business Management Skills	3.05	4.17
How would you rate your Marketing Skills	2.70	4.17
How would you rate your Record Keeping Skills	3.17	4.47
How would you rate your awareness of Agricultural Policy Issues	2.76	4.29
How would you rate your Legal Risk Analysis – Estate Planning, Wills, etc.	2.94	4.35
How would you rate your ability to create a resource inventory	2.64	4.11
How would you rate your ability to Understand the needs of my community	2.88	4.11
How would you rate your ability to identify local leaders in my community	3.17	4.47
How would you rate your ability to assume a leadership position in my community	3.00	4.35
How would you rate your ability to use local (City & County) resources to meet the needs of my community	2.58	4.41
How would you rate your ability to state resources to meet the needs of my community	2.64	4.29
How would you rate your ability to federal resources to meet the needs of my community	2.29	3.94
How would you rate your ability to improve the quality of life in your community	2.82	4.17
How would you rate your ability to assist others in seeking out agricultural resources in my community	2.82	4.58
How would you rate your ability to assist others in seeking out educational resources in my community	3.00	4.52

Note. M^b = Mean score for item before training; M^a= Mean score for item after training;

Table A3

Pre/Post Leadership Development for High School/GED Graduates (n=5)

Assessment Item	M^b	M^a
How would you rate your ability to communicate effectively	2.40	4.40
How would you rate your ability to motivate your peers	2.60	4.20
How would you rate your ability to work with others	3.00	4.60
How would you rate your ability to assume a leadership position	2.60	4.40
How would you rate your ability to conduct a meeting	2.40	4.00
How would you rate your ability to participate in consensus building	1.80	4.40
How would you rate your ability to serve as a team member	2.40	4.40
How would you rate your ability to build a team	1.40	4.00
How would you rate your ability to participate in group problem solving	1.60	4.40
How would you rate your ability to identify issues of concern within a community	2.20	4.20
How would you rate your ability to participate in group decision making	1.80	4.60
How would you rate your ability to obtain information to help in making decisions	1.80	4.40
How would you rate your ability to analyze facts and opinions to help make an informed decision	1.60	4.40
How would you rate your ability to Define Leadership	2.40	4.40
How would you rate your ability to Understand your individual Leadership Style	2.40	4.40
How would you rate your ability to Understand how personal values affect decision making	2.40	4.40
How would you rate your ability to appreciate diversity	2.00	4.60
How would you rate your ability to use brainstorming to find solutions	2.00	4.80
How would you rate your ability to appreciate different styles of leadership	1.80	4.80
How would you rate your ability to explain your philosophy of leadership	1.60	4.60
How would you rate your Business Management Skills	3.00	4.40
How would you rate your Marketing Skills	2.60	4.60
How would you rate your Record Keeping Skills	2.20	4.40
How would you rate your awareness of Agricultural Policy Issues	1.80	4.60
How would you rate your Legal Risk Analysis – Estate Planning, Wills, etc.	1.80	4.20
How would you rate your ability to create a resource inventory	1.80	4.40
How would you rate your ability to Understand the needs of my community	1.40	4.00
How would you rate your ability to identify local leaders in my community	1.80	4.20
How would you rate your ability to assume a leadership position in my community	1.80	3.80
How would you rate your ability to use local (City & County) resources to meet the needs of my community	1.60	4.00
How would you rate your ability to state resources to meet the needs of my community	1.60	3.80
How would you rate your ability to federal resources to meet the needs of my community	1.40	3.80
How would you rate your ability to improve the quality of life in your community	1.80	4.00
How would you rate your ability to assist others in seeking out agricultural resources in my community	1.40	4.00
How would you rate your ability to assist others in seeking out educational resources in my community	1.40	4.20

Note. M^b = Mean score for item before training; M^a = Mean score for item after training;

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

Table A4

Pre/Post Leadership Development for Vocational Technical (n=4)

Assessment Item	M^b	M^a
How would you rate your ability to communicate effectively	3.00	4.75
How would you rate your ability to motivate your peers	3.25	5.00
How would you rate your ability to work with others	3.25	4.75
How would you rate your ability to assume a leadership position	3.00	4.75
How would you rate your ability to conduct a meeting	2.25	4.50
How would you rate your ability to participate in consensus building	3.25	4.50
How would you rate your ability to serve as a team member	3.00	4.50
How would you rate your ability to build a team	2.75	4.75
How would you rate your ability to participate in group problem solving	3.00	4.75
How would you rate your ability to identify issues of concern within a community	3.25	4.75
How would you rate your ability to participate in group decision making	3.25	4.75
How would you rate your ability to obtain information to help in making decisions	3.00	5.00
How would you rate your ability to analyze facts and opinions to help make an informed decision	3.25	5.00
How would you rate your ability to Define Leadership	3.50	5.00
How would you rate your ability to Understand your individual Leadership Style	3.50	5.00
How would you rate your ability to Understand how personal values affect decision making	3.25	5.00
How would you rate your ability to appreciate diversity	3.00	5.00
How would you rate your ability to use brainstorming to find solutions	3.25	4.75
How would you rate your ability to appreciate different styles of leadership	3.00	4.75
How would you rate your ability to explain your philosophy of leadership	2.25	4.75
How would you rate your Business Management Skills	3.00	4.75
How would you rate your Marketing Skills	3.25	5.00
How would you rate your Record Keeping Skills	2.75	4.75
How would you rate your awareness of Agricultural Policy Issues	3.50	4.75
How would you rate your Legal Risk Analysis – Estate Planning, Wills, etc.	3.25	4.75
How would you rate your ability to create a resource inventory	3.00	4.75
How would you rate your ability to Understand the needs of my community	3.00	4.25
How would you rate your ability to identify local leaders in my community	3.25	4.75
How would you rate your ability to assume a leadership position in my community	3.50	4.50
How would you rate your ability to use local (City & County) resources to meet the needs of my community	3.25	4.75
How would you rate your ability to state resources to meet the needs of my community	3.00	4.75
How would you rate your ability to federal resources to meet the needs of my community	3.25	4.25
How would you rate your ability to improve the quality of life in your community	3.00	4.50
How would you rate your ability to assist others in seeking out agricultural resources in my community	3.25	5.00
How would you rate your ability to assist others in seeking out educational resources in my community	3.25	4.75

Note. M^b = Mean score for item before training; M^a = Mean score for item after training;

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

Table A5

Pre/Post Leadership Development for Some College – No Degree (n=4)

Assessment Item	M^b	M^a
How would you rate your ability to communicate effectively	3.00	4.28
How would you rate your ability to motivate your peers	2.85	4.42
How would you rate your ability to work with others	3.42	5.00
How would you rate your ability to assume a leadership position	3.14	4.57
How would you rate your ability to conduct a meeting	2.85	4.57
How would you rate your ability to participate in consensus building	2.85	4.42
How would you rate your ability to serve as a team member	3.28	4.57
How would you rate your ability to build a team	3.14	4.42
How would you rate your ability to participate in group problem solving	3.14	4.57
How would you rate your ability to identify issues of concern within a community	3.14	4.42
How would you rate your ability to participate in group decision making	3.00	4.28
How would you rate your ability to obtain information to help in making decisions	3.28	4.71
How would you rate your ability to analyze facts and opinions to help make an informed decision	2.85	4.28
How would you rate your ability to Define Leadership	3.14	4.85
How would you rate your ability to Understand your individual Leadership Style	3.00	4.57
How would you rate your ability to Understand how personal values affect decision making	2.85	4.42
How would you rate your ability to appreciate diversity	2.85	4.57
How would you rate your ability to use brainstorming to find solutions	2.71	4.42
How would you rate your ability to appreciate different styles of leadership	2.85	4.57
How would you rate your ability to explain your philosophy of leadership	2.71	4.71
How would you rate your Business Management Skills	3.00	4.75
How would you rate your Marketing Skills	3.00	4.57
How would you rate your Record Keeping Skills	2.85	4.42
How would you rate your awareness of Agricultural Policy Issues	2.85	4.28
How would you rate your Legal Risk Analysis – Estate Planning, Wills, etc.	2.71	4.42
How would you rate your ability to create a resource inventory	2.85	4.42
How would you rate your ability to Understand the needs of my community	3.00	4.28
How would you rate your ability to identify local leaders in my community	2.85	4.28
How would you rate your ability to assume a leadership position in my community	2.42	4.42
How would you rate your ability to use local (City & County) resources to meet the needs of my community	2.57	4.14
How would you rate your ability to state resources to meet the needs of my community	2.71	4.14
How would you rate your ability to federal resources to meet the needs of my community	2.42	4.14
How would you rate your ability to improve the quality of life in your community	2.85	4.42
How would you rate your ability to assist others in seeking out agricultural resources in my community	3.00	4.57
How would you rate your ability to assist others in seeking out educational resources in my community	2.85	4.28

Note. M^b = Mean score for item before training; M^a= Mean score for item after training;

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

Table A6

Pre/Post Leadership Development for Two Year Degree (n=2)

Assessment Item	M^b	M^a
How would you rate your ability to communicate effectively	3.50	4.50
How would you rate your ability to motivate your peers	4.00	4.00
How would you rate your ability to work with others	4.50	5.00
How would you rate your ability to assume a leadership position	3.00	5.00
How would you rate your ability to conduct a meeting	4.00	5.00
How would you rate your ability to participate in consensus building	3.50	4.50
How would you rate your ability to serve as a team member	4.50	5.00
How would you rate your ability to build a team	3.50	4.00
How would you rate your ability to participate in group problem solving	4.00	4.50
How would you rate your ability to identify issues of concern within a community	4.50	4.50
How would you rate your ability to participate in group decision making	4.00	4.50
How would you rate your ability to obtain information to help in making decisions	4.50	4.50
How would you rate your ability to analyze facts and opinions to help make an informed decision	4.50	5.00
How would you rate your ability to Define Leadership	4.00	5.00
How would you rate your ability to Understand your individual Leadership Style	2.00	4.00
How would you rate your ability to Understand how personal values affect decision making	3.00	4.00
How would you rate your ability to appreciate diversity	3.00	4.00
How would you rate your ability to use brainstorming to find solutions	3.50	4.50
How would you rate your ability to appreciate different styles of leadership	3.50	4.50
How would you rate your ability to explain your philosophy of leadership	2.50	3.50
How would you rate your Business Management Skills	3.50	4.50
How would you rate your Marketing Skills	3.00	4.50
How would you rate your Record Keeping Skills	3.50	4.50
How would you rate your awareness of Agricultural Policy Issues	3.00	4.00
How would you rate your Legal Risk Analysis – Estate Planning, Wills, etc.	3.50	4.50
How would you rate your ability to create a resource inventory	2.50	4.00
How would you rate your ability to Understand the needs of my community	4.00	4.50
How would you rate your ability to identify local leaders in my community	4.00	4.50
How would you rate your ability to assume a leadership position in my community	3.50	4.50
How would you rate your ability to use local (City & County) resources to meet the needs of my community	3.50	4.50
How would you rate your ability to state resources to meet the needs of my community	4.00	5.00
How would you rate your ability to federal resources to meet the needs of my community	3.00	4.00
How would you rate your ability to improve the quality of life in your community	3.50	5.00
How would you rate your ability to assist others in seeking out agricultural resources in my community	3.50	5.00
How would you rate your ability to assist others in seeking out educational resources in my community	4.00	5.00

Note. M^b = Mean score for item before training; M^a= Mean score for item after training;

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

Table A7

Pre/Post Leadership Development for College Graduates (n=13)

Assessment Item	M^b	M^a
How would you rate your ability to communicate effectively	3.76	4.46
How would you rate your ability to motivate your peers	3.61	4.61
How would you rate your ability to work with others	4.07	4.76
How would you rate your ability to assume a leadership position	3.53	4.46
How would you rate your ability to conduct a meeting	3.38	4.46
How would you rate your ability to participate in consensus building	3.23	4.30
How would you rate your ability to serve as a team member	3.84	4.38
How would you rate your ability to build a team	3.23	4.15
How would you rate your ability to participate in group problem solving	3.23	4.30
How would you rate your ability to identify issues of concern within a community	3.22	4.66
How would you rate your ability to participate in group decision making	3.55	4.77
How would you rate your ability to obtain information to help in making decisions	3.77	4.88
How would you rate your ability to analyze facts and opinions to help make an informed decision	3.77	4.66
How would you rate your ability to Define Leadership	3.33	4.77
How would you rate your ability to Understand your individual Leadership Style	3.11	4.44
How would you rate your ability to Understand how personal values affect decision making	3.44	4.66
How would you rate your ability to appreciate diversity	3.55	4.77
How would you rate your ability to use brainstorming to find solutions	3.33	4.88
How would you rate your ability to appreciate different styles of leadership	3.22	4.66
How would you rate your ability to explain your philosophy of leadership	2.88	4.66
How would you rate your Business Management Skills	3.00	4.33
How would you rate your Marketing Skills	2.66	4.33
How would you rate your Record Keeping Skills	2.66	4.33
How would you rate your awareness of Agricultural Policy Issues	2.44	4.22
How would you rate your Legal Risk Analysis – Estate Planning, Wills, etc.	2.66	4.22
How would you rate your ability to create a resource inventory	2.77	4.33
How would you rate your ability to Understand the needs of my community	3.00	4.44
How would you rate your ability to identify local leaders in my community	3.22	4.55
How would you rate your ability to assume a leadership position in my community	3.00	4.44
How would you rate your ability to use local (City & County) resources to meet the needs of my community	2.55	4.55
How would you rate your ability to state resources to meet the needs of my community	2.44	4.33
How would you rate your ability to federal resources to meet the needs of my community	2.33	4.11
How would you rate your ability to improve the quality of life in your community	2.88	4.44
How would you rate your ability to assist others in seeking out agricultural resources in my community	2.66	4.66
How would you rate your ability to assist others in seeking out educational resources in my community	3.22	4.77

Note. M^b = Mean score for item before training; M^a= Mean score for item after training;

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

Table A8

Pre/Post Leadership Development for Graduate/Professional (n=9)

Assessment Item	M^b	M^a
How would you rate your ability to communicate effectively	3.76	4.46
How would you rate your ability to motivate your peers	3.61	4.61
How would you rate your ability to work with others	4.07	4.76
How would you rate your ability to assume a leadership position	3.53	4.46
How would you rate your ability to conduct a meeting	3.38	4.46
How would you rate your ability to participate in consensus building	3.23	4.30
How would you rate your ability to serve as a team member	3.84	4.38
How would you rate your ability to build a team	3.23	4.15
How would you rate your ability to participate in group problem solving	3.23	4.30
How would you rate your ability to identify issues of concern within a community	3.22	4.66
How would you rate your ability to participate in group decision making	3.55	4.77
How would you rate your ability to obtain information to help in making decisions	3.77	4.88
How would you rate your ability to analyze facts and opinions to help make an informed decision	3.77	4.66
How would you rate your ability to Define Leadership	3.33	4.77
How would you rate your ability to Understand your individual Leadership Style	3.11	4.44
How would you rate your ability to Understand how personal values affect decision making	3.44	4.66
How would you rate your ability to appreciate diversity	3.55	4.77
How would you rate your ability to use brainstorming to find solutions	3.33	4.88
How would you rate your ability to appreciate different styles of leadership	3.22	4.66
How would you rate your ability to explain your philosophy of leadership	2.88	4.66
How would you rate your Business Management Skills	3.00	4.33
How would you rate your Marketing Skills	2.66	4.33
How would you rate your Record Keeping Skills	2.66	4.33
How would you rate your awareness of Agricultural Policy Issues	2.44	4.22
How would you rate your Legal Risk Analysis – Estate Planning, Wills, etc.	2.66	4.22
How would you rate your ability to create a resource inventory	2.77	4.33
How would you rate your ability to Understand the needs of my community	3.00	4.44
How would you rate your ability to identify local leaders in my community	3.22	4.55
How would you rate your ability to assume a leadership position in my community	3.00	4.44
How would you rate your ability to use local (City & County) resources to meet the needs of my community	2.55	4.55
How would you rate your ability to state resources to meet the needs of my community	2.44	4.33
How would you rate your ability to federal resources to meet the needs of my community	2.33	4.11
How would you rate your ability to improve the quality of life in your community	2.88	4.44
How would you rate your ability to assist others in seeking out agricultural resources in my community	2.66	4.66
How would you rate your ability to assist others in seeking out educational resources in my community	3.22	4.77

Note. M^b = Mean score for item before training; M^a= Mean score for item after training;

Note. 5=Very Good; 4=Good; 3=Fair; 2=Poor; 1=Very Poor

APPENDIX B

SURVEY

 A study developed and conducted by Allen Malone a student in the Department of Agricultural Leadership, Education and Communications at Texas A&M University.

[**Small Farmer Agricultural Leadership Training Institute**]

This Survey is completely confidential and purely for educational and research purposes only. The researcher of this study hopes to gain a better understanding of the effectiveness of leadership development programs and the impact it has on local communities**.**

Small Farmer Agricultural Leadership Training Institute

The questions that follow will focus on how you rate your skill levels BEFORE and AFTER your participation in the Small Farmer Agricultural Leadership Training that you participated in through Southern University in Louisiana. The instrument is broken into 5 different sections including a demographic section. Please remember that all personal information within this survey will be kept confidential and your identity will not be released with your responses in any way. Please take a few moments to complete the entire form.

Part I – Leadership Skill Development

Directions: Please rate your Leadership Skills based on each of the criteria statements below. Check the appropriate box from **1 = Very Poor** to **5 = Very Good** under the rating that best describes your ability *both* **BEFORE** your participation in the Institute and your ability **NOW**.

LEADERSHIP SKILL DEVELOPMENT	BEFORE					NOW				
How would you rate your ability to:	Very Poor 1	Poor 2	Fair 3	Good 4	Very Good 5	Very Poor 1	Poor 2	Fair 3	Good 4	Very Good 5
Communicate effectively										
Motivate your peers										
Work with others										
Assume a leadership position										
Conduct a meeting										
Participate in consensus building										
Serve as a member of a team										
Build a team										
Group problem solving										
Identify issues of concern within a community										
Participate in group decision making										
Obtain information to help in making decisions										
Analyze facts and opinions to make an informed decision										

Part II – Leadership Theory

Directions: Please rate your understanding of Leadership Theory based on each of the criteria statements below. Check the appropriate box from **1 = Very Poor** to **5 = Very Good** under the rating that best describes your ability *both* **BEFORE** your participation in the Institute and your ability **NOW**.

LEADERSHIP THEORY	BEFORE					NOW				
How would you rate your ability to:	Very Poor 1	Poor 2	Fair 3	Good 4	Very Good 5	Very Poor 1	Poor 2	Fair 3	Good 4	Very Good 5
Define leadership										
Understanding of your individual leadership style										
Understand how personal values affect decision making										
Appreciate diversity										
Use brainstorming to find solutions										
Appreciate different styles of leadership										
Explain your Philosophy of Leadership										

Part III – Enhancing Agricultural Skills

Directions: Please rate your level of Agricultural Skills based on each of the criteria statements below. Check the appropriate box from **1 = Very Poor** to **5 = Very Good** under the rating that best describes your ability *both* **BEFORE** your participation in the Institute and your ability **NOW**.

AGRICULTURAL SKILL DEVELOPMENT	BEFORE					NOW				
How would you rate your:	Very Poor 1	Poor 2	Fair 3	Good 4	Very Good 5	Very Poor 1	Poor 2	Fair 3	Good 4	Very Good 5
Business Management Skills										
Marketing Skills										
Record Keeping										
Awareness of Agricultural Policy Issues										
Legal Risk Analysis – estate planning, wills										
Ability to Create a Resource Inventory										

Part IV –Leadership Transformation

Directions: Please rate your level of using your leadership skills to enhance your community based on each of the criteria statements below. Check the appropriate box from **1 = Very Poor** to **5 = Very Good** under the rating that best describes your ability *both* **BEFORE** your participation in the Institute and your ability **NOW**.

LEADERSHIP TRANSFORMATION	BEFORE					NOW				
How would you rate your:	Very Poor 1	Poor 2	Fair 3	Good 4	Very Good 5	Very Poor 1	Poor 2	Fair 3	Good 4	Very Good 5
Ability to understand the needs of my community										
Ability to identify local leaders in my community										
Ability to assume a leadership position in my community										
Ability to use *Local (City and County)* Resources to meet the needs of my community										
Ability to use *State* Resources to meet the needs of my community										
Ability to use *Federal* Resources to meet the needs of my community										
Ability to improve the quality of life in your community										
Ability to assist others in seeking out *agricultural* resources in my community										
Ability to assist others in seeking out *educational* resources in my community										

Part V- Demographic Information - Please rate each of the criteria statements below. Check the appropriate box that best describes you.

1.   **SEX** ☐ Male   ☐ Female

2.   **AGE** ☐ 20 – 29   ☐ 30 - 39   ☐ 40 – 49   ☐ 50 – 59   ☐ 60 – 69   ☐ 70+

3.   **RACE** ☐ African-American (Black)   ☐   Caucasian (White)   ☐   Asian/Pacific Islander

        ☐ Hispanic   ☐ Other

4.   **EDUCATION**
     (Check highest level completed)

     _____   Some high school
     _____   H.S. Graduate / G.E. D.
     _____   Vocational / Technical training
     _____   Some college (less than 4 years)
     _____   Two year degree
     _____   College graduate
     _____   Graduate / professional degree

APPENDIX C

Small Farmer Agricultural Leadership Training Institute

Mid-term Evaluation

The Small Farmer Agricultural Leadership Training Institute's Leadership Team would like your feedback concerning your experience thus far. Please take a few moments to complete the entire form and either fax it 225-771-XXXX mail it back in the self-addressed stamped envelope provided immediately.

Please be as truthful and honest with your feedback. We will use this information to address programming beginning in October and for future classes.

Part I Demographic Information

    1.   Sex   _____ Male _____ Female

    2.   Age   _____

    3.   Race   _____   (please specify)

    4.   Highest level of education   _____   Some high school
              (check level completed)   _____   H.S. Graduate / G.E. D.
                                 _____   Vocational / Technical training
                                 _____   Some college (less than 4 years)
                                 _____   Two year degree
                                 _____   College graduate
                                 _____   Graduate / professional degree

Part II Leadership Training and Quality of Instruction

1. Have you received leadership training prior to participating in the Small Farmer Agricultural Leadership Training Institute?

   _____ Yes _____ No

2. Do you feel that the training you received in the Small Farmer Agricultural Leadership Training Institute has adequately prepared you to make better decisions concerning your agricultural endeavors?

   _____ Yes _____ No

3. Since participating in the Small Farmer Agricultural Leadership Training Institute, would you say that your leadership **potential** has (circle the number):

   1. Declined significantly
   2. Declined somewhat
   3. Remained about the same
   4. Increased somewhat
   5. Increased significantly

4. Since participating in the Small Farmer Agricultural Leadership Training Institute, would you say that your leadership **behavior** has (circle the number):

   1. Not changed
   2. Changed slightly
   3. Changed moderately
   4. Changed significantly
   5. Changed extremely significantly

Using the scale below, place the number in the space provided which most closely represents your level of satisfaction with each statement.

1. Extremely Satisfied
2. Somewhat Satisfied
3. Neutral
4. Somewhat Dissatisfied
5. Extremely Dissatisfied

5. _____ Overall quality of the instruction.

6. _____ Relevance of the topics to your specific agricultural needs.

7. _____ Interactive nature of the instruction.

8. _____ Opportunity to interact with other participants during the sessions.

9. _____ Amount of new information / learning obtained.

10. _____ Opportunity for post-training communication with other participants.

11. _____ Applicability of the program to your career development needs.

APPENDIX D

Pre & Post Survey Questions from the Kelsey and Wall Study in 2003.

SECTION I

I help people understand each other so they can reach a common ground.

I have knowledge of city infrastructure and support systems.

I have knowledge of county infrastructure and support systems.

I have knowledge of state infrastructure and support systems.

I know how to access city infrastructure and support systems.

I know how to access county infrastructure and support systems.

I know how to access state infrastructure and support systems.

I actively use city resources to meet the needs in my community.

I actively use county resources to meet the needs in my community.

I actively use state resources to meet the needs in my community.

I am aware of the needs of my community.

I use leadership skills in different settings.

I can identify local leaders in my community.

I understand my own weaknesses.

I understand my own strengths.

I respect a variety of leadership styles.

I utilize different leadership styles in different situations.

I allow others to take a leadership role when appropriate.

I can be a follower.

I can become a leader in situations.

I assist organizations to think and act in different ways.

I can effectively lead volunteer organizations.

I have a good understanding of public issues in my community.

I am well qualified to participate in public issues.

I have enough knowledge to do a good job in public office.

I have the skills to do a good job in public office.

I have the desire to run for a public office.

SECTION II

I actively strive to improve the quality of life in my community.

I am very active in recruiting new industries for my community.

I am very active in making efforts to improve and expand local education.

I am very active in seeking out special development programs in agriculture or industry.

I am very active in making efforts to improve the well being of the disadvantaged in my community.

I am very involved in projects concerned with community water resources.

I work in retaining current business and industry.

SECTION III

I take a very active role in improving my community.

I actively listen to the needs of lower economic status individuals in my community.

I actively voice the concerns of individuals of lower economic status in my community.

I regard the needs of all citizens in my community regardless of economic status.

I actively reach out to individuals of lower economic status than me to increase their participation in political or policy issues.

I actively work to close the participation gap between citizens of higher and lower economic status in my community.

I help to expand local participation in policy issues.

VITA

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EDUCATION:

08/2010	Texas A&M University & Texas Tech University Ed.D – Agricultural Education, Dissertation Title: *The Effectiveness of Leadership Development Programs on Small Farm Producers.*
08/1993	Prairie View A&M University, Prairie View, Texas M.S. – Agricultural Economics, Thesis Title: *The Impact of the North American Free Trade Agreement on Texas Rice Producers.*
08/1990	Prairie View A&M University, Prairie View, Texas B.S. – Agriculture: Concentration in Agricultural Economics

PROFESSIONAL EXPERIENCE:

02/1994 – 05/2002	Extension Agent –Prairie View A&M University (CEP) Provided educational programs in the area of agriculture and natural resources for the citizens of Dallas County, Texas.
06/2002 – 04/2008	Extension Program Specialist –Prairie View A&M University Provided educational support to county extension agents in the areas of risk management and agricultural economics.
05/2008 – Present	Associate County Extension Director –Texas AgriLife Extension Provide day to day management of agents and staff of the county extension program in Harris County, Texas.