The Impact of Middle School Agricultural Education Programs as Perceived by Georgia Middle School Principals

by

Quinton C. Hadsock

(Under the Direction of Jason Peake)

ABSTRACT

The purpose of this study was to determine Georgia middle school principal's perceptions of agricultural education. According to the 10 x 15 Long Range Goal for Agricultural Education, "By 2015 there will be in operation 10,000 quality agricultural education programs serving students through an integrated model of classroom/laboratory instruction, experiential learning, and leadership and personal skill development" (National FFA Organization, a, 2009). Installing middle school agricultural education programs is one avenue to potentially meet this goal (Rayfield & Croom, 2007). The likelihood of having a quality agricultural education program is increased when administrative support is present (Kalme & Dyer, 2000). This quantitative study examines seventy-four Georgia middle school principals that have agricultural education programs at their school to determine their perception of agricultural education. Conclusions include principals have a perceived knowledge of agricultural education, principals perceive that agricultural education has a positive impact on student grades and test scores in math and science, and principals perceive that agricultural education has a positive impact on student leadership. The researcher recommends that the study should be duplicated individually in other states and collectively across the nation; research should be conducted to compare how principals without agricultural education programs perceive agricultural education; principals should be educated on the duties of a FFA advisor and the parts of agricultural education; principals should be educated on the benefits of agricultural education; and research should be conducted to compare principals perception of agricultural education's impact on student leadership to other student leadership organization's impact on students leadership.

Index Words: Principals Perception, Middle School Agricultural Education, Leadership Development, CRCT, Student Grades

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B.S.A., University of Georgia, 2006

A Thesis Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment

of the Requirements for the Degree

MASTER OF AGRICULTURAL LEADERSHIP

ATHENS, GEORGIA

2009

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December 2009

Dedication

This is dedicated to my wife Amanda. You make me strive to be a better person in all aspects of life and you are the reason I want to better myself. The Bible says, "Where there is no vision, the people perish". You help me realize my vision.

Acknowledgements

An extra special thanks goes to Drs. Jason Peake, Dennis Duncan, and John Ricketts for the help I received from you throughout the time I have been a student at UGA. Thank you for helping make my research project a success and thank you for helping me become competent in the agricultural education profession. I am forever grateful.

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Chapter 1

Introduction

Background and Setting

Agricultural education has benefited many people throughout the years (Wang & King, 2009; Dyer & Williams, 1997). Former United States President Jimmy Carter, and current United States Senators Kevin Breene from Rhode Island, Taylor Brown from Montana, Sam Brownback and Roger Breske from Wisconsin all were FFA members before they became politicians (Wikipedia, 2009). Dormody and Seevers (1994) concluded that participation in agricultural education's FFA leadership activities promoted leadership skill development. These findings were confirmed in a similar study done by Seevers and Dormody (1994) on 4-H members. Agricultural education not only benefits the student by increasing leadership development but by increasing agricultural literacy (Fritz & Moody, 1997), and intellectual achievement (Knobloch, 2003). In addition to leadership development, Stevens (2007) found that middle school students that have an agricultural education program at their school, scored higher on the science portion of the Criterion-Referenced Competency Test (CRCT). Furthermore, Balschweid and Thompson (2000) found that students taught by integrating science and agriculture demonstrated higher achievement levels than students taught in conventional methods.

Benefits of agricultural education including increased agricultural literacy, responsibility, respect and speaking ability have been documented (Rossetti, Padilla, & McCaslin, 1992) as well as a need for programs in middle schools (Jewell, 1989). The

need for increased numbers of agricultural education programs is being met with a willingness to implement them, Fritz and Moody (1997) found that respondents that did not have a middle school program implemented at their school would like to implement one. Rayfield and Croom (2007) state that, "According to the 10x 15 Long-Range Goal for Agricultural Education, there will be 10,000 quality agricultural education programs that serve student through classroom instruction, supervised agricultural experience, and FFA programs by year 2015. One avenue of potential growth is to create more middle school agricultural education programs" (p. 722). Kantrovich (2007) warned, "The National Council for Agricultural Education's 10x15 goal of having 10,000 quality programs by 2015 will be a very difficult goal to meet", therefore for this to happen, school administrators must have a positive perception of agricultural education.

Administrators typically have a positive attitude toward agricultural education (Kalme & Dyer, 2000) but that is only if they are aware of the benefits. Kalme and Dyer (2000) also state, "If principals are interested in, knowledgeable about, have a positive image of, and are involved in agricultural education programs, they will likely support the program in both words and actions. Consequently, if beliefs are negative; interest, knowledge, image and activities of support will likely also be limited" (p.117). Middle School principals that have never been exposed to agricultural education have no idea of how an agricultural education program could benefit the students of their schools. Once principals realize these benefits, agricultural education can gain administrative support, Rayfield and Wilson (2008) state that, "Examining principal's views of career and technical education programs may give some indication as to the climate in which those programs are conducted. If we can understand what affects principal's perceptions we

can better address those attitudes and work toward improving the principal's views which in turn can strengthen career and technical education" (p. 2).

With the need for middle school programs comes a need for administrator awareness of agricultural education, this is how the need for this study came about. Middle school principles without agricultural education programs can use this study to better understand how other principals perceive agricultural education programs in their schools. Uninformed principals will be able to make an informed decision about implementing an agricultural education program in their school.

Statement of Problem

The purpose of this study was to determine how middle school principals perceive middle school agricultural education programs. The problem of this study was to determine how individual middle school principals, that have active middle school agricultural education programs in their schools, perceive agricultural education. Many benefits of agricultural education (Dormody & Seevers, 1994; Knobloch, 2003; Balschweid & Thompson, 2000; Rossetti, Padilla, & McCaslin, 1992) and a desire to implement agricultural education programs (Fritz & Moody, 1997) have been documented. The need to inform principals interested in starting an agricultural education program in their school about their peers' perceived benefits of middle school agricultural education makes this study important (Rayfield & Wilson, 2008). The researcher intends to satisfy this need by demonstrating Georgia middle school principal's perceptions of how agricultural education impacts test scores, and student leadership in Georgia.

Significance of the Study

Little research exists on principals' perceptions of middle school agricultural education. With research showing that Criterion-Referenced Competency Test (CRCT) scores are higher in schools with agricultural education programs, (Stevens, 2007), principal perception of agricultural education should be positive. Without research showing principal's perception, then administrative support of middle school agricultural education is unknown.

This study examined the perceptions of middle school principals in Georgia on agricultural education programs. School systems across Georgia can consult this study to determine how middle school principals that have a fully functional agricultural education program at their school perceive agricultural education. While the sampling frame of this study was only state wide. This will give the citizens and school board members of systems interested in installing a middle school agricultural education program something to base their decisions on.

Objectives

The primary purpose of the study was to determine how middle school principals perceive middle school agricultural education programs. The specific objectives were:

1. To determine principals perceived knowledge of agricultural education;
2. To determine the principals' perceptions of the impact an agricultural education program has on student grades and test scores in math, and science at their school; and
3. To determine the principals' perceptions of the impact an agricultural education program has on student leadership at their school.

Limitations and Delimitations

The following were limitations of the study:

1. Principles of schools in Georgia with grades 6-8 only that have Agricultural Education programs

The following were delimitations of the study:

1. Principles of middle schools in Georgia without Agricultural Education programs
2. Principles of middle schools not in Georgia
3. Principles of primary, elementary and high schools
4. Vocational supervisors, assistant principals or teachers

Assumptions of Study

The following are assumptions of the study:

1. Middle school principals are capable of determining their familiarity with agricultural education
2. Middle school principals are capable of determining the impact of agricultural education on their particular schools

Definition of Terms

The following terms have been defined:

Criterion-Referenced Competency Test (CRCT)

The Criterion-Referenced Competency Test is an assessment designed to measure how well students acquire the skills and knowledge described in the Georgia Performance Standards (GPS). (Georgia Department of Education, a, 2005-2008).

Georgia Performance Standards (GPS)

The Georgia Performance Standards provide clear expectations for instruction, assessment, and student work. They define the level of work that demonstrates achievement of the standards, enabling a teacher to know "how good is good enough." (Georgia Department of Education, b, 2008).

Middle School Agricultural Education Program

A middle school agricultural education program is a program of instruction that uses agriculture related classroom instruction, Supervised Agricultural Experience Programs (SAE), and membership in the National FFA organization.

Middle School Principal

A middle school principal is the chief administrator for a school that provides instruction to students in grades 6, 7, and 8.

National Council for Agricultural Education

The premier leadership organization for shaping and strengthening school based agricultural education at all levels in the United States (National FFA Organization, b, 2008).

National FFA Organization (FFA)

The National FFA Organization is an American youth organization known as a Career and Technical Student Organization, based on middle and high school classes that promote and support agricultural education. (Wikipedia, 2009).

Supervised Agricultural Experience (SAE)

Supervised agricultural experience programs (SAE) are planned activities related to agriculture that support skill competency development, career success and the

application of specific agricultural and academic skills a student has learned through classroom instruction. (National FFA Organization, b, 2008).

Smith-Hughes National Vocational Education Act

The Smith-Hughes National Vocational Education Act is federal legislation that provides financial reimbursement to public schools for the administration of vocational agriculture education programs. (National FFA Organization, b, 2008).

4-H

4-H in the United States is a youth organization administered by the Cooperative State Research, Education, and Extension Service of the United States Department of Agriculture, with the mission of "engaging youth to reach their fullest potential while advancing the field of youth development. (Wikipedia, 2009).

10 x 15 Long-Range Goal for Agricultural Education

10 x 15 is the ambitious, long-range strategic goal for agricultural education. The focus of this unprecedented effort is to create new programs in communities not yet served by agricultural education and FFA and to strengthen the quality of current programs providing personal, academic and career education in agriculture. (National FFA Organization, a, 2009).

Chapter 2

Review of Literature

This chapter includes a review of related literature. The findings are divided into three major categories: agricultural education, middle school agricultural education programs and the perception of agricultural education.

Agricultural Education

The National FFA Organization (b, 2008) states that agricultural education programs are divided into three parts: classroom/laboratory instruction, supervised agricultural experiences and the FFA student leadership organization. Classroom and Laboratory instruction is done by an agricultural educator. They are normally certified teachers in the area of agriculture.

> More than 11,000 teachers deliver an innovative, cutting edge and integrated curriculum to students. In 2001, 59% of qualified agricultural education graduates pursued teaching as a career; over 35 agriculture programs closed due to lack of a qualified teacher and 365 agriculture teachers teach in more than one school 23% of teachers have five or fewer years of teaching experience. The shortage of qualified teachers is the greatest challenge facing FFA and agricultural education. (National FFA Organization, b, 2008)

Supervised agricultural experience programs (SAE) are a part of agricultural education that students do at home. Students use this program to practice things that

they learned in the classroom and laboratory. (Lee, 2003) The National FFA Organization states:

> Supervised agricultural experience programs (SAE) are planned activities related to agriculture that support skill competency development, career success and the application of specific agricultural and academic skills a student has learned through classroom instruction. A SAE program is the actual, hands-on application of concepts and principles learned in the agricultural education classroom. Students are supervised by agricultural education teachers in cooperation with parents, employers and other adults who assist them in the development and achievement of their educational and career goals. FFA provides support materials to local teachers who implement effective SAE programs, along with motivational activities and award incentives available through funds raised by the National FFA Foundation. (National FFA Organization, b, 2008)

FFA is a club or student organization designed to help students become leaders, become familiar with different agricultural related careers and provides opportunities for students to grow personally. (Lee, 2003) The National FFA organization states:

> FFA is a student leadership organization open to any student enrolled in an agricultural class in grades 7-12 in a public school. FFA uses agricultural education to create real-world success.

> Agricultural teachers become advisors to local FFA chapters, which students join. More than 7,000 FFA chapters are currently in existence; their programs are managed on a local, state and national level. Each chapter's Program of Activities is designed with the needs of the students in mind. Activities vary greatly from school to school, but are based in a well-integrated curriculum. Chapter activities and FFA programs concentrate on three areas of our mission: premier leadership, personal growth and career success. FFA is celebrating 75 years of achieving student success. For 75 years, our ability to develop the social, practical and academic strengths of youth has made FFA a model for educational programs worldwide. (National FFA Organization, b, 2008)

Agricultural Education officially began in 1917 with the signing of the Smith-Hughes National Vocational Education Act which established vocational agriculture courses. The National FFA Organization started in 1928 but was originally called the Future Farmers of America. The name was changed in 1988 to recognize the change in agricultural education to include non-traditional agricultural careers. Also occurring in 1988, delegates voted to open FFA membership to middle school students. (National FFA Organization, b, 2008)

The National FFA Organization (a, 2009) states that the agriculture industry has an increased demand to meet the worlds demand for food, agricultural education is planning to try to help reach that goal by providing quality education in the area of agriculture. The National Council for Agriculture Education has developed a plan, called the 10 x 15: Long Range Goal for Agricultural Education, to have 10,000 quality

agricultural education programs by the year 2015. A demand for student achievement and leadership development has fueled this initiative and is helping to make this goal a reality. This plan has eight themes with goals and initiatives to meet this goal. The themes and goals for each are:

1. Program quality-define quality programs
2. Innovative program models-maintain quality agricultural education models
3. Continuous improvement through research and evaluation-educators continue to improve
4. Highly qualified educator supply-obtain quality educators
5. Partners and Resource Development-provide opportunities for collaboration
6. Promotion and Advocacy-develop a promotional plan
7. Agricultural Education Leadership-strengthen agricultural education leadership
8. Coordinated Growth Plan-states have growth plans that coordinates with national plan (National FFA Organization, a, 2009).

Middle School Agricultural Education Programs

Many reasons exist for having an agricultural education program in middle schools. Rossetti, Padilla and McCaslin (1992) reported that middle school teachers felt that agricultural education programs benefited students in the following ways:

1. increased agricultural awareness
2. increase enrollment of secondary agricultural education programs
3. participation in FFA
4. career awareness
5. leadership development
6. reduced drop out rates

7. increased self esteem
8. occupational exploration
9. increased responsibility
10. increased respect
11. increased human relations skills
12. increased speaking ability
13. increased student recognition
14. increasing enrollment of non-traditional students

Students may choose not to enroll in agricultural education once they reach high school. Since this is true, agricultural education in middle school could be critically important.

> Students need to be educated about the importance of agriculture to our society to ensure that they make informed decisions. (Fritz & Moody, 1997)

Brown and Stewart (1993) found that a student's knowledge of agriculture is not strongly correlated with their attitude toward it. This being the case, the need for agricultural literacy is increased. While the attitude toward agriculture may not be affected, agricultural literacy will at least give a person a basis for making decisions.

Middle school agricultural education programs are beneficial to both the state the program is in and the students involved. Rossetti and McCaslin (1994) surveyed state FFA executive secretaries and they concluded that agricultural awareness, agricultural career awareness, hands on experiences, and a boost to secondary agricultural education enrollment were all benefits of having a middle school agricultural education program. Only a few disadvantages were cited by the executive secretaries.

Middle grades are a time of self discovery and teaching methods should reflect this. Middle school students may not have had enough time to develop their motivational needs. This fits right into the model of middle school agricultural education. An exploratory type of teaching method is used to deliver material about all parts of agriculture. A very basic understanding of all types of agricultural principles is the goal of many middle school programs. (Rohs & Anderson, 2001)

Dyer and Breja (2003) identified the problems with recruiting quality students into agricultural education programs. They concluded that the ten major problems teachers face with recruitment and retention of quality students are: scheduling difficulties, finding time to recruit, student involvement in other activities, access to students, competition from other programs, lack of guidance counselor support, increased graduation requirements, image of agriculture, lack of interest in agriculture and block scheduling. Out of the ten responses, at least four of them can be impacted by having middle school agriculture education.

Perceptions of Agricultural Education

Very little research exists about the perceptions of middle school agricultural education programs but there is some research that covers the perceptions of agricultural education.

Benefits of agricultural education have been established but agricultural education can not be beneficial to students if they are not enrolled in a fully functional program. It would be valuable to know how administrators and decision makers perceive agricultural education programs. Perception refers to an individual's current appraisal of an object, or program (Hinkson & Kieth, 2000).

Administrators tend to agree with the philosophy of vocational preparation as the purpose for the existence of agricultural education programs (Jewell, 1989). Other studies (Hinkson & Kieth, 2000; Kalme & Dyer, 2000) have concluded that administrators have a positive attitudes and perceptions toward agricultural education but Kalme and Dyer (2000) recommended that further research be conducted on these perceptions and also state that principals must have a positive image of agricultural education or programs will be limited.

Perceptions of other school personnel have also been researched. Guidance counselor's perceptions were studied by Woodard and Herren (1995). Their research method consisted of a list of statements that the counselors responded to. They concluded that as a group guidance counselors were positive about the benefits of agricultural education. Their research could be helpful in developing a similar study. While a guidance counselor would not be making decisions regarding the instillation of an agricultural education program, their perception may be important to administrators making these decisions.

Other recommendations from past research conclude that the number of introductory agricultural courses should be increased and that this might be accomplished best by offering agricultural education programs in middle and elementary schools (Jewell, 1989).

Riesenberg and Lierman (1990) analyzed the perception of administrators and teachers on factors influencing enrollment in agricultural education. They tested the perceptions on a list of factors that could influence enrollment. They concluded that scheduling conflicts, change in students' interests and attitudes toward agriculture, competition with other elective courses, and academically oriented students guided

away from secondary agriculture were the major factors that influence enrollment. Their research method could be helpful in creating tools for further research.

Summary

Very little research exists of middle school principals perception of agricultural education. Many benefits of agricultural education has been documented (Rossetti, Padilla, & McCaslin, 1992; Wang and King, 2009) and agricultural education has a positive perception among school administrators (Hinkson & Kieth, 2000; Kalme & Dyer, 2000). Kalme and Dyer (2000) state that principals must have a positive image of agricultural education or programs will be limited. The National Council for Agricultural Education has a goal of more agricultural education programs (National FFA Organization, a, 2009) and middle schools have been targeted as a potential avenue for meeting this goal (Rayfield & Croom, 2007).

Chapter 3

Methodology

Research Design

This study is descriptive in nature utilizing survey research methods; descriptive research is a type of quantitative research. The survey was conducted through an electronic mail questionnaire that will collect ordinal and ratio data.

Variables

The variables that are under investigation for this study are:

1. Principal familiarity with the agricultural education program at their respective schools.
2. Principal perception of the impact that agricultural education has on student math and science grades and test scores.
3. Principal perception of the impact that agricultural education has on student leadership.

Population

The population of this study was all middle school principals in Georgia with active agricultural education programs. A list was compiled from the Georgia Agricultural Education website (http://www.gaaged.org) of all Georgia middle schools with agricultural education programs. This list contained 74 middle schools from across the state of Georgia. Once the list was completed, the researcher obtained email

addresses of the principals of those schools along with fax numbers for each school from the Georgia Department of Education website (http://www.doe.k12.ga.us/). The researcher also obtained the email addresses of the agricultural education teachers at each school. The teacher's email addresses were obtained from the Georgia Agricultural Education website.

Surveying Procedure

The target population for this study included all principals of middle schools in Georgia that have an active agricultural education program. There are 74 middle school agricultural education programs in Georgia. Since the number of programs was small enough to handle, a census was conducted.

Instrumentation

Validity is, "the extent to which the instrument measures what it is supposed to measure", and reliability is, "the consistency with which a measuring instrument yields a certain result when the entity being measured has not changed" (Leedy & Ormrod, 2005). In order to ensure reliability and validity, the researcher attempted to find an instrument that has been tested. Since this study is unique and an instrument that met the needs of this study did not exist, two separate instruments were combined to yield one reliable yet valid surveying instrument. The first study that was used to create the instrument was done by Hinkson and Kieth (2000). This study was done in Texas and dealt with the, "Attitudes and Perceptions of High School Administrators". The other study that was used to create the instrument was done by Dormody and Seevers (1994). Their research concentrated on leadership development through agricultural education.

In order to ensure instrument reliability SPSS 16.0 was utilized to calculate the Cronbach's coefficient alpha for each construct of the instrument and the entire instrument. The alpha levels for construct 1 (familiarity), construct 2 (math and science), and construct 3 (leadership) were 0.97, 0.91, and 0.85 respectively. Additionally the alpha level for the entire instrument was calculated to be 0.91.

Data Collection

Once the email addresses and fax numbers were obtained for the principals and agricultural education teachers, the researcher began sending emails that contained a letter of intent along with the survey. Dillman (2000) recommends five contacts should be made to maximize response. To heed this recommendation, five rounds of emails continued over the next few weeks to ensure that the principals had a chance to respond. After five rounds of emails, the researcher sent the letters of intent and the surveys to the agricultural education teachers of the schools whose principals had not responded. After waiting two weeks to give the teachers and principals a chance to respond, the researcher faxed the letter of intent along with the survey to the schools whose principal had not responded. Of the 74 principals surveyed, 33 responded producing a 45% response rate. In order to control for non-respondents early and late-responders were compared and no significant difference was found between these groups (Linder, Murphy, & Briers, 2001).

Data Analysis

Microsoft Excel was used to complete the statistical analysis of the data collected. For the Personal Data portion of the instrument, the frequency of each response was used to

show how many times each option was chosen. In the familiarity, grades and test scores, and leadership section of the instrument the mean and standard deviation was used to show how the principals perceived each statement.

Chapter 4

Findings

The majority of principals, 23 out of 32 respondents, responded that the number of years that they have been a principal ranged between 1 and 11 years and 29 out of 32 responded that the number of years that they have been at their respective schools ranges between 1 and 7 years. Over half of the principals surveyed have worked with the Agricultural Education teacher currently at their school. These figures are displayed in Table 1.

Table 1-Personal data of Georgia middle school principals

How long …	Less than 1 year	1-3 years	4-7 years	8-11 years	12-15 years	15 years or greater
…have you served as a principal?	2	12	9	8	0	1
…have you served as principal at the school you are currently at?	3	16	10	2	1	0
…has the current Agricultural Education teacher served at your school?	2	17	9	3	1	0

The first question in Table 2 displays some data where the principals were asked to give the zip code of their school. The responses to this question were compiled by population using the 2000 census data. This information was compiled from the United States Census Bureau website which is located at http://factfinder.census.gov/servlet/SAFFPopulation. The remaining questions in

Table 2-Personal data of Georgia middle school principals continued.

What is the zip code of the school you are currently serving at?		Frequency
A.	Zip Code has less than 5,000 people	3
B.	Zip Code has 5,001 to 10,000 people	9
C.	Zip Code has 10,001 to 25,000 people	16
D.	Zip Code has more than 25,000 people	3
What is your gender?		Frequency
A.	Female	12
B.	Male	20
What was your job title before becoming a principal?		Frequency
A.	Classroom Teacher	4
B.	Agricultural Education Teacher	0
C.	Athletic Coach	2
D.	Assistant Principal	30
E.	Other	0
Which of the following describes the environment in which you were raised?		Frequency
A.	Rural farm or ranch	5
B.	Rural but not farm/ranch	13
C.	City 2,500 to 10,000	6
D.	City 10,000 to 50,000	4
E.	City over 50,000	4
To which age group do you belong?		Frequency
A.	30 years or younger	0
B.	31-39 years	6
C.	40-49 years	18
D.	50-59 years	5
E.	60 years or over	3
As a principal, how many years have you worked with Agricultural Education teachers?		Frequency
A.	1-5 years	21
B.	6-10 years	8
C.	11-15 years	1
D.	16-20 years	2
E.	Over 20 years	0
I enjoy my job as a principal.		Frequency
A.	Strongly agree	31
B.	Agree	1
C.	Disagree	0
D.	Strongly disagree	0

Table 2 display more data. Over 60% of the principals that responded were male and over 90% of them surveyed as an assistant principal before they became a principal.

Over half of the principals that responded were raised in a rural area and about 55% of them were between the age of 40 and 49 (Table 2).

Almost 94% of respondents did not hold a degree in Agricultural Education. Almost 79% of respondents were never in FFA and over 75% did not have children that were ever in FFA. Over half of respondents have participated as a member or volunteer in an agriculturally-related program excluding FFA and almost half of respondents have children that have participated as a member or volunteer in an agriculturally-related program excluding FFA. Almost 64% of respondents have worked with Agricultural Education teachers between 1 and 5 years and almost 94% of respondents enjoy their job as principal (Table 3).

Table 3-Personal data of Georgia middle school principals continued.

	Yes	No	I do not have children
Do you hold a degree in Agricultural Education or a closely related field?	1	31	n/a
Were you ever a member of FFA?	6	26	n/a
Have your children ever been members of the FFA?	7	25	0
Have you ever participated as a member or volunteer in an agriculturally related program excluding FFA, such as 4-H or Georgia Young Farmers?	17	15	n/a
Have your children ever participated as a member or volunteer in an agriculturally related program excluding FFA, such as 4-H or Georgia Young Farmers?	16	16	0

Objective 1- To determine how familiar the principals are with Agricultural Education.

Principals were asked to respond to a series of statements that would help determine how familiar they were with Agricultural Education. Each statement started with, "As a principal, I believe…" and the remaining part of the statement was labeled with a number. Their responses were recorded on a 4 point Likert scale where 4=strongly agree, 3=agree, 2=disagree, and 1=strongly disagree. All but one of the statements had a mean response of 3 or greater indicating that most of the principals believed that they were familiar with Agricultural Education. The mean and standard

Table 4-Mean and standard deviations of responses to statements used to determine how familiar the principals were with Agricultural Education.

As a principal, I believe…	Mean	SD
the Agricultural Education program is an important part of the school.	3.656	0.479
the Agricultural Education program is an important part of the community.	3.625	0.549
there are a number of Agricultural Education events, other than FFA activities, outside of the classroom and laboratory that are co-curricular, such as field trips.	3.387	0.712
the middle school Agricultural Education program places enough emphasis on actual classroom teaching.	3.469	0.564
the middle school Agricultural Education program provides equal opportunities for all middle school students.	3.563	0.564
I place as much interest on the Agricultural Education program as I do other programs.	3.281	0.585
I know what a SAEP (Supervised Agricultural Experience Program) is.	2.938	0.933
know what a CDE (Career Development Event) is.	3	0.968
know the duties of a FFA advisor.	3.258	0.622
know the duties of an Agricultural Education teacher.	3.5	0.508
my attendance is important at Agricultural Education program activities and FFA events.	3.313	0.529
I recognize those students in the Agricultural Education program and FFA for their achievements, honors, and awards.	3.5	0.508

deviations of responses to statements used to determine how familiar the principals were with Agricultural Education are displayed in Table 4.

The findings displayed in Table 4 show that all but one statement had a mean response of 3 or greater meaning that Georgia middle school principals feel that they are familiar with agricultural education. The statement with the highest mean response was, "As a principal, I believe the Agricultural Education program is an important part of the school". The statement with the lowest mean response was, "As a principal, I believe I know what a SAEP (Supervised Agricultural Experience Program) is".

Objective 2- To determine the principals' perceptions of the impact an agricultural education program has on student grades and test scores in math, and science at their school.

Again, principals were asked to respond to statements that would give a good idea of how the principals felt Agricultural Education impacted grades and test scores in math and science. Each statement started with, "As a principal, I believe that as a result of being enrolled in the Agricultural Education program at my school, students'…" and the remaining part of the statement was labeled with a number. The respondents used a 4 point Likert scale 4=strongly positively impacted, 3=positively impacted, 2=negatively impacted, and 1=strongly negatively impacted. The mean and standard deviations of responses to all statements in the Math and Science portion of the survey are displayed in Table 5.

Table 5-Mean and standard deviations of responses to statements used to determine how the principals feel Agricultural Education impacts student grades and test scores in math, and science at their school.

As a principal, I believe that as a result of being enrolled in the Agricultural Education program at my school, students'…	Mean	SD
scores on the Math portion of the CRCT are…	3.063	0.348
grades in Math courses are…	3.063	0.348
scores on the Science portion of the CRCT are…	3.121	0.327
grades in Science courses are…	3.121	0.327

The findings displayed in Table 5 show that all statements had a mean response of 3 or greater meaning that Georgia middle school principals feel that Agricultural Education positively impacts students test scores and grades in math and science. The means and standard deviations were the same for both test scores and grades on both the math and science portion of the survey. This means that Georgia middle school principals feel that agricultural education has the same impact on grades as test scores.

Objective 3- To determine the principals' perceptions of the impact an agricultural education program has on student leadership at their school.

Principals were asked to respond to a series of statements that were used to determine how the principals felt Agricultural Education impacts student leadership at their school. Each statement started with, "As a principal, I believe that as a result of being enrolled in the Agricultural Education program at my school, students…" and the remaining part of the statement was labeled with a number. The principals used a 4

point Likert scale used to indicate how they agreed or disagreed with the statements (4=strongly agree, 3=agree, 2=disagree, and 1=strongly disagree). Mean and standard deviations of responses to statements used to determine how Agriculture Education impacts student leadership can be found in Table 6.

Table 6-Mean and standard deviations of responses to statements used to determine how the principals feel Agricultural Education impacts student leadership at their school.

As a principal, I believe that as a result of being enrolled in the agricultural education program at my school, students…	Mean	SD
have a positive self concept.	3.531	0.508
can set goals.	3.563	0.506
can use information to solve problems.	3.5	0.508
can delegate responsibility.	3.375	0.549
consider input from all group members.	3.406	0.556
can listen effectively.	3.375	0.549
can consider alternatives.	3.375	0.549
respect others.	3.406	0.556
can solve problems.	3.469	0.506
get along with others.	3.406	0.496
use rational thinking.	3.336	0.549
are open to change.	3.323	0.626
exhibit more leadership skills than students that are not enrolled in the Agricultural Education program.	3.344	0.603

Findings displayed in Table 6 show that all statements had a mean response of 3 or better meaning that Georgia middle school principals feel that Agricultural Education programs have a positive impact on student leadership. The statement with the highest mean response was, "As a principal, I believe that as a result of being enrolled in the agricultural education program at my school students can set goals". The statement with the lowest mean response was, "As a principal, I believe that as a result of being enrolled in the agricultural education program at my school students are open to change".

Table 7-Mean and standard deviations of familiarity, math and science, and leadership constructs.

Construct	Mean	SD
Familiarity	3.373	0.627
Math and Science	3.174	0.372
Leadership	3.406	0.543

In order to gain a better understanding of all of the results of this study the three main sections of this study have been condensed into three constructs 1. Familiarity, 2. Math and Science, and 3. Leadership. The mean and standard deviation of these constructs are reported in Table 7.

Chapter 5

Conclusions and Recommendations

Conclusions

After a review of the relevant literature, it was concluded that middle schools are being targeted as an avenue to establish more quality Agricultural Education programs. It was also found that many benefits exist from having an active Agricultural Education program. Knowing this it became evident that middle school principals' perceptions of Agricultural Education needed to be researched. This would be helpful in determining how the new programs will be received.

As a group the principals had only one statement with a mean response less than 3, so it was concluded that principals were familiar with Agricultural Education. Not as many knew the actual duties of an FFA advisor or recognized the integral parts of the Agricultural Education program but most felt that Agricultural Education programs were important to the school and community.

Similarly, all of the mean responses in the grades and test scores section of the survey had a mean response of 3 or greater meaning that Georgia middle school principals felt that having an Agricultural Education program at their school positively impacted grades and test scores in math and science. The mean responses indicated that the principals felt that science was more positively impacted than math was.

Furthermore, mean responses showed that principals felt grades and test scores are impacted equally by Agricultural Education.

Leadership was also perceived by the principals to be positively impacted by Agricultural Education. Mean responses indicate that more students use rational thinking as a result of being enrolled in Agricultural Education than any other leadership skill on the survey. Mean responses similarly indicated that less students are open to change as a result of being enrolled in Agricultural Education than any other leadership skill on the survey.

Recommendations

The recommendations based on the findings and conclusions of this research are as follows:

1. The study should be duplicated individually in other states and collectively across the nation.
2. Research should be conducted to compare how Georgia middle school principals with and without Agricultural Education programs at their school perceive Agricultural Education.
3. An effort should be made to educate Georgia middle school principals with Agricultural Education programs at their school on the duties of a FFA advisor and the integral parts of Agricultural Education.
4. An effort should be made to educate Georgia middle school principals with Agricultural Education programs at their school about the benefits of Agricultural Education.

5. Research should be conducted to compare how Georgia middle school principals perceive how Agricultural Education impacts leadership as apposed to other leadership organizations so all organizations can work collectively to impact students in the best possible way.

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Appendix A: Information Letter

Dear Georgia Middle School Principal:

Professor Jason Peake and I are with the Department of Agricultural Leadership, Education, and Communication at The University of Georgia and we invite you to participate in a research study entitled The Impact of Middle School Agricultural Education as Perceived by Georgia Middle School Principals. The purpose of this study is to determine how Georgia middle school principals view agricultural education.

In order to participate in this study, participants must be 18 years of age or older, be a principal of a middle school in Georgia, and have an agricultural education program at their school.

Your participation will involve completing the attached survey and should only take about 10 to 15 minutes. Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits. Your responses will be confidential. The results of the research study may be published, but your name will not be used. In fact, the published results will be presented in summary form only. Your identity will not be associated with your responses in any published format. Internet communications are insecure and there is a limit to the confidentiality that can be guaranteed due to the technology itself. However, once the materials are received by the researcher, standard confidentiality procedures will be employed.

The findings from this project may provide information on Georgia Middle School Principal's perception of Agricultural Education. There are no known risks or discomforts associated with this research and there are no direct benefits to the participants. Results will not be reported by zip code. Zip code information will only be used to determine perceptions in relation to rural and urban areas.

If you have any questions about this research project, please feel free to call Quinton Hadsock at (229) 251-6629 or send an e-mail to qhadsock@uga.edu or Jason Peake at (229) 386-3085 or send an e-mail to jpeake@uga.edu. Questions or concerns about your rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board, 612 Boyd GSRC, Athens, Georgia 30602-7411; telephone (706) 542-3199; email address irb@uga.edu.

By completing and returning this questionnaire, you are agreeing to participate in the above described research project.

Thank you for your consideration! Please keep this letter for your records.

Sincerely,

Quinton Hadsock

Appendix B: Informed Consent Page

Informed Consent

Protocol Title: The Impact of Middle School Agricultural Education as Perceived by Georgia Middle School Principals

Please read this consent document carefully before you decide to participate in this study.

Purpose of the research study:
The primary purpose of this study is to identify Georgia Middle School Principal's perception of Agricultural Education.

What you will be asked to do in the study:
After you have read this document, you will be asked to certify that you have read it and understood the content by signing on the line provided. Then you will be asked to complete the attached survey that will be used for the study. After the survey is completed, it will be collected and kept confidential.

Time required:
10 to 15 minutes

Risks and Benefits:
The findings will be used to attempt to improve Georgia Middle School Agricultural Education. There is no anticipated risk.

Compensation:
There is no compensation for taking the survey.

Confidentiality:
Your identity will be kept confidential to the extent provided by law. Your information will be assigned a code number. The list connecting your name to this number will be kept in a locked file. When the study is completed and the data have been analyzed, the list will be destroyed. Your name will not be used in any report.

Voluntary participation:
Your participation in this study is completely voluntary. There is no penalty for not participating.

Right to withdraw from the study:
You have the right to withdraw from the study at anytime without consequence.

Whom to contact if you have questions about the study:
- Quinton Hadsock, Graduate Student in Agricultural Leadership, Education, and Communication, The University of Georgia, 207 Four Towers, Athens, GA 30602, qhadsock@uga.edu
- Jason Peake, Assistant Professor of Agricultural Leadership, Education, and Communication, University of Georgia, PO Box 748, Tifton, GA 31793, jpeake@uga.edu, 229.386.3085

Whom to contact about your rights as a research participant in the study:
Human Subjects Office, University of Georgia, 612 Boyd GSRC, Athens, GA 30602-7411, 706-542-3199
http://www.ovpr.uga.edu/grdsturesarch/apl/search=?758309-001-5340957

Agreement: By signing your name on the line below you are voluntarily agreeing to participate in this study.

Participant: _____ Date: _____

Appendix C: Questionnaire

Section I. Familiarity

Directions: *For questions 1-12, use the underline tool to indicate your level of agreement with the following statements.*

SA=Strongly Agree
A=Agree
D=Disagree
SD=Strongly Disagree

Example:					
As a principal, I believe…		SA	A	D	SD
1.	the Agricultural Education program helps students receive scholarships.	4	3	2	1
As a principal, I believe…		SA	A	D	SD
1.	the Agricultural Education program is an important part of the school.	4	3	2	1
2.	the Agricultural Education program is an important part of the community.	4	3	2	1
3.	there are a number of Agricultural Education events, other than FFA activities, outside of the classroom and laboratory that are co-curricular, such as field trips.	4	3	2	1
4.	the middle school Agricultural Education program places enough emphasis on actual classroom teaching.	4	3	2	1
5.	the middle school Agricultural Education program provides equal opportunities for all middle school students.	4	3	2	1
6.	I place as much interest on the Agricultural Education program as I do other programs.	4	3	2	1
7.	I know what a SAEP (Supervised Agricultural Experience Program) is.	4	3	2	1
8.	know what a CDE (Career Development Event) is.	4	3	2	1
9.	know the duties of a FFA advisor.	4	3	2	1
10.	know the duties of an Agricultural Education teacher.	4	3	2	1
11.	my attendance is important at Agricultural Education program activities and FFA events.	4	3	2	1
12.	I recognize those students in the Agricultural Education program and FFA for their achievements, honors, and awards.	4	3	2	1

Section II. Math and Science

Directions: *For questions 1-12, use the underline tool to indicate your level of agreement with the following statements.*

SPI=Strongly Positively Impacted
PI=Positively Impacted
NI=Negatively Impacted
SNI=Strongly Negatively Impacted

Example:					
As a principal, I believe…		SPI	PI	NI	SNI
1.	that as a result of being enrolled in the Agriculture Education program at my school, students are…	4	3	2	1
As a principal, I believe that as a result of being enrolled in the Agricultural Education program at my school, students'…		SPI	PI	NI	SNI
1.	scores on the Math portion of the CRCT are…	4	3	2	1
2.	grades in Math courses are…	4	3	2	1
3.	scores on the Science portion of the CRCT are…	4	3	2	1
4.	grades in Science courses are…	4	3	2	1

Section III. Leadership

Directions: *For questions 1-12, use the underline tool to indicate your level of agreement with the following statements.*

SA=Strongly Agree
A=Agree
D=Disagree
SD=Strongly Disagree

Example:					
As a principal, I believe…		SA	A	D	SD
1.	the agriculture education program has a positive impact on student leadership.	4	3	2	1
As a principal, I believe that as a result of being enrolled in the agricultural education program at my school, students…		SA	A	D	SD
1.	have a positive self concept.	4	3	2	1
2.	can set goals.	4	3	2	1
3.	can use information to solve problems.	4	3	2	1
4.	can delegate responsibility.	4	3	2	1
5.	consider input from all group members.	4	3	2	1
6.	can listen effectively.	4	3	2	1
7.	can consider alternatives.	4	3	2	1
8.	respect others.	4	3	2	1
9.	can solve problems.	4	3	2	1
10.	get along with others.	4	3	2	1
11.	use rational thinking.	4	3	2	1
12.	are open to change.	4	3	2	1
13.	exhibit more leadership skills than students that are not enrolled in the Agricultural Education program.	4	3	2	1

Section IV. Personal Data

Directions: *This section asks for demographic information. Please use the underline tool to provide the best answer for the questions below.*

1. How long have you served as a principal?
    A. less than one year
    B. 1-3 years
    C. 4-7 years
    D. 8-11 years
    E. 12-15 years
    F. 15 years or more
2. How long have you served as principal at the school you are currently serving at?
    A. less than one year
    B. 1-3 years
    C. 4-7 years
    D. 8-11 years
    E. 12-15 years
    F. 15 years or more
3. At the school that you are currently serving at, how long has the current Agricultural Education teacher been serving there?
    A. less than one year
    B. 1-3 years
    C. 4-7 years
    D. 8-11 years
    E. 12-15 years
    F. 15 years or more
4. What is the zip code of the school you are currently serving at?
    _____
5. What is your gender?
    A. female
    B. male
6. What was your job title before becoming a principal?
    A. Classroom Teacher (please specify which subject)_____
    B. Agricultural Education Teacher
    C. Athletic Coach
    D. Assistant Principal
    E. Other (please specify other)_____
7. Which of the following describes the environment in which you were raised?
    A. rural farm or ranch
    B. rural but not farm/ranch
    C. city 2,500 to 10,000 people
    D. city 10,000 to 50,000 people
    E. city over 50,000

8. To which age group do you belong?
    A. 30 years or younger
    B. 31-39 years
    C. 40-49 years
    D. 50-59 years
    E. 60 years or over
9. Do you hold a degree in Agricultural Education or a closely related field?
    A. yes
    B. no
10. Were you ever a member of the FFA?
    A. yes
    B. no
11. Have your children ever been members of the FFA?
    A. yes
    B. no
    C. I do not have children
12. Have you ever participated as a member or volunteer in an agriculturally-related program excluding FFA, such as 4-H or Georgia Young Farmers?
    A. yes
    B. no
13. Have your children ever participated as a member or volunteer in an agriculturally related program excluding FFA, such as 4-H or Georgia Young Farmers?
    A. yes
    B. no
    C. I do not have children
14. As a principal, how many years have you worked with Agricultural Education teachers?
    A. 1-5 years
    B. 6-10 years
    C. 11-15 years
    D. 16-20 years
    E. over 20 years
15. I enjoy my job as a principal.
    A. strongly agree
    B. agree
    C. disagree
    D. strongly disagree

Directions: *In the space provided, please give any additional comments you would like to add that are relevant to the Agricultural Education program at your school.*

_____
_____
_____
_____
_____

Thank you for your time!