PERCEIVED LEVELS OF TEACHER SELF-EFFICACY AMONG SECONDARY
ARIZONA AGRICULTURAL EDUCATION TEACHERS

by

Kevin Neal Hartfield

A Thesis Submitted to the Faculty of the
DEPARTMENT OF AGRICULTURAL EDUCATION
In Partial Fulfillment of the Requirements
For the Degree of
MASTER OF SCIENCE
WITH A MAJOR IN AGRICULTURAL EDUCATION
In the Graduate College
THE UNIVERSITY OF ARIZONA

2011
STATEMENT BY AUTHOR

This thesis has been submitted in partial fulfillment of requirements for an advanced degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the Library.

Brief quotations from this thesis are allowable without special permission, provided that accurate acknowledgment of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the head of the major department or the Dean of the Graduate College when in his or her judgment the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

SIGNED: Kevin N. Hartfield
Acknowledgments

Thank you to the Arizona Agricultural Educators who participated in the study. With your participation we can work towards maintaining and developing our programs.

Thank you to Tyler Grandil for providing an up to date list of the Arizona Agricultural Educators that would serve as the population. Mr. Grandil was critical in the implementation of the research study.

Dr. Dave Cox, thank you for your assistance in the financial aspects of the research study. Thank you for granting funds from the College of Agriculture and Life Sciences at the University of Arizona.

To my fellow graduate students, thank you for your involvement, advice, and humor while I completed the study. Dr. Franklin, thank you for your knowledge of instrumentation and study design. Dr. Torres, thank you for teaching me about methods and research design with a practical approach. Dr. Foor, thank you for your honesty and dedication during my graduate school experience.

A final thanks to my family. It is my hope that I can one day live up to who you are now and have been since the day I was born.
TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION ........................................................................................................ 11
  Background and Setting ........................................................................................................... 11
  Teacher Attrition ..................................................................................................................... 11
  Efficacy .................................................................................................................................. 13
  Agriculture Teacher Self-Efficacy ............................................................................................. 14
  Statement of the problem ......................................................................................................... 15
  Purpose and Objectives of the Study ....................................................................................... 16
  Research Objectives .............................................................................................................. 16
  Significance of the Study ......................................................................................................... 17
  Definition of Terms .................................................................................................................. 18
  Limitations of the Study .......................................................................................................... 20
  Basic Assumptions .................................................................................................................. 20

CHAPTER 2: LITERATURE REVIEW ......................................................................................... 21
  Purpose of the Study .............................................................................................................. 21
  Research Objectives .............................................................................................................. 21
  Historical Background ........................................................................................................... 22
  Social Cognitive Theory ......................................................................................................... 23
  Self-Efficacy .......................................................................................................................... 24
  Teacher Self-Efficacy ............................................................................................................. 26
  Measuring Teacher Self-Efficacy ............................................................................................ 27
  Novice Teacher Self-Efficacy .................................................................................................. 30
  Experienced Teacher Self-Efficacy ......................................................................................... 31
  Summary ............................................................................................................................... 32
  Conceptual Framework for the Current Study ....................................................................... 33

CHAPTER 3: PROCEDURES .................................................................................................... 35
  Purpose of the Study .............................................................................................................. 35
  Research Objectives .............................................................................................................. 35
  Research Design and Population ............................................................................................ 36
  Instrumentation ...................................................................................................................... 37
  Instrument Validity ................................................................................................................ 38
  Reliability Procedures .......................................................................................................... 38
   Domains: Classroom Instruction; FFA; and SAE ................................................................. 39
    Content Domain ................................................................................................................. 39
  Data Collection Procedures ................................................................................................ 40
  Data Analysis ....................................................................................................................... 41
CHAPTER 4: RESULTS

Purpose of the Study ........................................................................................................ 43
Research Objectives ........................................................................................................ 43
Objective One .................................................................................................................. 45
Objective Two .................................................................................................................. 54
Objective Three ............................................................................................................... 56
Objective Four .................................................................................................................. 57
Objective Five .................................................................................................................. 59
Objective Six .................................................................................................................... 60
Objective Seven ............................................................................................................... 62
Objective Eight ................................................................................................................ 63
Objective Ten .................................................................................................................... 67
Objective Eleven .............................................................................................................. 68

CHAPTER 5: DISCUSSION

Purpose of the Study ........................................................................................................ 69
Research Objectives ........................................................................................................ 69
Summary of Procedures ................................................................................................... 70
Summary of Conclusions for Objective One ................................................................. 71
Summary of Conclusions for Objective Two ................................................................. 72
Summary of Conclusions for Objective Three .............................................................. 73
Summary of Conclusions for Objective Four ............................................................... 74
Summary of Conclusions for Objective Five ............................................................... 75
Summary of Conclusions for Objective Six ................................................................. 76
Summary of Conclusions for Objective Seven ............................................................. 77
Summary of Conclusions for Objective Eight ............................................................. 78
Summary of Conclusions for Objective Nine ............................................................... 80
Summary of Conclusions for Objective Ten ................................................................. 81
Summary of Conclusions for Objective Eleven .......................................................... 82
Recommendations/Discussion ....................................................................................... 83
Recommendations for Further Study .......................................................................... 86

LIST OF REFERENCES ................................................................................................... 88

APPENDIX A: EVALUATION FORM TO PANEL OF EXPERTS ................................. 91
APPENDIX B: PRE-NOTICE LETTER ......................................................................... 102
APPENDIX C: COVER LETTER .................................................................................. 104
APPENDIX D: QUESTIONNAIRE ................................................................................. 107
APPENDIX E: POSTCARD TO FACILITATE ANONYMOUS RESPONSE .......... 119
APPENDIX F: REMINDER POSTCARD ................................................................. 121
APPENDIX G: SECOND COVER LETTER .......................................................... 123
APPENDIX H: FINAL CONTACT LETTER .......................................................... 126
APPENDIX I: FREQUENCY DISTRIBUTION TABLES ......................................... 128
APPENDIX J: SCATTER PLOTS ........................................................................ 139
LIST OF TABLES

Table 1: Age of Respondents.................................................................45
Table 2: Age of Novice Respondents......................................................46
Table 3: Age of Experienced Respondents..............................................47
Table 4: Sex of Respondents.................................................................48
Table 5: Sex of Novice Respondents......................................................49
Table 6: Sex of Experienced Respondents................................................50
Table 7: Number of Years Teaching.......................................................51
Table 8: Number of Years Teaching, Novice Educators..........................52
Table 9: Number of Years Teaching, Experienced Educators...................53
Table 10: Teacher Self-Efficacy of Novice and Experienced Arizona Agricultural Education Teachers..........................................................55
Table 11: Level of Perceived Importance of Job Related Factors of Novice and Experienced Arizona Agricultural Education Teachers.................................56
Table 12: Teacher Self-Efficacy of Novice Arizona Agricultural Education Teachers..................................................................................58
Table 13: Level of Perceived Importance of Job Related Factors of Novice Arizona Agricultural Education Teachers.........................................................59
Table 14: Teacher Self-Efficacy of Experienced Arizona Agricultural Education Teachers..................................................................................61
Table 15: Level of Perceived Importance of Job Related Factors of Experienced Arizona Agricultural Education Teachers.........................................................62
Table 16: Relationship Among Novice and Experienced Teachers Efficacy and
Importance Constructs........................................................................................................63

Table 17: Relationship Between Level of Experience and Teacher Self-Efficacy and Job Importance Factors........................................................................................................................................66

Table 18: Frequency Distribution of Classroom Capability Items........................................129
Table 19: Frequency Distribution of FFA Capability Items....................................................133
Table 20: Frequency Distribution of SAE Capability Items....................................................135
Table 21: Frequency Distribution of Content Capability Items.............................................137
LIST OF FIGURES

Figure 1: Sources of Self-efficacy.................................................................25
Figure 2: Conceptual framework for the study...........................................34
Figure 3-10: Chart for linearity.................................................................140
ABSTRACT

The purpose of this study was to describe the level of teacher self-efficacy among novice (one through five years teaching) and experienced (more than five years teaching) secondary Arizona Agricultural Education teachers related to classroom, FFA, SAE, and content items. A mailed questionnaire generated a 76% response rate (n = 71). Arizona Agricultural Education teachers reported high levels of efficacy in all constructs. Experienced teachers were slightly more efficacious in all of the constructs. FFA and SAE constructs had the highest relationships, as well as constructs in the same area (capability, importance). When the correlation between experience and the constructs were reviewed, it was found that teachers level of efficacy increases with experience. It was also found that with experience, the level of importance of job related factors decreased.
CHAPTER 1: INTRODUCTION

Background and Setting

The need for educators is evident by the fact that more than 300,000 veteran teachers left the profession between 2004 and 2008 (Carroll & Foster, 2010). New educators have been introduced in response to the void left by veteran teachers, only to see first year attrition rates increase since 1994 (Carroll & Foster, 2010). The turnover rate for teachers is substantially higher than other professions (Ingersoll, 2002). Furthermore, the school systems’... “inability to support high quality teaching in many of our schools is driven not by too few teachers coming in, but by too many going out, that is, by a staggering teacher turnover and attrition rate” (National Commission on Teaching and America’s Future [NCTAF], 2002, p. 3).

Teacher Attrition

According to data from the National Center for Education Statistics [NCES] for the 1999-2000 school year, it is estimated that nearly a third of America’s educators leave the profession over the course of their first three years of teaching, and roughly half leave after five years (Ingersoll, 2001). The teacher shortage is due to a combination of the demand for more educators based on the increase of students, tied into the fact that a multitude of teachers are retiring (Ingersoll, 2004). With such an issue taking precedence, the public school system is unable to address its number one priority, the students, by providing them with highly qualified educators at every subject and every grade level.

Qualified teachers of agricultural education are sufficient enough to fill needed replacements, but public schools still display a shortage (Camp, Broyles, & Skelton, 2002).
Camp et al. concluded that public schools struggle to fill needed agricultural education positions because many qualified teachers choose not to enter the field. In 2001, close to one-fourth of recently qualified agricultural educators did not become teachers.

Experts in education feel the largest issue faced by novice instructors that tends to lead to their change in occupation is salary. On average, first year educators will have a salary of roughly $30,000. Nevertheless, according to the NCES, fewer than 20 percent of educators who change schools or switch professions claim salary as their main complaint. Furthermore, educators revealed that 38 percent were dissatisfied with administrative support and 32 percent towards workplace conditions as their reason for change according to the NCES’s 2001 survey of 8,400 public and private school teachers. According to Moore and Swan (2008), “Given the fact that beginning teachers are expected to perform the same jobs at the same level as veteran teachers, it is no surprise that the first years of teaching are quite challenging” (p. 60). New teachers are expected to take on a full schedule of classes while creating and implementing their own lesson plans, and still develop effective teaching tendencies and classroom-management strategies without assistance. In addition, agricultural educators also assume the role as FFA advisor, traveling with students to competitions, overseeing student activities, and visiting with students outside of class in regard to Supervised Agricultural Experience (SAE) visits.

The tasks of classroom work and FFA advisor responsibilities can overwhelm a new teacher in agricultural education with no experience or structure. Myers, Dyer, & Washburn (2005) ranked the top issues that new agricultural educators face. According to the panel findings, the top five were: organizing an effective alumni chapter, organizing an effective advisory committee, organizing and planning FFA chapter events and activities, the
management of student discipline in the classroom, and recruiting and retaining alumni members. In multiple studies it was found that beginning agriculture teachers had issues with student discipline (Talbert, 1994), and low morale levels in relation to rapport among teachers (Henderson & Nieto, 1991).

Findings show that attrition rates are higher for novice teachers with less than five years experience (Guarino, Santibanez, & Daley, 2006). The NCES (1997) reported that over the course of three years, 17 percent of new public school teachers will leave the profession. Close to half of all beginning educators will leave teaching by their seventh year (Marso & Pigge, 1997; Wilkinson, 1994). Guarino et al. determined the retention of more experienced teachers is higher until they reach the age of retirement.

Teachers desire to be in the profession for reasons other than salary. Nieto (2003) determined that teachers entered the field to make a difference in the lives of students and the next generation. Teachers who remain in the profession find themselves absorbed by the feelings they develop from student interaction and the emotion involved.

Efficacy
As a teacher, the number one goal is to allow the student to learn. With a strong set of skills and self-efficacy, teachers can assist students in the development of their cognitive capabilities. Teacher self-efficacy or instructional efficacy is, “a teacher’s belief that he or she can reach even difficult students to help them learn” (Woolfolk, 2007, p.334).

When discussing self-efficacy one must remember that the behavior recognizes the wide spread ability of the human being. Efficacy alternates based on the function it refers to. “Efficacy beliefs involve different types of capabilities, such as management of thought, affect, action, and motivation” (Bandura, 1997, p.45). Beliefs related to self-efficacy allow
people with a similar set of skills or attributes to perform the same function differently. Nonetheless, efficacy beliefs can only show true excelled performance if a skill set is available. “Perceived self-efficacy is not a measure of the skills one has but a belief about what one can do under different sets of conditions with whatever skills one possesses” (Bandura, 1997, p.37). In addition, self-efficacy beliefs are built from four principal sources of information as claimed by Bandura: enactive mastery experiences that serve as indicators of capability; vicarious experiences that alter efficacy beliefs through transmission of competencies and comparison with the attainments of others; verbal persuasion and allied types of social influences that one possesses certain capabilities; and physiological and affective states from which people partly judge their capableness, strength, and vulnerability to dysfunction.

Agriculture Teacher Self-Efficacy
Blackburn & Robinson (2008) examined levels of teacher self-efficacy of early agriculture teachers (1-6 years experience). Results displayed that the group with the most experienced teachers (5-6 years experience) had the highest teacher self-efficacy scores. Blackburn & Robinson discussed that these teachers may have developed their own teaching style over this time, allowing them to increase their belief of self-efficacy by mastering difficult situations. Another thought for higher levels of teacher self-efficacy from the more experienced teachers included the possibility of the less efficacious teachers from the cohort leaving the profession.

Researchers in education tend to generalize that the reason so many teachers leave the profession during their first five years is due to low levels of teacher self-efficacy.

Whittington, McConnell, and Knobloch (2006) looked at the levels of teacher self-efficacy of
novice Ohio agriculture teachers at the end of the year. According to their findings, “first-year, second-year, and third-year teachers are similarly efficacious at the end of the school year, and novice teachers in agricultural education in Ohio were efficacious at the end of the school year” (p.26). Whittington, et al: further concluded, “It is not necessarily experience that effects teacher efficacy, but a variety of factors” (p.35). Epps, Foor, and Cano (2010) reported no significant differences in the level of teacher efficacy between novice and experienced secondary agriculture teachers surveyed in the United States.

Statement of the problem
The United States faces an educational crisis of retaining educators. This problem can be stated the same for agricultural programs in the state of Arizona, with a high demand for quality teachers (Arizona Association FFA, 2010). Many teachers remain in the profession because they display a high level of teacher efficacy (Knobloch & Whittington, 2003). If this holds true, it would suggest that agricultural education programs are unable to retain novice teachers due to their low levels of teacher self-efficacy. Knowing this, the problem statement is as follows: Do novice and experienced secondary agriculture teachers in Arizona differ on their level of teacher self-efficacy?
Purpose and Objectives of the Study
The purpose of the study was to compare the difference in the level of teacher self-efficacy between novice and experienced secondary Arizona Agricultural Education teachers. Specifically, the following research objectives guided the study:

Research Objectives
1. Describe the demographics (age, gender, years teaching) of Arizona Agricultural Education teachers.
2. Describe the perceived level of teacher self-efficacy of Arizona Agricultural Education teachers.
3. Describe the perceived level of importance of job related factors of Arizona Agricultural Education teachers.
4. Describe the perceived level of teacher self-efficacy of novice Arizona Agricultural Education teachers.
5. Describe the perceived level of importance of job related factors of novice Arizona Agricultural Education teachers.
6. Describe the perceived level of teacher self-efficacy of experienced Arizona Agricultural Education teachers.
7. Describe the perceived level of importance of job related factors of experienced Arizona Agricultural Education teachers.
8. Describe the relationship among the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers.
9. Describe the relationship between level of experience and the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers.

10. Describe the variance between level of experience and the perceived level of teacher self-efficacy.

11. Describe the variance between level of experience and the perceived level of importance of job related factors.

Significance of the Study

This study was deemed appropriate as the researcher was unable to find record of work involving teacher self-efficacy amongst agricultural educators in the state of Arizona. Specifically, no work has been found associating novice and experienced agricultural educators in the state of Arizona. This study seeks to replicate the 2008 study conducted by Wolf (2008) on teacher self-efficacy specific to Agricultural Education. The teacher self-efficacy constructs used in Wolf’s study were classroom instruction, FFA, and SAE.

Ideally, the knowledge obtained will serve useful in developing recruitment and retention strategies for organizations related to Agricultural Education in Arizona. Furthermore, results from the study may suggest future curriculum design and focus for the Department of Agricultural Education at The University of Arizona in regard to the teacher preparation program. In addition, the findings will benefit efforts to lower attrition rates in Agricultural Education in Arizona by addressing means of teacher retention and support. Knowledge obtained can be specified to novice and experienced teachers in an effort to
narrow the scope and determine critical aspects such as areas of low teacher self-efficacy that can be further developed. Knowledge of teacher self-efficacy specific to Agricultural Education in Arizona will assist in describing the program for comparison with other states and programs.

The results of this study will add to the literature base on teacher self-efficacy in agricultural education by identifying Arizona Agricultural Educators’ levels of teacher self-efficacy in specific job-related factors. Additionally, the results of this study will be used to describe novice and experienced teachers perceptions of the importance of those factors.

**Definition of Terms**

*Agricultural education*

Formerly referred to as “vocational agriculture”, is systematic program of instruction available to students desiring to learn about the science, business, technology of plant and animal production and/or about the environmental and natural resources systems. It is comprised of three components; classroom and laboratory instruction, the FFA, and the supervised agricultural experience (SAE) (Dailey, Conroy, & Shelly-Tobert, 2001).

*Experienced Arizona Agricultural Education Teachers*

Instructors with more than five years experience teaching agriculture at the secondary level (Ingersoll, 2001).
**FFA**

The National FFA Organization is a youth organization that is a part of agricultural education programs. Founded as the Future Farmers of America, the name was changed in 1988 to reflect the growing diversity of agriculture (FFA Manual, 2011).

**Supervised Agriculture Experience**

The application of the concepts principals learned in planned, real-life settings under supervision of the agriculture teacher (Talbert, Vaughn, Croom & Lee, 2007).

**Novice Arizona Agricultural Education Teachers**

Instructors with five years or less experience teaching agriculture at the secondary level (Ingersoll, 2001).

**Teacher Self-Efficacy**

Teacher self-efficacy is defined as “the teachers” motivation to persist when faced with obstacles, and the willingness to exert effort to overcome those obstacles” (Woolfolk 2001).

**Job-Related Factors**

Items for which are reflected during the everyday duties of a given individual for a specific occupation. Accurate to which an individual will experience during their employment.
Limitations of the Study
The results of this study cannot be generalized to agriculture teachers in other states, and teachers in a discipline other than agricultural education. Also, the investigation will rely on the participating educators sending their information in a timely manner to construct complete results. In addition, the support of agricultural education programs from the various high schools involved in the study will vary and may possibly increase or decrease the levels of efficacy in the subjects depending on the levels of support in the classroom provided (materials, instructional aides, class sizes).

Basic Assumptions
Due to the nature of this study, the investigator made several assumptions. These assumptions were:

1. The data will be sent, received, and processed in a timely manner.

2. All teachers will report their data in the same format and that they will be accurate and complete.

3. All teachers will respond truthfully to the administered questionnaire.

4. All teachers will have a basic knowledge of the construct of teacher self-efficacy.
Purpose of the Study
The purpose of the study was to compare the difference in the level of teacher self-efficacy between novice and experienced secondary Arizona Agricultural Education teachers.

Specifically, the following research objectives guided the study:

Research Objectives
1. Describe the demographics (age, gender, years teaching) of Arizona Agricultural Education teachers.
2. Describe the perceived level of teacher self-efficacy of Arizona Agricultural Education teachers.
3. Describe the perceived level of importance of job related factors of Arizona Agricultural Education teachers.
4. Describe the perceived level of teacher self-efficacy of novice Arizona Agricultural Education teachers.
5. Describe the perceived level of importance of job related factors of novice Arizona Agricultural Education teachers.
6. Describe the perceived level of teacher self-efficacy of experienced Arizona Agricultural Education teachers.
7. Describe the perceived level of importance of job related factors of experienced Arizona Agricultural Education teachers.
8. Describe the relationship among the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers.

9. Describe the relationship between level of experience and the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers.

10. Describe the variance between level of experience and the perceived level of teacher self-efficacy.

11. Describe the variance between level of experience and the perceived level of importance of job related factors.

Historical Background

According to theorist Albert Bandura (1997, p.3), self-efficacy is defined as, “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments”. These beliefs in efficacy can alter the lives of individuals. For instance, a person’s level of self-efficacy may guide the choices that person makes in the course of their life, how much effort they will put into a task, the amount of persistence while facing failure and obstacles, and the amount of stress and depression faced in dealing with demanding situations (Bandura). In efforts to further define self-efficacy, researchers specifically targeted teachers in what is considered teacher efficacy. Teacher self-efficacy is defined as, “a teacher’s belief that he or she can reach even difficult students to help them learn” (Woolfolk, 2007, p.334). Teachers who believe in their abilities are more likely to create learning environments that support the cognitive process (Bandura). Having a basic
understanding for teacher self-efficacy is relevant in supporting the education system, producing effective teachers, and aiding the retention of teachers.

Social Cognitive Theory
Social cognitive theory deals with learning from observing others actions and consequences (Woolfolk, 2007). Additionally, Social cognitive theory is the interaction of variables on the process of learning. These interacting variables are: behavior, environment, and personal (Evans, 1989). The relationship among the variables is known as reciprocal determinism. In an educational setting, behaviors include goal progress, motivation, and learning. Environmental variables include models, instruction, and feedback. Personal variables include goals, outcome expectations, attributions, progress self-evaluation, self-regulatory progress, and self-efficacy (Woolfolk). According to the proponent of social cognitive theory, Albert Bandura, the variables are independent of one another, meaning they do not interact with equal strength. Furthermore, these influences occur at differing times during the development process (Bandura, 1989). Nonetheless, the variables are in constant interaction, influencing and are influenced by each other. For example, a teacher providing feedback can lead students to display increased effort or motivation. Another example is teachers displaying an achievable outcome expectation which leads to students displaying increased motivation which causes the teacher to adjust instruction accordingly (Woolfolk). Social cognitive theory examines self-confidence in a variety of settings to explore how it is created and how it affects behavioral outcomes such as persistence and effort. A main component to the idea of reciprocal determinism indicates that self-beliefs and other personal factors affect analysis of the environment and behaviors. Individuals can use their self-beliefs
to control how they cognitively interpret an event (Bruning, Schraw, Norby, & Ronning, 2004).

**Self-Efficacy**

The roots of self-efficacy are established as a component within social cognitive theory. Bandura (1997, p.3) stated, “People guide their lives by their beliefs of personal efficacy. Self-efficacy refers to beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments.” Self-efficacy can vary in its influence on life choices people make every day, the amount of effort put into an endeavor, the length of perseverance and resilience when faced with obstacles such as failure, stress, and depression (Bandura). “Among the types of thoughts that affect action, none is more central or persuasive than people’s judgments of their capabilities to exercise control over events that affect their lives” (Bandura, 1989, p.59).

Self-efficacy is built up and based around four major principals: mastery experiences, physiological and emotional arousal, social persuasion, and vicarious experiences (Bandura). The first, mastery experiences, pertain to direct personal experiences. Mastery experiences are considered the most powerful source of efficacy information. Successful mastery experiences by an individual raise efficacy and mastery experiences of failure lower efficacy. Physiological and emotional arousal levels can also affect levels of self-efficacy. As an individual performs a skill or task, feelings of nervousness and concern can lower efficacy while feelings of excitement can raise efficacy. Social persuasion does not independently increase self-efficacy but works as a boost towards efforts that will increase self-efficacy. Vicarious experiences reflect having someone else model an action or skill. If the person
modeling performs well, efficacy is enhanced, while efficacy is not as high when the model performs poorly.

Figure 1. Sources of Self-efficacy (Bandura, 1982)

Bandura (1989) stated, “these different sources of efficacy influences vary in their power to produce changes” (Evans, 1989, p.60). A key factor in self-efficacy is that individuals who display high levels must also have a skill or competency set to put to use. In order to function properly and efficiently, an individual must develop competencies and skills while holding a strong belief in their own efficacy (Evans, 1989). Knowing this, individuals with the same set of skills can perform well, poorly, or adequately based on the level of self-efficacy held. For example, an individual who has developed an extensive skill set for their trade may perform poorly as they display low levels of self-efficacy as compared to another individual who has a smaller skill set but performs extraordinarily with a high
sense of self-efficacy. Choices made by individuals are affected by self-efficacy as one is more likely to engage in an activity or event for which they feel they can master. In this sense, self-efficacy affects choice behavior which leaves a lasting impact on the path one’s life leads.

A common misconception lies between self-efficacy and self-esteem. Often, these two concepts are used to represent the same idea. The literature clearly revealed that self-efficacy and self-esteem are different phenomena. According to Bandura (1997, p.3), “perceived self-efficacy is concerned with judgments of personal capability, whereas self-esteem is concerned with judgments of self-worth.” Self-efficacy and self-esteem are ideas that are independent from one another in their levels. Certain individuals may hold a high level of efficacy for a given task while displaying no self-worth for completing the task skillfully. Conversely, another individual may display low levels of self-efficacy regarding a task and not affect their self-esteem in any form.

Teacher Self-Efficacy

Self-efficacy was further qualified in the literature to include teachers. “Teachers’ sense of efficacy, a teacher’s belief that he or she can reach even difficult students to help them learn, appears to be one of the few personal characteristics of teachers that is correlated with student achievement” (Woolfolk, 2007, p. 334). In other words, teacher self-efficacy revolves around creating environments conducive to learning and cognitive development. Teacher self-efficacy beliefs relate to the structure of curriculum and forming student perceptions of their ability to learn (Bandura, 1997). Teachers with a high sense of teacher self-efficacy believe that their efforts in the classroom will leave a lasting impact on the student, no matter their background. High efficacy teachers create an atmosphere conducive
to student success and learning. The teacher with a high sense of efficacy works diligently with students who struggle with content, spends more time on academic subject matters, and praises students for succeeding and making gains. Teachers with a low sense of teacher self-efficacy feel incapable of teaching or motivating difficult children for a long period of time due to influences from the home and neighborhood environment. Low efficacy teachers spend more time in the classroom on nonacademic material, fail to provide adequate time for students to answer, and constantly criticize the struggling student (Evans, 1989).

Teacher self-efficacy has shown valuable in the area of student academic achievement over time. Teachers higher in their sense of teacher self-efficacy will increase student achievement on standardized tests in the core areas of reading, mathematics, and language. High-efficacy teachers believe more in their students by teaching more strategies in the learning process, establishing a higher sense of student accountability, and allocating more time towards focusing on academic learning. The higher the sense of teacher self-efficacy, the greater the choices made for student success, and the more likely student self-efficacy will increase. The dedication and personal accomplishment of teachers with a high sense of efficacy are components to the creating of an effective learning environment (Bruning, Schraw, Norby, & Ronning, 2004).

Measuring Teacher Self-Efficacy
In an attempt to better define teacher self-efficacy and measure it with higher accuracy, many attempts have been utilized. Initially, measures of teacher self-efficacy were driven from the ideas of Rotter’s social learning theory (Tschannen-Moran, & Woolfolk Hoy, 2001). Rotter’s work with teacher self-efficacy was based around the idea of internal or external control. An instructor who displays confidence in their ability to teach difficult or
unmotivated students is one who has internal control, meaning reinforcement lies within the teacher’s control. External control suggests an instructor who believes they are unable to impact a student simply because of the environment they came from. Reinforcement comes from the environment and is not in the teacher’s control, making it external (Rotter, 1966).

Simply stated, studies were conducted to determine the extent to which teachers felt learning and student motivation were in control of the teacher. The first effort to measure contained just two questions from Rand researchers within a study of teacher characteristics and student learning. Following the Rand study, a trio of measures were created in an effort to develop a clearer understanding of social learning theory. A 30-item measuring instrument looking at responsibility for student achievement was developed by Guskey (1981). Rose and Medway (1981) introduced a 28-item measure in the teacher locus of control, and Ashton, Olejnik, Crocker, and McAuliffe (1982) developed the Webb scale (Tschannen-Moran, & Woolfolk Hoy, 2001). As these measures were playing a prominent role in studying teacher self-efficacy, Bandura’s ideas of social cognitive theory gained more attention and drew more research. The Ashton vignettes developed following Bandura’s theory, describing situations a teacher might encounter and asking them to rate how effective they might be in handling the given situations on a scale from “extremely ineffective” to “extremely effective”. In addition, another frame was added to look at how teachers compared themselves to other teachers with a scale from “much less effective than most teachers” to “much more effective than most teachers” (Tschannen-Moran, & Woolfolk Hoy, 2001). Although the Ashton vignettes were not highly recognized and failed to find much use in other studies, the most popular measure of teacher self-efficacy, Gibson and Dembo’s (1984) teacher efficacy scale, was introduced around the same time. Within their work a two factor
structure was developed, leading the assumption that the factors represented self-efficacy and outcome expectancy; items out of Bandura’s social cognitive theory. Much criticism has come out of the interpretation of outcome expectancy as one of the factors. Nevertheless, Gibson and Dembo’s instrument factors have been supported by other research and the measure itself continues to serve as an influence for other research (Tschannen-Moran, & Woolfolk Hoy, 2001).

In an effort to effectively measure teacher self-efficacy, researchers have combined ideas from measurements related to social cognitive theory and social learning theory. One example is drawn from the work of Midgley, Feldlaufer, and Eccles (1989). Using items from the Rand study, the Webb Scale, other measurements, and items Midgley, Feldlaufer, and Eccles created a 5-item personal teaching self-efficacy measure was established (Tschannen-Moran, & Woolfolk Hoy, 2001). As research continued to determine the most effective way of measuring teacher self-efficacy, Bandura himself has contributed further advancements. He stated:

Teachers’ perceived efficacy rests on much more than the ability to transmit subject matter. Their effectiveness is also partly determined by their efficacy in maintaining an orderly classroom conducive to learning, enlisting resources and parental involvement in children’s academic activities, and counteracting social influences that subvert student’s commitments to academic pursuits. Multifaceted teacher efficacy scales enable researchers to select those that are most germane to the domain of functioning the research is designed to elucidate (Bandura, 1997, p.243).

A new instrument was developed by Bandura, consisting of 30 items with seven subscales on a 9-point scale in an effort to grasp a general knowledge of teacher’s self-
efficacy beliefs. It should be noted in regard to this instrument that validity and reliability information is not available (Tschannen-Moran, & Woolfolk Hoy, 2001). In an effort to construct a valid and reliable instrument, Tschannen-Moran, & Woolfolk Hoy sought to determine the optimal level of specificity for measurement and develop items that accurately reflect tasks done by teachers. This new instrument, named the Ohio State teacher efficacy scale (OSTES), retained 23 items from Bandura’s 30 item scale and generated additional items closely related to everyday teacher life. By being used in three studies, it was determined OSTES had a unified and stable factor structure while representing the multitude of capabilities relevant to good teaching. This form of measurement would eventually develop into the Teacher’s Sense of Efficacy Scale (TSES) (Tschannen-Moran, & Woolfolk Hoy, 2007).

Novice Teacher Self-Efficacy

Bandura (1997) proposed that teacher self-efficacy is built from four principal sources of information: mastery experiences, vicarious experiences, verbal persuasion, and social influences, with mastery experiences being the most influential source. Novice teachers are restricted in the number of mastery experiences due to the lack of time spent in the classroom. Glickman & Tamashiro (1982) found that novice teachers who leave the profession are less efficacious than teachers who remain. Although novice teachers may generally have lower teacher self-efficacy, student teachers may enter the profession with an enlarged level of teacher self-efficacy due to the mastery experiences and other obtained sources during student teaching (Knobloch, 2006).

Researchers want to look deeper into novice teacher self-efficacy because of the rate at which teachers are leaving the profession during their first five years (Ingersoll, 2001).
Epps, Foor, and Cano (2010) determined that novice agricultural educators possessed a high level of teacher self-efficacy. Whittington, McConnell, and Knobloch (2006) reported that first-year, second-year, and third-year teachers are similarly efficacious at the end of the school year and plan to teach for the next five years. Blackburn, and Robinson (2008) added that early career agriculture teachers in Kentucky are efficacious, although the results showed a slight decrease after the second year. Woolfolk Hoy and Burke-Spero, (2005) determined that soon to be teachers raise their level of teacher self-efficacy because of student teaching. “Any experience or training that helps you succeed in the day-to-day tasks of teaching will give you a foundation for developing a sense of efficacy in your career” (p.334). In addition, teacher self-efficacy may decline during the first year of teaching due to the removal of support present during the student teaching process. Wolf (2008) reported that beginning agriculture teachers in the state of Ohio perceived themselves as being fairly efficacious, with age and excellence of the student teaching experience and first year teaching being related.

Experienced Teacher Self-Efficacy
As teachers grow in experience, studies suggest that a custodial view of classroom control with strict rules and standards to control discipline will take precedence (Bruning, Schraw, Norby, & Ronning, 2004). Bandura (1997) suggested that the mastery of more difficult situations leads to an increase in the level of teacher efficacy. Experienced teachers’ mastery experiences should allow them to perfect their preferred style of learning (Blackburn & Robinson, 2008). Furthermore, experienced teachers may develop a higher level of teacher self-efficacy in that they will have had experienced real success with the students in the classroom (Woolfolk, 2007). Experienced teachers vary in their level of efficacy depending on the level of efficacy for the school they teach at. “We are finding that the longer the
teachers teach in a high-efficacy school, the higher their sense of personal efficacy, whereas the longer teachers teach in a low-efficacy school, the lower their sense of instructional efficacy” (Evans, 1989, p.67).

Summary
Agricultural Education in the state of Arizona is filled with a diverse group of educators in terms of years of experience. Every year, secondary Agricultural Education programs in Arizona are searching for new instructors. Many attempts toward the prevention of teachers leaving the profession as well as recruitment have been executed by organizations at the national and state level. One possible reason for many teachers leaving Agricultural Education is due to a low level of teacher self-efficacy. Driven out of Bandura’s social cognitive theory, teacher self-efficacy defines teachers’ own perceptions of their ability to properly structure and maintain a classroom in the face of adversity and stress. In an attempt to better describe teachers’ efficacy and understand how it impacts education, researchers have created a variety of tools to measure levels of teacher self-efficacy. Since 1966, tools have been established and redefined to properly relate to the experiences and everyday tasks a teacher faces. No tool exists to this day that is referred to as the prime form of measurement for teacher self-efficacy. The initial perception is that novice teachers, or teachers with less than five years of experience, display lower levels of teacher self-efficacy, which eventually is why they leave the profession. Many studies have looked directly at the levels of teacher self-efficacy in novice teachers.

Research shows that teachers display high levels of teacher self-efficacy coming out of student teaching due to the support from their cooperating teacher. This level eventually drops by the first year and rises following the end of the first year teaching. Research in
Agricultural Education found that novice teachers did not display low levels of teacher self-efficacy. Experienced teachers are expected to develop high levels of teacher self-efficacy as they experience more scenarios considered mastery experiences. This level is thought to decrease as teachers develop their own structure and grow into a custodial view that limits student involvement. Furthermore, studies suggest that experienced teachers may display higher levels of teacher self-efficacy because all of the low level teachers have already left the profession. When compared in Agricultural Education, novice teachers and experienced teachers have been found to display similar levels of teacher self-efficacy. Little research was revealed involving the levels of teacher self-efficacy in Agricultural Education and even less in comparing them between novice and experienced teachers.

Conceptual Framework for the Current Study
Based on the review of literature related to the study of the levels of teacher self-efficacy between novice and experienced agriculture teachers, the idea of reciprocal determinism out of social cognitive theory (Bandura, 1997), the four variables of self-efficacy (Bandura, 1997), and level of experience were included in the conceptual framework for the current study.
Figure 2. Conceptual framework for the study
CHAPTER 3: PROCEDURES

Purpose of the Study
The purpose of the study was to compare the difference in the level of teacher self-efficacy between novice and experienced secondary Arizona Agricultural Education teachers.

Specifically, the following research objectives guided the study:

Research Objectives
1. Describe the demographics (age, gender, years teaching) of Arizona Agricultural Education teachers.
2. Describe the perceived level of teacher self-efficacy of Arizona Agricultural Education teachers.
3. Describe the perceived level of importance of job related factors of Arizona Agricultural Education teachers.
4. Describe the perceived level of teacher self-efficacy of novice Arizona Agricultural Education teachers.
5. Describe the perceived level of importance of job related factors of novice Arizona Agricultural Education teachers.
6. Describe the perceived level of teacher self-efficacy of experienced Arizona Agricultural Education teachers.
7. Describe the perceived level of importance of job related factors of experienced Arizona Agricultural Education teachers.
8. Describe the relationship among the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers.

9. Describe the relationship between level of experience and the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers.

10. Describe the variance between level of experience and the perceived level of teacher self-efficacy.

11. Describe the variance between level of experience and the perceived level of importance of job related factors.

Research Design and Population
The design used for this study was descriptive-correlational research, which “gathers data from individuals on two or more variables and then seeks to determine if the variables are related” (Ary, Jacobs, & Razavieh, 2010, p.27). The study used a census, meaning the entire population was surveyed and, the results will not be generalized beyond the population. Population parameters were used to determine if there is a difference between the characteristics (novice, teachers with five years or less experience, and experienced, teachers with more than five years experience, agriculture teachers) in their level of teacher self-efficacy. The target population was secondary Agricultural Education teachers in the state of Arizona. The population consisted of secondary Agricultural Education teachers (N = 93). Frame error was addressed by obtaining the current, up to date directory of agriculture teachers in the state of Arizona for the 2010- 2011 school year from the State FFA Executive Secretary. The frame is updated annually by the State Department of Education. Sampling
error was avoided because a census of all secondary Agricultural Education teachers in the state of Arizona was used and no inferences were necessary. Selection error was addressed by obtaining the current, up to date directory of agriculture teachers in the state of Arizona for the 2010-2011 school year. The frame was purged of any duplicates and/or teachers currently not teaching. This was a reliable frame that is updated annually by the State Department of Education.

Instrumentation

Data were collected using an instrument Appendix (D) developed by Wolf, (2008) that incorporated a variety of other sources (Duncan & Ricketts, 2006; Duncan, Ricketts, Peake, & Uesseler, 2005; Garton & Chung, 1996; Joerger, 2002; Myers, Dyer, & Washburn, 2005; Roberts & Dyer, 2004; Tschannen- Moran & Woolfolk Hoy, 2001). The instrument was a booklet questionnaire using a nine-point summated rating scale adapted from the Teacher Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001). Teachers responded to their perceived capability of each item from 1= No Capability to 9= A Great Deal of Capability. The instrument in this study was created to measure teaching efficacy specific to Arizona agricultural education teachers by the researcher with assistance from experts in the field of research who have knowledge of questionnaires and teacher self-efficacy. The instrument was also designed to obtain information on the demographic background (gender, age, years of experience as a teacher), and form of Teacher certification (traditionally versus non-traditionally) of all agriculture teachers in the state of Arizona.

In addition to participant’s perceived self-efficacy in certain tasks, they were also asked to rate the level of importance of the tasks in their current teaching position.
Importance of the items was measured using a nine-point summated scale which asked participants to rate each item from 1= Not Important to 9= Very Important.

**Instrument Validity**

Validity was determined as a means to ensure quality research through a panel of seven experts in the field of agricultural education and teacher self-efficacy with knowledge of face and content validity. Content validity concerns the extent to which a specific set of activity/ factor items reflects a content domain (Devellis, 2003).

The panel were selected based on two criteria, knowledge of Arizona Agricultural Education or knowledge of teacher self-efficacy research and teacher self-efficacy models. Seven experts were chosen to evaluate the instrument for appropriateness and clarity. The panel consisted of six university Agricultural Education faculty and one State FFA executive secretary. A list of all panel members is located in Appendix A.

The panel reviewed the questionnaire for determination of valid content, instrumentation and insight on the subject. A evaluation form was distributed and completed by each expert in the panel Appendix (A). Clarity of each item was addressed by the panel below each criterion and space was given for the panel to give comment and/or re-word the activity/ factor. Modifications were made to the instrument for each activity/ factor based on the recommendations of the panel of experts.

**Reliability Procedures**

As the questionnaire used was developed directly from that used by Wolf (2008) whose study population closely approximates the population of this study, the reliability estimates for that instrument is reported.
Domains: Classroom Instruction; FFA; and SAE

For Wolf (2008) the reliability of the instruments was assessed through a pilot test ($N = 13$) and a posthoc test ($N = 39$) using the Cronbach’s alpha internal consistency reliability coefficient. Cronbach’s alpha is concerned with the homogeneity of the items within a scale (DeVellis, 2003). Bandura (2006) recommended the use of Cronbach’s alpha to assess the internal consistency of self-efficacy instruments. The reliability estimates of the domains from the pilot and post-hoc tests were all above .85 reliability and are acceptable for this study. Nunnally and Bernstein (1994) stated: “in the early stages of predictive or construct validation research, time and energy can be saved using instruments that have only modest reliability, e.g., .70. it can be argued that increasing reliabilities much beyond .80 in basic research is often wasteful of time and money” (p.264).

Content Domain

Reliability was determined for the Content domain by the researcher as the items were specific for the study. Post-hoc reliability was computed by the researcher from the data collected from the population for the Content domain. The items related to the Content Capability construct yielded a Cronbach’s alpha coefficient of .81, while items related to the Content Importance construct yielded a Cronbach’s alpha coefficient of .87. The post-hoc reliability analysis further asserted the instrument was reliable since all computed coefficients were higher than the 0.7 minimum alpha level.
Data Collection Procedures

Data were collected using a mailed questionnaire guided by Dillman’s (2009) recommendations. Approval from the Institutional Review Board was sought; the research protocol was approved on January 11, 2011 (protocol number 10-0989-00). An initial pre-notice letter of intent was sent on February 15, 2011 in an effort to inform teachers about the study and that a questionnaire would be sent to them in the next week Appendix (B). The following week (February 18, 2011), the questionnaire Appendix (D), cover letter Appendix (C), and fifty cent piece incentive were mailed to the teachers with a self-addressed stamped envelope and pre-stamped return postcard for anonymous response Appendix (E).

Approximately one week following distribution of the questionnaire (February 25, 2011), a follow-up postcard Appendix (F) was mailed to the teachers in order to determine if they had received and taken the questionnaire. If teachers had not returned a return postcard by March 4, 2011, a follow-up questionnaire was sent March 4, 2011 along with a follow-up letter Appendix (G) explaining the teachers’ importance in the study and a University of Arizona keychain incentive. All materials that were received by March 4, 2011 were considered early respondents and questionnaires were numbered with a black marker upon arrival. The first wave questionnaire was created on blue paper and the second wave questionnaire was created on yellow paper. All materials received following March 4, 2011 were considered late respondents and questionnaires were numbered with a red marker upon arrival. Blue questionnaires received post March 4, 2011 were considered late respondents and numbered with a red marker. A final contact letter was mailed March 14, 2011 to those who had not returned a return postcard Appendix (H). This letter emphasized the relevance of the study and importance of having a large response rate. Data collection ceased on March 25, 2011.
Because this study relies heavily on using a census, non-response error was critical in being able to generalize the findings to the population. To address a non-response error, multiple points of contact were used with the population during the course of the study as suggested by Dillman (2009). These points of contact include: pre-notice letter, cover letter, fifty cent piece incentive, follow-up postcard, follow-up questionnaire, follow-up keychain incentive, and final contact letter. Early respondents were considered those participants who had returned the questionnaire by March 4, 2011. Late respondents were considered those participants who returned the questionnaire after March 4, 2011 and before March 25, 2011. Early respondents were compared to late respondents (Miller & Smith, 1983) on the teacher self-efficacy classroom construct, the teacher self-efficacy FFA construct, the teacher self-efficacy SAE construct, the teacher self-efficacy content construct, the perceived importance classroom construct, the perceived importance FFA construct, the perceived importance SAE construct, and the perceived importance content construct using an independent t-test.

Data Analysis

The data were analyzed using the SPSS Personal Computer. Constructs were summated to analyze the data. Cases where individual domains (Classroom, FFA, SAE, Content) had more than 15 percent missing items were excluded from the data set. In cases with less than 15 percent missing in individual domains (Classroom, FFA, SAE, Content), mean replacement was used.

Descriptive statistics were used to address research objective one: describe the demographics (age, gender, years teaching) of Arizona Agricultural Education teachers, objective two: describe the perceived level of teacher self-efficacy of Arizona Agricultural
Education teachers, research objective three: describe the perceived level of importance of job related factors of Arizona Agricultural Education teachers, research objective four: describe the perceived level of teacher self-efficacy of novice Arizona Agricultural Education teachers, research objective five: describe the perceived level of importance of job related factors of novice Arizona Agricultural Education teachers, research objective six: describe the perceived level of teacher self-efficacy of experienced Arizona Agricultural Education teachers, and research objective seven: describe the perceived level of importance of job related factors of experienced Arizona Agricultural Education teachers.

Point biserial correlation coefficients ($r$) were used to answer research objective eight: describe the relationship among the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers, research objective nine: describe the relationship between level of experience and the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers, research objective ten: describe the variance between level of experience and the perceived level of teacher self-efficacy, and research objective eleven: describe the variance between level of experience and the perceived level of importance of job related factors.
CHAPTER 4: RESULTS

Purpose of the Study
The purpose of the study was to compare the difference in the level of teacher self-efficacy between novice and experienced secondary Arizona Agricultural Education teachers.

Specifically, the following research objectives guided the study:

Research Objectives
1. Describe the demographics (age, gender, years teaching) of Arizona Agricultural Education teachers.
2. Describe the perceived level of teacher self-efficacy of Arizona Agricultural Education teachers.
3. Describe the perceived level of importance of job related factors of Arizona Agricultural Education teachers.
4. Describe the perceived level of teacher self-efficacy of novice Arizona Agricultural Education teachers.
5. Describe the perceived level of importance of job related factors of novice Arizona Agricultural Education teachers.
6. Describe the perceived level of teacher self-efficacy of experienced Arizona Agricultural Education teachers.
7. Describe the perceived level of importance of job related factors of experienced Arizona Agricultural Education teachers.
8. Describe the relationship among the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers.

9. Describe the relationship between level of experience and the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers.

10. Describe the variance between level of experience and the perceived level of teacher self-efficacy.

11. Describe the variance between level of experience and the perceived level of importance of job related factors.
Objective One

Objective one sought to describe the demographics of Arizona Agricultural Education teachers. Frequencies were reported for age, gender, and years teaching.

The Arizona Agricultural Education teachers in this study reported a mean age of 36 years ($SD = 10.7$). Table 1 describes the ages of respondents ($n = 68$). One (1.5%) of the respondents did not report their age.

Table 1

<table>
<thead>
<tr>
<th>Age Range</th>
<th>$f$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>22-31</td>
<td>30</td>
<td>44.1</td>
</tr>
<tr>
<td>32-41</td>
<td>15</td>
<td>22.1</td>
</tr>
<tr>
<td>42-51</td>
<td>12</td>
<td>17.6</td>
</tr>
<tr>
<td>51-59</td>
<td>10</td>
<td>14.7</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>Total</td>
<td>68</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Mean = 36.39; Median = 33; Mode = 30; SD = 10.7; Range = 37.
Novice Arizona Agricultural Education teachers (those with 5 years or less experience) reported a mean age of 30 years ($SD = 8.1$). Table 2 describes the ages of novice respondents ($n = 26$).

Table 2

<table>
<thead>
<tr>
<th>Age Range</th>
<th>$f$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>22-31</td>
<td>19</td>
<td>73.1</td>
</tr>
<tr>
<td>32-41</td>
<td>3</td>
<td>11.5</td>
</tr>
<tr>
<td>42-51</td>
<td>4</td>
<td>15.4</td>
</tr>
<tr>
<td>51-59</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note: Mean = 29.96; Median = 27; Mode = 23; SD = 8.1; Range = 27.
Experienced Arizona Agricultural Education teachers (those with 6 years or more experience) reported a mean age of 40 years ($SD = 10.1$). Table 3 describes the ages of experienced respondents ($n = 41$).

Table 3

<table>
<thead>
<tr>
<th>Age Range</th>
<th>$f$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>22-31</td>
<td>11</td>
<td>26.8</td>
</tr>
<tr>
<td>32-41</td>
<td>12</td>
<td>29.3</td>
</tr>
<tr>
<td>42-51</td>
<td>8</td>
<td>19.5</td>
</tr>
<tr>
<td>51-59</td>
<td>10</td>
<td>24.4</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Mean = 40.46; Median = 40; Mode = 31; SD = 10.1; Range = 34.
Female respondents \((n = 37)\) made up 54\% and male Arizona Agricultural Education teachers \((n = 31)\) made up 46\% of respondents. Table 4 reports the gender of Arizona Agricultural Education teachers.

Table 4

<table>
<thead>
<tr>
<th>Sex</th>
<th>(f)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>37</td>
<td>54.4</td>
</tr>
<tr>
<td>Male</td>
<td>31</td>
<td>45.6</td>
</tr>
<tr>
<td>Total</td>
<td>68</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Female Arizona Agricultural Education teachers \((n = 17)\) made up 65.4\% of novice respondents. Male teachers \((n = 9)\) made up 34.6\% of novice respondents. Table 5 reports the gender of novice Arizona Agricultural Education teachers.

Table 5

<table>
<thead>
<tr>
<th>Sex</th>
<th>(f)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>17</td>
<td>65.4</td>
</tr>
<tr>
<td>Male</td>
<td>9</td>
<td>34.6</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Female Arizona Agricultural Education teachers \( (n = 19) \) made up 46.3% of experienced respondents. Male teachers \( (n = 22) \) made up 53.7% of experienced respondents.

Table 6 reports the gender of experienced Arizona Agricultural Education teachers.

<table>
<thead>
<tr>
<th>Sex</th>
<th>( f )</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>19</td>
<td>46.3</td>
</tr>
<tr>
<td>Male</td>
<td>22</td>
<td>53.7</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>100.0</td>
</tr>
</tbody>
</table>
The average years teaching for Arizona Agricultural Education teachers was 11 years \((SD = 9.7)\). Table 7 describes the distribution of the number of years of experience teaching of Arizona Agricultural Education teachers \((n = 68)\). One \((1.5\%)\) of the respondents did not report their years of experience.

Table 7

**Number Of Years Teaching**

<table>
<thead>
<tr>
<th>Years of Experience</th>
<th>(f)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8</td>
<td>36</td>
<td>52.9</td>
</tr>
<tr>
<td>9-16</td>
<td>15</td>
<td>22.1</td>
</tr>
<tr>
<td>17-24</td>
<td>7</td>
<td>10.3</td>
</tr>
<tr>
<td>25-36</td>
<td>9</td>
<td>13.2</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>Total</td>
<td>68</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Mean = 10.78; Median = 8; Mode = 1; SD = 9.7; Range = 32.5.
Novice Arizona Agricultural Education teachers in the study reported a mean teaching experience of 2.5 years ($SD = 1.4$). Table 8 describes the distribution of the number of years of experience teaching of novice Arizona Agricultural Education teachers ($n = 26$).

Table 8

<table>
<thead>
<tr>
<th>Years of Experience</th>
<th>$f$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>13</td>
<td>50.0</td>
</tr>
<tr>
<td>3-4</td>
<td>10</td>
<td>38.5</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>11.5</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Mean = 2.54; Median = 2.5; Mode = 1; SD = 1.4; Range = 4.5.
Experienced Arizona Agricultural Education teachers in the study reported a mean teaching experience of 16 years ($SD = 9.0$). Table 9 describes the distribution of the number of years of experience teaching of experienced Arizona Agricultural Education teachers (n=41).

Table 9

<table>
<thead>
<tr>
<th>Years of Experience</th>
<th>$f$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-10</td>
<td>16</td>
<td>34.1</td>
</tr>
<tr>
<td>11-15</td>
<td>8</td>
<td>19.5</td>
</tr>
<tr>
<td>16-20</td>
<td>6</td>
<td>14.6</td>
</tr>
<tr>
<td>21-25</td>
<td>3</td>
<td>7.3</td>
</tr>
<tr>
<td>26-30</td>
<td>4</td>
<td>9.8</td>
</tr>
<tr>
<td>31-33</td>
<td>4</td>
<td>9.8</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Mean = 16.01; Median = 11; Mode = 8; SD = 9.0; Range = 27.
Objective Two

The purpose of objective two was to describe the perceived level of teacher self-efficacy of Arizona Agricultural Education teachers. Frequencies were reported for each of the nine points on the Likert-type scale for the 60 items related to perceived teacher self-efficacy.

In the Classroom domain, Arizona Agricultural Education teachers reported a mean perceived teacher self-efficacy level of 6.89 (SD = .82). Teachers reported a mean perceived teacher self-efficacy level of 6.88 (SD = 1.35) in the FFA domain. Within the SAE domain, teachers reported a mean level of perceived teacher self-efficacy of 6.46 (SD = 1.17). Arizona Agricultural Education teachers reported a mean level of perceived teacher self-efficacy at 6.23 (SD = 1.18) in the domain of Content. Table 10 describes the distribution of perceived teacher self-efficacy of Arizona Agricultural Education teachers (n = 68).
Table 10.  
*Teacher Self-Efficacy of Novice and Experienced Arizona Agricultural Education Teachers*(n = 68)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Descriptor</th>
<th>Classroom</th>
<th>FFA</th>
<th>SAE</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>0.00-1.49</td>
<td>No Capability</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>1.50-2.49</td>
<td></td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>2.50-3.49</td>
<td>Very Little Capability</td>
<td>0</td>
<td>0.00</td>
<td>2</td>
<td>2.94</td>
</tr>
<tr>
<td>3.50-4.49</td>
<td></td>
<td>0</td>
<td>0.00</td>
<td>2</td>
<td>2.94</td>
</tr>
<tr>
<td>4.50-5.49</td>
<td>Some Capability</td>
<td>2</td>
<td>2.94</td>
<td>8</td>
<td>11.76</td>
</tr>
<tr>
<td>5.50-6.49</td>
<td></td>
<td>23</td>
<td>33.82</td>
<td>10</td>
<td>14.71</td>
</tr>
<tr>
<td>6.50-7.49</td>
<td>Quite a Bit of Capability</td>
<td>26</td>
<td>38.24</td>
<td>18</td>
<td>14.71</td>
</tr>
<tr>
<td>7.50-8.49</td>
<td></td>
<td>15</td>
<td>22.06</td>
<td>22</td>
<td>32.35</td>
</tr>
<tr>
<td>8.50-9.00</td>
<td>A Great Deal of Capability</td>
<td>2</td>
<td>2.94</td>
<td>6</td>
<td>8.82</td>
</tr>
</tbody>
</table>
Objective Three

Objective three was to describe the perceived level of importance of job related factors of Arizona Agricultural Education teachers. Frequencies were reported for each of the nine points on the Likert-type scale for the 60 items related to importance.

In the Classroom domain, Arizona Agricultural Education teachers reported a mean level of importance of 7.65 and \((SD = .76)\). The teachers reported a mean importance level of 7.55 \((SD = 1.14)\) in the FFA domain. Within the SAE domain, teachers reported a level of importance mean of 7.50 \((SD = 1.39)\). Arizona Agricultural Education teachers reported a mean level of importance at 7.25 \((SD = 1.17)\) in the domain of Content. Table 11 describes the distribution of importance of job related factors of Arizona Agricultural Education teachers \((n = 68)\).

Table 11. Level of Perceived Importance of Job Related Factors of Novice and Experienced Arizona Agricultural Education teachers \((n = 68)\)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Descriptor</th>
<th>Classroom</th>
<th>FFA</th>
<th>SAE</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(f)</td>
<td>(f)</td>
<td>(f)</td>
<td>(f)</td>
</tr>
<tr>
<td>0.00-1.49</td>
<td>No Important</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1.50-2.49</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2.50-3.49</td>
<td>Slightly Important</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3.50-4.49</td>
<td></td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2.94</td>
</tr>
<tr>
<td>4.50-5.49</td>
<td>Fairly Important</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>4.41</td>
</tr>
<tr>
<td>5.50-6.49</td>
<td></td>
<td>3</td>
<td>4.41</td>
<td>5</td>
<td>7.35</td>
</tr>
<tr>
<td>6.50-7.49</td>
<td>Important</td>
<td>25</td>
<td>36.76</td>
<td>16</td>
<td>23.53</td>
</tr>
<tr>
<td>7.50-8.49</td>
<td></td>
<td>30</td>
<td>41.12</td>
<td>29</td>
<td>42.65</td>
</tr>
<tr>
<td>8.50-9.00</td>
<td>Very Important</td>
<td>10</td>
<td>14.71</td>
<td>13</td>
<td>19.12</td>
</tr>
</tbody>
</table>

|          |                     | 23.53   | 16  | 23.53 |
|          |                     | 23.53   | 12  | 17.65 |
**Objective Four**

The overall scope of objective four was to describe the perceived level of teacher self-efficacy of novice Arizona Agricultural Education teachers. Frequencies were reported for each of the nine points on the Likert-type scale for the 60 items related to perceived teacher self-efficacy.

In the Classroom domain, novice experienced Arizona Agricultural Education teachers reported a mean perceived teacher self-efficacy of 6.66 (SD = .89). The teachers reported a mean perceived teacher self-efficacy level of 6.65 (SD = 1.38) in the FFA domain. Novice teachers reported a mean level of perceived teacher self-efficacy of 6.38 (SD = 1.29) in the SAE domain. Novice experience level Arizona Agricultural Education teachers reported a mean level of perceived teacher self-efficacy at 6.11 (SD = 1.05) in the domain of Content. Table 12 describes the distribution of perceived teacher self-efficacy of novice Arizona Agricultural Education teachers (n = 26).
### Table 12.
**Teacher Self-Efficacy Of Novice Arizona Agricultural Education Teachers (n = 26)**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Descriptor</th>
<th>Classroom</th>
<th>FFA</th>
<th>SAE</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$f$</td>
<td>$f$</td>
<td>$f$</td>
<td>$f$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$%$</td>
<td>$%$</td>
<td>$%$</td>
<td>$%$</td>
</tr>
<tr>
<td>0.00-1.49</td>
<td>No Capability</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1.50-2.49</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2.50-3.49</td>
<td>Very Little Capability</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3.50-4.49</td>
<td>Some Capability</td>
<td>0</td>
<td>1</td>
<td>3.85</td>
<td>1</td>
</tr>
<tr>
<td>4.50-5.49</td>
<td></td>
<td>2</td>
<td>7.69</td>
<td>5</td>
<td>19.23</td>
</tr>
<tr>
<td>5.50-6.49</td>
<td>Quite a Bit of Capability</td>
<td>11</td>
<td>42.31</td>
<td>5</td>
<td>19.23</td>
</tr>
<tr>
<td>6.50-7.49</td>
<td></td>
<td>8</td>
<td>30.77</td>
<td>6</td>
<td>23.01</td>
</tr>
<tr>
<td>7.50-8.49</td>
<td>A Great Deal of Capability</td>
<td>4</td>
<td>15.38</td>
<td>7</td>
<td>26.92</td>
</tr>
<tr>
<td>8.50-9.00</td>
<td></td>
<td>1</td>
<td>3.85</td>
<td>2</td>
<td>7.69</td>
</tr>
</tbody>
</table>


Objective Five

This objective sought to describe the perceived level of importance of job related factors of novice Arizona Agricultural Education teachers. Frequencies were reported for each of the nine points on the Likert-type scale for the 60 items related to importance.

In the Classroom domain, novice experience level Arizona Agricultural Education teachers reported a mean importance of 7.73 ($SD = .69$). The teachers reported a mean level of importance of 7.73($SD = .92$) in the FFA domain. Novice experience level teachers reported a level mean importance of 7.74 ($SD = 1.01$) in the SAE domain. Novice Arizona Agriculture Education teachers reported a mean level of importance of 7.36 ($SD = 1.16$) in the domain of Content. Table 13 describes the distribution of importance of job related factors of novice Arizona Agricultural Education teachers ($n = 26$).

Table 13. Level Of Perceived Importance Of Job Related Factors Of Novice Arizona Agricultural Education Teachers: ($n = 26$)

| Scale  | Descriptor         | Classroom | | FFA | | SAE | | Content |
|--------|--------------------|-----------|-----|-----|-----|-----|-----------|
|        |                    | $f$ | %   | $f$ | %   | $f$ | %   | $f$ | %   |
| 0.00-1.49 | Not Important      | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1.50-2.49 |                   | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 2.50-3.49 | Slightly Important | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 3.50-4.49 |                   | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 4.50-5.49 | Fairly Important   | 0 | 0.00 | 1 | 3.85 | 1 | 3.85 | 2 | 7.69 |
| 5.50-6.49 |                   | 1 | 3.85 | 2 | 7.69 | 2 | 7.69 | 3 | 11.54 |
| 6.50-7.49 | Important         | 8 | 30.77 | 6 | 23.01 | 9 | 34.62 | 11 | 42.31 |
| 7.50-8.49 |                   | 15 | 57.69 | 11 | 42.31 | 6 | 23.01 | 4 | 15.38 |
| 8.50-9.00 | Very Important    | 2 | 7.69 | 6 | 23.01 | 8 | 30.77 | 6 | 23.01 |
Objective Six

The purpose of objective six was to describe the perceived level of teacher self-efficacy of experienced Arizona Agricultural Education teachers. Frequencies were reported for each of the nine points on the Likert-type scale for the 60 items related to capability.

In the Classroom domain, experienced Arizona Agricultural Education teachers reported a mean perceived teacher self-efficacy of 7.01 (SD = .75). The teachers reported a mean perceived teacher self-efficacy level of 7.00 (SD = 1.35) in the FFA domain. Experienced teachers reported a mean level of perceived teacher self-efficacy in the SAE domain of 6.47 (SD = 1.46). Experienced Arizona Agricultural Education teachers reported a mean level of perceived teacher self-efficacy at 6.26 (SD = 1.2) in the domain of Content.

Table 14 describes the distribution of perceived teacher self-efficacy of experienced Arizona Agricultural Education teachers (n = 41).
Table 14. *Teacher Self-Efficacy Of Experienced Arizona Agricultural Education Teachers (n = 41)*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Descriptor</th>
<th>Classroom</th>
<th>FFA</th>
<th>SAE</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>0.00-1.49</td>
<td>No Capability</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>1.50-2.49</td>
<td></td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>2.50-3.49</td>
<td>Very Little Capability</td>
<td>0</td>
<td>0.00</td>
<td>2</td>
<td>4.88</td>
</tr>
<tr>
<td>3.50-4.49</td>
<td></td>
<td>0</td>
<td>0.00</td>
<td>1</td>
<td>2.44</td>
</tr>
<tr>
<td>4.50-5.49</td>
<td>Some Capability</td>
<td>0</td>
<td>0.00</td>
<td>3</td>
<td>7.32</td>
</tr>
<tr>
<td>5.50-6.49</td>
<td></td>
<td>12</td>
<td>29.27</td>
<td>5</td>
<td>12.20</td>
</tr>
<tr>
<td>6.50-7.49</td>
<td>Quite a Bit of Capability</td>
<td>18</td>
<td>43.90</td>
<td>12</td>
<td>29.27</td>
</tr>
<tr>
<td>7.50-8.49</td>
<td></td>
<td>10</td>
<td>24.39</td>
<td>14</td>
<td>34.15</td>
</tr>
<tr>
<td>8.50-9.00</td>
<td>A Great Deal of Capability</td>
<td>1</td>
<td>2.44</td>
<td>4</td>
<td>9.76</td>
</tr>
</tbody>
</table>
Objective Seven

Objective seven sought to describe the perceived level of importance of job related factors of experienced Arizona Agricultural Education teachers. Frequencies were reported for each of the nine points on the Likert-type scale for the 60 items related to importance.

In the Classroom domain, experienced Arizona Agricultural Education teachers reported a mean importance of 7.58 ($SD = .80$). Experienced Arizona Agricultural Education teachers indicated level of importance for the FFA domain of 7.42 ($SD = 1.27$). Experienced teachers reported a level of importance mean in the SAE domain of 7.33 ($SD = .27$).

Experienced Arizona Agricultural Education teachers reported a mean level of importance of 7.16 ($SD = 1.18$) in the domain of Content. Table 15 describes the distribution of importance of job related factors of experienced Arizona Agricultural Education teachers ($n = 41$).

Table 15.
Level Of Perceived Importance Of Job Related Factors Of Experienced Arizona Agricultural Education Teachers ($n = 41$)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Descriptor</th>
<th>Classroom</th>
<th>FFA</th>
<th>SAE</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$f$</td>
<td>$%$</td>
<td>$f$</td>
<td>$%$</td>
</tr>
<tr>
<td>0.00-1.49</td>
<td>Not Important</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>1.50-2.49</td>
<td></td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>2.50-3.49</td>
<td>Slightly Important</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>3.50-4.49</td>
<td></td>
<td>0</td>
<td>0.00</td>
<td>2</td>
<td>4.88</td>
</tr>
<tr>
<td>4.50-5.49</td>
<td>Fairly Important</td>
<td>0</td>
<td>0.00</td>
<td>2</td>
<td>4.88</td>
</tr>
<tr>
<td>5.50-6.49</td>
<td></td>
<td>2</td>
<td>4.88</td>
<td>3</td>
<td>7.32</td>
</tr>
<tr>
<td>6.50-7.49</td>
<td>Important</td>
<td>17</td>
<td>41.46</td>
<td>10</td>
<td>24.39</td>
</tr>
<tr>
<td>7.50-8.49</td>
<td></td>
<td>15</td>
<td>36.59</td>
<td>17</td>
<td>41.46</td>
</tr>
<tr>
<td>8.50-9.00</td>
<td>Very Important</td>
<td>7</td>
<td>17.07</td>
<td>7</td>
<td>17.07</td>
</tr>
</tbody>
</table>
Objective Eight

The overall scope of objective 8 was to describe the relationship among the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers. A Pearson product moment correlation was used and is viewed in Table 16. Davis’ (1971) conventions were used to describe the relationships: .01 to .09 = negligible association, .10 to .29 = low association, .30 to .49 = moderate association, .50 to .69 = substantial association, .70 or higher = very high association.

Table 16.
Relationship Among Novice and Experienced Teachers Efficacy and Importance Constructs: (n=68)

<table>
<thead>
<tr>
<th>Construct</th>
<th>X₁</th>
<th>X₂</th>
<th>X₃</th>
<th>X₄</th>
<th>X₅</th>
<th>X₆</th>
<th>X₇</th>
<th>X₈</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Capability (X₁)</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class Importance (X₂)</td>
<td>.45</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FFA Capability (X₃)</td>
<td>.58</td>
<td>.24</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FFA Importance (X₄)</td>
<td>.36</td>
<td>.57</td>
<td>.57</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAE Capability (X₅)</td>
<td>.59</td>
<td>.31</td>
<td>.80</td>
<td>.42</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAE Importance (X₆)</td>
<td>.43</td>
<td>.66</td>
<td>.50</td>
<td>.77</td>
<td>.54</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content Capability (X₇)</td>
<td>.60</td>
<td>.18</td>
<td>.43</td>
<td>.18</td>
<td>.52</td>
<td>.23</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Content Importance (X₈)</td>
<td>.29</td>
<td>.63</td>
<td>.16</td>
<td>.48</td>
<td>.16</td>
<td>.52</td>
<td>.40</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note: r= Pearson correlation. Capability scale: 1= No Capability, 2, 3=Very Little Capability, 4, 5= Some Capability, 6, 7= Quite a Bit of Capability, 8, and 9= A Great Deal of Capability. Importance Scale: 1= Not Important, 2, 3= Slightly Important, 4, 5= Fairly Important, 6, 7=Important, 8, and 9= Very Important.

Among Classroom Capability, all other perceived teacher efficacy and perceived level of importance constructs had a range from a low association (r=.29) among Content Importance to a substantial association (r=.60) in Content Capability. All other capability relationships among the Classroom Capability ranged in the substantial association descriptor.
according to Davis’ (1971) conventions. All other importance constructs ranged in the moderate association convention.

Among Classroom Importance, the relationship with Content Capability displayed a low association \((r = .18)\). FFA Capability also had a low relationship with Classroom Importance \((r = .24)\). However, all other importance relationships yielded a substantial association: FFA Importance \((r = .57)\), SAE Importance \((r = .66)\), and Content Importance \((r = .63)\).

FFA Capability had a very high association with SAE Capability \((r = .80)\). FFA Capability had a substantial association with FFA Importance \((r = .57)\), in addition to a moderate association with SAE Importance \((r = .50)\) and Content Capability \((r = .43)\). FFA Capability had a low association \((r = .16)\) with Content Importance.

FFA Importance has a very high association with SAE Importance \((r = .77)\). FFA Importance had a low relationship with Content Capability \((r = .18)\)

SAE Capability had a substantial association with SAE Importance \((r = .54)\) and Content Capability \((r = .52)\). SAE Capability had a low relationship with Content Importance \((r = .16)\).

SAE Importance had a substantial association with Content Importance \((r = .52)\) and a low association with Content Capability \((r = .23)\).

Content Capability had a moderate relationship with Content Importance \((r = .40)\).
Objective Nine

Objective 9 sought to describe the relationship between level of experience and the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers. A point-biserial correlation was used and the results are in Table 17. A scatter plot was created to ensure that the data met the assumptions of linearity Appendix (J). Davis’ (1971) conventions were used to describe the relationships: .01 to .09 = negligible association, .10 to .29 = low association, .30 to .49 = moderate association, .50 to .69 = substantial association, .70 or higher = very strong association.

The level of experience had a positive negligible association among two of the capability constructs: SAE Capability \((r = .03)\), Content Capability \((r = .06)\). Experience level had a negative negligible association with Content Importance \((r = -.08)\). The remaining constructs fell into low association, with Class Capability \((r = .21)\) and FFA Capability \((r = .13)\) having a positive low association, and Class Importance \((r = -.10)\) and FFA Importance \((r = -.13)\) having a negative low association.
Table 17.

Relationship Between Level Of Experience And Teacher Self-Efficacy And Job Importance Factors: (n = 67)

<table>
<thead>
<tr>
<th>Variable</th>
<th>$r$</th>
<th>$r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Capability</td>
<td>.21</td>
<td>.04</td>
</tr>
<tr>
<td>Class Importance</td>
<td>-.10</td>
<td>.01</td>
</tr>
<tr>
<td>FFA Capability</td>
<td>.13</td>
<td>.02</td>
</tr>
<tr>
<td>FFA Importance</td>
<td>-.13</td>
<td>.02</td>
</tr>
<tr>
<td>SAE Capability</td>
<td>.03</td>
<td>.00</td>
</tr>
<tr>
<td>SAE Importance</td>
<td>-.17</td>
<td>.03</td>
</tr>
<tr>
<td>Content Capability</td>
<td>.06</td>
<td>.00</td>
</tr>
<tr>
<td>Content Importance</td>
<td>-.08</td>
<td>.01</td>
</tr>
</tbody>
</table>

Note: $r = \text{Point-biserial correlation. } 0 = \text{Novice, } 1 = \text{Experienced, } \text{Relationship} = \text{Davis’s (1971), } n = 67$ because one teacher did not respond years teaching.
Objective Ten

This objective sought to describe the variance between level of experience and the perceived level of teacher self-efficacy. Variance was calculated by squaring the correlation coefficient and is viewed in Table 17. A scatter plot was drawn to ensure that the data met the assumptions of linearity Appendix (J).

Both SAE Capability and Content Capability had a coefficient of determination of \((r^2 = 0.00)\), explaining less than zero percent of the variance with experience. The relationship between FFA Capability and experience explained two percent \((r^2 = 0.02)\) of the variance and Classroom Capability explained four percent \((r^2 = 0.04)\) of the variance with experience.
Objective Eleven

The purpose of objective eleven was to describe the variance between level of experience and the perceived level of importance of job related factors. Variance was calculated by squaring the correlation coefficient and is viewed in Table 17. A scatter plot was drawn to ensure that the data met the assumptions of linearity Appendix (J).

Classroom Importance and Content Importance each had a coefficient of determination of \( r^2 = .01 \), explaining one percent of the variance with experience. FFA Importance explained two percent \( r^2 = .02 \) of the variance with experience. The relationship between SAE Importance and experience explained three percent \( r^2 = .03 \) of the variance.
CHAPTER 5: DISCUSSION

Purpose of the Study
The purpose of the study was to compare the difference in the level of teacher self-efficacy between novice and experienced secondary Arizona Agricultural Education teachers.

Specifically, the following research objectives guided the study:

Research Objectives
1. Describe the demographics (age, gender, years teaching) of Arizona Agricultural Education teachers.
2. Describe the perceived level of teacher self-efficacy of Arizona Agricultural Education teachers.
3. Describe the perceived level of importance of job related factors of Arizona Agricultural Education teachers.
4. Describe the perceived level of teacher self-efficacy of novice Arizona Agricultural Education teachers.
5. Describe the perceived level of importance of job related factors of novice Arizona Agricultural Education teachers.
6. Describe the perceived level of teacher self-efficacy of experienced Arizona Agricultural Education teachers.
7. Describe the perceived level of importance of job related factors of experienced Arizona Agricultural Education teachers.
8. Describe the relationship among the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers.

9. Describe the relationship between level of experience and the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers.

10. Describe the variance between level of experience and the perceived level of teacher self-efficacy.

11. Describe the variance between level of experience and the perceived level of importance of job related factors.

Summary of Procedures

Survey research methods were employed for this descriptive – correlational study. A census was conducted among Arizona Agricultural Education teachers. A researcher developed instrument was utilized in the data collection process to determine Arizona Agricultural Education teachers perceived level of teacher self-efficacy and perceived level of importance of job related factors. Content validity and face validity of the instrument were achieved through a review of a panel of experts. Reliability was determined by Wolf (2008) by computing a Cronbach’s alpha for the Classroom, FFA, and SAE domains and the instrument was deemed reliable. Additionally, post-hoc reliability was computed by the researcher from the data collected from the population for the Content domain. The items related to the Content Capability construct yielded a Cronbach’s alpha coefficient of .81, while items related to the Content Importance construct yielded a Cronbach’s alpha
coefficient of .87. The post-hoc reliability analysis further asserted the instrument was reliable since all computed coefficients were higher than the 0.7 minimum alpha level.

Five points of contact were utilized in the data collection process for the 93 Arizona Agricultural Education teachers included in the study. A 76% (n = 71) response rate was attained through the data collection process. After the data were examined, 73% (n = 68) of the returned instruments were deemed usable for the data analysis. Non-response error was addressed by comparing early respondents to late respondents (Miller and Smith, 1983) on the teacher self-efficacy and job importance summated scores. In terms of data analysis, SPSS V. 18 was utilized to obtain descriptive and relational statistics to meet the research objectives.

Summary of Conclusions for Objective One: Describe the demographics (age, sex, years teaching) of Arizona Agricultural Education teachers.

Objective one sought to describe the demographics of Arizona Agricultural Education teachers. Teachers in this study reported a mean age of 36 years (SD = 10.7). Novice Arizona Agricultural Education teachers reported a mean age of 30 years (SD = 8.1). Experienced Arizona Agricultural Education teachers reported a mean age of 40 years (SD = 10.1). Thirty-seven female teachers made up 54% of all respondents and 31 male teachers made up 46% of all respondents. Of novice respondents (n = 26), 65.4% were female and 34.6% were male. Of experienced respondents (n = 41), 46.3% were female and 53.7% were male. The average years teaching for all respondents was 11 years (SD = 9.7). For novice teachers, a mean
teaching experience of 2.5 years ($SD = 1.4$) was reported. For experienced teachers, the average years teaching was 16 years ($SD = 9.0$).

Summary of Conclusions for Objective Two: Describe the perceived level of teacher self-efficacy of Arizona Agricultural Education teachers.

The purpose of objective two was to describe the perceived level of teacher self-efficacy of Arizona Agricultural Education teachers. In the Classroom domain, Arizona Agricultural Education teachers reported a mean perceived level of teacher self-efficacy of 6.89 ($SD = .82$). The teachers reported a mean perceived teacher self-efficacy level of 6.88 ($SD = 1.35$) in the FFA domain. Within the SAE domain, teachers reported a mean level of perceived teacher self-efficacy of 6.46 ($SD = 1.17$). Arizona Agricultural Education teachers reported a mean level of perceived teacher self-efficacy at 6.23 ($SD = 1.18$) in the domain of Content.

As a whole, Arizona Agricultural Education teachers fell into the descriptor range of, “Quite a Bit of Capability” when describing their level of efficacy in the Classroom, FFA, and SAE constructs. Teachers reported between the descriptors “Some Capability” and “Quite a Bit of Capability” for Content efficacy. Teachers reported the highest levels of teacher self-efficacy in the FFA construct and the lowest levels in the Content construct. Knowing this, the researcher concluded that Arizona Agricultural Education teachers perceive themselves to be efficacious.
Objective three sought to describe the perceived level of importance of job related factors of Arizona Agricultural Education teachers. In the Classroom domain, Arizona Agricultural Education teachers reported a mean level of importance of 7.65 and ($SD = .76$). The teachers reported a mean importance level of 7.55 ($SD = 1.14$) in the FFA domain. Within the SAE domain, teachers reported a level of importance mean of 7.50 ($SD = 1.39$). Arizona Agricultural Education teachers reported a mean level of importance at 7.25 and standard deviation of 1.17 in the domain of Content.

Pertaining to importance of job related factors, Arizona Agricultural Education teachers as a whole fell into the descriptor range of, “Important” when describing the importance of the SAE and Content constructs. For the Classroom and FFA constructs, teachers fell between the descriptors “Important” and “Very Important”. Teachers reported the highest level of importance in the FFA construct and the lowest levels in the Content construct. In general, Arizona Agricultural Education teachers feel that all aspects of their job are important.
Summary of Conclusions for Objective Four: Describe the perceived level of teacher self-efficacy of novice Arizona Agricultural Education teachers.

Similar to objective two, objective four was to describe the perceived level of teacher self-efficacy of novice Arizona Agricultural Education teachers. In the Classroom domain, novice experienced Arizona Agricultural Education teachers reported a mean perceived teacher self-efficacy of 6.66 (SD = .89). The teachers reported a mean perceived level of teacher self-efficacy of 6.65 (SD = 1.38) in the FFA domain. Novice teachers reported a mean level of perceived teacher self-efficacy of 6.38 (SD = 1.29) in the SAE domain. Novice experience level Arizona Agricultural Education teachers reported a mean level of perceived teacher self-efficacy at 6.11 and (SD = 1.05) in the domain of Content.

Regarding novice Arizona Agricultural Education teachers, the majority describe their capability in the four domain areas between, “Some Capability” and “Quite a Bit of Capability”. When compared to the entire population, novice teachers display slightly lower levels of teacher self-efficacy, specifically in the Classroom construct. Novice teachers reported the highest levels of teacher self-efficacy in the FFA domain and the lowest levels in the Content construct.
Summary of Conclusions for Objective Five: Describe the perceived level of importance of job related factors of novice Arizona Agricultural Education teachers.

Similar to objective three, objective five sought to describe the perceived level of importance of job related factors of novice Arizona Agricultural Education teachers. In the Classroom domain, novice experience level Arizona Agricultural Education teachers reported a mean importance of 7.73 ($SD = .69$). The teachers reported a mean level of importance of 7.73 ($SD = .92$) in the FFA domain. Novice experience level teachers reported a level mean importance of 7.74 ($SD = 1.01$) in the SAE domain. Novice Arizona Agriculture Education teachers reported a mean level of importance of 7.36 ($SD = 1.16$) in the domain of Content.

In relation to importance of job related factors, novice Arizona Agricultural Education teachers fell between the descriptors “Important” and “Very Important” in relation to the Classroom and FFA constructs. For the constructs SAE and Content, the majority of novice teachers fell into the descriptor, “Important”. Novice teachers are similar in how they perceive the importance of job related factors when compared to the entire population.
Summary of Conclusions for Objective Six: Describe the level of teacher self-efficacy of experienced Arizona Agricultural Education teachers.

The purpose of objective six was to describe the perceived level of teacher self-efficacy of experienced Arizona Agricultural Education teachers. In the Classroom domain, experienced Arizona Agricultural Education teachers reported a mean level of perceived teacher self-efficacy of 7.01 ($SD = .75$). Experienced teachers reported a mean perceived teacher self-efficacy level of 7.00 ($SD = 1.35$) in the FFA domain. Experienced teachers reported a mean level of perceived teacher self-efficacy in the SAE domain of 6.47 ($SD = 1.46$). Experienced Arizona Agricultural Education teachers reported a mean level of perceived teacher self-efficacy at 6.26 ($SD = 1.2$) in the domain of Content.

Experienced Arizona Agricultural Education teachers were somewhat diverse in their perceived capability. In the Classroom and SAE constructs, experienced teachers fell into the descriptor of “Quite a Bit of Capability”. In the FFA construct, the highest number of experienced teachers found themselves between the descriptors “Quite a Bit of Capability” and “A Great Deal of Capability”. Experienced teachers feel between the descriptors “Some Capability” and “Quite a Bit of Capability” for the Content construct. Experienced teachers reported the highest levels of teacher self-efficacy in the FFA construct and the lowest levels in the Content construct. When compared to all Arizona Agricultural Education teachers, experienced teachers were similar in their levels of teacher self-efficacy in the Classroom, SAE, and Content constructs and higher in the FFA construct. Experienced teachers were slightly higher in their levels of efficacy in the Classroom and SAE constructs when
compared to novice teachers. Experienced teachers were higher in their FFA efficacy level than novice teachers and the same in the Content construct.

Summary of Conclusions for Objective Seven: Describe the perceived level of importance of job related factors of experienced Arizona Agricultural Education teachers.

Objective seven sought to describe the perceived level of importance of job related factors of experienced Arizona Agricultural Education teachers. In the Classroom domain, experienced Arizona Agricultural Education teachers reported a mean importance of 7.58 (SD = .80). Experienced Arizona Agricultural Education teachers indicated level of importance for the FFA domain of 7.42 and standard deviation of 1.27. Experienced teachers reported a level of importance mean in the SAE domain of 7.33 and a standard deviation of 1.27. Experienced Arizona Agricultural Education teachers reported a mean level of importance of 7.16 (SD = 1.18) in the domain of Content.

Regarding level of importance of job related factors, experienced teachers fell into the descriptor “Important” for the constructs Classroom, SAE, and Content. For the FFA construct, experienced teachers fell between the descriptors “Important” and “Very Important”. Experienced teachers reported the highest levels of importance in the FFA construct and the lowest levels in the Content construct. Experienced Arizona Agricultural Education teachers were similar to the entire population regarding their perceived importance in the FFA, SAE, and Content constructs. Regarding the Classroom construct, experienced teachers were slightly lower than the entire population and novice teachers.
Summary of Conclusions for Objective Eight: Describe the relationship among the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers.

Objective eight sought to describe the relationship among the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers. Among Classroom Capability, all other perceived teacher efficacy and perceived level of importance constructs had a range from a low association ($r = .29$) among Content Importance to a substantial association ($r = .60$) in Content Capability. All other capability relationships among the Classroom Capability ranged in the substantial association descriptor according to Davis’ (1971) conventions. All other importance constructs ranged in the moderate association convention. Among Classroom Importance, the relationship with Content Capability displayed a low association (Davis, 1971) ($r = .18$). FFA Capability also had a low relationship (Davis, 1971) with Classroom Importance ($r = .24$), however, all other importance relationships yielded a substantial association (Davis, 1971): FFA Importance ($r = .57$), SAE Importance ($r = .66$), and Content Importance ($r = .63$). FFA Capability had a very high association (Davis, 1971) with SAE Capability ($r = .80$). FFA Capability had a substantial association (Davis, 1971) with FFA Importance ($r = .57$), in addition to a moderate association (Davis, 1971) with SAE Importance ($r = .50$) and Content Capability ($r = .43$). FFA Capability had a low association (Davis, 1971) ($r = .16$) with Content Importance. FFA Importance had a very high association (Davis, 1971) with SAE Importance ($r = .77$). FFA Importance had a low relationship (Davis, 1971) with Content Capability ($r = .18$). SAE Capability had a substantial association (Davis, 1971) with SAE
Importance (r=.54) and Content Capability (r=.52). SAE Capability had a low relationship (Davis, 1971) with Content Importance (r=.16). SAE Importance had a substantial association (Davis, 1971) with Content Importance (r=.52) and a low association (Davis, 1971) with Content Capability (r=.23). Content Capability had a moderate relationship (Davis, 1971) with Content Importance (r=.40).

When examining the relationship between the perceived level of teacher self-efficacy and perceived level of importance of job related factors of Arizona Agricultural Education teachers a few associations are noted. Very high associations (Davis, 1971) were found between FFA Capability and SAE Capability (r = .80), as well as between FFA Importance and SAE Importance (r = .77). Equally noted are the low associations (Davis, 1971) between Class Importance and FFA Capability (r = .24), Class Importance and Content Capability (r = .18), Class Capability and Content Importance (r = .29), Content Importance and FFA Capability (r = .16), Content Importance and SAE Capability (r = .16), Content Capability and FFA Importance (r = .18), and Content Capability and SAE Importance (r = .23). In addition, the smallest relationship between constructs in the same area was between FFA Capability and Content Capability which displayed a moderate association (r = .43) (Davis, 1971). As a result, relationships within the same area (capability, importance) were higher than relationships between domains.
Summary of Conclusions for Objective Nine: Describe the relationship between level of experience and the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers.

Objective nine sought to describe the relationship between level of experience and the perceived level of teacher self-efficacy and the perceived level of importance of job related factors of Arizona Agricultural Education teachers. Level of experience had a positive negligible association (Davis, 1971) among two of the capability constructs: SAE Capability ($r=.03$), Content Capability ($r=.06$). Experience level had a negative negligible association (Davis, 1971) with Content Importance ($r=-.08$). The remaining constructs fell into low association (Davis, 1971), with Class Capability ($r=.21$) and FFA Capability ($r=.13$) having a positive low association (Davis, 1971), and Class Importance ($r=-.10$) and FFA Importance ($r=-.13$) having a negative low association (Davis, 1971).

The relationship between level of experience and perceived level of teacher self-efficacy and perceived level of importance of job related factors displayed the low association (Davis, 1971) between experience and Class Capability ($r=.21$) as the prominent finding. It should also be noted that this relationship explained 4% of the variance between the two variables, meaning 96% of the variance between Class Capability and experience is not explained. The researcher concluded that experience has little relationship with efficacy levels and perceived importance of job related factors.
Summary of Conclusions for Objective Ten: Describe the variance between the level of experience and the perceived level of teacher self-efficacy.

Objective ten sought to describe the variance between level of experience and the perceived level of teacher self-efficacy. Both SAE Capability and Content Capability had a coefficient of determination of \( r^2 = <.00 \), explaining less than zero percent of the variance with experience. The relationship between FFA Capability and experience explained two percent \( r^2 = .02 \) of the variance and Classroom Capability explained four percent \( r^2 = .04 \) of the variance with experience.

The relationship between level of experience and perceived level of teacher self-efficacy and perceived level of importance of job related factors displayed the low association (Davis, 1971) between experience and Class Capability \( r = .21 \) as the prominent finding. It should also be noted that this relationship explained 4% of the variance between the two variables, meaning 96% of the variance between Class Capability and experience is not explained. The researcher concluded that experience has little relationship with efficacy levels and perceived importance of job related factors.
Summary of Conclusions for Objective Eleven: Describe the variance between level of experience and the perceived level of importance of job related factors.

The purpose of objective eleven was to describe the variance between level of experience and the perceived level of importance of job related factors. Classroom Importance and Content Importance each had a coefficient of determination of \( r^2 = .01 \), explaining one percent of the variance with level of experience. FFA Importance explained two percent \( r^2 = .02 \) of the variance with experience. The relationship between SAE Importance and experience explained three percent \( r^2 = .03 \) of the variance between the two variables.

The relationship between level of experience and perceived level of teacher self-efficacy and perceived level of importance of job related factors displayed the low association (Davis, 1971) between experience and Class Capability \( r = .21 \) as the prominent finding. It should also be noted that this relationship explained 4% of the variance between the two variables, meaning 96% of the variance between Class Capability and experience is not explained. The researcher concluded that experience has little relationship with efficacy levels and perceived importance of job related factors.
Recommendations/Discussion

Teachers in this study reported that they were capable in their ability to teach agriculture and perceived all areas of a program to be important. Specifically, both novice and experienced teachers reported to be the most efficacious in the FFA domain and reported that the FFA domain was important. This indicates that the Arizona Association FFA is a major aspect of Agricultural Education in Arizona. All teachers were the least efficacious in the Content domain and reported the lowest importance in this same domain. As a result of this, more emphasis in teacher development from the Department of Agricultural Education at the University of Arizona and the Arizona Agriculture Teachers Association (AATA) should stem from content aspects of an Agricultural Education program as opposed to FFA components, which should still find priority in Arizona Association FFA events and meetings.

Novice teachers were efficacious in all areas of the Agricultural Education program. Novice teachers were concentrated in their efficacy in the Classroom and Content domains but displayed a more diverse level of efficacy in the FFA and SAE domains. This may relate to the number of teachers that are limited in knowledge pertaining to the FFA program due to their certification method or non involvement during their youth. Determining levels of knowledge about FFA from novice Arizona Agricultural Education teachers should be a priority for teacher education programs and professional development. Novice teachers’ perceptions of importance in the FFA and SAE domains were not reflective of their efficacy levels. Novice teachers indicated in large frequencies that they felt the FFA and SAE domains were important. If novice teachers are aware of the importance of the FFA program
but feel unable to conduct the tasks, induction programs should be implemented by the Arizona Association FFA to gradually guide novice teachers into their responsibilities.

Experienced teachers perceived the Content domain as important but displayed the lowest level of efficacy in the domain. Experienced teachers require more emphasis in updating their content knowledge. With an average experience of 16 years teaching, many experienced teachers are facing a continued change in agricultural practices and science. Priority should be placed on professional development from the AATA to create tools and provide workshops that supplement experienced teachers with up to date content knowledge. Mastery experiences as indicated by Bandura (1997) are the most powerful source of efficacy information. Successful mastery experiences by an individual raise efficacy and mastery experiences of failure lower efficacy. An increase in efficacy due to these experiences may assist in the retention of novice teachers as many novice teachers who leave the profession are less efficacious than teachers who remain (Glickman & Tamashiro, 1982). The Arizona Department of Education and teacher educators must recognize that a positive experience is crucial for teachers, particularly novice teachers, and these individuals must provide opportunities and environments that will assist teachers in building levels of efficacy. Arizona Agricultural Education teachers reported efficacious in their program, this is evidence that programs developed in the state of Arizona are supplying current and future educators with successful experiences. Depending on perceived levels of efficacy, these practices should be considered by teacher education programs outside of Agricultural Education, including other Career and Technical Education courses as well as general education as a means of properly preparing teachers to increase their teacher self-efficacy and insure they will remain in the profession.
Implications

The teacher self-efficacy scores on this instrument mirror the levels of teacher self-efficacy reported in studies of novice and experienced teachers using Tschannen-Moran, and Woolfolk Hoys’ (2001) *Teachers’ Sense of Efficacy Scale (TSES)* (Knobloch & Whittington, 2006; Blackburn & Robinson, 2008; Wolf, 2008; Epps, Foor, & Cano, 2010). The utilization of this instrument will allow for clearer and more comprehensive analysis of Agricultural education teachers’ self-efficacy, as well as future research on agricultural education teacher self-efficacy.

The teachers in this study were all Arizona Agricultural Education teachers. The findings revealed that there were more males than female experienced teachers and more female than male novice teachers.

While studies (Knobloch & Whittington, 2006; Blackburn & Robinson, 2008) sought to determine levels of teacher self-efficacy, these studies were limited to novice teachers only. Measurement of novice and experienced teachers not only provides two factors to correlate with teacher self-efficacy, but also provides an overview of the capabilities of novice and experienced teachers that may serve as an overview of needed changes in professional development workshops and curriculum structure within a teacher educator program, which may result in a advanced skill sets for novice and experienced teachers, increasing levels of teacher self-efficacy, resulting in higher student achievement within Arizona Agricultural Education programs.
Recommendations for Further Study

Replication of the study using perceived of teacher self-efficacy and perceived importance of job related factors is encouraged with similar populations of secondary Agricultural Education instructors. Specifically, studies should be replicated in Arizona to further substantiate the findings and further validate the instrument. In addition, studies should be done in other states so that results may be compared and further interpretation may be made. A national study of perceived teacher self-efficacy and perceived importance of job related factors may not be as meaningful as a statewide study since teacher preparation programs and state FFA associations vary from state to state. Furthermore, changes in agricultural education teacher self-efficacy should be studied longitudinally to address the possible changes in the domains over time.

Items relating to the Content domain serve as a good measure for Arizona Agricultural Education teachers perceived teacher self-efficacy and perceived importance of job related factors. The same may not be true for other states as curriculum components vary according to state mandated standards. A suitable set of items should be selected for the Content domain that measures perceived teacher self-efficacy and perceived importance of job related factors depending on the state content areas. The remaining domains however should be able to serve as a universal measure to determine Agricultural Education teachers perceived teacher self-efficacy and perceived importance of job related factors.

Demographic information should be collected using the term sex as recommend by APA standards and include an extra space for the respondent to clarify their sex. This can not only facilitate more response, but the findings can be used to examine the different levels of teacher self-efficacy based on sex.
According to Woolfolk (2007), teacher self-efficacy is correlated with student achievement. In an attempt to further define this correlation, studies of teacher self-efficacy should include a measure of student achievement that can be used to correlate the findings. Specific to Agricultural Education, student achievement may stem from content area tests, FFA participation and achievement, or skills and advancement in SAE projects to accurately portray the three circle model of Agricultural Education.
LIST OF REFERENCES


APPENDIX A: EVALUATION FORM TO PANEL OF EXPERTS
Panel of Experts

Dr. Robert Torres  Professor, Agricultural Education

Dr. Dennis Duncan  Professor, Agricultural Education

Dr. Kattlyn Wolf  Professor, Agricultural Education

Dr. Ryan Foor  Professor, Agricultural Education

Dr. Edward Franklin  Professor, Agricultural Education

Mr. Quinton Molina  Senior Lecturer, Agricultural Education

Mr. Tyler Grandil  Arizona FFA Executive Secretary
**Evaluation Sheet**

Directions: Please review the following items for appropriateness and clarity. Indicate each with a checkmark on the right column. Additional comments may be provided on the lines below each item. Additional items may be added in the space provided at the end of the review. The directions to subjects are as follows:

*Please respond to the following items related to your capabilities in the following items and how important those items are in your program*

*Each item will be rated on the following nine point scale:*

What is your level of capability to:

<table>
<thead>
<tr>
<th>No Capability</th>
<th>Very Little Capability</th>
<th>Some Capability</th>
<th>Quite a Bit of Capability</th>
<th>A Great Deal of Capability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

How important is it to:

<table>
<thead>
<tr>
<th>Not Important</th>
<th>Slightly Important</th>
<th>Fairly Important</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
**Construct 1: Classroom**

1. Motivate students to learn

   ______________________________________
   ______________________________________
   ______________________________________
   ____ Appropriateness ____ Clarity

2. Manage student behavior

   ______________________________________
   ______________________________________
   ______________________________________
   ____ Appropriateness ____ Clarity

3. Use a variety of teaching techniques

   ______________________________________
   ______________________________________
   ______________________________________
   ____ Appropriateness ____ Clarity

4. Teach students to think critically

   ______________________________________
   ______________________________________
   ______________________________________
   ____ Appropriateness ____ Clarity

5. Create lesson plans for instruction

   ______________________________________
   ______________________________________
   ______________________________________
   ____ Appropriateness ____ Clarity

6. Respond to difficult questions from my students

   ______________________________________
   ______________________________________
   ______________________________________
   ____ Appropriateness ____ Clarity

7. Craft good questions for my students

   ______________________________________
   ______________________________________
   ______________________________________
   ____ Appropriateness ____ Clarity

8. Adjust lessons for individual students

   ______________________________________
   ______________________________________
   ______________________________________
   ____ Appropriateness ____ Clarity
9. Evaluate student learning
____________________________
____________________________
____________________________

10. Use a variety of assessment strategies
____________________________
____________________________
____________________________

11. Provide alternative explanations when students are confused
____________________________
____________________________
____________________________

12. Implement alternative strategies in my classroom
____________________________
____________________________
____________________________

13. Provide appropriate challenges for very capable students
____________________________
____________________________
____________________________

14. Teach students with special needs
____________________________
____________________________
____________________________

15. Utilize computers in my teaching
____________________________
____________________________
____________________________

16. Utilize multimedia in my teaching
____________________________
____________________________
____________________________

____ Appropriateness ____ Clarity
Construct 2: FFA

17. Manage a horticulture laboratory/greenhouse

____________________________

____________________________

____________________________

\[\text{_____ Appropriateness \text{_____ Clarity}}\]

18. Implement a curriculum in agriculture

____________________________

____________________________

____________________________

\[\text{_____ Appropriateness \text{_____ Clarity}}\]

19. Manage an agricultural mechanics laboratory

____________________________

____________________________

____________________________

\[\text{_____ Appropriateness \text{_____ Clarity}}\]

20. Effectively conduct field trips

____________________________

____________________________

____________________________

\[\text{_____ Appropriateness \text{_____ Clarity}}\]

21. Advise FFA meetings

____________________________

____________________________

____________________________

\[\text{_____ Appropriateness \text{_____ Clarity}}\]

22. Train a chapter officer team

____________________________

____________________________

____________________________

\[\text{_____ Appropriateness \text{_____ Clarity}}\]

23. Assist students in planning FFA chapter activities

____________________________

____________________________

____________________________

\[\text{_____ Appropriateness \text{_____ Clarity}}\]

24. Assist students in planning FFA banquets

____________________________

____________________________

____________________________

\[\text{_____ Appropriateness \text{_____ Clarity}}\]
25. Assist students in facilitating FFA fundraising activities

____________________________

_______________

26. Assist students in preparing FFA degree applications

____________________________

_______________

27. Assist students in preparing FFA proficiency applications

____________________________

_______________

28. Assist students in preparing a Program of Activities

____________________________

_______________

29. Coach leadership based CDE teams (Eg. Speaking, Parli Pro)

____________________________

_______________

30. Coach skill based CDE teams (Eg. Judging, Ag Mechanics)

____________________________

_______________

31. Utilize the FFA alumni

____________________________

__________

___ Appropriateness ___ Clarity

___ Appropriateness ___ Clarity

___ Appropriateness ___ Clarity

___ Appropriateness ___ Clarity

___ Appropriateness ___ Clarity

___ Appropriateness ___ Clarity

___ Appropriateness ___ Clarity

___ Appropriateness ___ Clarity

___ Appropriateness ___ Clarity
32. Utilize a Program Advisory Board

33. Recruit new FFA members

34. Assist students in recruiting new FFA members

35. Assist students in developing an effective public relations program for the FFA chapter

36. Supervise students during FFA trips and activities

37. Assist students in developing community service projects

38. Provide career exploration opportunities for students

**Construct 3: SAE**

39. Develop SAE opportunities for students
40. Motivate students to have an SAE program

__________

__________

__________

_____ Appropriateness _____ Clarity

41. Supervise student entrepreneurship SAE programs

__________

__________

__________

_____ Appropriateness _____ Clarity

42. Supervise student placement SAE programs

__________

__________

__________

_____ Appropriateness _____ Clarity

43. Supervise student production SAE programs

__________

__________

__________

_____ Appropriateness _____ Clarity

44. Conduct home/SAE visits

__________

__________

__________

_____ Appropriateness _____ Clarity

45. Make recommendations for students’ SAE projects

__________

__________

__________

_____ Appropriateness _____ Clarity

46. Utilize resources to make recommendations to students’ SAE projects

__________

__________

__________

_____ Appropriateness _____ Clarity

47. Assist students in keeping SAE records

________________________

________________________

________________________

_____ Appropriateness _____ Clarity
48. Utilize the community to develop SAE opportunities for students

__________________________________

____ Appropriateness ____ Clarity

49. Show students the value of SAE programs

__________________________________

____ Appropriateness ____ Clarity

50. Assist students in receiving recognition for SAE projects

__________________________________

____ Appropriateness ____ Clarity

51. Integrate current advances in agriculture technology into the curriculum

__________________________________

____ Appropriateness ____ Clarity

Construct 4: Standards

52. Teach knowledge and skills related to plant systems

__________________________________

____ Appropriateness ____ Clarity

53. Teach knowledge and skills related to animal systems

__________________________________

____ Appropriateness ____ Clarity

54. Teach knowledge and skills related to natural resource systems

__________________________________

____ Appropriateness ____ Clarity
55. Teach knowledge and skills related to agribusiness systems

__________________________________  ____ Appropriateness  ____ Clarity

56. Teach knowledge and skills related to environmental service systems

__________________________________  ____ Appropriateness  ____ Clarity

Additional Items

__________________________________

_____________________________________________________________________

__________________________________  ____ Appropriateness  ____ Clarity
APPENDIX B: PRE-NOTICE LETTER
February 15, 2011

«Salu» «FName» «LName»
«ChapName»
«Address1»
«City», AZ «Zip»

Dear «Salu» «LName»;

In a few days you will receive a request by mail to complete a questionnaire regarding your teacher efficacy. Teacher efficacy is one's belief in their ability to properly plan and manage a classroom. You have been identified as a high school Agricultural Education teacher in Arizona.

We are contacting you in advance to provide notice that the questionnaire will be delivered via the U.S. postal service.

In three to five days you will receive a questionnaire in the mail. We ask that you fill out the entire questionnaire at your earliest convince and return it using the pre addressed and stamped envelope. This research project will provide important information about agriculture teachers within Arizona and your participation is invaluable.

Yours in quality education,

Kevin Hartfield
Graduate Assistant

Cash L. Veo
Graduate Assistant

Ryan M. Foor, Ph. D.
Assistant Professor

P. S. We will enclose a small token of appreciation with the questionnaire as a way of saying thank you.
APPENDIX C: COVER LETTER
February 18, 2011

«Salu» «FName» «LName»
«ChapName»
«Address1»
«City», AZ «Zip»

Dear «Salu» «LName»;

You have been identified as a secondary agricultural educator within the state of Arizona. You are being asked to voluntarily participate in a research study. This research study is intended to assess your efficacy as a secondary agriculture teacher.

Your responses to this questionnaire will greatly assist in improving teacher preparation and teacher education within Arizona. The questionnaire will take approximately 15 minutes to complete. There are no known risks to your participation in completing this questionnaire. Your participation is voluntary. If you decide to stop participating in the study, there will be no penalty to you, and you will not lose any benefits to which you are otherwise entitled. Your decision will not affect your future relationship with The University of Arizona. There is no cost to you except your time. You may answer some or none of the questions. Your results will be kept confidential; your name will not be associated with your responses.

Please complete the enclosed questionnaire, fold in half lengthwise, and return in the enclosed, self-addressed stamped envelope by March 4. All answers to this questionnaire are completely anonymous. There is no identification number of any kind on the questionnaire. However, to let us know that your questionnaire has been returned, please print your name and return the enclosed post card separately in the mail so we can check your name off the mailing list.

If you choose to participate in the study, you may discontinue participation at any time without penalty or loss of benefits. By participating in the study, you do not give up any personal legal rights you may have as a participant in this study.
If you have questions concerning your rights as a research subject, you may call The University of Arizona Human Subjects Protection Program at (520) 626-6721. Completing this questionnaire implies that you are giving permission for the investigator to use your responses for research purposes. For questions, concerns, or complaints about the study you may contact Kevin Hartfield or Cash Veo at (520) 343-2692.

A 50 cent piece is enclosed as a token of appreciation to say thank you for your help.

Thank you for your time!

Kevin Hartfield
Graduate Assistant

Cash Veo
Graduate Assistant

Ryan M. Foor, Ph. D.
Assistant Professor
APPENDIX D: QUESTIONNAIRE
Please respond to the following items related to your capabilities in the following items and how important those items are in your program.

For example: If you feel that you have 'Quite a Bit of Capability' regarding, "Manage student behavior", circle the number 7 on the scale to the left of the item. If you feel that it is 'Slightly Important' to "Manage student behavior", circle the number 3 on the scale to the right of the item.

<table>
<thead>
<tr>
<th>No Capability</th>
<th>Very Little Capability</th>
<th>Some Capability</th>
<th>Quite a Bit of Capability</th>
<th>A Great Deal of Capability</th>
<th>Not Important</th>
<th>Slightly Important</th>
<th>Fairly Important</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Manage student behavior

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Classroom

Respond using this scale to indicate your capability relative to each item.

<table>
<thead>
<tr>
<th>No Capability</th>
<th>Very Little Capability</th>
<th>Some Capability</th>
<th>Quite a Bit of Capability</th>
<th>A Great Deal of Capability</th>
<th>Not Important</th>
<th>Slightly Important</th>
<th>Fairly Important</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Please complete both ends of the scale.

Respond using this scale to indicate your perception of the importance relative to each item.

<table>
<thead>
<tr>
<th>Motivate students to learn</th>
<th>Manage student behavior</th>
<th>Use a variety of teaching techniques</th>
<th>Teach students to think critically</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7 8 9</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
</tbody>
</table>

What is your level of capability to:

How important is it to:
Respond using this scale to indicate your capability relative to each item

<table>
<thead>
<tr>
<th>No Capability</th>
<th>Very Little Capability</th>
<th>Some Capability</th>
<th>Quite a Bit of Capability</th>
<th>A Great Deal of Capability</th>
</tr>
</thead>
</table>

Please complete both ends of the scale

What is your level of capability to:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create lesson plans for instruction 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Respond to difficult questions from my students 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Craft good questions for my students 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Adjust lessons for individual students 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Evaluate student learning 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Use a variety of assessment strategies 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Provide alternative explanations when students are confused 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Implement alternative teaching strategies in my classroom 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Provide appropriate challenges for very capable students 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Teach students with special needs 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

Respond using this scale to indicate your perception of the importance relative to each item

<table>
<thead>
<tr>
<th>Not Important</th>
<th>Slightly Important</th>
<th>Fairly Important</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
</table>

How important is it to:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create lesson plans for instruction 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Respond to difficult questions from my students 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Craft good questions for my students 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Adjust lessons for individual students 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Evaluate student learning 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Use a variety of assessment strategies 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Provide alternative explanations when students are confused 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Implement alternative teaching strategies in my classroom 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Provide appropriate challenges for very capable students 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Teach students with special needs 1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>
Respond using this scale to indicate your capability relative to each item

<table>
<thead>
<tr>
<th>No Capability</th>
<th>Very Little Capability</th>
<th>Some Capability</th>
<th>Quite a Bit of Capability</th>
<th>A Great Deal of Capability</th>
</tr>
</thead>
</table>

Please complete both ends of the scale

What is your level of capability to:

1 2 3 4 5 6 7 8 9

1. Utilize computers in my teaching

2. Utilize emerging technologies in my teaching

3. Utilize a variety of resources in my teaching

4. Manage a horticulture laboratory/greenhouse

5. Implement an Agriscience curriculum in a coherent sequence

6. Manage an agricultural mechanics laboratory

7. Effectively conduct field trips

8. Utilize a Program Advisory Board

9. Integrate current advances in agriculture technology into the curriculum

Respond using this scale to indicate your perception of the importance relative to each item

<table>
<thead>
<tr>
<th>Not Important</th>
<th>Slightly Important</th>
<th>Fairly Important</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
</table>

How important is it to:

1 2 3 4 5 6 7 8 9

Please continue to the next page
<table>
<thead>
<tr>
<th>No Capability</th>
<th>Very Little Capability</th>
<th>Some Capability</th>
<th>Quite a Bit of Capability</th>
<th>A Great Deal of Capability</th>
<th>Please complete both ends of the scale</th>
<th>Not Important</th>
<th>Slightly Important</th>
<th>Fairly Important</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your level of capability to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advise FFA meetings</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Train an FFA chapter officer team</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist students in planning FFA chapter activities</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist students in planning FFA banquets</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist students in executing FFA fundraising activities</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist students in preparing FFA degree applications</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist students in preparing FFA proficiency applications</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist students in preparing a Program of Activities</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coach leadership based CDE teams (e.g. Speaking, Parli Pro)</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coach skill based CDE teams (e.g. Livestock Judging, Ag Mechanics)</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td>1 2 3 4 5 6 7 8 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Respond using this scale to indicate your capability relative to each item

<table>
<thead>
<tr>
<th>No Capability</th>
<th>Very Little Capability</th>
<th>Some Capability</th>
<th>Quite a Bit of Capability</th>
<th>A Great Deal of Capability</th>
</tr>
</thead>
</table>

Please complete both ends of the scale

What is your level of capability to:

1. Utilize an FFA alumni/booster affiliate
2. Recruit new FFA members
3. Assist students in recruiting new FFA members
4. Assist students in developing an effective public relations program for the FFA chapter
5. Supervise students during FFA trips and activities
6. Assist students in developing community service projects

Respond using this scale to indicate your perception of the importance relative to each item

<table>
<thead>
<tr>
<th>Not Important</th>
<th>Slightly Important</th>
<th>Fairly Important</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
</table>

How important is it to:

1. Utilize an FFA alumni/booster affiliate
2. Recruit new FFA members
3. Assist students in recruiting new FFA members
4. Assist students in developing an effective public relations program for the FFA chapter
5. Supervise students during FFA trips and activities
6. Assist students in developing community service projects

Please continue to the next page
<table>
<thead>
<tr>
<th>SAE</th>
<th>Respond using this scale to indicate your capability relative to each item</th>
<th>Respond using this scale to indicate your perception of the importance relative to each item</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Please complete both ends of the scale</td>
<td>Not Important</td>
</tr>
<tr>
<td>No Capability</td>
<td>Very Little Capability</td>
<td>Some Capability</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7 8 9</td>
<td>Provide career exploration opportunities for students</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7 8 9</td>
<td>Develop SAE opportunities for students</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7 8 9</td>
<td>Motivate students to have an SAE program</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7 8 9</td>
<td>Supervise student entrepreneurship SAE programs</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7 8 9</td>
<td>Supervise student placement SAE programs</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7 8 9</td>
<td>Supervise student production SAE programs</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7 8 9</td>
<td>Conduct home/SAE visits</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7 8 9</td>
<td>Make recommendations for students’ SAE projects</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7 8 9</td>
<td>Utilize resources to make recommendations to students’ SAE projects</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7 8 9</td>
<td>Assist students in keeping SAE records</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
</tbody>
</table>
### Respond using this scale to indicate your capability relative to each item

<table>
<thead>
<tr>
<th>No Capability</th>
<th>Very Little Capability</th>
<th>Some Capability</th>
<th>Quite a Bit of Capability</th>
<th>A Great Deal of Capability</th>
</tr>
</thead>
</table>

### Respond using this scale to indicate your perception of the importance relative to each item

<table>
<thead>
<tr>
<th>Not Important</th>
<th>Slightly Important</th>
<th>Fairly Important</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
</table>

What is your level of capability to:

1 2 3 4 5 6 7 8 9

Utilize the community to develop SAE opportunities for students

1 2 3 4 5 6 7 8 9

Show students the value of SAE programs

1 2 3 4 5 6 7 8 9

Assist students in receiving recognition for SAE projects

1 2 3 4 5 6 7 8 9

Please continue to the next page
### Content Standards

Respond using this scale to indicate your capability relative to each item

<table>
<thead>
<tr>
<th>No Capability</th>
<th>Very Little Capability</th>
<th>Some Capability</th>
<th>Quite a Bit of Capability</th>
<th>A Great Deal of Capability</th>
</tr>
</thead>
</table>

Please complete both ends of the scale

<table>
<thead>
<tr>
<th>Not Important</th>
<th>Slightly Important</th>
<th>Fairly Important</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
</table>

What is your level of capability to:

1. Teach knowledge and skills related to Plant Systems
2. Teach knowledge and skills related to Animal Systems
3. Teach knowledge and skills related to Natural Renewable Resource Systems
4. Teach knowledge and skills related to Agribusiness Systems
5. Teach knowledge and skills related to Environmental Service Systems
6. Teach knowledge and skills related to Power Structural & Technical Systems
7. Teach knowledge and skills related to Food Products & Processing Systems
8. Teach knowledge and skills related to Agricultural Mechanics throughout the coherent sequence of courses

How important is it to:

1. 2 3 4 5 6 7 8 9
2. 1 2 3 4 5 6 7 8 9
3. 1 2 3 4 5 6 7 8 9
4. 1 2 3 4 5 6 7 8 9
5. 1 2 3 4 5 6 7 8 9
6. 1 2 3 4 5 6 7 8 9
7. 1 2 3 4 5 6 7 8 9
8. 1 2 3 4 5 6 7 8 9
Demographic information

What is your sex? (Check one)

________ FEMALE

________ MALE

How were you prepared to teach? (Check all that apply)

____ Undergraduate teacher education program (graduated with teacher certification).

____ Graduate program beyond the Bachelors degree.

____ Combined undergraduate and graduate program.

____ Substitute teaching that led to a permanent teaching position.

____ An alternate route program such as Peace Corps, Teach for America, Teacher Opportunity Corps.

____ No prior teaching experience, but have a degree in an agriculturally related field.

____ No prior teaching experience, and do not have a degree in an agriculturally related field.

My highest level of formal education is:

_____ B.S./B.A. _____ M.S./M.Ed./M.A./MAE _____ Ed.S./Ed.D./Ph.D

For questions below, please fill in each blank.

What is your age?

________ YEARS

How many years have you been teaching (including this year)?

________ YEARS
Comments:

Thank you for your participation!
APPENDIX E: POSTCARD TO FACILITATE ANONYMOUS RESPONSE
Questionnaire # xxx

This postcard is being returned to let you know that my questionnaire has been returned in a separate envelope.

__________________
____________________
Your name (please print)

Thank you very much for your help with this important study. We really appreciate it.

Ryan M. Foor, Ph. D. Cash L. Veo Kevin Hartfield
Assistant Professor Graduate Associate Graduate Associate
The University of Arizona The University of Arizona The University of Arizona
February 25, 2011

Last week a questionnaire seeking information about your teacher self-efficacy as a secondary agriculture teacher was mailed to you. You were selected because you were identified as secondary agricultural educator within the state of Arizona.

If you have already completed and returned the questionnaire to us, please accept our sincerest thanks. If not, please do so today. We are especially grateful for your help because it is only by asking people like you to participate that we can understand the teacher self-efficacy of agricultural educators in order to better the profession.

If you did not receive a questionnaire, or if it was misplaced, please call us at (520) 343-2692 and we will get another one in the mail to you today.

Thank you for your time!

Kevin Hartfield  Cash L. Veo  Ryan M. Foor, Ph. D.
Graduate Associate  Graduate Associate  Assistant Professor
The University of Arizona  The University of Arizona  The University of Arizona
APPENDIX G: SECOND COVER LETTER
March 4, 2011

«Salu» «FName» «LName»
«ChapName»
«Address 1»
«City», AZ «Zip»

Dear «Salu» «LName»;

About two weeks ago we sent a questionnaire to you that asked about your teacher self-efficacy as a secondary agriculture teacher. To the best of our knowledge, the questionnaire has not yet been returned.

The responses from people who have already returned the questionnaire include a variety of responses regarding their teacher self-efficacy. We think the results are going to be very useful to the field of teacher education. We are writing again because of the importance your questionnaire has for helping to get accurate results.

Your responses to this questionnaire will greatly assist in improving teacher preparation and teacher education within Arizona. The questionnaire will take approximately 15 minutes to complete. There are no known risks to your participation in completing this questionnaire. Your participation is voluntary. If you decide to stop participating in the study, there will be no penalty to you, and you will not lose any benefits to which you are otherwise entitled. Your decision will not affect your future relationship with The University of Arizona. There is no cost to you except your time. You may answer some or none of the questions. Your results will be kept confidential; your name will not be associated with your responses.

Please complete the enclosed questionnaire, fold in half lengthwise, and return in the enclosed, self-addressed stamped envelope by March 14. All answers to this questionnaire are completely anonymous. There is no identification number of any kind on the questionnaire. However, to let us
know that your questionnaire has been returned, please print your name and return the enclosed post card separately in the mail so we can check your name off the mailing list.

If you choose to participate in the study, you may discontinue participation at any time without penalty or loss of benefits. By participating in the study, you do not give up any personal legal rights you may have as a participant in this study.

If you have questions concerning your rights as a research subject, you may call The University of Arizona Human Subjects Protection Program at (520) 626-6721. Completing this questionnaire implies that you are giving permission for the investigator to use your responses for research purposes. For questions, concerns, or complaints about the study you may contact Kevin Hartfield or Cash Veo at (520) 343-2692.

A keychain is enclosed as a token of appreciation to say thank you for your help.

Thank you for your time!

Kevin Hartfield
Graduate Assistant

Cash Veo
Graduate Assistant

Ryan M. Foor, Ph. D.
Assistant Professor
APPENDIX H: FINAL CONTACT LETTER
March 14, 2011

«Salu» «FName» «LName»
«ChapName»
«Address 1»
«City», AZ «Zip»

Dear «Salu» «LName»;

During the last few weeks we have sent you several mailings about an important research study we are conducting at The University of Arizona.

The purpose of the study is to help understand more about secondary agriculture teacher self-efficacy in Arizona and how we can use this knowledge to better the courses and professional workshops offered.

The study is drawing to a close, and this is the last contact that will be made with the sample of Arizona secondary agricultural education teachers.

We are sending this final contact because of our concern that people who have not responded may have different perceptions than those who have. Hearing from everyone in this small sample helps assure that the survey results are as accurate as possible.

We also want to assure you that your response to this study is voluntary, and if you prefer not to respond that is fine. If you are not a secondary agricultural education teacher in Arizona and you feel that we have made a mistake including you in this study, please let us know by returning the blank questionnaire with a note indicating so. This would be very helpful.

Finally, we appreciate your willingness to consider our request as we conclude this effort to better understand secondary agriculture teacher self-efficacy in Arizona. Thank you very much.

Sincerely,

Kevin Hartfield
Graduate Assistant

Cash L. Veo
Graduate Assistant

Ryan M. Foor, Ph. D.
Assistant Professor
APPENDIX I: FREQUENCY DISTRIBUTION TABLES
Table 18

*Frequency Distribution Of Classroom Capability Items: (n=68)*

<table>
<thead>
<tr>
<th>What is your level of capability to:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Motivate students to learn</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>0</td>
<td>0.0</td>
<td>5</td>
</tr>
<tr>
<td>Manage student behavior</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>7</td>
</tr>
<tr>
<td>Use a variety of teaching techniques</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>5</td>
</tr>
<tr>
<td>Teach students to think critically</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>4</td>
<td>5.9</td>
<td>11</td>
</tr>
<tr>
<td>Create lesson plans for instruction</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>4</td>
</tr>
<tr>
<td>Respond to difficult questions from my students</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>6</td>
</tr>
<tr>
<td>Craft good questions for my students</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>6</td>
</tr>
<tr>
<td>Adjust lessons for individual students</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>2.9</td>
<td>11</td>
</tr>
</tbody>
</table>

Table 18 Continued
Table 18 Continued

<table>
<thead>
<tr>
<th>What is your level of capability to:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Evaluate student learning</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
<td>2.9</td>
<td>4</td>
</tr>
<tr>
<td>Use a variety of assessment strategies</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>1.5</td>
<td>6</td>
<td>8.8</td>
<td>16</td>
</tr>
<tr>
<td>Provide alternative explanations when students are confused</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>0</td>
<td>0.0</td>
<td>4</td>
</tr>
<tr>
<td>Implement alternative teaching strategies in my classroom</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>8</td>
</tr>
<tr>
<td>Provide appropriate challenges for very capable students</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>1.5</td>
<td>10</td>
</tr>
<tr>
<td>Teach students with special needs</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>3</td>
<td>4.4</td>
<td>9</td>
</tr>
<tr>
<td>Utilize computers in my teaching</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
<td>2.9</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 18 Continued
<table>
<thead>
<tr>
<th>What is your level of capability to:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Utilize emerging technologies in my teaching</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>3</td>
<td>4.4</td>
<td>1</td>
<td>1.5</td>
<td>5</td>
</tr>
<tr>
<td>Utilize a variety of resources in my teaching</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>2.9</td>
<td>3</td>
</tr>
<tr>
<td>Manage a horticulture laboratory/greenhouse</td>
<td>4</td>
<td>5.9</td>
<td>2</td>
<td>2.9</td>
<td>8</td>
<td>11.8</td>
<td>5</td>
<td>7.4</td>
<td>15</td>
</tr>
<tr>
<td>Implement an Agriscience curriculum in a coherent sequence</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>2.9</td>
<td>1</td>
<td>1.5</td>
<td>5</td>
</tr>
<tr>
<td>Manage an agricultural mechanics laboratory</td>
<td>7</td>
<td>10.3</td>
<td>2</td>
<td>2.9</td>
<td>5</td>
<td>7.4</td>
<td>1</td>
<td>1.5</td>
<td>12</td>
</tr>
<tr>
<td>Effectively conduct field trips</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>4</td>
<td>5.9</td>
<td>3</td>
</tr>
<tr>
<td>Utilize a Program Advisory Board</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
<td>2.9</td>
<td>3</td>
<td>4.4</td>
<td>6</td>
<td>8.8</td>
<td>11</td>
</tr>
</tbody>
</table>


Integrate current advances in agriculture technology into the curriculum

| 0 | 0.0 | 0 | 0.0 | 4 | 5.9 | 3 | 4.4 | 10 | 14.7 | 17 | 25.0 | 16 | 23.5 | 15 | 22.1 | 3 | 4.4 |

*Note.* Scale: 1= No Capability, 3= Very Little Capability, 5= Some Capability, 7= Quite a Bit of Capability, 9= A Great Deal of Capability
<table>
<thead>
<tr>
<th>What is your level of capability to:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advise FFA meetings</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2.9</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>10.3</td>
</tr>
<tr>
<td>Train an FFA chapter officer team</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2.9</td>
<td>4</td>
<td>5.9</td>
<td>4</td>
<td>5.9</td>
<td>8</td>
</tr>
<tr>
<td>Assist students in planning FFA chapter activities</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>1.5</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Assist students in planning FFA banquets</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
<td>2.9</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
<td>2.9</td>
<td>1</td>
</tr>
<tr>
<td>Assist students in executing FFA fundraising activities</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.5</td>
<td>3</td>
<td>4.4</td>
<td>2</td>
<td>2.9</td>
<td>5</td>
</tr>
<tr>
<td>Assist students in preparing FFA degree applications</td>
<td>3</td>
<td>4.4</td>
<td>5</td>
<td>7.4</td>
<td>6</td>
<td>8.8</td>
<td>5</td>
<td>7.4</td>
<td>6</td>
</tr>
<tr>
<td>Assist students in preparing FFA proficiency applications</td>
<td>3</td>
<td>4.4</td>
<td>7</td>
<td>10.3</td>
<td>4</td>
<td>5.9</td>
<td>6</td>
<td>8.8</td>
<td>7</td>
</tr>
<tr>
<td>Assist students in preparing a Program of Activities</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2.9</td>
<td>2</td>
<td>2.9</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 19 Continued
<table>
<thead>
<tr>
<th>What is your level of capability to:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Coach leadership based CDE teams (e.g. Speaking, Parli Pro)</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>2.9</td>
<td>7</td>
<td>10.3</td>
<td>3</td>
<td>4.4</td>
<td>5</td>
</tr>
<tr>
<td>Coach skill based CDE teams (e.g. Livestock Judging, Ag Mechanics)</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>1.5</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>2.9</td>
<td>5</td>
</tr>
<tr>
<td>Utilize an FFA alumni/booster affiliate</td>
<td>4</td>
<td>5.9</td>
<td>5</td>
<td>7.4</td>
<td>8</td>
<td>11.8</td>
<td>8</td>
<td>11.8</td>
<td>16</td>
</tr>
<tr>
<td>Recruit new FFA members</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>4</td>
<td>5.9</td>
<td>7</td>
</tr>
<tr>
<td>Assist students in recruiting new FFA members</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>3</td>
<td>4.4</td>
<td>7</td>
</tr>
<tr>
<td>Assist students in developing an effective public relations program for the FFA chapter</td>
<td>2</td>
<td>2.9</td>
<td>1</td>
<td>1.5</td>
<td>3</td>
<td>4.4</td>
<td>5</td>
<td>7.4</td>
<td>11</td>
</tr>
<tr>
<td>Supervise students during FFA trips and activities</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
<td>2.9</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
</tr>
<tr>
<td>Assist students in developing community service projects</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
<td>2.9</td>
<td>7</td>
</tr>
</tbody>
</table>

*Note.* Scale: 1= No Capability, 3= Very Little Capability, 5= Some Capability, 7= Quite a Bit of Capability, 9= A Great Deal of Capability
Table 20

*Frequency Distribution Of SAE Capability Items: (n=68)*

<table>
<thead>
<tr>
<th>What is your level of capability to:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Provide career exploration opportunities for students</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>0</td>
<td>0.0</td>
<td>3</td>
<td>4.4</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>19.</td>
<td>26.5</td>
<td>8</td>
<td>11.8</td>
<td>10</td>
<td>14.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop SAE opportunities for students</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>1.5</td>
<td>5</td>
<td>7.4</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>16.</td>
<td>25.</td>
<td>17</td>
<td>25.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivate students to have an SAE program</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>1.5</td>
<td>3</td>
<td>4.4</td>
<td>6</td>
<td>8.8</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>13.</td>
<td>23.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervise student entrepreneurship SAE programs</td>
<td>0</td>
<td>0.0</td>
<td>3</td>
<td>4.4</td>
<td>0</td>
<td>0.0</td>
<td>4</td>
<td>5.9</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>11.</td>
<td>17.</td>
<td>20</td>
<td>29.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervise student placement SAE programs</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>2.9</td>
<td>0</td>
<td>0.0</td>
<td>5</td>
<td>7.4</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>10.</td>
<td>22.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervise student production SAE programs</td>
<td>2</td>
<td>2.9</td>
<td>2</td>
<td>2.9</td>
<td>3</td>
<td>4.4</td>
<td>6</td>
<td>8.8</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>10.</td>
<td>19.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct home/SAE visits</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>1.5</td>
<td>6</td>
<td>8.8</td>
<td>4</td>
<td>5.9</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>13.</td>
<td>20.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 20 Continued
<table>
<thead>
<tr>
<th>What is your level of capability to:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Make recommendations for students’ SAE projects</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>4</td>
<td>5.9</td>
<td>9</td>
</tr>
<tr>
<td>Assist students in keeping SAE records</td>
<td>2</td>
<td>2.9</td>
<td>3</td>
<td>4.4</td>
<td>5</td>
<td>7.4</td>
<td>1</td>
<td>1.5</td>
<td>11</td>
</tr>
<tr>
<td>Utilize the community to develop SAE opportunities for students</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>2.9</td>
<td>6</td>
<td>8.8</td>
<td>6</td>
<td>8.8</td>
<td>18</td>
</tr>
<tr>
<td>Show students the value of SAE programs</td>
<td>1</td>
<td>1.5</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>2.9</td>
<td>5</td>
<td>7.4</td>
<td>13</td>
</tr>
<tr>
<td>Assist students in receiving recognition for SAE projects</td>
<td>2</td>
<td>2.9</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
<td>2.9</td>
<td>4</td>
<td>5.9</td>
<td>9</td>
</tr>
</tbody>
</table>

Note. Scale: 1= No Capability, 3= Very Little Capability, 5= Some Capability, 7= Quite a Bit of Capability, 9= A Great Deal of Capability
<table>
<thead>
<tr>
<th>What is your level of capability to teach knowledge and skills related to:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant Systems</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
<td>2.9</td>
<td>1</td>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td>Animal Systems</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>1.5</td>
<td>8</td>
</tr>
<tr>
<td>Natural Renewable Resource Systems</td>
<td>2</td>
<td>2.9</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>1.5</td>
<td>3</td>
<td>4.4</td>
<td>17</td>
</tr>
<tr>
<td>Agribusiness Systems</td>
<td>1</td>
<td>1.5</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>4.4</td>
<td>7</td>
<td>10.3</td>
<td>12</td>
</tr>
<tr>
<td>Environmental Service Systems</td>
<td>2</td>
<td>2.9</td>
<td>3</td>
<td>4.4</td>
<td>6</td>
<td>8.8</td>
<td>6</td>
<td>8.8</td>
<td>17</td>
</tr>
<tr>
<td>Power Structural &amp; Technical Systems</td>
<td>3</td>
<td>4.4</td>
<td>2</td>
<td>2.9</td>
<td>4</td>
<td>5.9</td>
<td>7</td>
<td>10.3</td>
<td>16</td>
</tr>
<tr>
<td>Food Products &amp; Processing Systems</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>1.5</td>
<td>6</td>
<td>8.8</td>
<td>6</td>
<td>8.8</td>
<td>14</td>
</tr>
</tbody>
</table>
Table 21 Continued

<table>
<thead>
<tr>
<th>Agricultural Mechanics throughout the coherent sequence of courses</th>
<th>4</th>
<th>5.9</th>
<th>3</th>
<th>4.4</th>
<th>1</th>
<th>1.5</th>
<th>4</th>
<th>5.9</th>
<th>9</th>
<th>13.2</th>
<th>14</th>
<th>20.6</th>
<th>14</th>
<th>20.6</th>
<th>12</th>
<th>17.6</th>
<th>7</th>
<th>10.3</th>
</tr>
</thead>
</table>

*Note.* Scale: 1 = No Capability, 3 = Very Little Capability, 5 = Some Capability, 7 = Quite a Bit of Capability, 9 = A Great Deal of Capability


APPENDIX J: SCATTER PLOTS
Figure 3
Figure 5
Figure 6
Figure 7
Figure 8
Figure 9
Figure 10