

FACTORS INFLUENCING AGRICULTURAL EDUCATION
STUDENTS' CHOICE TO TEACH

A Dissertation

Presented to the Faculty of the Graduate School

University of Missouri

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

By

REBECCA GRACE LAWVER

Dr. Robert M. Torres, Dissertation Supervisor

MAY 2009

The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

FACTORS INFLUENCING AGRICULTURAL EDUCATION STUDENTS'

CHOICE TO TEACH

Presented by Rebecca Grace Lawver,

A candidate for the degree of doctor of philosophy

And hereby certify that, in their opinion, it is worthy of acceptance.

Dr. Robert M. Torres

Dr. Robert Terry, Jr.

Dr. Bryan L. Garton

Dr. Sharon Huntze

DEDICATION

This work is dedicated to my family.

My husband Mark and children, Caleb, & Grace Lawver

My father and mother, James & Melinda Hightower

My sister and family, Anne, Dan, Sam, Will & Kate Doud

My brother and family, Jake, Ami, Madeline, Paige, & Olivia Hightower

My grandmother, Ellen Epperson

My grandparents, Kenneth & Marian Hightower

My father-in-law and mother-in-law, Richard & Clara Lawver

In memory of

My grandfather, Larry Dale Epperson

My husband's grandparents, Bernard & Mary Lawver

ACKNOWLEDGEMENTS

Mark, I want to thank you for your unconditional love, constant words of encouragement, and the daily “motivational quotes.” I would have not been able to do this without you. Caleb and Grace, thank you for the hugs and kisses every. It’s been a tough road but the time we’ve spent in Missouri has only strengthened our family.

To my advisor, Dr. Robert Torres: your enthusiasm, creativity and passion for teaching and research are something I will always take with me. No matter how hard you tried to “stress me out” or make a ripple in my “go with the flow” attitude, the tweaks, additions, and changes to this document are greatly appreciated. Through your guidance I have become a more confident teacher and researcher, thank you!

Dr. Bryan Garton: during my time at Mizzou, you have been a priceless resource. You have taught me the benefits of being meticulously organized and detail oriented and how to truly care about students. I have appreciated our Husker vs. Mizzou debates and hope to see you at the game!

Dr. Rob Terry: During the past three years you have provided me with great advice and wonderful ideas. You have always believed in my ability, even when I didn’t. Thank you for the encouragement and support!

Dr. Sharon Huntze: I am honored to have been part of your teaching team. You approach teaching with sophistication, patience and care for students that is hard to find. You have taught me to set high standards for my students and inspire them to reach their goals. Thank you for serving as a model teacher.

Dr. Amy Smith: What would this year have been like without you here? I am so thankful that we had one more year to work together. When I began here I never thought

I'd leave with such a great friend. Thank you for being my sounding board, my go-to girl and for "wordSmithing" everything. I look forward to working with you in the future.

Dr. Anna Ball: I am very thankful that I had the opportunity to work with you, even if it was for a short time. Thank you for opening up your office and letting me pull up a chair to just talk. Your support has been great.

Dr. Jon Ulmer: You know I wouldn't be here if it wasn't for you. From the day you left Nebraska until the day I walked through the doors of Gentry Hall, you always encouraged me. Thank you for being a great friend and back-up babysitter. I look forward to joining the ranks and having the opportunity to work with you.

To my fellow graduate students: David Frazier, I will always think of you as the life-long advisor, always willing to lend an ear, tell a story, or teach me something I didn't know. I wish you the best of luck as you find the job of your dreams. Misty Lambert, thank you, thank you, thank you! You have taught me so much. How to prioritize research, keep a *somewhat* clean office, to take my keys with me where ever I go (so I don't have to throw sticks at the window), and to appreciate the little things in life. You have been a great officemate and I don't think I could have made it through this process without your encouragement, "you can do it" or "you're doing it right." Thank you. Ryan Saucier, you have been wonderful to work with and even more fun to visit with. Thank you for making my family feel welcome at your home and for the continuous encouragement. It's great to have a friend like you. Lucas Maxwell, Stacy Vincent, and Justin Killingsworth, although we have not worked together for long, my experience here will be shaped by those that I shared it with. Good luck in the future, you will all be an asset to agricultural education.

To Carol Swaim and Sandy Kaiser: I am going to miss sharing lunch with you. You both have offered great advice and have always been there to support me when I need it. Thank you!

To Norman Rohrbach and John Tummons: Your hard work and dedication to agricultural education and the teachers of Missouri is amazing. I appreciate the opportunity to learn and work with you both.

To my parents, siblings, and their families...once again thank you for your encouragement. I would have not made it this far without you! While we might be separated by miles, we will never be separated in our hearts. I love you all.

I cannot forget my grandparents: Whether it was planting potatoes with Grandpa Dale or listening to stories Grandpa Hightower told about teaching at Omaha South High, I realized that my love of agriculture and teaching was passed down from you. Thank you.

TABLE OF CONENTS

ACKNOWLEDGEMENTS	ii
ABSTRACT	xiii
I. INTRODUCTION	1
Background and Setting	1
Teacher Shortage in Secondary Agricultural Education.....	1
Career Selection	2
Teacher Recruitment.....	3
Statement of the Problem.....	4
Theoretical Framework.....	6
Theory of Reasoned Action	7
Expectancy-Value	7
Purpose of the Study	8
Definition of Terms.....	10
Basic Assumptions.....	13
Limitations of the Study.....	13
Significance of the Problem.....	14
Implications.....	14
Applications	15
II. REVIEW OF LITERATURE	17
Purpose of the Study	17

Teacher Shortage in Agricultural Education.....	17
Teacher Preparation	20
Career Choice.....	23
Choosing a Career in Teaching.....	25
Choosing to Teach Secondary Agricultural Education.....	27
Theoretical Framework.....	30
Theory of Reasoned Action	30
Expectancy-Value Theory	32
FIT-Choice® Framework	35
Summary	41
III. METHODOLOGY	43
Purpose of the Study	43
Research Objectives.....	43
Research Design.....	45
Population	47
Instrumentation	48
Measurement Error	50
Data Collection	56
Non-Response Error.....	58
Data Analysis	58

IV. FINDINGS	65
Purpose of the Study	65
Research Objectives.....	65
Findings.....	67
Research Objective One – Characteristics of Respondents	67
Research Objective Two – Beliefs about Teaching Agricultural Education	70
Research Objective Three – Attitude toward Teaching	
Agricultural Education.....	75
Research Objective Four – Intent to Teach Agricultural Education.....	82
Research Objective Five – Relationship between	
Beliefs and Characteristics.....	84
Research Objective Six – Relationship between	
Attitude and Characteristics	85
Research Objective Seven –Relationship between Intent	
Teach and Characteristics	87
Research Objective Eight – Variance in Intent to Teach	
by Characteristics.....	88
Research Objective Nine – Predict Students’ Intent to	
Teach from Beliefs.....	89
Research Objective Ten – Predict Students’ Intent to	
Teach from Attitude.....	89

Research Objective Eleven – Variance in Intent to Teach	
Accounted for by Attitude	90
V. SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS ..	92
Purpose of the Study	92
Research Objectives.....	92
Limitations of the Study.....	94
Research Design.....	94
Population	96
Instrumentation	96
Validity of the Ag Ed FIT-Choice instrument	97
Reliability of the Ag Ed FIT-Choice instrument	98
Data Collection	98
Data Analysis	99
Summary of the Findings.....	101
Conclusions, Implications and Recommendations	107
REFERENCES.....	129
APPENDICES	137
A. Instrument use agreement	138
B. Ag-Ed FIT-Choice Questionnaire	140
C. Panel of Experts	152
D. Sub-constructs of the Ag Ed FIT-Choice Instrument	154

E. Email Letter to panel members.....	158
F. Initial Email to faculty at selected institutions	161
G. Pre-notice Email and instructions to consenting institutions	164
H. Letter included in questionnaire packet	166
I. Thank you Email to faculty members.....	168
J. Follow-up Email to faculty members	170
K. Reminder Email	172
L. Letter included with replacement packet of questionnaires	174
M. Final contact with faculty members Email reminder	176
N. Test for Assumptions for Multiple Linear Regression.....	178
VITA	193

LIST OF TABLES

Table	Page
1. Reliability Estimates for Summated Attitude and Beliefs of the Ag Ed FIT-Choice Instrument.	53
2. Reliability Estimates for Sub-constructs of the Ag Ed FIT-Choice Instrument	55
3. Level of Agreement Real Limits.....	59
4. Davis (1971) Conventions for Correlation Coefficient	61
5. Characteristics of Senior Level Agricultural Education Students	68
6. Enrollment in High School Agricultural Education.....	68
7. FFA and SAE Participation among Senior Level Agricultural Education Majors	69
8. 4-H Participation of Senior Level Agricultural Education Majors	70
9. Beliefs of Senior Agricultural Education Majors toward a Career as a High School Agriculture Teacher	72
10. Sub-constructs of Beliefs About Teaching	74
11. Attitude of Senior Agricultural Education Majors towards a Career as a High School Agriculture Teacher	76
12. Sub-construct of Attitude about Teaching	81
13. Senior Level Agricultural Education Majors Intent to Teach.....	83
14. Intent to Teach Sub-constructs.....	84
15. Bivariate Correlations between Beliefs and Selected Characteristics	85
16. Bivariate Correlations between Attitude and Selected Characteristics.....	86

17. Bivariate Correlations between Intent to Teach and Selected Characteristics	88
18. Stepwise Regression of Predictors of Intent to Teach from Beliefs	89
19. Stepwise Regression of Predictors of Intent to Teach from Attitude	90
20. Hierarchical Regression of Intent to Teach Controlling for Beliefs	91
21. Summary Table of Bivariate Intercorrelation between Characteristics	180
22. Summary Table of Bivariate Intercorrelation between Sub-Constructs of Belief.....	183
23. Tolerance for Regression on Sub-Constructs of Belief	183
24. Summary Table of Bivariate Intercorrelation between Sub-Constructs of Attitude	187
25. Tolerance for Regression on Sub-Constructs of Attitude	188
26. Summary Table of Bivariate Intercorrelation between Attitude & Belief.....	191
27. Tolerance for Attitude and Beliefs.....	191

LIST OF FIGURES

Figure	Page
1. Potential Teachers, Placement and the Teacher Shortage	18
2. Theory of Reasoned Action	32
3. Factors Influencing Teaching Choice (FIT-Choice®) Scale.....	40

FACTORS INFLUENCING AGRICULTURAL EDUCATION STUDENTS' CHOICE TO TEACH

Rebecca Grace Lawver

Dr. Robert M. Torres, Dissertation Supervisor

ABSTRACT

The purpose of this study was to determine the factors that influence senior level agricultural education students' choice to become secondary agriculture teachers. This study focused on the extent to which beliefs and attitude influenced students' intent to select a teaching secondary agricultural education as a career.

The Agricultural Education Factors Influencing Teaching Choice instrument was distributed to senior level students enrolled in institutions with programs to certify secondary agriculture teachers in nine states. A total of 145 students completed the instrument. Overall, negligible to low relationships were found between students' beliefs and selected characteristics. Negligible to low relationships were also found between students' attitude and selected characteristics. A moderate relationship was found between students' participation in high school agricultural education and their intent to teach. Negligible to low relationships were found with the remaining characteristics and intent to teach. Using stepwise regression, results show 11 % of students' intent to teach can be explained by the belief sub-constructs *teacher morale* and *expert career*. Sixty-one percent of the students' intent to teach can be explained by the attitude sub-constructs *fallback career*, *working with adolescents*, *intrinsic career value*, and *job security*. Using hierarchical regression revealed that 17 % of students' intent to teach can be accounted for by attitude when controlling for beliefs.

CHAPTER 1

INTRODUCTION

This chapter begins with a discussion of the background and setting that provide the context of the problem statement for this research. The purpose and objectives of the research are presented along with the need for the study and the theoretical frameworks upon which the study is based. Finally, definitions of terms and limitations of the study are provided.

Background and Setting

Teacher Shortage in Secondary Agricultural Education

Each year, students enroll in agricultural education as a major course of study at higher education institutions across the United States, for a variety of reasons, however, not all of these students choose to become secondary agriculture teachers when they complete their degree program. A supply and demand study of 2006 agricultural education graduates reported that of the 785 prospective teachers, it is estimated, from past trends, that 53 percent or 401 teachers will actually teach in the fall of 2007 (Kantrovitch, 2007). Unfortunately, this situation is not a new trend. C.H. Lane of the Federal Board for Vocational Education stated, “experience has shown that many students who work in teacher-training classes do not become teachers” (Jarvis, 1921, as cited in Camp, 2000, p.4).

Kantrovich (2007) stated that the teacher shortage epidemic has potential to reach sweeping proportions if teacher preparation institutions are unable to recruit and retain students to teach agricultural education. However, Parnley, Bowen and Warmbrod (1979) concluded that the teacher shortage reported from previous national supply and

demand studies of agricultural education did not result from a shortfall in the number of graduates, but from the low percentage of graduates choosing teaching as their initial profession. Perhaps even more distressing is that agricultural education has not experienced a single year since 1965 in which all teaching positions have been filled (Kantrovich, 2007).

Career Selection

The college years are a crucial time for students to mature and to make decisions regarding their choice of career and academic major as it determines the nature of most of their course work within an institution and their level of interaction with faculty members and other students (Porter & Umbach, 2006). Kim, Markham and Cangelosi (2002) suggested that students gravitate toward a particular major because they hear about job opportunities, high starting salaries and are influenced by the quality of instruction. Some students enter college having already chosen a major and a career, while others remain undecided until much later in their academic course work (Kim, Markham, & Cangelosi).

Even so, prospective teachers are expected to identify their career interests early, undertake extensive coursework, and, once licensed, take a job (Peske, Liu, Johnson, Kauffmann & Kardos, 2001). Educational programs in agriculture are in direct competition with engineering, business and medicine which are judged as more glamorous and promising careers (Thompson & Russell, 1993). Yet those who do pursue teaching as a career choice bring varying values and motivations to their initial teaching experience and enter classrooms and laboratories with high expectations for themselves and their students (Backes & Burns, 2008). Furthermore, students are likely attracted to teaching because of a combination of altruistic, intrinsic and extrinsic motives (Seng

Yong, 1995). To improve recruitment and retention efforts, tapping into this motivation is important when working with teachers and when assisting them with their career choices.

There is national interest in maintaining high quality undergraduate and graduate agricultural education teacher preparation programs. Institutions desire to attract the best and the brightest students, and seek innovative ways to appeal to potential students (Wildman & Torres, 2001). It is essential that factors be identified that have the greatest influence on students' decisions to become agricultural education teachers. The characteristics of students choosing to enter a career as a secondary agricultural education teacher in the current climate of teacher shortages will provide valuable background information for teacher educators, recruitment departments, institutions of higher education, and policy-makers (Richardson & Watt, 2006).

Unless teaching can be made attractive as a career choice for college students, new graduates, and those who switch after pursuing other careers, the shortage of suitably qualified and experienced teachers' promises to worsen (Crow, Levine, & Nager, 1990; Priyadharshini & Robinson-Pant, 2003; Richardson & Watt, 2003; Serow & Forrest, 1994).

Teacher Recruitment

Recruiting quality teachers is crucial to attaining excellence in education (Darling-Hammond, 1997). In addition, supplying a skilled and competent workforce in secondary agricultural education has become a national goal (National Council for Agricultural Education, 2007). Since the publication of *A Nation at Risk* (National Commission of Excellence in Education, 1983), improving teacher recruitment and retention has become a priority. In agricultural education, there have been numerous

attempts to identify the number of new graduates who fill secondary teaching positions as well as a report of the number of positions that are left unfilled each year (Kantrovich, 2007). To address the teacher shortage issue, many states have increased teacher salaries and tightened requirements for certification in hopes to make the profession more appealing (Ballou & Podgursky, 1998). Hanushek and Pace (1995) argued that teacher salaries are not a powerful influence to recruit students into the profession. The question becomes for those considering a career in secondary agricultural education, what is it about teaching secondary agricultural education that motivates an individual to become a teacher?

Within agricultural education, there is an overall lack of research in the area of teacher recruitment and what attracts students to a career in teaching secondary agricultural education. Additionally, many recruitment efforts typically highlight recruitment of high school students into agricultural education programs and into the FFA (Hoover & Scanlon, 1991; Ries & Kahler, 1997; Sutphin & Newsom-Stewart, 1995).

Statement of the Problem

Questions about the motivation to become a teacher have resulted in a steady flow of research and reports from around the globe since the 1960s (Watt & Richardson, 2007). Intrinsic, extrinsic and altruistic motivations have been identified as the most important factors to study teacher recruitment and career selection (Brookhart & Freeman, 1992; Seng Yong, 1995).

How do teacher educators address the recruitment of qualified teachers into school based agricultural education programs? What motivates students who are majoring in agricultural education to choose a career in teaching? According to Richardson and

Watt (2006), it is critical to target the range of motivations that attracts young people to the teaching profession. Teacher education programs will continue to prepare students to become agricultural education teachers and national goals will continue to be set to recruit individuals into the profession. Teacher educators, however, must know what motivates students to choose a career in secondary agricultural education.

Many school based agricultural education teacher positions continue to go unfilled every year because local school administrators fail to find qualified persons to apply for, and or fill positions. Additionally, this occurrence affects school districts who hope to open new programs. According to Camp, Broyles and Skelton (2002), the agricultural education profession has been only moderately effective in recruiting and retaining teachers. Therefore, the problem addressed in this study was to determine the factors that influence agricultural education students' choice to become secondary agricultural education teachers. A review of the literature revealed little research on students' choice to enter the teaching profession upon graduation.

On a national level the future of school based agricultural education and teacher recruitment is a concern. The *10 x 15 Long Range Goal for Agricultural Education* was developed by the National Council for Agricultural Education in 2007 as an effort to create new programs in communities not yet served by agricultural education and FFA, and to strengthen the quality of current programs. This initiative included eight high priority themes, namely: program quality, program models, continuous improvement through research and evaluation, highly qualified educators, partners and resources, promotion and advocacy, agricultural education leadership and coordinated growth (National Council for Agricultural Education, 2008). One goal of the *10 x 15 Long Range*

Goal for Agricultural Education is to ensure an abundant supply of highly motivated, well-educated teachers in all disciplines, pre-kindergarten through adult, providing agriculture, food, fiber and natural resources systems education (National Council for Agricultural Education). The overarching goal is to develop the number of agricultural education programs from the current number of 7,200 to 10,000 by the year 2015. Moreover, one of the most important priorities of the *10x15 Long Range Goal for Agricultural Education* is to secure an abundant supply of well-trained, highly qualified agricultural educators for all roles including teacher, teacher educator, association leader, state and national staff (National Council for Agricultural Education).

Theoretical Framework

There are several frameworks that apply directly to understanding career choice and behavior. These theories can provide foundational knowledge which can be used to draw useful concepts to explain student behavior (Gysbers, Heppner, & Johnston, 2003). Examples include Super's life-span theory which identifies career choice as a process (Super, Savickas, & Super, 1996); Holland's typology of vocational personalities (Holland, 1997) which further explores understanding the person and the environment fit; and Lent, Brown and Hackett's Social Cognitive Career Theory (Lent, Brown, & Hackett, 1997) that focuses on the personal constructions that people place on events related to career choice. While these theories are all relevant to career choice, additional research articles and literature on the topic of teaching choice are based upon motivation and attitude theories (Watt & Richardson, 2007).

Two frameworks emerge as particularly applicable and relevant for this study. Specifically, the frameworks that serve as a foundation for this study included Eccles,

Adler, Futterman, Gof, Kaczala, and Meece, expectancy-value model (1983), which was built upon Fishbein and Ajzen belief and attitude theory (1975).

Theory of Reasoned Action

According to Fishbein and Ajzen (1975), in general, an individual will hold a positive attitude toward a given behavior if an individual believes that the performance of the behavior will lead to mostly positive outcomes. On the other hand, if the individual believes that mostly negative outcome will result from the behavior, and the individual will hold a negative attitude toward it. While Eccles et al. (1983) model contains many components based on the work of Fishbein and Ajzen. They suggested that many investigators fail to distinguish between beliefs, attitudes and intentions. Given that, Fishbein and Ajzen theory of reasoned action served as a framework for this study as well. This theory suggested that investigators should not only look at beliefs, attitudes and intentions, but also behaviors. Understanding a person's behavior requires more than just knowledge of his/her intention, it is a more appropriate to measure their intention in order to predict their behavior (Fishbein & Ajzen).

Expectancy-Value

The expectancy-value model has been used to understand the motivations that trigger individuals' behaviors and is one of the major frameworks for achievement motivation (Atkinson, 1957). The theory proposes that if one can identify the factor or factors that impact an individual's intention, then whether that individual will engage in a particular behavior can be predicted. The basis of this theory is that individuals choose behaviors based on the outcomes they expect and the values to which they ascribe (Borders, Earlywine, & Hewey, 2004).

Eccles et al. (1983) developed the expectancy-value model to investigate gender enrollment patterns in secondary school mathematics by identifying variables that influence achievement-related choices and behaviors of students. In the formulation of expectancy-value theory, values and ability beliefs or expectancies for success are the most important motivations that predict academic choices and behaviors (Eccles et al.).

Purpose of the Study

The purpose of this study was to determine the factors that influence agricultural education students' choice to become secondary agriculture teachers. Specifically, the study focused on the extent to which beliefs and attitude influenced students' intention to select a teaching career in secondary agricultural education.

Research Objectives

To guide the stated purpose, the following research objectives were developed:

1. Describe characteristics of students majoring in agricultural education (sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership).
2. Describe students' beliefs about teaching secondary agricultural education (expert career, high demand, social status, teacher morale, salary).
3. Describe students' attitude toward teaching secondary agricultural education (ability, intrinsic career value, fallback career, job security, bludging, time for family, job transferability, shape the future of adolescents, enhance social equity, make social contribution, work with adolescents, prior teaching and learning experiences, social influences).

4. Describe students' intent to teach secondary agricultural education (social dissuasion, satisfaction with choice).
5. Determine the relationship between students' beliefs about teaching secondary agricultural education and their sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.
6. Determine the relationship between students' attitude about teaching secondary agricultural education and their sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.
7. Determine the relationship between students' intent to teach and their sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.
8. Determine the amount of unique variance in intent to teach (satisfaction with choice) that can be accounted for by the students' demographic characteristics.
9. Predict students' intent to teach (satisfaction with choice) from the belief factors (expert career, high demand, social status, teacher morale, salary).
10. Predict students' intent to teach (satisfaction with choice) from the attitudinal factors education (ability, intrinsic career value, fallback career, job security, time for family, job transferability, shape the future of adolescents, enhance social equity, make social contribution, work with adolescents, prior teaching and learning experiences, social influences).

11. Determine the amount of unique variance in intent to teach (satisfaction with choice) that can be accounted for by the students' attitude where controlling for beliefs.

Definition of Terms

The following terms are operationally defined to provide clarity. Each of the terms is used regularly throughout the dissertation.

4-H: An organization of young people across America learning leadership, citizenship and life skills, 4-H'ers participate in fun, hands-on learning activities, supported by the latest research of land-grant universities, that are focused science, engineering, technology, healthy living and citizenship (4-H.org, 2009).

Agricultural Education: Agricultural Education program is build on three core areas of classroom/laboratory instruction, supervised agricultural experience programs, and FFA student organization activities and opportunities. Agricultural Education prepares students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber and natural resources systems. (FFA.org, 2009)

Attitude: An individual's positive or negative feeling associated with performing a particular behavior (Fishbein & Ajzen, 1975).

Bludging: Adopting the laziest approach possible and choosing what will be the easiest option, within the context of teaching it could be based on people's perception about the length of the working day, frequent school holidays and summer breaks (Watt & Richardson, 2007).

Expectancy-Value Theory: States that attitude are developed and modified based on assessments about beliefs and values (Fishbein & Ajzen, 1975) and in relation to this study, expectations of success and the value of the job are major determinants of motivation for academic choices (Watt & Richardson, 2007).

Fallback career: A second career choice, should one's first choice of career is not available (Watt & Richardson, 2007).

FIT-Choice®: Factors Influencing Teaching Choice investigates motivations for selecting teaching as a career, teaching self-efficacy and experiences of beginning teachers (Watt & Richardson, 2007).

High Demand – Jobs that are considered demanding and ones that require hard work (Watt & Richardson, 2007).

Intent: A course of action that one anticipates to follow (Merriam-Webster, 2008).

Intrinsic Career Value: Enjoyment one gets from completing a given job (Watt & Richardson, 2007).

Job Security: The probability or perception that one will continue to have or keep their job (Watt & Richardson, 2007).

Job Transferability: The ability to move from one job to another or one school to another (Watt & Richardson, 2007).

Social Dissuasion: The extent which others have advised individuals against choosing teaching as a career (Watt & Richardson, 2007).

SAE: An SAE program is a planned practical agricultural activity which supports skill and competency development, career success and application of specific agricultural and academic skills a student has learned through classroom instruction in agricultural education (FFA.org, 2009).

Social Equity: Ensuring equal opportunity and access for all individuals (Watt & Richardson, 2007).

Social Influences: Power to affect relationships in the community (Watt & Richardson, 2007).

Basic Assumptions

An assumption is an accepting statement assumed to be true without proof.

Therefore, the following assumptions guided this study:

1. The respondents hold sufficient experience in agricultural education to complete the instrument.
2. The respondents have a significant interest in their career choice for the future.
3. Students who participated in this study were representative of a typical group of students enrolled in agricultural education teacher preparation coursework.
4. Respondents completed the instrument honestly and objectively.

Limitations of the Study

Limitations are the statements that reflect the relative weaknesses of the study.

The following limitations were identified by the researcher:

1. Institutional differences in overall program components could not be controlled.
2. The institutions used in this study did not provide names or email addresses of currently enrolled agricultural education students. Therefore, the researcher had no formal means with which to code questionnaires.
3. Data collection was limited to students enrolled in agricultural education at Arkansas State University, Illinois State University, Iowa State University, Kansas State University, Murray State University, North West Missouri State University, Oklahoma State University, Southern Arkansas University,

Southern Illinois University, University of Arkansas, University of Central Missouri, University of Illinois-Urbana, University of Kentucky, University of Missouri, University of Nebraska, University of Tennessee-Knoxville, University of Tennessee-Martin, Western Illinois University, and Western Kentucky University during the 2008-2009 academic year.

4. Data collection was conducted in November, 2008 prior to student teaching. Respondents may have responded differently to items on the instrument had they reflected upon their student teaching experiences, as opposed to clinical teaching experiences.

5. The study utilized pre-identified groups of students. Therefore, the sample was not representative of the entire population and non-probabilistic; caution should be exercised when interpreting the results and interpretations should not extend beyond the sample.

Significance of the Problem

As school-based agricultural education programs continue to grow, the supply of highly qualified teachers is critical (Kantrovich, 2007). While there are no easy answers to resolving the teacher shortage issue, understanding the beliefs, attitude and intentions of students who choose a career in secondary agricultural education is important.

Implications

Ideally, students in secondary agricultural education classrooms across the country will have certified teachers who have knowledge of the discipline and are committed to the teaching profession. Agricultural education teacher preparation

programs exists to develop teachers in a formal setting by establishing a common foundation of essential knowledge, skills and learning as well as encourage the development of the core elements of theory and practice (Dyson, 2005).

The increase of teacher shortages has led a renewed interest in the U.K., United States, Europe, Australia, and Asia in understanding what motivates people to choose teaching as a career and what motivates them to persist in this career (Organization for Economic Cooperation and Development, 2002). There continues to be a struggle to understand why students are attracted to teaching in the first place. At a time when other careers offer higher salaries, promotion, social prestige, and better working conditions, teaching appears to be less attractive (Organization for Economic Cooperation and Development; Ramsay, 2000). This situation suggests that a different approach to teacher recruitment, induction and retention is called for (Richardson & Watt, 2006). Faculty in agricultural education teacher preparation programs must have the ability to recognize students' motivations to enter the ranks of a secondary agricultural education teacher and promote the positive aspects of the profession. It is necessary to determine the beliefs, attitudes and intentions of students' who chose to teach secondary agricultural education. Identifying those factors that influence students' choice to teach secondary agricultural education will assist teacher educators in promoting an attractive, vibrant profession.

Applications

The need for teacher recruitment in agricultural education has been well documented (Camp, 2000; Camp, Broyles, & Skelton, 2002; Kantrovitch, 2007; National Council for Agricultural Education, 2000, 2007). It is critical that secondary agricultural educators, teacher educators, association leaders, state and national staff understand and

recognize and value those factors that motivate students to choose teaching secondary agricultural education as a career. Secondary agricultural educators must make a sincere attempt to advertize the advantages of teaching to students in their classrooms since they serve as primary recruiters to the profession. Additionally, state and national FFA should make recruitment of secondary teachers a priority and capitalize on programs such as the agricultural education proficiency award area to provide early identification of future teachers.

Current teacher recruitment campaigns have tended to focus on limited motivations, predominately relating to the opportunity to make social contributions and the opportunity to work with children, likely limiting the audience and its effectiveness (Richardson & Watt, 2006). Teacher educators should expand their focus to include additional values. Additionally, identifying the factors that motivate students to a career in secondary agricultural education and incorporating them into the current secondary curriculum would prove to be beneficial. This would provide an opportunity to capitalize on the beliefs, attitudes, intentions and behaviors of the students who want to teach. Finally, curriculum should be developed that highlights the career of an agriculture teacher and maximizes the positive characteristics of the profession for use by all individuals concerned with the teacher recruitment trend.

CHAPTER II

REVIEW OF LITERATURE

This chapter presents a review of the literature describing the factors that influence students' choice of teaching as a career. The first section is a brief discussion of the issues facing teacher preparation and teacher quality. The second section discusses career selection of college students and progresses into the choice to teach secondary agricultural education. The third section consists of a literature review of the theoretical framework related to beliefs and attitude as well as the expectancy-value theory and is followed by a section which addresses the framework and constructs of the Factors Influencing Teaching-Choice (FIT-Choice®) framework.

Purpose of the Study

The purpose of this study was to determine the factors that influence agricultural education students' choice to become secondary agriculture teachers. Specifically the study focused on the extent to which beliefs and attitude influenced students' intention to select a teaching career in secondary agricultural education.

Teacher Shortage in Agricultural Education

The strength of the agricultural education profession hinges on several variables including state and federal legislation, funding, public perception and local administration, but also on the recruitment of graduates into the profession (Kantrovich, 2007). Figure 1 displays data related agricultural education teaching positions in 2007. Almost half of the graduates, 401 of 785, chose careers other than teaching. The choice of agricultural education majors to enter fields other than teaching secondary agricultural

education resulted in 38 % of the available secondary agricultural education positions left unfilled (Kantrovich).

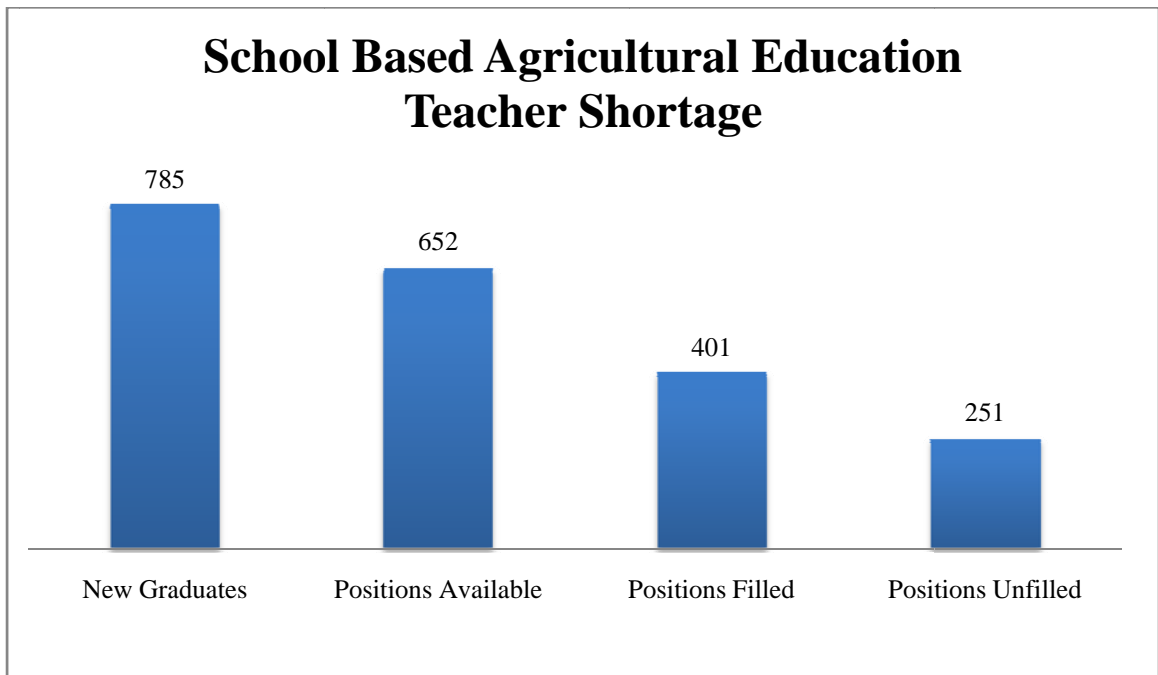


Figure 1. *Predicted Teacher Shortage in School Based Agricultural Education* (Kantrovich, 2007).

In 1980, Craig reported that the number of graduates from teacher education programs in agriculture was sufficient to supply the demand for teachers; however, the percentage of graduates accepting positions declined, leaving a net shortage of teachers. Weaver (1984) suggested that the placement of agricultural education graduates in non-teaching positions may be evidence that teacher education programs are meeting the needs of students who intend to teach as well as those who desire other professional endeavors. It should be noted that this is not an indictment of post-secondary agricultural education programs. Several institutions offer agricultural education majors with a teacher certification option as well as non-certification options such as leadership, communication or extension (AAAEonline.org, 2007).

The core issue continues to be that the available number of graduates in agricultural education exceeds the number of positions available. Nevertheless, due the matriculation of agricultural education graduates who are certified to teach yet choose careers other than teaching, it leaves a significant number of positions unfilled each year. This is problematic as those unfilled positions either are left unfilled for the year, programs are closed entirely, or administrators are forced to hire uncertified or alternatively certified teachers (Roberts & Dyer, 2004). For those in the helping profession such as agricultural education it has been noted that teachers are drawn to teaching because intrinsic motives such as having the opportunity to serve others, touch people's lives and feeling like they had a "calling" to the profession (Harms & Knobloch, 2001). Extrinsic motives identified by Harms and Knobloch included salary and benefits, balance between career and personal time and opportunities for advancement and personal growth. Seng Yong (1995) further identified that people are likely attracted to teaching because of the altruistic, intrinsic and extrinsic motives.

The shortage of secondary agricultural education teachers is a prevalent occurrence that has been documented as early as 1921 (Camp, 2000). In 1979, Parmley et al. concluded that the teacher shortage problems that were reported from previous national supply and demand studies of agricultural education did not result from a shortfall in the number of graduates, but from the low percentage of graduates choosing teaching as their initial profession. Currently, a supply and demand study of 2006 agricultural education graduates reported that 53 percent will actually accept positions teaching secondary agricultural education in the fall of 2007 (Kantrovitch, 2007). Furthermore, Kantrovitch stated that teacher shortage epidemic has potential to reach

sweeping proportions if teacher preparation is unable to recruit and retain additional students into the teaching field in agricultural education. In order to improve recruitment efforts, it is critical to target the range of motivations, including altruistic, intrinsic and extrinsic motivators, which attract people to the teaching profession (Richardson & Watt, 2006).

Identifying and recruiting teachers has been an ongoing concern for more than two decades (Wright & Custer, 1998). An additional concern raised by Harms and Knobloch (2005) is that pre-service agricultural education teachers are likely to be sought after by non-profit and industry because of their caring and competent qualities. Today's teacher candidates have multiple career options that offer attractive features (Peske et al., 2001). Because of the excessive need for teachers Darling-Hammond and Sykes (2003) offer several strategies for recruiting teachers, including state-supported scholarships, recruiting minorities and experts in the field, offering better incentives, and improving licensing agreements. Considering agriculture education is continuing to face recruitment issues as well, additional teacher recruitment practices are necessary to encourage students to choose a career in the profession.

Teacher Preparation

The effect of teacher preparation on teacher quality is a compelling claim for individuals involved in national education policy making (Decker & Rimm-Kaufman, 2008). Concerns at the national level filter down and may have an impact on teacher education and recruitment of teachers to the profession. When examining teacher recruitment it is important to address the concerns of teacher preparation and teacher quality. Given the differences in school resources and policies aimed at equalizing

education, the quality and effectiveness of teachers is essential to understand who chooses to teach and why (Bacolod, 2007). There is a renewed public interest in school reform and teacher education has been identified as a problem (Cochran-Smith, 2005). McLean and Camp (2000) identified the criticisms of public education in general, then criticisms of teacher education and vocational education. At that time agricultural education was also put on notice that change was needed (McLean & Camp). The problem lies in providing evidence that the teacher preparation programs are effective and that future teachers are of high quality (Decker & Rimm-Kaufman, 2008).

A study conducted by Allen (2003) identifies eight strategies for effective teacher preparation. They include (1) to what extent does subject knowledge contribute to the effectiveness of a teacher, (2) to what extent does pedagogical coursework contribute to a teacher's effectiveness, (3) To what extent does high-quality field experience prior to certification contribute to a teacher's effectiveness, (4) are there alternative route programs that graduate a high percentage of effective new teachers with average or higher than average rates of teacher retention, (5) are there any teacher preparation strategies that are likely to increase effectiveness of new teachers in hard to staff and low performing schools, (6) is setting more stringent teacher preparation program entrance requirements or a more selective screening of program candidates likely to ensure more effective teachers, (7) does accreditation of teacher preparation programs contribute significantly to the likelihood of their graduates will be effective and will remain in the classroom, and (8) do institutional warranties for new teachers contribute to the likelihood that recent graduates of those institutions will be effective.

In summary, adequate knowledge of subject matter is necessary for effective teaching; there are vague implications and limited support for the effectiveness of pedagogical studies, although necessary for teacher efficacy; high quality field experiences by well trained teachers and university faculty is vital to teacher efficacy; there is some support for the development of alternative route preparation; the research is unclear regarding hard to staff and low performing schools as well as inconclusive and potentially negatively impacts raising admission standards; there are no implications that can be drawn from the research regarding accreditation of teacher preparation programs; and finally, due to the absence of research in the area of institutional warranties conclusions cannot be drawn that imply that teacher preparation institutions are responsible for ensuring that their students will do well on licensure exams and guarantee their classroom effectiveness (Allen, 2003).

In regards to agricultural education teacher preparation, 84 active teacher preparation programs for agriculture have been identified with only 79 actually qualifying any new, potential teachers in 1995 (Camp, 1998). McLean and Camp (2000) continue to describe the curricular structure of the agriculture education teacher preparation programs as extensively different. This makes it almost impossible to identify a set of commonly taught courses that represents a traditional agricultural education teacher preparation institution. Nevertheless, teaching methods courses and program and curriculum related topics continue to dominate the agricultural education teacher preparation coursework (McLean & Camp). While the research on teacher preparation and teacher quality is limited it does provide some guidance for policy makers on the impact of coursework, field experience and alternative routes to teacher preparation

(Allen, 2003). It is especially important to ensure that current teacher preparation programs include curriculum that is addressing national trends in teacher education.

In addition, what this research fails to address within the context of teacher preparation is the student who chooses a career in teaching and how to recruit them to the teaching profession. Understanding the beliefs, attitude and intent of those enrolled in teacher preparation courses is important to guarantee a qualified supply of teachers. Furthermore, to ensure the research on teacher preparation more accurately addresses issues in teacher quality, more connections to the individual must be made. It is important to study teacher beliefs and attitude as a useful outcome for understanding teachers' future teaching quality (Decker & Rimm-Kaufman, 2008). As competition for new teachers intensifies and school districts fill vacancies, there are legitimate worries about who will staff the nation's schools and whether those hired will be of high quality (Peske et al., 2001). Policies aimed at teacher recruitment and retention are likely to have effects on the distribution of teachers across schools as well as the overall supply of teachers among college graduates (Bacolod, 2007). Insight into those who choose to enter teacher education programs and subsequently choose to become teachers is vital in teacher recruitment and future teacher quality.

Career Choice

College serves as the foundation for students to discover their interests and make decisions about their career future. Colleges of agriculture traditionally expend a great deal of time, energy, and financial resources in the marketing and recruitment of students (Washburn, Garton & Vaughn, 2002). Career development not only starts early in a person's life, it is also shaped by personal and environmental factors (Bandura, 1986). A

variety of factors influence what students will major in and what career they will choose. College students complete internships and use past experiences in preparing to enter the workforce, and ask a variety of questions to help them choose careers (Harms & Knobloch, 2005). The choices made during these formative periods of development will shape the course of students' lives and help determine which aspects of their talents they choose to cultivate (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). Some students are interested in the job opportunities or high starting salaries, while others are influenced by the quality of instruction provided in a particular department (Kim, Markham, & Cangelosi, 2002). Along with choosing an academic major students must develop career goals for the future (Guerra & Braungart-Rieker, 1999). One of the issues with studies investigating career choice of young people is the respondents' perception of the career they claim to desire, therefore research must also investigate how knowledgeable young people are about the career they wish to follow (White, 2007). Even so, there are some students who enter college who have a clear choice of what their major will be and the career they wish to pursue, yet there are others who remain undecided until much later in their course work (Kim, Markham, & Cangelosi).

Harms and Knobloch (2003) present the following questions from students as they begin to make career choices: Can I be successful in this career? Will my needs be met by this career? Do I see myself influencing others in this career? This framework for career choice was formed based on the assumptions of the social cognitive career theory (Lent et al., 1996). The social cognitive career theory is unique from other theories in that it focuses on the personal meaning that people place on events related to career decision making (Swanson & Fouad, 1999). Social cognitive career theory is a new effort to

understand the process people go through in forming interests, making choices, and achieving success in educational and occupational choices (Lent et al., 1994). While the social cognitive career theory is not driving this study, it is influential and provides a backdrop into the attitudes and beliefs of student choice. This theory is anchored in Bandura's (1986) self-efficacy theory. Bandura's theory relates to people's belief that they can be successful in their chosen careers and the number of alternatives that they may consider (Harms & Knobloch).

Choosing a Career in Teaching

In education, teacher candidates are expected to identify their career interests early on in order to complete the extensive coursework required for teacher certification, and once licensed they are expected to take a job (Peske et al., 2001). Students are more likely to choose a career in which they believe that they can be successful, have their needs met and influence others. It is this perceived self-efficacy that is a pivotal factor in career choice (Bandura et. al., 2001). Additional college major choice factors include gender, academic self-efficacy and preparation.

What makes teaching appealing as a career typically begins with practicing teachers reflecting on their decisions teach and undergraduate students identifying their motivations to teach (Hammond, 2002). Lortie (1975) found that the appeal of teaching was interpersonal in nature, the sense of service it carried and it allowed teachers to continue to be engaged in a subject they enjoyed. Lyons (1981) supports Lortie indicating a continued interest in their academic subject as the most common motivation in teaching, followed by working with children and an interest in the teaching and learning process. Additional factors for pre-service teachers' decisions to teach were job

satisfaction and working with children, having a challenging career, sharing subject knowledge, improving children's lives, and inspiration of former teachers (Reid & Caudwell, 1997). Additionally, Kyracou and Coulthard (2000) found undergraduates were interested in a career in teaching because they felt they could make a contribution to society. Furthermore, family or friends and former teachers were identified as primary influences for students' to choose a career in teaching (Hillman, 1994; Lyons, 1981; Reid & Caudwell, 1997)

In a study conducted by Porter and Umbach (2006) it was found that females were more likely than males to choose social science majors, and academic self-efficacy and academic preparation are not significant predictors of college major choice. Hammond (2002) found that the most common motivation for students to choose a career in teaching was their positive experiences of teaching in the past, a special interest in the subject matter and special features of the subject they were teaching.

Richardson and Watt (2006) found that enrollment within teacher education were largely female and the highest rated motivations for choosing teaching as a career to include perceived teaching abilities, intrinsic value of teaching, the desire to make a social contribution, shaping the future and working with adolescents. The lowest rated motivation for choosing teaching was perceived that teaching was a fallback career and the social influences others had for them to pursue a career in teaching. The attitude about the teaching profession was perceived as highly demanding, having a heavy workload, highly emotional and requiring hard work. However, it was also perceived as low in return, which reveals that students perceive that teaching as having a low social status

and low salary. Overall, students were satisfied with their career choice as a teacher, but also experienced strong social dissuasion from teaching as a career (Richardson & Watt).

Choosing to Teach Secondary Agricultural Education

As students begin nearing the end of their formal teacher preparation coursework and enter the workforce it is important to identify what factors have the greatest influence on students' decision to choose a career in teaching secondary agricultural education. A number of studies have been conducted to determine undergraduate choice to major in agricultural education. Cole (1984) concluded that students who were actively involved in SAE and FFA activities were more encouraged to choose agricultural education as a college major. Additional reasons for majoring in agricultural education as identified by Hillison, Camp and Burke (1986) were the flexibility of the program that allows majors to enter jobs other than teaching. Mueller and Miller (1993) agree that the upswing in the agricultural economy has made many new jobs available to agricultural education graduates at very competitive salaries. Thus, providing agricultural education graduates with a choice in career either teaching or in industry. Additional evidence about career choice that has been presented is that students' choice of career plans are strongly gendered and tend to correspond with traditional careers, although it is changing in some areas such as medicine (White, 2007). What is absent in the research is identifying the motivating factors that promote majoring in agricultural education and consequently choosing a career as a secondary agricultural education teacher.

Park and Rudd (2005) stated secondary agriculture teachers influence many decisions about a student's career and further education through teacher actions, comments, and instruction. These interactions between teacher and student influence

students choice of career and ultimately may lead to a career in agricultural education. Additionally, highlighting teachers at the National FFA Convention, and producing recruitment brochures are complementary efforts to attract students' to choose a career teaching agricultural education (Park & Rudd). Alternatively, Esters and Bowen (2005) suggest that parents and friends as the individuals who most influenced students' career choice.

Recruiting students to the profession is important in maintaining and growing secondary agriculture education programs. Insight into the factors that influence students' choice to teach will offer additional assistance when developing recruitment efforts. The question still remains: Why do students' choose a career in teaching? Students entered the teaching profession expecting to make a difference in the lives of students (Hayes, 1990; Stiegelbauer, 1992). Harms & Knobloch (2005) identify several factors to explain career choice for those in career and technical education and agricultural education including, serving others, touching people's lives/making an impact, the "calling" to the career, salary and benefits, balance between career and personal time, and opportunities for advancement. Brunetti (2001) found that the most important motivation for experienced teachers was the opportunity to work with young people and watching their students learn and grow. Stiegelbauer also identified the importance of being a role model for adolescents, continual learning and growth, sharing personal knowledge and expertise, and creating a positive learning environment as motivation to choose a career in teaching. Additionally, Hayes found that 92% of college students majoring in education chose teaching because they loved children, 98% felt that teaching would allow them to express their creative abilities, and 54% were influenced to become a teacher by

one of their own former teachers. Furthermore, a study conducted by Weiner (1993) identified three reasons for choosing a career in teaching; wanting the opportunity to be creative, enjoying working with young people, and desiring a socially useful job.

The current research on the subject of students' decision to teach agricultural education is narrow. However, past research in agricultural education reveals that students enrolled in high school agriculture education courses, FFA experience, and agriculture education teachers as being the most influential factors in students' choice to teach (Arrington, 1985; Edwards & Briers, 2001; Hillison, Camp, & Burke, 1986; Ktrollik & Harrison, 1987). Additionally, Park and Rudd (2005) suggest that by employing encouraging attitudes and behaviors from agriculture education teachers, they could help recruit new teachers into the profession. Edwards & Briers found that the level of agricultural work experience adds considerably to the number of years first year teachers expect to teach. Without a doubt, quality teachers are needed to fill positions at a time where teacher shortages are apparent and teacher education programs stand to gain from this study.

Theoretical Framework

Two frameworks emerge as particularly applicable and relevant for this study. Specifically, the frameworks that serve as a foundation for this study included Eccles et al. expectancy-value model (1983) which has been built upon Fishbein and Ajzen belief and attitude theory (1975).

Theory of Reasoned Action

According to Fishbein and Ajzen (1975), in general, an individual will hold a positive attitude toward a given behavior if he/she believes that the performance of the behavior will lead to mostly positive outcomes. On the other hand, if the individual believes that mostly negative outcome will result from the behavior, he/she will hold a negative attitude toward it. When the ultimate goal is to predict and understand an individual's behavior the first item is to identify and measure the behavior of interest (Ajzen & Fishbein, 1980). In this study, it is those factors that influence students' choice of becoming a secondary agriculture education teacher. The choice or intention to become a secondary agriculture teacher is a function of students' attitude toward teaching and their perception of teaching. Individuals will intend to perform a behavior when they evaluate it positively and when they believe that others think they should perform it (Ajzen & Fishbein, 1980). In other words, students will intend to teach if they evaluate teaching and learning experiences positively and are encouraged to pursue the career. In addition, it is possible to predict and gain some understanding of a person's intention by measuring their attitude toward performing the behavior as well (Ajzen & Fishbein, 1980).

Fishbein and Ajzen (1975) suggest that many fail to distinguish between beliefs, attitudes and intentions and stated that behavior is a result of intentions, which are a function of one's attitude which are then the result of one's beliefs or expectations that the behavior will lead to a particular outcome. Given that, Fishbein and Ajzen theory of reasoned action served as the fundamental framework for this study (see Figure 2). The theory suggests that a person's intention is a function of two basic determinants. It includes individuals' positive or negative attitude toward the behavior and the subjective norm which relates to the social influence others have on the individual (Ajzen & Fishbein, 1980). This also includes social dissuasion, the influence others have on discouraging an individual from choosing a particular behavior (Richardson & Watt, 2006).

The theory of reasoned action can be used to predict, explain, and influence human behavior (Ajzen & Fishbein, 1980). Understanding a person's behavior requires more than just knowledge of his/her intention, it also must include the ability to appropriately measure their intention by assessing beliefs and attitude in order to predict their behavior (Fishbein & Ajzen, 1975). The expectancy-value theory is directly linked to Fishbein and Ajzen's theory with the core belief that behavior is a function of the expectancies an individual has and the value of the goal toward which the individual is working (Watt & Richardson, 2007). The expectancy-value theory is the overarching theory in which this study is based.

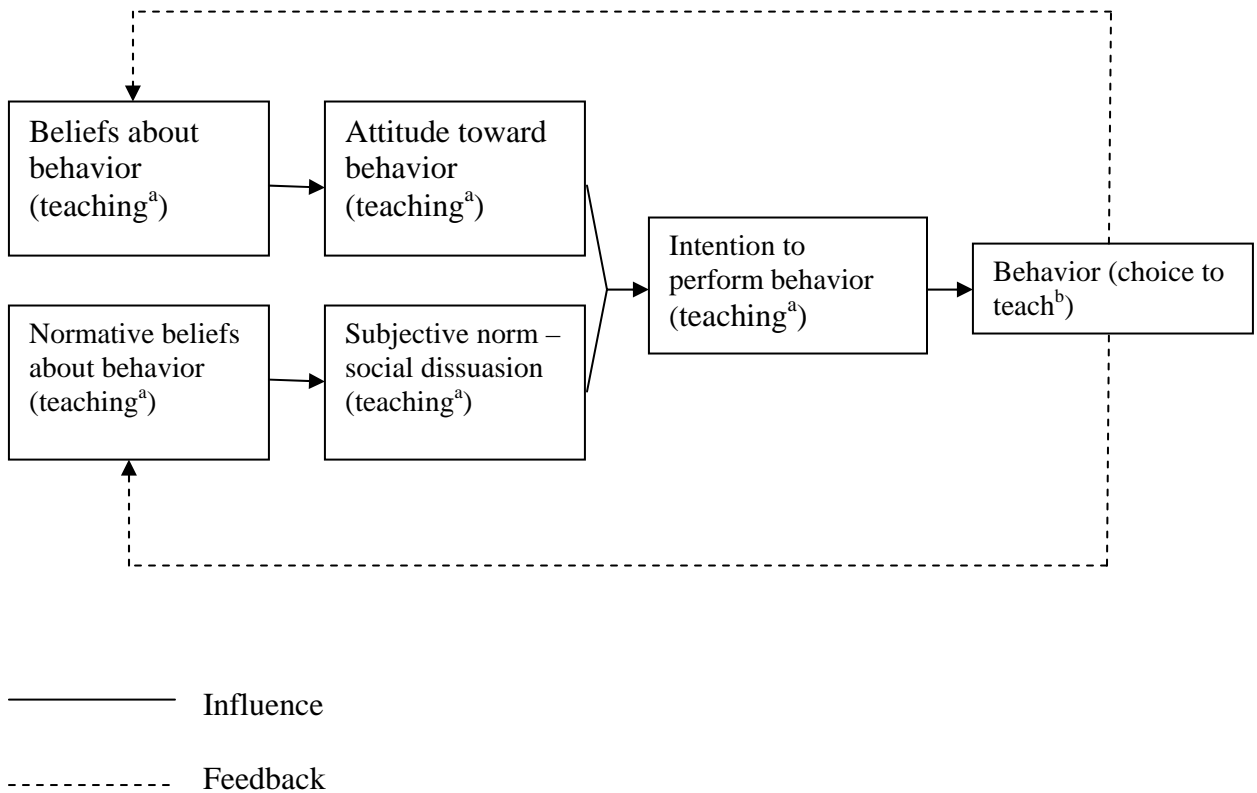


Figure 2. *Theory of Reasoned Action (Fishbein & Ajzen, 1975)*. Note. Additions made to theory, ^aBehavior, attitude and intent toward teaching as a career, ^bChoice to teach

Expectancy-Value Theory

Watt and Richardson’s (2007) model for studying factors that influence teaching was developed based on the achievement motivation by Atkinson. Expectancy-Value theory is one of the major frameworks for achievement motivation theory (Atkinson, 1957). According to expectancy-value theory (Eccles, et al., 1983) behavior is a function of the expectancies one has and the value of the goal toward which one is working. This theory predicts that, when more than one behavior is possible, the behavior chosen will be the one with the largest blend of expected success and value. Expectancy-value

theories hold that people are goal-oriented beings. Expectancy-value theorists have regarded success expectancies and the value placed in tasks as major determinants of motivation for academic choices (Watt & Richardson, 2007). Modern expectancy-value theories differ from Atkinson's theory in that both the expectancy and value components are more elaborate and linked to psychological and social/cultural determinants and expectancies and values are assumed to be positively related to each other; rather than inversely related as proposed by Atkinson (Eccles & Wigfield, 2002).

Eccles et al. (1983) originally developed the expectancy-value model to investigate gender enrollment patterns in secondary school mathematics and argued that existing research in academic choice was limited by the lack of a combined theoretical framework to guide the organization of variables that influenced achievement related choices and behaviors. Watt and Richardson (2007) insisted that a similar situation exists in the research of the choice of teaching as a career. The expectancy-value model however, has been identified as one of the most comprehensive motivational models for explaining academic and career choices (Wigfield & Eccles, 2000). The expectancy-value model has been used to understand the motivations that trigger individuals' behaviors and is one of the major frameworks for achievement motivation (Atkinson, 1957). The theory proposes that if one can identify the factor or factors that impact an individual's intention, then it can be predicted that an individual will engage in a particular behavior. The basis of the theory is that individuals choose behaviors based on the outcomes they expect and the values they ascribe to (Borders et al., 2004). Additionally, expectancies for success are defined by beliefs about how successful a student will do on a given task and their individual values for a particular task can help explain why they choose one task over

another (Jacobs & Eccles, 2000). In teacher preparation, this answers the motivational question about what makes students want to do the task or “prepare to be a teacher.” Students’ motivation is determined by how much they value the goal (or task), and whether they expect to succeed. Jacobs and Eccles emphasized the distinct contribution that is made by individual beliefs, expectations for success, and the value of the task and its influence on achievement and choice.

Eccles et al. (1983) developed the expectancy-value model to investigate gender enrollment patterns in secondary school mathematics identifying variables that influence achievement-related choices and behaviors of students. Expectancies for success are defined as students’ beliefs about how well they will do on upcoming tasks, either in the immediate or longer-term future (Jacobs & Eccles, 2000). The formulation of expectancy-value theory, values and ability beliefs or expectancies for success are the most important motivations that predict academic choices and behaviors (Eccles et al, 1983). According to some modern expectancy-value theories, an individual’s values for a particular goal and task can help explain why a student chooses one career over another Jacobs and Eccles (2000) explain:

According to the expectancy-value model, the key determinants of choice will be the relative value and perceived probability of success of each available option. Expectancies and values are assumed to directly influence performance and task choice and to be influenced by task-specific beliefs such as self-perceptions of competence, perceptions of the task demands, and the child’s goals and self-schemas (p. 406).

Watt and Richardson (2007) provide an integrative theoretical model to guide research into why individuals choose teaching as a career by drawing together recurring themes from the teacher education literature, ability-related beliefs emphasized in the career-choice literature and locating these themes within the expectancy-value framework. This work led to the development of the FIT-Choice® Scale.

FIT-Choice® Framework

The Factors Influencing Teaching Choice (FIT-Choice®) framework is a relatively new framework for studying teaching choice. The FIT-Choice® framework was founded on the expectancy-value theory and developed by Helen Watt and Paul Richardson (Richardson & Watt, 2006). The FIT-Choice® framework provides a comprehensive and coherent model to guide systematic investigation into students' choice of a teaching career. However, due to the originality of this study the research has not been strongly articulated with the existing motivation literature or career choice literature (Watt & Richardson, 2007). Yet it does draw together the recurring themes from the teacher education literature that has been identified in relation to career choice and ability related beliefs, and locates those themes within the expectancy-value framework (Richardson & Watt).

The FIT-Choice® framework taps into altruistic, utilitarian, and intrinsic motivations along with the ability-related beliefs (Richardson & Watt, 2006). The first and simplest construct for self perception about teaching is the perceived ability to teach (Watt & Richardson, 2007). These items ask about individuals perceptions of their teaching ability, do they think they do a good job. For values, Watt & Richardson developed three expectancy-value components: intrinsic, subjective attainment and utility

values. Intrinsic value items were developed and assessed individuals' interest and desire for teaching as a career choice, including generalities about being interested in teaching. Subjective attainment values relate to the degree that which individuals consider tasks to be important (Watt & Richardson). Contained within subjective attainment value constructs are time for family, job security and job transferability and subsequently have named this set of factors personal utility value.

This is further clarified by Watt & Richardson (2007) who reported that people enter teaching have frequently chosen the career independent of the career content, rather because of the quality of life teaching offers. This includes items such as more time with family, a secure income, opportunities to travel and an overall desirable quality of life.

The Australian term, bludging relates to people's adopting the laziest approach possible and choosing what they think will be the easiest option and within the context of teaching, bludging could be based on people's perception about the length of the working day, frequent school holidays and summer breaks (Watt & Richardson, 2007). This construct provides insight into those individuals who choose teaching on the basis that teaching will allow for low effort and provide a lifestyle where personal activities would come before professional activities. Utility value was renamed social utility value due to research findings by Watt & Richardson indicating that teachers have a strong desire to make a social contribution or give back to society. These items tap into individuals' desire to provide a service to society, make a worthwhile contribution, help the disadvantaged, and raise the ambitions for underprivileged youth and shape the future of adolescents (Watt & Richardson).

To address task perceptions within the context of choosing teaching as a career (Watt & Richardson, 2007) identified two components: task demand and task return. Task demand includes expert career and high demand, which identify the perceptions of teaching as a highly expert career, requiring high levels of specialized and technical knowledge; as well as the perceptions of teaching as highly demanding with a heavy workload, high emotional demand and generally requires hard work (Watt & Richardson). Task return includes constructs including social status, teacher morale, and salary. Task return measures the perceptions of teaching as a well respected, high-status occupation, where teachers feel valued by society and salary is fair and good.

Watt and Richardson (2007) categorize the antecedent socialization constructs to include positive teaching and learning experiences. Prior teaching and learning experiences that were positive in nature can include teaching Sunday school, or having good teachers. In addition to prior teaching and learning significant others such as family, friends, and colleagues may influence individuals' choice to teach as well (Darling-Hammond & Sclan, 1996). Finally, the last construct to be identified by Watt and Richardson (2007) is teaching as a fallback career. If individuals failed to be accepted in their first career choice they may have chosen teaching as a fallback career.

Understanding students' motivations for choosing a teaching as a career has implications for teacher education, curriculum design, and recruitment. The FIT-Choice scale was guided by the three major self, value, and task sets of variables that predict choices in Eccles et al.'s (1993) model. This model provides a comprehensive and coherent model to guide systematic investigation into the question of why people choose teaching (Richardson & Watt, 2006). Richardson and Watt developed a FIT-Choice®

framework model which organizes the themes from the teacher education literature and locate them within the Expectancy-Value framework to explain students' choices to teach. The FIT-Choice® model (see Figure 3) is described by the following:

The model contains antecedent *socialization influences*, followed by more proximal influences of *task perceptions*, *self perceptions*, *values*, and *fallback career*. Higher order task demand return constructs in turn contain first-order constructs; *expert career* and *high demand* comprise the higher order *task demand* construct; and *social status and teacher morale* and *salary* comprise the higher order *task return* construct. Similarly, higher order *values* constructs contain first order component constructs. Values constructs in our model are *intrinsic value*, *personal utility value* and *social utility value*. *Personal utility values* which contain first-order constructs *job security*, *time for family*, and *job transferability* and *social utility value* contain first-order constructs *shape future of children/adolescents*, *enhance social equity*, *make social contribution* and *work with children/adolescents*. (p. 32)

The FIT-Choice® scale was developed from a large-scale Australian study, which included two universities in the Australian States of New South Wales and Victoria (Watt & Richardson, 2007). The study included two large cohorts ($N=1140$) of beginning teacher education candidates and described the factors that teacher education candidates identified as most important in their decision to teach.

The FIT-Choice® scale determines the strength of influence for a range of motivations from individuals choosing teaching as a career, this framework, founded on the expectancy-value theory, provides a comprehensive model to guide systematic

investigation into the question of why people choose teaching as a career (Richardson & Watt, 2006). The expectancy-value framework was chosen as the most comprehensive motivational model for explaining academic and career choices (Wigfield & Eccles, 2000).

To identify the factors that influence students to teach the following constructs have been identified within the FIT-Choice® scale. On the far right of the FIT-Choice® model, the choice of teaching career is the outcome variable. However, because this study was conducted with seniors it is not possible to measure whether these individuals chose teaching as a career. An alternative measure was developed. The satisfaction with choice subscale was created and identifies how satisfied respondents were with their choice of a career in teaching secondary agriculture prior to their student teaching experience.

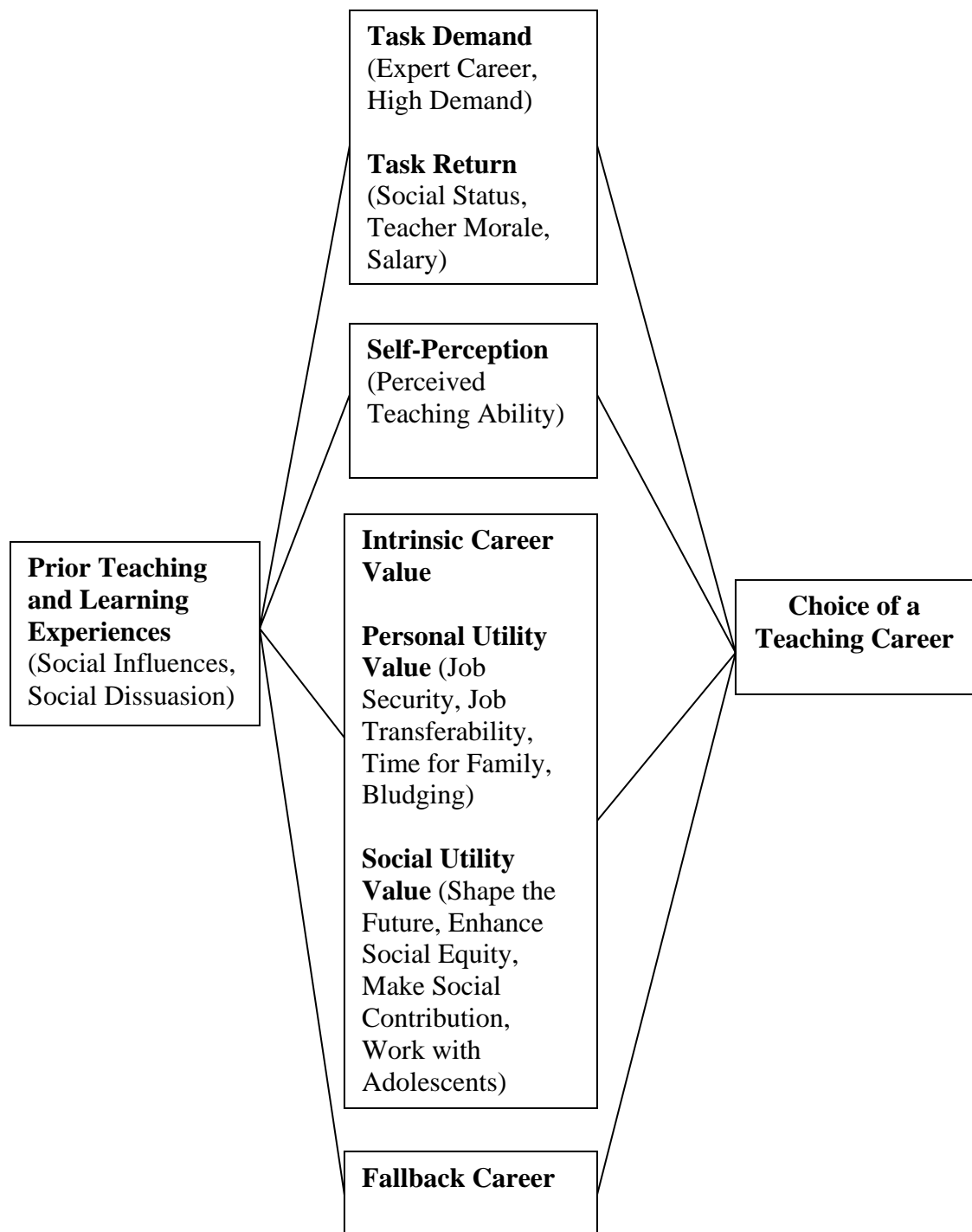


Figure 3. *Theoretical model of the Factors Influencing Teaching Choice (FIT-Choice®) Scale (Watt & Richardson, 2007).*

Summary

There is a renewed public interest in school reform, insisting on providing evidence that teacher preparation programs are effective and that future teachers are high quality. Teacher preparation and teacher quality may have an impact on teacher education and recruitment of teachers to the profession. College is a foundational period for students to discover their interests and make decisions about their career future. Yet, career decisions are expected early in a person's life. In addition to the choices students' make in regards academic major, they must develop career goals for the future. This can be a strenuous and emotional time for students. A variety of factors will influence what students will major in and what career they will choose.

Students are more likely to choose a career in which they believe that they can be successful, have their needs met and influence others. In teacher preparation programs, students' are expected to identify their career early in order to complete the coursework required for certification. With the shortage of graduates entering the teaching profession it is important to identify what factors have the greatest influence on students' decision to choose a career in teaching secondary agricultural education. A number of studies have been conducted to determine undergraduate choice to major in agricultural education. Students who are actively involved in SAE and FFA activities, the flexibility of the major, and economic reasons are cited as additional reasons for majoring in agricultural education (Cole, 1984; Hillison, Camp & Burke, 1986; Mueller & Miller, 1993). What is absent in the research is identifying the motivating factors that promote majoring in agricultural education and consequently choosing a career as a secondary agricultural education teacher

The National Council for Agricultural Educations plan to secure an abundant supply of well-trained, highly qualified agricultural educators must be met with a solid strategy to recruit new teachers. Investigating the attitudinal, belief and intent that influence students' choice to select a teaching career in agricultural education will assist secondary agriculture teachers, teacher educators, and recruitment groups in promoting the profession.

CHAPTER III

METHODOLOGY

Chapter III describes the methodology of the study. Included in this chapter are the research objectives, research design, population, instrumentation, data collection, and data analyses procedures.

Purpose of the Study

The purpose of this study was to determine the factors that influence agricultural education students' choice to become secondary agriculture teachers. Specifically the study focused on the extent to which beliefs and attitude influenced students' intention to select a career in secondary agricultural education.

Research Objectives

To guide the stated purpose, the following research objectives were developed:

1. Describe characteristics of students majoring in agricultural education (sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership).
2. Describe students' beliefs about teaching secondary agricultural education (expert career, high demand, social status, teacher morale, salary).
3. Describe students' attitude toward teaching secondary agricultural education (ability, intrinsic career value, fallback career, job security, bludging, time for family, job transferability, shape the future of adolescents, enhance social equity, make social contribution, work with adolescents, prior teaching and learning experiences, social influences).

4. Describe students' intent to teach secondary agricultural education (social dissuasion, satisfaction with choice).
5. Determine the relationship between students' beliefs about teaching secondary agricultural education and their sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.
6. Determine the relationship between students' attitude about teaching secondary agricultural education and their sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.
7. Determine the relationship between students' intent to teach and their sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.
8. Determine the amount of unique variance in intent to teach (satisfaction with choice) that can be accounted for by the students' demographic characteristics.
9. Predict students' intent to teach (satisfaction with choice) from the belief factors (expert career, high demand, social status, teacher morale, salary).
10. Predict students' intent to teach (satisfaction with choice) from the attitudinal factors education (ability, intrinsic career value, fallback career, job security, time for family, job transferability, shape the future of adolescents, enhance social equity, make social contribution, work with adolescents, prior teaching and learning experiences, social influences).

11. Determine the amount of unique variance in intent to teach (satisfaction with choice) that can be accounted for by the students' attitude where controlling for beliefs.

Research Design

This study utilized a descriptive-correlational research design method to address senior agricultural education majors' choice of a career as a teacher of school-based agricultural education. This type of research often uses questionnaires and interviews to gather information from groups of subjects (Ary, Jacobs, & Razavieh, 2002). Consistent with the literature on research design, this study utilized a mailed questionnaire to gather data regarding attitude, belief and intention to teach (Dillman, 2007). After the questionnaire was developed, prior to the data collection phase of the research, the researcher submitted a plan outlining the details of the research project and all related materials to the University of Missouri Institutional Review Board (IRB). The data collection phase of the research was then completed after receiving approval from the IRB and adhered to the requirements and specifications described in the approval notice, IRB # 1122237.

In addition to describing *what is* with respect to beliefs, attitude and intentions to teach secondary agricultural education, this study also utilized a correlational research method to investigate potential relationship between variables of interest. Correlational research is used to identify the strength and direction of relationships among selected variables (Ary, Jacobs, & Razavieh, 2002; Gall, Gall & Borg, 2003). This study sought to explain and predict the participants' beliefs, attitudes and intent to teach by selected characteristics, including sex, their perceived agriculture experience compared to their

peers, their agricultural education background, including years enrolled in agricultural education, FFA and if they participated in SAE and 4-H.

While the purpose of this research is not necessarily to discover cause-and-effect relationships, Gall, Gall and Borg (2003) suggested that most educational research has a strong inclination in doing so but must be reserved for experimental studies. Yet, unless researchers generate an accurate description of an educational phenomenon as it exists, they lack a firm basis for explaining or changing it (Gall, Borg & Gall, 1996).

In this study, there were three outcome variables: attitude toward teaching secondary agricultural education, beliefs about teaching secondary agricultural education and intent to teach secondary agricultural education. In addition, included within the outcome variables of attitude, belief and intent were sub-scale items including: self perception of teaching ability, intrinsic career value, personal utility value, social utility value, bludging, task perceptions, prior teaching and learning experiences, and fallback career. Predictor variables included sex as well as perceived agriculture experience compared to their peers, participation and years of experience in agricultural education, FFA, and 4-H and participation in SAE.

Two primary concerns that must be addressed with descriptive research are internal and external validity issues. Internal validity of a study establishes that the data or the findings are true or measures what is purported to be measured (Borg & Gall, 1989). To ensure internal validity, measurement error must be minimized and the instrument for data collection must be trusted. External validity is influenced by factors such as sampling error, selection error, frame error, and non-response error. Internal validity will be addressed in the instrumentation section.

Population

The target population consisted of senior level agricultural education students enrolled in teacher preparation programs in nine states. Institutions selected for inclusion in this study were identified from the American Association of Agricultural Education Directory (aaaeonline.org). A total of 93 institutions that offer teacher certification programs in agricultural education were identified. To address potential frame error and determine accuracy, the list was examined for errors, omissions and purged of duplicates.

A convenience sample of senior students majoring in agricultural education in the central part of the United States was used. A convenience sample was used for two reasons. First, all of the selected institutions were easily accessible and convenient to contact, attributable to the researcher's close contact with the individual faculty members in those programs. Second, there was reduced expense to collect data due to the number of institutions and students studied. The use of a time and place sample, as suggested by Oliver and Hinkle (1982), was justified because the student cohort population could be considered representative of future populations of students at these institutions.

The researcher selected institutions in states contiguous to Missouri by reason of the close proximity, ease of contact, and familiarity with the institutions. Twenty-six institutions in Arkansas, Illinois, Iowa, Kansas, Kentucky, Missouri, Nebraska, Oklahoma, and Tennessee were initially identified as offering a major in agricultural education (AAAEonline.org, 2007). In order for institutions to participate in the study, they must have had access to senior level agricultural education majors who were to participate in student teaching during the fall of 2008 or spring of 2009. Seven of the 26 institutions did not meet these criteria. Specifically, four institutions did not have access

to student teachers in the fall semester and three declined to participate. As a result, 19 institutions were included in the study.

Instrumentation

The data collection instrument was adapted from the FIT-Choice® Scale (Watt & Richardson, 2007). The FIT-Choice® scale was developed to measure beliefs, attitude and intention of teacher candidates (Richardson & Watt, 2006). The instrument was adapted after reviewing the FIT-Choice®, agricultural education and teaching literature. Dr. Helen Watt provided written permission allowing the FIT-Choice® to be utilized and adapted for this study (see Appendix A).

The original Watt and Richardson FIT-Choice® instrument used a seven point Likert scale with response choices ranging from 1 = not at all important to 7 = extremely important. According to DeVellis (1991), questionnaires with many items should have a narrow response scale. Additionally, Spector (1992) suggested that a wider response scale can make it hard for respondents to decide among alternatives, this also was taken into consideration when reducing the response choices. Consequently, because the number of items included in the instrument (73), the response scale was modified to a five points with the following choices: 1 = definitely disagree, 2 = disagree, 3 = neutral, 4 – agree, 5 = definitely agree. The main addition to the statements in the questionnaire was the term “Agriculture,” and therefore renamed the Ag Ed FIT-Choice Instrument. Dillman’s (2007) Tailored Design Method was utilized as a guide for the development of the instrument.

The instrument was printed booklet style on white 8.5 x 11 paper. The cover included a colored graphic of students in a classroom (see See Appendix B). The inside cover included a brief letter of thanks and a description of the study. The researcher signed each questionnaire in green ink. The instrument included four sections and each section contained directions for responding to each item, an example to provide clarity of expectations and color printing highlighted each statement. Respondents were asked to fill in their response to each item.

Section one of the instrument included 40 statements designed to collect data related to students' attitude toward becoming a secondary agricultural education teacher. This section began with a stem "I want to become a high school agriculture teacher because." Students' were asked to identify their attitude about teaching agriculture for 40 items using a five point Likert scale comprised of 1 = definitely disagree, 2 = disagree, 3 = not sure, 4 = agree and 5 = definitely agree.

Section two of the instrument was designed to collect data related to students' beliefs about teaching. These 15 items began with the stem, "Compared with other professionals." Students' were asked to rate their level of agreement about their beliefs about teaching agricultural education using a five point Likert scale comprised of 1 = definitely disagree, 2 = disagree, 3 = not sure, 4 = agree and 5 = definitely agree.

Section three included six statements related to students' intent to teach. Students were asked to rate their level of agreement with each statement using a five point Likert scale comprised of 1 = definitely disagree, 2 = disagree, 3 = not sure, 4 = agree and 5 = definitely agree. More specifically, these questions measured students' social dissuasion and career choice satisfaction.

The final section included 11 items designed to collect information about the respondents' personal characteristics and background experiences. Characteristics studied included sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership. A final question was asked to offer additional comments. Directions were included and students were asked to bubble in their response.

Measurement Error

Measurement error can never be entirely eliminated; however, by recognizing that random and systematic type error exists, error can be minimized. The following section outlines the steps taken to minimize measurement error.

Validity of the Ag Ed FIT-Choice instrument

Validity, as described by Gay and Airasian (2002), is the most important characteristic a test or measure can have. "Validity in quantitative research depends on careful instrument construction to ensure that the instrument measures what it is supposed to measure" (Patton, 2002, p. 14). Three specific types of evidence were used to determine the validity of the Ag Ed Fit-Choice instrument.

A panel of experts was utilized to review the instrument and address face, construct, and content validity. The panel of experts consisted of seven university faculty members representing higher education institutions from across the United States and Australia (See Appendix C).

Face validity is simply whether or not the instrument appears valid for the intended purpose and is especially important to determine because respondents are more

likely to complete an instrument that appears to be meaningful and appropriate (Ary, Jacobs, & Razavieh, 2002).

Construct validity was determined by identifying the underlying sub-constructs from the FIT-Choice® literature and consulting the members of the dissertation committee to determine relevancy. Items were placed into relevant constructs. Gay and Airasian (2000) identified construct validity as the most important form of validity as it often asks the fundamental question, “What is the test really measuring?” (p. 167).

A test has content validity if it measures the content that it was designed to measure (Gay & Airasian, 2002). For the purposes of this study, content validity concerns the adequacy with which the sub-constructs adequately sample the content area to be measured. Members of the dissertation committee and a panel of experts reviewed the instrument for content validity. The construction of the FIT-Choice® scale (Watt & Richardson, 2007) was reviewed and questions were placed into relevant sub-constructs (see Appendix D).

To assure the instrument was carefully constructed the panel of experts reviewed the instrument. Panelists were selected based upon individual specialties including, secondary agricultural education teaching experience, and knowledge of teacher education, proficiency in the development of the FIT-Choice Scale® and overall expertise in the subject matter. In early September, panelists were sent a letter via email requesting their help in addressing the validity of the instrument (see Appendix E). Each panelist was provided documents that explained the purpose and research objectives for the study, the instrument and a key that identified the questions by sub-construct. These

documents were included so that panelists could easily understand and become acquainted with the overall purpose of the study.

Reliability of the Ag Ed FIT-Choice instrument

Reliability is defined as the “stability of the measuring device over time” (Borg & Gall, 1989, p. 257). It is difficult to design a measure that is perfectly reliable, therefore efforts must be made to determine the reliability of a measure and increase reliability, if at all possible. Borg and Gall suggested determining reliability of a measuring instrument by computing a correlation coefficient between two sets of measurements.

Pilot Testing

Ary, Jacobs, and Razavieh (2002) supported pilot testing in order to help clarify or eliminate items and provide the following to address any issues:

1. Do the respondents seem comfortable with the questionnaire and motivated to complete it?
2. Are certain items confusing?
3. Could some items result in hostility or embarrassment on the part of the respondents?
4. Are the instructions clear?
5. How long will it take a respondent to complete the questionnaire?
6. Do all respondents interpret the items in the same way? (p. 402)

A pilot study was conducted in September of 2008 with freshman level agricultural education students ($n = 29$) at the University of Missouri. This group of students was selected because of its similarity in teaching interests to the target population. Students were invited, through personal contact, to complete the instrument

and share any concerns or suggestions for improvement. As a result of the pilot test, some modifications were made to the final instrument including clarification of questions and minor formatting issues. Special efforts were made to enhance the visual appearance of the instrument. Some of the changes made as a result of the pilot test were the inclusion of examples of how to complete the first three sections of the questionnaire, yellow highlighting of examples, and blue highlighting of alternating items in the questionnaire. These modifications were made to improve the face validity and readability of the instrument.

Cronbachs' alpha was used as an estimate for reliability of the Ag Ed FIT Choice questionnaire from the data collected during the pilot test ($n = 29$). Cronbach's alpha is the most common form of internal consistency as an estimate for reliability (Ary, Jacobs, & Razavieh, 2002). The resulting Cronbach's alpha was .91 for the section measuring attitude about teaching, and .71 for beliefs about teaching (see Table 1). In social science research .70 is often used as the lower limit for an acceptable Cronbach's alpha coefficient for a set of items (Garson, 2008). Thus, the measures of reliability for this instrument were considered acceptable.

Table 1

Reliability Estimates for Summated Attitude and Beliefs of the Ag Ed FIT-Choice Instrument (n = 29)

Construct	Number of Items	<i>alpha</i>
Attitude	40	.91
Beliefs	15	.71

Cronbachs' alpha was used as an estimate for reliability of the sub-constructs of the Ag Ed FIT-Choice questionnaire using data collected during the pilot test ($n = 29$). Table 2 shows the results of that procedure. The sub-constructs of the Ag Ed FIT-Choice questionnaire ranged from measuring shaping the future of adolescents at .90 to job transferability at .52. Generally .70 and above is an acceptable alpha; however a lower alpha is not necessarily a detriment as it may measure several attributes rather than only one, which can result in a deflated Cronbachs' alpha (Nunnally, 1978). Additionally Nunnally also concluded that in the early stages of construct validation research it may be acceptable to have only modest reliability.

Table 2

Reliability Estimates for Sub-constructs of the Ag Ed FIT-Choice Instrument (n = 29)

Construct	Number of Items	<i>alpha</i>
Shape the Future of Adolescents	3	.90
Job Security	3	.86
Work with Adolescents	3	.86
Social Influence	3	.86
Salary	3	.84
Ability	3	.78
Enhance Social Equity	3	.78
Prior Teaching and Learning	3	.77
Intrinsic Career Value	3	.76
Time for Family	5	.75
Expert Career	3	.75
Make Social Contribution	3	.67
Satisfaction with Choice	3	.67
High Demand	3	.65
Social Status	6	.63
Social Dissuasion	2	.63
Fallback career	3	.60
Job Transferability	3	.52

Data Collection

Dillman's (2007) Tailored Design Method (TDM) suggested five points of contact to guide the data collection process when using mailed questionnaires. These include: first contact (pre-notice letter), second contact (mailed instrument), third contact (thank you/reminder postcard), fourth contact (first replacement instrument), and fifth (invoking special responses). Because of the unique characteristics of the sample, a modified version of the TDM method was used.

Faculty members at Arkansas State University, Illinois State University, Iowa State University, Kansas State University, Murray State University, North West Missouri State University, Oklahoma State University, Southern Arkansas University, Southern Illinois University, University of Arkansas, University of Central Missouri, University of Illinois-Urbana, University of Kentucky, University of Missouri, University of Nebraska, University of Tennessee-Knoxville, University of Tennessee-Martin, Western Illinois University, and Western Kentucky University were contacted and invited to participate in the study. Faculty members assisting with the study were identified via the directory of the American Association for Agricultural Education found on the website of the organization (AAAEonline.org, 2008). The dissertation committee assisted in the selection of the faculty members to contact because of their familiarity with individuals at the selected institutions. Identified faculty members were contacted via email in early September of 2008 and asked to assist in the data collection process (see Appendix F). Once consent was obtained, instructions for data collection procedures were sent via email (see Appendix G), as a pre-notice letter. This email, sent on November 3, 2008, explained the purpose of the study, the process of completing the instrument, the

responsibility of the faculty members and specified timeline. The email also explained that participation in the study was voluntary, in accordance with IRB policies and contained contact information for those involved in the study.

Two days after the pre-notice email was sent, a packet containing the questionnaires was mailed to each institution participating in the study. This third contact sent to the person assisting with data collection at each institution included the packet of questionnaires, a letter explaining the study, and a self addressed, stamped return envelope. The letter included in this packet urged faculty members to encourage students to complete and return the instrument by reiterating the importance of the study (see Appendix H).

The fourth contact was made with the faculty members via email on December 4, 2008. It contained information similar to the second contact message and served as either a thank you (see Appendix I) or reminder to complete have their students complete the instrument (see Appendix J).

On January 27, 2009, the fifth contact was made with faculty members' via email to determine whether or not they needed additional time or new copies of questionnaires (see Appendix K). A new packet of questionnaires was mailed to faculty who had either not yet begun data collection or requested additional copies. This contact included a brief informal letter encouraging participation and highlighting the importance of the instrument (see Appendix L).

The sixth and final contact was made via email on February 2, 2009 (see Appendix M). Of the 19 institutions that agreed to participate in the study, completed

questionnaires were received from 18 yielding a response rate of 94.73% and resulting in 145 data points.

Non-Response Error

Due to the nature of convenience sampling, non-response error was not a concern in this study. However, to encourage participation of the cohort group of students, multiple contacts were utilized and all letters were personalized to the university faculty who agreed to assist with the study. Each questionnaire was personally signed to emphasize the care that went into the creation of the instrument and importance of the study.

Data Analysis

Data were analyzed using SPSS® 15.0 for Windows. Data analysis methods were selected as a result of determining the scales of measurement for the variables. The alpha level was set *a priori* at .05.

Research Objective One – Characteristics of Respondents

Descriptive statistics were used to analyze the characteristics of seniors majoring in agricultural education by institution. Specifically, frequency and percentages were used to describe nominal and ordinal data. Characteristics analyzed included sex as well as perceived agriculture experience compared to their peers, years in school based agricultural education, years of membership in FFA, participation in SAE and years of 4-H membership.

Research Objective Two – Beliefs about Teaching Agricultural Education

Mean scores and standard deviations were calculated to describe the level of importance of each item investigated as perceived by students. Frequencies and

percentages were reported for each of the 15 questions related to beliefs about teaching secondary agricultural education were included in Part II of the Ag Ed FIT-Choice instrument. Items were summated according to each construct (expert career, high demand, social status, teacher morale, salary) and treated as interval data. A five point Likert scale comprised of 1 = definitely disagree, 2 = disagree, 3 = not sure, 4 = agree and 5 = definitely agree was used to measure the data. When describing levels of agreement the following real limits served as a guide for data analysis (see Table 3).

Table 3

Level of Agreement Real Limits

Scale	Anchor
0.00 – 1.50	Definitely Disagree
1.60 – 2.50	Disagree
2.60 – 3.50	Not Sure
3.60 – 4.50	Agree
4.60 – 5.00	Definitely Agree

Research Objective Three – Attitude toward Teaching Agricultural Education

Describe the students' attitudes toward a career in teaching secondary agricultural education. Mean scores and standard deviations were calculated to describe the level of importance of each item investigated as perceived by students. Frequency and percentages were also reported for each of the 40 questions related to attitude toward teaching secondary agricultural education. These questions were included in Part I of the Ag Ed FIT-Choice instrument. Items were summated according to each construct (ability, intrinsic career value, fallback career, job security, time for family, job transferability,

shape the future of adolescents, enhance social equity, make social contribution, work with adolescents, prior teaching and learning experiences, social influences) and treated as interval data means and standard deviations were reported. A five point Likert scale comprised of 1 = definitely disagree, 2 = disagree, 3 = not sure, 4 = agree and 5 = definitely agree was used to measure the data. When describing levels of agreement the following real limits served as a guide for data analysis (see Table 3). A favorable attitude toward a career teaching agricultural education was identified when a mean of 3 or higher was found.

Research Objective Four – Intent to Teach Agricultural Education

Identify the students' intentions to teach secondary agricultural education after graduation. Mean scores and standard deviations were calculated to describe the level of importance of each item investigated as perceived by students to answer objective four. Each of the 6 questions related to intent to teach secondary agricultural education were included in Part III of the Ag Ed FIT-Choice instrument. Items were summated according to the construct satisfaction with career choice and social dissuasion and treated as interval data. A five point Likert scale comprised of 1 = definitely disagree, 2 = disagree, 3 = not sure, 4 = agree and 5 = definitely agree was used to measure the data. When describing levels of agreement the following real limits served as a guide for data analysis (see Table 3).

Research Objective Five – Relationship between Beliefs and Characteristics

Determine the relationship between students' beliefs about teaching secondary agricultural education and their sex, perceived agriculture experience compared to their

peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.

Pearson’s Product Moment and point biserial correlation was used to represent the correlation coefficient, represented by the term r , which is reported in both magnitude and direction. These included attitude about teaching secondary agricultural education by students including sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.

To interpret the magnitude of the correlation coefficients, the Davis (1971) conventions were used. Table 4 outlines the correlation coefficient scale and the corresponding convention or descriptor.

Table 4

Davis (1971) Conventions for Correlation Coefficient

Correlation Coefficient	Convention
1.00	Perfect
.70 - .99	Very High
.50 - .69	Substantial
.30 - .49	Moderate
.10 - .29	Low
.01 - .09	Negligible

Research Objective Six – Relationship between Attitude and Characteristics

Determine the relationship between students' attitude about teaching secondary agricultural education and their sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.

Pearson's Product Moment correlation and point biserial correlation was used to represent the correlation coefficient, represented by the term r , which is reported in both magnitude and direction. These included attitude about teaching secondary agricultural education by students including sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.

Research Objective Seven – Relationship between Intent Teach and Characteristics

Determine the relationship between students' intent to teach secondary agricultural education and their, agriculture, agricultural education, FFA, SAE and 4-H experience.

Pearson's Product Moment correlation and point biserial correlation was used to represent the correlation coefficient, represented by the term r , which is reported in both magnitude and direction. These included attitude about teaching secondary agricultural education by students including sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.

Research Objective Eight – Variance in Intent to Teach by Characteristics

Stepwise multiple linear regression was used to predict the dependent variable, students' intent to teach from the independent variables, students' characteristics including sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.

Research Objective Nine – Predict Students' Intent to Teach from Beliefs

Stepwise multiple linear regression was used to predict the students' intent to teach from the sub-constructs of beliefs (expert career, high demand, social status, teacher morale, salary). Stepwise multiple linear regression is used when wanting to find the best independent variable (expert career, high demand, social status, teacher morale, salary) for predicting the dependent variable (intent to teach) (Borg & Gall, 1989).

Research Objective Ten – Predict Students' Intent to Teach from Attitude

Stepwise multiple linear regression was used to predict the dependent variable, students' intent to teach from the independent variable, sub-constructs of attitude (ability, intrinsic career value, fallback career, job security, time for family, job transferability, shape the future of adolescents, enhance social equity, make social contribution, work with adolescents, prior teaching and learning experiences, social influences).

Research Objective Eleven – Variance in Intent to Teach by Attitude

Hierarchical regression was used to determine the amount of unique variance in the students' intent to teach that can be accounted for by attitude when controlling for beliefs. Hierarchical regression is used when controlling for extraneous variables that are known

to impact the dependent variable, this allows the researcher to identify the amount of unique variance accounted for by a particular variable of interest (Huck, 2008).

Appendix N displays the tests for the assumptions of multiple linear regression used in the study. The tests included:

1. Linear relationships between independent variables and dependent variables
2. Test of multicollienarity
3. Visual inspection for homoscedasticity
4. Normality of the residuals of the independent variables

When inspecting the test for multicollinearity of bivariate correlations .80 was set *a priori* as the cutoff value for concern (Berry & Feldman, 1985). Were violations of the assumptions present, appropriate remedies were exercised following the recommendations of Berry and Feldman.

CHAPTER IV

FINDINGS

Chapter IV presents the findings of the study. Following the purpose and research objectives, results of the statistical analysis procedures used to address the objectives of the study are described.

Purpose of the Study

The purpose of this study was to determine the factors that influence agricultural education students' choice to become secondary agriculture teachers. Specifically the study focused on the extent to which beliefs and attitude influenced a student's intention to select a career in secondary agricultural education.

Research Objectives

To guide the stated purpose, the following research objectives were developed:

1. Describe characteristics of students majoring in agricultural education (sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership).
2. Describe students' beliefs about teaching secondary agricultural education (expert career, high demand, social status, teacher morale, salary).
3. Describe students' attitude toward teaching secondary agricultural education (ability, intrinsic career value, fallback career, job security, bludging, time for family, job transferability, shape the future of adolescents, enhance social equity, make social contribution, work with adolescents, prior teaching and learning experiences, social influences).

4. Describe students' intent to teach secondary agricultural education (social dissuasion, satisfaction with choice).
5. Determine the relationship between students' beliefs about teaching secondary agricultural education and their sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.
6. Determine the relationship between students' attitude about teaching secondary agricultural education and their sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.
7. Determine the relationship between students' intent to teach and their sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.
8. Determine the amount of unique variance in intent to teach (satisfaction with choice) that can be accounted for by the students' demographic characteristics.
9. Predict students' intent to teach (satisfaction with choice) from the belief factors (expert career, high demand, social status, teacher morale, salary).
10. Predict students' intent to teach (satisfaction with choice) from the attitudinal factors education (ability, intrinsic career value, fallback career, job security, time for family, job transferability, shape the future of adolescents, enhance social equity, make social contribution, work with adolescents, prior teaching and learning experiences, social influences).

11. Determine the amount of unique variance in intent to teach (satisfaction with choice) that can be accounted for by the students' attitude where controlling for beliefs.

Findings

Research Objective One – Characteristics of Respondents

Research objective one sought to analyze the characteristics (sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership) of senior agricultural education students. Because the characteristics were nominal or ordinal in nature, each was reported using frequency and percentages. Table 5 displays students' characteristics. A total of 77 (53.47%) respondents were female, while the remaining 67 (46.53%) were male. In regards to perceived agriculture related experience compared to their peers 67 (47.53%) students identified themselves as having more agriculture experience when compared to their peers, 57 (39.58%) students identified themselves as having the same amount of agriculture experience and 20 (13.89%) students identified themselves as having less agriculture experience than their peers.

Table 5

Characteristics of Senior Level Agricultural Education Students (n = 145)

Characteristic	<i>f</i>	%
Sex		
Female	77	53.47
Male	67	46.53
Agriculture Experience ^a		
More than Others	67	46.53
Same as Others	57	39.58
Less than Others	20	13.89

^aPerceived agriculture experience compared to their peers

More than 86% (125) of the respondents took one or more school based agriculture classes while in high school. Students reported a mean of 4.05 years of enrollment in secondary agricultural education (*SD* = .88). These data are displayed in

Table 6

Enrollment in High School Agricultural Education (n = 145)

Enrollment	<i>f</i>	%	<i>M</i>	<i>SD</i>
Yes	125	86.21		
No	19	13.10		
Years of Enrollment in High School Agricultural Education Courses			4.05	.88

Table 7 shows that 127 of the 145 respondents (87.59%) had been members of the National FFA Organization. The mean number of years of membership in FFA for those students was 5.52 ($SD = 1.91$) years. Nearly four-fifths of students (78.32%, $n = 112$) reported having a Supervised Agricultural Experience (SAE) project.

Table 7

FFA and SAE Participation Among Senior Level Agricultural Education Majors ($n = 145$)

Characteristic	<i>f</i>	%	<i>M</i>	<i>SD</i>
FFA Membership				
Yes	127	87.59		
No	17	11.72		
Years of FFA Membership			5.52	1.91
Supervised Agricultural Experience Project				
Yes	112	78.32		
No	31	21.68		

Table 8 identifies the majority of the students 71.74% ($n = 103$) were members of the 4-H with the remainder 28.26% ($n = 41$) of students not members of 4-H. The students who were members of the 4-H reported a mean of 7.27 ($SD = 3.71$) years of membership.

Table 8

4-H Participation of Senior Level Agricultural Education Majors (n = 145)

Participation	<i>f</i>	%	<i>M</i>	<i>SD</i>
Yes	103	71.53		
No	41	28.47		
Years of 4-H Membership			7.27	3.71

Research Objective Two – Beliefs about Teaching Agricultural Education

Research objective two sought to analyze the beliefs of the senior agricultural education students about teaching. Students were asked to indicate their level of agreement regarding statements of beliefs about teaching secondary agricultural education (see Table 9). No items regarding beliefs about teaching agricultural education fell into the definitely agree (4.60 – 5.00) category. Eight items regarding beliefs about teaching fell into the agree (3.60 – 4.50) category. The following items were identified, “teaching agriculture is a highly skilled occupation” ($M = 4.30$; $SD = .60$); “agriculture teachers have high morale” ($M = 4.15$; $SD = .67$); “teaching agriculture is emotionally demanding” ($M = 4.12$; $SD = .80$); “agriculture teachers are perceived as professionals” ($M = 4.07$, $SD = .78$); “teaching agriculture requires a high level of technical knowledge” ($M = 4.04$; $SD = .69$); teaching agriculture requires a high level of expert knowledge” ($M = 4.02$; $SD = .87$); teaching agriculture is a well respected career” ($M = 4.01$; $SD = .89$); and “agriculture teachers need highly specialized knowledge” ($M = 3.97$; $SD = .94$).

Three items regarding beliefs about teaching fell into the disagree (1.60 – 2.50) category. Those items were “agriculture teachers are well paid” ($M = 2.77$; $SD = 1.07$), “teaching

agriculture requires hard work” ($M = 1.84$; $SD = .98$), and “agriculture teachers have a heavy work load” ($M = 1.67$; $SD = .86$).

Table 9

Beliefs of Senior Agricultural Education Majors toward a Career as a High School Agriculture Teacher (n = 145)

	Definitely Disagree		Disagree		Not Sure		Agree		Definitely Agree		<i>M^a</i>	<i>SD</i>
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%		
Compared with other professionals (e.g., sales persons, managers, science teachers)...	0	.00	2	1.37	5	3.44	85	58.62	53	36.55	4.30	.60
teaching agriculture is a highly skilled occupation.	0	.00	2	1.37	17	11.72	83	57.24	43	29.65	4.15	.67
agriculture teachers have high morale.	1	.68	6	4.13	15	10.34	76	52.41	47	32.41	4.12	.80
teaching agriculture is emotionally demanding.	0	.00	8	5.52	15	10.34	81	55.86	41	28.27	4.07	.78
agriculture teachers are perceived as professionals.	0	.00	7	4.82	11	7.58	96	66.21	31	21.37	4.04	.69
teaching agriculture requires a high level of technical knowledge.	1	.68	10	6.89	16	11.03	75	51.72	43	29.65	4.02	.87
teaching agriculture requires a high level of expert knowledge.	1	.68	12	8.27	15	10.34	74	51.03	43	29.65	4.01	.89

^a Real limits scale for mean scores is 0.00 – 1.00=Definitely Disagree; 1.60 – 2.50=Disagree; 2.60 – 3.50=Not Sure; 3.60 – 4.00=Agree; 4.60 – 5.00=Definitely Agree.

Table 9 (continued)

	Definitely Disagree		Disagree		Not Sure		Agree		Definitely Agree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Compared with other professionals (e.g., sales persons, managers, science teachers)...	2	1.37	15	10.34	17	11.72	77	53.10	34	23.45
agriculture teachers need highly specialized knowledge.										
agriculture teachers are valued by society.	3	2.07	19	13.10	34	23.44	70	48.28	19	13.10
teaching agriculture is a high status occupation.	0	.00	36	24.83	40	27.58	57	39.31	12	8.27
agriculture teachers feel their occupation has a high social status.	1	.68	31	21.38	52	35.86	46	31.72	14	9.66
agriculture teachers earn a good salary.	7	4.83	44	30.34	23	15.86	68	46.89	3	2.07
agriculture teachers are well paid.	17	11.72	51	35.17	27	18.62	49	33.79	1	.68
teaching agriculture requires hard work.	62	42.75	60	41.37	11	7.59	8	5.51	4	2.75
agriculture teachers have a heavy work load.	70	48.28	64	44.13	4	2.75	3	2.07	4	2.75

^a Real limits scale for mean scores is 0.00 – 1.00=Definitely Disagree; 1.60 – 2.50=Disagree; 2.60 – 3.50=Not Sure; 3.60 – 4.00=Agree; 4.60 – 5.00=Definitely Agree.

Five sub-constructs were identified from the beliefs about teaching construct. The following sub-constructs fell into the agree (3.60 – 4.50) category, students’ rated “expert career” having the highest mean ($M=3.98$; $SD=.69$) followed by “social status” ($M=3.79$; $SD=.62$), and “teacher morale” ($M=3.67$; $SD=.67$). The sub-construct “salary” ($M=2.94$; $SD=.97$) fell into the not sure (2.60 – 3.50) category and “high demand” ($M=2.54$; $SD=.56$) fell into the disagree (1.60 – 2.50) category (see Table 10).

Table 10

Sub-constructs of Beliefs about Teaching (n = 145)

Construct Item	M^a	SD
Expert Career	3.98	.69
Social Status	3.79	.65
Teacher Morale	3.67	.67
Salary	2.94	.97
High Demand	2.54	.56

^a Real limits scale for mean scores is 0.00 – 1.00=Definitely Disagree; 1.60 - 2.50=Disagree; 2.60 – 3.50=Not Sure; 3.60 – 4.00=Agree; 4.60 – 5.00=Definitely Agree.

Research Objective Three – Attitude toward Teaching Agricultural Education

Research objective three sought to evaluate the attitude about teaching agriculture education held by senior agricultural education students. Students were asked to indicate their level of agreement to each statement regarding attitude about teaching secondary agricultural education (see Table 11). Two statements were rated 4.50 or higher and include, “I like teaching about agriculture” ($M = 4.56$; $SD = .53$), and “I want to help adolescents learn” ($M = 4.56$; $SD = .55$). Students tend to agree with 25 statements (3.60 – 4.50), and rated 13 statements as not sure (2.60 – 3.50). Four statements were rated disagree (1.60 – 2.50), “teaching agriculture was not my first career choice” ($M = 2.50$; $SD = 1.20$), “agriculture teachers have lengthy holidays” ($M = 2.30$; $SD = 1.01$); “agriculture teachers have short working days” ($M = 1.74$; $SD = .73$); and “I chose teaching as a last resort career” ($M = 1.64$; $SD = .80$).

Table 11

Attitude of Senior Agricultural Education Majors towards a Career as a High School Agriculture Teacher (n=145)

	Definitely Disagree		Disagree		Not Sure		Agree		Definitely Agree			
	f	%	f	%	f	%	f	%	f	%		
<i>"I want to become a high school agriculture teacher because..."</i>												
I like teaching about agriculture.	0	.00	0	.00	2	1.39	60	41.38	82	56.55	4.56	.53
I want to help adolescents learn.	0	.00	1	.68	1	.68	59	40.69	83	57.24	4.56	.55
I am interested in teaching agriculture.	1	.68	1	.68	8	5.52	51	35.17	83	57.24	4.49	.70
teaching agriculture allows me to provide a service to society.	0	.00	1	.68	2	1.39	70	48.28	72	49.66	4.47	.57
teaching agriculture will allow me to influence the next generation.	0	.00	1	.68	3	2.07	69	47.59	72	49.66	4.46	.58
teaching agriculture will allow me to shape children's values.	1	.68	1	.68	3	2.07	67	46.21	73	50.34	4.45	.64
I have had good teachers as role-models.	0	.00	3	2.07	3	2.07	71	48.97	68	46.90	4.41	.64
teachers make a worthwhile contribution.	0	.00	0	0.00	9	6.61	71	48.97	65	44.83	4.39	.60
teaching agriculture is a fulfilling career.	0	.00	2	1.39	5	3.47	75	52.08	62	43.06	4.37	.62

^a Real limits scale for mean scores is 0.00 – 1.00=Definitely Disagree; 1.60 – 2.50=Disagree; 2.60 – 3.50=Not Sure; 3.60 – 4.00=Agree; 4.60 – 5.00=Definitely Agree.

Table 11 (continued)

	Definitely Disagree		Disagree		Not Sure		Agree		Definitely Agree			
	f	%	f	%	f	%	f	%	f	%		
<i>“I want to become a high school agriculture teacher because...”</i>												
teaching agriculture will allow me to have an impact on children.	0	.00	2	1.39	3	2.07	82	56.55	57	39.31	4.35	.60
I have the qualities of a good agriculture teacher.	0	.00	0	.00	6	4.14	90	62.07	49	33.79	4.30	.54
I have had positive learning experiences.	0	.00	3	2.07	3	2.07	88	60.69	51	35.17	4.29	.61
teaching agriculture enables me to give back to society.	0	.00	4	2.76	3	2.07	85	58.62	53	36.55	4.29	.64
I like working with adolescents.	0	.00	2	1.39	10	6.90	90	62.07	43	29.66	4.20	.62
I want a job working with adolescents.	0	.00	0	0.00	19	13.10	78	53.79	47	32.41	4.19	.65
teaching agriculture is a career suited to my abilities.	0	.00	2	1.39	13	8.97	85	58.62	45	31.03	4.19	.65
teaching agriculture will offer a steady career.	0	.00	3	2.07	14	9.66	83	57.24	45	31.03	4.17	.68
I have had inspirational agriculture teachers.	6	4.14	15	10.34	2	1.39	51	35.17	70	48.28	4.14	1.13
I have good teaching skills.	0	.00	3	2.07	13	8.97	96	66.21	33	22.76	4.10	.63
teaching will allow me to raise the ambitions of underprivileged youth.	0	.00	3	2.07	18	12.41	90	62.07	34	23.45	4.07	.66

^a Real limits scale for mean scores is 0.00 – 1.00=Definitely Disagree; 1.60 – 2.50=Disagree; 2.60 – 3.50=Not Sure; 3.60 – 4.00=Agree; 4.60 – 5.00=Definitely Agree.

Table 11 (continued)

	Definitely Disagree		Disagree		Not Sure		Agree		Definitely Agree			
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%		
<i>“I want to become a high school agriculture teacher because...”</i>												
I want to work in an adolescent centered environment.	0	0.00	8	5.52	18	12.41	84	57.93	35	24.14	4.01	.77
people I’ve worked with think I should become an agriculture teacher.	0	0.00	5	3.45	26	17.93	77	53.10	36	24.83	4.00	.76
teaching agriculture will be a secure job.	1	.68	6	4.14	19	13.10	91	62.76	28	19.31	3.96	.74
teaching agriculture will allow me to benefit the socially disadvantaged.	0	0.00	4	2.76	36	24.83	83	57.24	21	14.48	3.84	.70
my family thinks I should become an agriculture teacher.	2	1.37	16	11.03	29	20.00	67	46.21	31	21.38	3.75	.96
teaching agriculture will provide a reliable income.	2	1.37	14	9.67	21	14.48	96	66.21	11	7.59	3.69	.80
school holidays will fit within family commitments.	1	.68	17	11.72	27	18.62	83	57.24	16	11.03	3.67	.85
teaching agriculture will allow me to work against social disadvantage.	5	3.45	8	5.52	47	32.41	65	44.83	19	13.10	3.59	.91
my friends think I should become an agriculture teacher.	6	4.14	17	11.72	32	22.07	64	44.14	25	17.24	3.59	1.04

^a Real limits scale for mean scores is 0.00 – 1.00=Definitely Disagree; 1.60 – 2.50=Disagree; 2.60 – 3.50=Not Sure; 3.60 – 4.00=Agree; 4.60 – 5.00=Definitely Agree.

Table 11 (continued)

	Definitely Disagree		Disagree		Not Sure		Agree		Definitely Agree			
	f	%	f	%	f	%	f	%	f	%		
<i>“I want to become a high school agriculture teacher because...”</i>	0	.00	24	16.55	35	24.14	65	44.83	21	14.48	3.57	.93
a teaching qualification is recognized everywhere.	4	2.76	47	32.41	24	16.55	44	30.34	26	17.93	3.28	1.18
I have always wanted to become an agriculture teacher.	5	3.45	41	28.28	46	31.72	41	28.28	12	8.28	3.10	1.02
a teaching job will allow me to choose where I wish to live.	9	6.21	30	20.69	56	38.62	38	26.21	12	8.28	3.10	1.02
teaching agriculture will be a useful job for me to have when traveling.	9	6.21	47	32.41	46	31.72	32	22.07	10	6.90	2.90	1.04
teaching hours will fit within the responsibilities of having a family.	19	13.10	49	33.79	46	31.72	27	18.62	3	2.07	2.63	1.00
teaching agriculture allows time for family.	27	18.81	55	37.93	17	11.72	37	25.52	8	5.52	2.61	1.21
I was unsure of what career I wanted.	33	22.78	54	37.24	17	11.72	35	24.14	6	4.14	2.50	1.20
teaching agriculture is not my first career choice.	30	20.69	68	46.90	23	15.86	22	15.17	2	1.37	2.30	1.01
agriculture teachers have lengthy holidays.	57	39.10	71	48.97	12	8.28	4	2.76	0	.00	1.74	.73
agriculture teachers have short working days.	70	48.28	65	44.83	3	2.07	5	3.45	2	1.37	1.64	.80
I chose teaching as a last-resort career												

^a Real limits scale for mean scores is 0.00 – 1.00=Definitely Disagree; 1.60 – 2.50=Disagree; 2.60 – 3.50=Not Sure; 3.60 – 4.00=Agree; 4.60 – 5.00=Definitely Agree.

Thirteen sub-constructs were identified from the attitude about teaching construct (see Table 12). None of the sub-constructs fell into the definitely agree (4.60 – 5.00) category. Ten sub-constructs fell into the agree (3.60 – 4.50) category (see Table 11). Those items included “make a social contribution” ($M = 4.38$; $SD = .46$); “prior teaching and learning” ($M = 4.27$; $SD = .63$); “ability” ($M = 4.20$; $SD = .48$); “work with adolescents” ($M = 4.13$; $SD = .61$); “intrinsic career value” ($M = 4.12$; $SD = .57$); “job security” ($M = 3.94$; $SD = .58$); “enhance social equity” ($M = 3.83$; $SD = .58$); “shape the future” ($M = 3.80$; $SD = .46$); and “social influence” ($M = 3.78$; $SD = .72$). The sub-constructs “job transferability” ($M = 3.26$; $SD = .70$) and “time for family” ($M = 3.07$; $SD = .71$) fell into the not sure (2.60 – 3.50) category. The sub-construct “fallback career” ($M = 2.25$; $SD = .81$) fell into the disagree category (1.56 – 2.50). Finally, the sub-construct “bludging” ($M = 2.02$; $SD = .75$) fell into the definitely disagree category (.00 – 1.50).

Table 12

Sub-construct of Attitude About Teaching (n=145)

Construct Item	<i>M^a</i>	<i>SD</i>
Make a Social Contribution	4.38	.46
Prior Teaching and Learning	4.27	.63
Ability	4.20	.48
Work with Adolescents	4.13	.61
Intrinsic Career Value	4.12	.57
Job Security	3.94	.58
Enhance Social Equity	3.83	.58
Shape the Future	3.80	.46
Social Influence	3.78	.72
Job Transferability	3.26	.70
Time for Family	3.07	.71
Fallback Career	2.25	.81
Bludging	2.02	.75

^a Real limits scale for mean scores is 0.00 – 1.00=Definitely Disagree; 1.60 - 2.50=Disagree; 2.60 – 3.50=Not Sure; 3.60 – 4.00=Agree; 4.60 – 5.00=Definitely Agree.

Research Objective Four – Intent to Teach Agricultural Education

Objective four sought to identify students' intentions to teach secondary agricultural education upon graduation (see Table 13). Students were asked to indicate their level of agreement with six statements regarding their intent to teach. The statement, "I have carefully thought about becoming an agriculture teacher" reported the highest mean ($M = 4.45$; $SD = .69$); followed by "I am satisfied with the choice to become an agriculture teacher" ($M = 4.20$; $SD = .82$); "I am happy with my decision to become an agriculture teacher" ($M = 4.20$; $SD = .86$); and "Others influenced me to become an agriculture teacher" ($M = 4.01$; $SD = 1.02$).

Additionally, two sub-constructs for intent to teach were identified (see Table 14). The sub-construct "satisfaction with choice" ($M = 4.29$; $SD = .72$) indicated the students agreement in their choice to teach. The sub-construct "social dissuasion" ($M = 3.48$; $SD = .70$) indicated the degree with which others advised against pursuing a career in teaching.

Table 13

Senior Level Agricultural Education Majors Intent to Teach (n = 145)

	Definitely Disagree		Disagree		Not Sure		Agree		Definitely Agree		<i>M^a</i>	<i>SD</i>
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%		
<i>“I want to become a high school agriculture teacher because...”</i>												
I have carefully thought about becoming an agriculture teacher.	1	.70	2	1.50	3	2.20	59	43.1	72	52.6	4.45	.69
I am satisfied with the choice to become an agriculture teacher.	1	.70	3	2.20	20	14.6	56	40.9	57	41.6	4.20	.82
I am happy with my decision to become an agriculture teacher.	2	1.50	4	2.90	16	11.7	58	42.3	57	41.6	4.20	.86
Others influenced me to become an agriculture teacher.	5	3.60	11	8.00	7	5.10	69	50.4	45	32.8	4.01	1.02
I was encouraged to pursue careers other than teaching agriculture.	2	1.50	32	23.4	11	8.00	72	52.6	20	14.6	3.55	1.05
Others have told me that teaching agriculture was not a good career.	15	10.9	54	39.4	12	8.80	51	37.2	5	3.60	2.83	1.15

^a Real limits scale for mean scores is 0.00 – 1.00=Definitely Disagree; 1.60 – 2.50=Disagree; 2.60 – 3.50=Not Sure; 3.60 – 4.00=Agree; 4.60 – 5.00=Definitely Agree.

Table 14

Intent to Teach Sub-constructs (n = 145)

Construct Item	<i>M^a</i>	<i>SD</i>
Satisfaction with Choice	4.29	.72
Social Dissuasion	3.48	.70

^a Real limits scale for mean scores is 0.00 – 1.00=Definitely Disagree; 1.60 - 2.50=Disagree; 2.60 – 3.50=Not Sure; 3.60 – 4.00=Agree; 4.60 – 5.00=Definitely Agree.

Research Objective Five – Relationship between Beliefs and Characteristics

Objective five sought to determine the relationship between students’ beliefs about teaching secondary agricultural education and their sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership (see Table 15). Pearson’s Product Moment and point biserial correlations were used to calculate the correlation coefficient, represented by the term *r*, which is reported in both magnitude and direction. Davis (1971) conventions were used to interpret the magnitude of the correlations. The findings indicate a low, positive relationship between beliefs about teaching and the number of years students were members of the FFA ($r = .20$) and years enrolled in high school agricultural education ($r = .18$). There was a low, negative correlation between students’ intent to teach and sex ($r_{pb} = -.13$). Students’ participation in FFA had a low, negative relationship with beliefs ($r_{pb} = -.10$). Students’ participation in 4-H ($r_{pb} = .09$) had a negligible, positive relationship with beliefs, while students’ agriculture experience compared to their peers ($r = -.09$) had a negligible, negative

relationship with beliefs. Students' participation in high school agricultural education ($r_{pb} = -.08$), SAE participation ($r_{pb} = -.04$), and years of membership in 4-H ($r = -.03$) had a negligible, negative relationship with beliefs.

Table 15

Bivariate Correlations between Beliefs and Selected Characteristics (n=145)

Characteristic	<i>r</i>	Magnitude
Years of FFA Membership	.20	Low
Years Enrolled in High School Agricultural Education	.18	Low
Sex ^a	-.13	Low
Participated in FFA ^b	-.10	Low
Participated in 4-H ^b	.09	Negligible
Agriculture Experience	-.09	Negligible
Participated in High School Agricultural Education ^b	-.08	Negligible
Participated in SAE ^b	-.04	Negligible
Years of 4-H Membership	-.03	Negligible

Note: ^aFemale=1; Male=2, ^bYes=1; No=2; ^{ab} point biserial coefficients reported

Research Objective Six – Relationship between Attitude and Characteristics

Objective six sought to determine the relationship between students' attitude about teaching secondary agricultural education and their, agriculture, agricultural education, FFA, SAE and 4-H experience (see Table 16). Pearson's Product Moment and point biserial correlations were used to calculate the correlation coefficient, represented by the term *r*, which is reported in both magnitude and direction. The findings indicate a low, positive relationship between attitude about teaching and the number of years

students were FFA members ($r = .25$) and the number of years enrolled in high school agricultural education ($r = .18$). Students' participation in SAE ($r_{pb} = -.13$) and the number of years of membership in 4-H ($r = -.10$) had a low, negative relationship with attitude. Students' agriculture experience compared to their peers ($r = .07$) and students' participation in 4-H ($r_{pb} = .03$) had negligible, positive relationship with attitude. While sex ($r_{pb} = -.07$), students' participation in high school agricultural education ($r_{pb} = -.02$) and students' participation in the FFA ($r_{pb} = -.02$) had negligible, negative relationships with attitude.

Table 16

Bivariate Correlations between Attitude and Selected Characteristics (n=145)

Characteristic	r	Magnitude
Years of FFA Membership	.25*	Low
Years Enrolled in High School Agricultural Education	.18	Low
Participated in SAE ^b	-.13	Low
Years of 4-H Membership	-.10	Low
Agriculture Experience	.07	Negligible
Sex ^a	-.07	Negligible
Participated in 4-H ^b	.03	Negligible
Participated in High School Agricultural Education ^b	-.02	Negligible
Participation in FFA ^b	-.02	Negligible

Note: ^aFemale=1; Male=2, ^bYes=1; No=2; ^{ab} point biserial coefficients reported; * $p < .05$

Research Objective Seven –Relationship between Intent Teach and Characteristics

Determine the relationship between students' intent to teach secondary agricultural education and their, agriculture, agricultural education, FFA, SAE and 4-H experience (see Table 17). Pearson's Product Moment and point biserial correlations were used to calculate the correlation coefficient, represented by the term r , which is reported in both magnitude and direction. A moderate, positive relationship between students' participation in high school agricultural education ($r_{pb} = .38$) and students' beliefs about teaching was reported. Students' years of enrollment in high school agricultural education had a low, positive relationship ($r = .15$) with intent to teach. Sex ($r_{pb} = -.12$) and SAE experience ($r_{pb} = -.12$) had a low, negative relationship with intent to teach. Students' participation in FFA ($r_{pb} = -.09$), students' agriculture experience compared to their peers ($r = -.07$) and years of 4-H membership ($r = -.05$) reported a negligible, negative relationship with intent to teach. The number of years students were members of the FFA ($r = .03$) and students' participation in 4-H ($r_{pb} = .01$) reported a negligible, positive relationship with intent to teach.

Table 17

Bivariate Correlations between Intent to Teach and Selected Characteristics (n = 145)

Characteristic	<i>r</i>	Magnitude
Participated in High School Agricultural Education ^b	.38	Moderate
Years Enrolled in High School Agricultural Education	.15	Low
Sex ^a	-.12	Low
Participated in SAE ^b	-.12	Low
Participated in FFA ^b	-.09	Negligible
Agriculture Experience	-.07	Negligible
Years of 4-H Membership	-.05	Negligible
Years of FFA Membership	.03	Negligible
Participated in 4-H ^b	.01	Negligible

Note: ^aFemale=1; Male=2, ^bYes=1; No=2; ^{ab}point biserial coefficients reported

Research Objective Eight – Variance in Intent to Teach by Characteristics

Stepwise multiple linear regression was used to determine the amount of variance in the dependent variable, students' intent to teach (satisfaction with choice) that can be accounted for by the independent variables, selected characteristics of sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership. The selected characteristics of sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership accounted for no variance in the dependent variable of intent to teach.

Research Objective Nine – Predict Students’ Intent to Teach from Beliefs

Stepwise multiple linear regression was used to predict the students’ intent to teach from the sub-constructs of beliefs (expert career, high demand, social status, teacher morale, salary). Table 18 displays the regression model which depicts the sub-construct found to be significant in the regression equation for the beliefs about teaching. Eleven percent of students’ intent to teach can be explained by the belief sub-constructs of “teacher morale” and “expert career” (Adjusted $R^2=.11$; $F(df= 2,140) = 3.06$; $p<.05$).

Table 18

Stepwise Regression of Predictors of Intent to Teach from Beliefs (n = 145)

Construct	<i>R</i>	<i>R</i> ²	<i>b</i>	β	<i>t-value</i>	<i>p-value</i>
	.34	.12				
Teacher Morale			.26	.24	2.99	.03*
Expert Career			.21	.20	2.40	.02*
(Constant)			2.48		5.83	.01*

Adjusted $R^2=.11$; $F(2,140) = 3.06$, * $p < .05$

Research Objective Ten – Predict Students’ Intent to Teach from Attitude

Stepwise multiple linear regression was used to predict the dependent variable, students’ intent to teach (satisfaction with choice) from the independent variables, sub-constructs of attitude (ability, intrinsic career value, fallback career, job security, time for family, job transferability, shape the future of adolescents, enhance social equity, make social contribution, work with adolescents, prior teaching and learning experiences, social influences). Table 19 displays the regression model which depicts the four sub-constructs found to be significant in the regression equation for students’ attitude about

teaching agriculture. Table 19 indicates that 61% of students' intent to teach can be explained by the sub-constructs of "fallback career," "working with adolescents," "intrinsic career value," and "job security" (Adjusted $R^2 = .61$; $F(4, 138) = 2.43$; $p < .05$).

Table 19

Stepwise Regression of Predictors of Intent to Teach from Attitude (n = 145)

Construct	<i>R</i>	<i>R</i> ²	<i>b</i>	β	<i>t-value</i>	<i>p-value</i>
	.79	.62				
Fallback career			-.33	-.38	-5.48	.01*
Work with Adolescents			.38	.32	5.60	.01*
Intrinsic Career Value			.29	.24	3.39	.01*
Job Security			.21	.17	3.10	.01*
(Constant)			1.42		2.70	.01*

Adjusted $R^2 = .61$; $F(4,138) = 2.43$, * $p < .05$

Research Objective Eleven – Variance in Intent to Teach Accounted for by Attitude

Hierarchical regression was used to determine the amount of unique variance in the students' intent to teach that can be accounted for by attitude when controlling for beliefs (see Table 20). Hierarchical regression is used when controlling for extraneous variables that are known to impact the dependent variable, this allows the researcher to identify the amount of unique variance accounted for by a particular independent variable of interest. The independent variable that is entered first is what the researcher wants to control for, in this case beliefs, then enter the next independent variable (attitude) to find out what it contributes above and beyond the independent variable that first went in (Huck, 2008).

The regression model which depicts the construct found to be significant in the regression

equation for intent to teach. Seventeen percent of students' intent to teach can be accounted for the sub-construct attitude (Adjusted $R^2=.17$; $F(2, 140) = 3.06$; $p<.05$) when controlling for beliefs.

Table 20

Hierarchical Regression of Intent to Teach Controlling for Beliefs (n = 145)

Variable	<i>R</i>	R^2	R^2 Change	<i>b</i>	β	<i>t-value</i>	<i>p-value</i>
Control Variable							
Beliefs	.31	.11	.11	.36	.19	2.23	.03*
Variable of Interest							
Attitude	.43	.18	.08	.76	.31	3.59	.01*
(Constant)				.30		.42	.67
Adjusted $R^2=.17$; $F(2,140) = 3.06$, * $p<.05$							

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This chapter presents an overview of the study, including the purpose, research objectives, limitations, research design, population, instrumentation, data collection and data analysis. It also includes a summary of the findings for each of the eleven research objectives and conclusions based on the findings and existing literature. Finally, recommendations for action related to the conclusions and recommendations for further research are offered.

Purpose of the Study

The purpose of this study was to determine the factors that influence agricultural education students' choice to become secondary agriculture teachers. Specifically the study focused on the extent to which beliefs and attitude influenced a student's intention to select a career in secondary agricultural education.

Research Objectives

To guide the stated purpose, the following research objectives were developed:

1. Describe characteristics of students majoring in agricultural education (sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership).
2. Describe students' beliefs about teaching secondary agricultural education (expert career, high demand, social status, teacher morale, salary).
3. Describe students' attitude toward teaching secondary agricultural education (ability, intrinsic career value, fallback career, job security, bludging, time for family, job

- transferability, shape the future of adolescents, enhance social equity, make social contribution, work with adolescents, prior teaching and learning experiences, social influences).
4. Describe students' intent to teach secondary agricultural education (social dissuasion, satisfaction with choice).
 5. Determine the relationship between students' beliefs about teaching secondary agricultural education and their sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.
 6. Determine the relationship between students' attitude about teaching secondary agricultural education and their sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.
 7. Determine the relationship between students' intent to teach and their sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.
 8. Determine the amount of unique variance in intent to teach (satisfaction with choice) that can be accounted for by the students' demographic characteristics.
 9. Predict students' intent to teach (satisfaction with choice) from the belief factors (expert career, high demand, social status, teacher morale, salary).
 10. Predict students' intent to teach (satisfaction with choice) from the attitudinal factors education (ability, intrinsic career value, fallback career, job security, time for family,

job transferability, shape the future of adolescents, enhance social equity, make social contribution, work with adolescents, prior teaching and learning experiences, social influences).

11. Determine the amount of unique variance in intent to teach (satisfaction with choice) that can be accounted for by the students' attitude where controlling for beliefs.

Limitations of the Study

This study was limited to senior agricultural education students enrolled in one of eighteen undergraduate programs at the Arkansas State University, Illinois State University, Iowa State University, Kansas State University, Murray State University, North West Missouri State University, Oklahoma State University, Southern Arkansas University, Southern Illinois University, University of Arkansas, University of Central Missouri, University of Illinois-Urbana, University of Kentucky, University of Missouri, University of Nebraska, University of Tennessee-Knoxville, University of Tennessee-Martin, Western Illinois University, and Western Kentucky during the 2008-2009 academic year. Differences between institutional program components could not be controlled.

Research Design

This study utilized descriptive-correlational research design method to address the research questions regarding senior agricultural education majors' choice of a career in secondary agricultural education. Consistent with the literature on research design, this study utilized a paper questionnaire to gather information regarding beliefs, attitude, and the intent to teach. The data collection phase of the research was completed after

receiving approval from the Institutional Review Board and adhered to the requirements and specifications described in the approval notice.

In addition to describing “what is” with respect to beliefs, attitude and intent to teach secondary agricultural education, this study also utilized a correlational research method to investigate potential relationship between variables of interest. This study sought to compare the participants’ beliefs, attitudes and intent to teach by selected characteristics, including sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.

In this study there was one dependent variable – intent to teach. The independent variables included attitude toward teaching agricultural education, beliefs about teaching agricultural education and selected characteristics including sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership. In addition, included within the independent variables of attitude are beliefs are sub-construct items. Sub-construct items for attitude include, ability, intrinsic career value, fallback career, job security, time for family, job transferability, shape the future of adolescents, enhance social equity, make social contribution, work with adolescents, prior teaching and learning experiences and social influences. Sub-construct items for beliefs included, expert career, high demand, social status, teacher morale, and salary.

Population

The target population consisted of senior level agricultural education majors. The frame for this study was obtained from the American Association of Agricultural Education institution Directory (AAAEonline.org, 2007). Convenience sampling was used. Twenty-six institutions in Arkansas, Illinois, Iowa, Kansas, Kentucky, Missouri, Nebraska, Oklahoma, and Tennessee were initially identified. A total of seven institutions were not included in the study. Four institutions did not have access to senior agricultural education majors and three declined to participate. The researcher selected the states contiguous to Missouri by reason of the close proximity and the ease of contact and familiarity with the institutions. Nineteen institutions during the 2008-2009 school year who had access to senior level students agreed to participate. A cluster sample was used because students were easily accessible and convenient to contact and there was a limited cost due to the number of institutions who agreed to participate.

Instrumentation

The paper instrument was distributed via mail to the participating institutions. A faculty member in the agricultural education department distributed the questionnaire to senior level agricultural education majors were obtaining teacher certification. The instrument was adapted and developed from the FIT-Choice® scale (Watt & Richardson, 2007). Section one measured students' attitude toward becoming a secondary agricultural education teacher and included 40 statements. This section began with a stem "I want to become a high school agriculture teacher because..." Students' were asked to identify their attitude about teaching agriculture for 40 items using a five point Likert scale

comprised of 1 = definitely disagree, 2 = disagree, 3 = not sure, 4 = agree and 5 = definitely agree.

Section two measured students' beliefs about teaching, began with the stem "Compared with other professionals..." and included 15 statements. Students' were asked to rate their level of agreement about their beliefs about teaching agricultural education using a five point Likert scale comprised of 1 = definitely disagree, 2 = disagree, 3 = not sure, 4 = agree and 5 = definitely agree.

Section three included six questions related to students' intent to teach. Students were asked to rate their level of agreement using a five point Likert scale comprised of 1 = definitely disagree, 2 = disagree, 3 = not sure, 4 = agree and 5 = definitely agree. The questions were in order to identify the students' intent to teach upon graduation. These questions measured students' social dissuasion and career choice satisfaction.

The final section included 11 demographic and characteristic questions and a final question to offer additional comments. Directions were included and students were asked to bubble in their response. Characteristics included questions about sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.

Validity of the Ag Ed FIT-Choice instrument

To ensure validity of the Ag Ed FIT-Choice instrument, face and construct validity were addressed. A 7 member panel of experts consisting of university faculty was utilized to reviewed the instrument and addressed both face and construct validity.

Minor modifications were made to the instrument as a result of the feedback provided by the panel.

Reliability of the Ag Ed FIT-Choice instrument

Reliability of the Ag Ed FIT-Choice instrument was also a concern. A pilot test was conducted with 29 freshman level agricultural education students. The students were asked to complete the instrument, estimate the approximate amount of time it took to complete, and share any suggestions for improvement. Based on the responses generated the resulting Cronbach's alpha was .91 for the section measuring attitude about teaching, and .71 for beliefs about teaching. The sub-constructs of the Ag Ed FIT-Choice questionnaire ranged from measuring shaping the future of adolescents at .90 to job transferability at .52.

Data Collection

A modified version of the Dillman (2007) Tailored Design Method was used. Faculty members at Arkansas State University, Illinois State University, Iowa State University, Kansas State University, Murray State University, North West Missouri State University, Oklahoma State University, Southern Arkansas University, Southern Illinois University, University of Arkansas, University of Central Missouri, University of Illinois-Urbana, University of Kentucky, University of Missouri, University of Nebraska, University of Tennessee-Knoxville, University of Tennessee-Martin, Western Illinois University, and Western Kentucky University were contacted and invited to participate in the study.

Once consent was obtained, instructions for the study were sent via email as a pre-notice letter which explained the purpose of the study, the process of completing the

instrument, the responsibility of the faculty member and specified timeline. The questionnaire and instruction packet were sent to the Agricultural Education faculty member at the participating institutions. The faculty members distributed, collected, and returned the questionnaires in a self addressed stamped envelope. This contact urged faculty members to complete and return the instrument by reiterating the importance of the study. An email was sent to the faculty members two weeks later that contained information similar to the third contact and served as either a thank you or reminder to serve as a reminder. The fifth contact was made with faculty members' via email to determine whether or not they needed additional time or new copies of questionnaires. An instrument packet was mailed to faculty that had either not yet begun the instrument or those who requested additional copies. The final contact was made via email February 2, 2009. Results include a response rate of 93% ($n = 145$), and 18 of the 19 institutions that initially agreed to participate returned questionnaires.

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences® (SPSS) 15.0 for Windows. Data analysis methods were selected as a result of determining the scales of measurement for the variables. An alpha level of .05 was set *a priori*.

Research objective one was addressed by calculating frequencies, percentages, means and standard deviations for the variables of interest. To address research objective two, three, and four, mean scores, standard deviations, frequencies and percentages were reported for the individual items. Mean scores and standard deviations were calculated for sub-constructs of beliefs, attitude and intent to teach.

To determine the relationship between beliefs and the selected characteristics of sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership, research objective five utilized Pearson's Product Moment and point biserial correlations. To interpret the magnitude of the correlation coefficients, the Davis (1971) conventions were used. Objective six utilized Pearson's Product Moment and point biserial correlations and Davis's conventions (1971) to determine the relationship between students' attitude about teaching and selected characteristics of sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership. Objective seven utilized Pearson's Product Moment and point biserial correlation and the Davis's conventions to determine the relationship between students' intent to teach and selected characteristics of sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.

Objective eight utilized stepwise multiple linear regression to predict students' intent to teach from the selected characteristics of sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership. Research objective nine was addressed by using a Stepwise multiple linear regression to predict students' intent to teach from belief sub-constructs of expert career, high demand, social status, teacher morale and salary. Objective ten utilized a stepwise multiple linear regression to predict students' intent to teach from attitude sub-constructs including

ability, intrinsic career value, fallback career, job security, time for family, job transferability, shape the future of adolescents, prior teaching and learning experiences, and social influences. Finally, objective eleven utilized hierarchical regression to determine the amount of unique variance in the students' intent to teach that can be accounted for by attitude when controlling for beliefs to address.

Summary of the Findings

Research Objective One – Characteristics of the Respondents

Of the 145 senior level agricultural education majors at 18 participating institutions, 77 (53.47%) were female and 67 (46.53%) were male. With regard to the amount of agriculture experience the students had 76 (46.53%) reported having “more experience than their peers,” 57 (39.58%) reported having “same as peers,” and 20 (13.89%) reported having “less than their peers.” The majority 125 (86.21%) students' were enrolled in high school agricultural education courses, with the remaining 19 (13.10%) students' not enrolled in high school agricultural education. Students who reported being enrolled in agricultural education reported a mean of 4.05 years of participation.

With regard to FFA membership, SAE participation, and 4-H membership a majority of students 127 (87.59%) reported being members of the FFA with a mean of 5.52 years of membership, the remaining 17 (11.72%) were not members of the FFA. Over three-fourths of the students 112 (78.32%) reported having an SAE project, the remaining 31 (21.68%) reported not having an SAE project. With regard to 4-H participation, 103 (71.53%) of the students reported being a member of the 4-H and 41 (28.47%) students' reported not participating in 4-H. Students' who reported being

members of the 4-H reported a mean of 7.27 years of membership. Four sub-constructs were identified from the beliefs about teaching construct. The sub-construct “expert career” reported the highest mean, followed by “social status,” “salary,” and “high demand.”

Research Objective Two – Beliefs about Teaching Agricultural Education

Students were asked to indicate their level of agreement with 15 items describing their beliefs about teaching secondary agricultural education. According to the respondents no items regarding beliefs about teaching agricultural education fell into the definitely agree (4.60 – 5.00) category. Eight statements fell into the agree (3.60 – 4.50) those included, “teaching agriculture is a highly skilled occupation”; “agriculture teachers have high morale”; “teaching agriculture is emotionally demanding”; “agriculture teachers are perceived as professionals”; “teaching agriculture requires a high level of technical knowledge”; teaching agriculture requires a high level of expert knowledge”; teaching agriculture is a well respected career”; and “agriculture teachers need highly specialized knowledge.” Three statements were rated definitely disagree to disagree were “agriculture teachers are well paid, “teaching agriculture requires hard work,” and “agriculture teachers have a heavy work load.” Three items regarding beliefs about teaching fell into the disagree (1.60 – 2.50) category and included “agriculture teachers are well paid”; “teaching agriculture requires hard work”; and “agriculture teachers have a heavy work load.” With regard to the belief sub-constructs the following students’ rated “expert career” having the highest mean, followed by “social status,” “teacher morale,” “salary,” and “high demand.”

Research Objective Three – Attitude toward Teaching Agricultural Education

In regards to attitude toward teaching agricultural education senior level students were asked to rate 40 statements. Two statements were rated 4.50 or higher and include, “I like teaching about agriculture” and “I want to help adolescents learn.” Students tend to agree with 25 statements (3.60 – 4.50), and rated 13 statements as not sure (2.60 – 3.50). Four statements fell into the disagree (1.60 – 2.50) category and include “teaching agriculture was not my first career choice,” “agriculture teachers have lengthy holidays,” “agriculture teachers have short working days,” and “I chose teaching as a last resort career.”

None of the sub-constructs fell into the definitely agree (4.60 – 5.00) category. Ten sub-constructs fell into the agree (3.60 – 4.50) category and included “make a social contribution,” “prior teaching and learning,” “ability,” “work with adolescents,” “intrinsic career value,” “job security,” “enhance social equity,” “shape the future,” and “social influence.” The sub-constructs “job transferability” and “time for family” fell into the not sure (2.60 – 3.50) category. The sub-construct “fallback career” fell into the disagree category (1.56 – 2.50) and the sub-construct “bludging” fell into the definitely disagree category (0.00 – 1.50).

Research Objective Four – Intent to Teach Agricultural Education

Students’ were asked to indicate their level of agreement with six statements. The statement, “I have carefully thought about becoming an agriculture teacher” reported the highest mean; followed by “I am satisfied with the choice to become an agriculture teacher”; “I am happy with my decision to become an agriculture teacher”; and “others influenced me to become an agriculture teacher.” The sub-construct “satisfaction with

choice” fell into the agree (3.60 – 4.50) category indicating the satisfaction students’ had with their choice to teach. The sub-construct “social dissuasion” fell into the not sure (2.60 – 3.50) category and indicated the degree with which others advised against pursuing a career in teaching.

Research Objective Five – Relationship between Students’ Beliefs and Characteristics

When determining the relationship between students beliefs’ and their selected characteristics of sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership.

Pearson’s Product Moment and point biserial correlations were utilized. The relationship between students’ beliefs about teaching and the number of years the students were members of the FFA and the number of years students were enrolled in high school agricultural education had a low, positive correlation. Low, negative correlations were found between students’ beliefs about teaching and sex and participation in FFA. Participation in 4-H had negligible, positive relationship with beliefs about teaching agricultural education, while agriculture experience, participation in high school agricultural education, SAE, and the number of years in 4-H had negligible, negative relationship with beliefs.

Research Objective Six – Relationship between Students’ Attitude and Characteristics

Pearson’s Product Moment and point biserial correlation were used to calculate the correlation coefficient between students’ attitude about teaching and sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years

of 4-H membership. The findings indicate a low, positive relationship between attitude about teaching and the number of years students were FFA members and the number of years enrolled in high school agricultural education. Participation in SAE and years of membership in 4-H had a low, negative relationship with attitude. Agriculture experience and participation in participation in 4-H had negligible, positive relationship, while sex, participation in high school agricultural education and participation in the FFA had a negligible, negative relationship with attitude.

Research Objective Seven – Relationship between Students' Intent to Teach and Characteristics

With regard to the relationship between students' intent to teach secondary agricultural education and sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership. Pearson's Product Moment and point biserial correlations were used to calculate the correlation coefficient. A moderate, positive relationship between participation in high school agricultural education and students' beliefs about teaching was reported. Years of enrollment in high school agricultural education had a low, positive relationship. Sex and SAE had a low, negative relationship. Participation in FFA, agriculture experience and years of 4-H membership reported a negligible, negative relationship with intent to teach. Years of membership in the FFA and participation in 4-H reported a negligible, positive relationship with intent to teach.

Research Objective Eight – Variance in Intent to Teach by Characteristics

Stepwise multiple linear regression was used to determine the amount of variance in the students' intent to teach that can be explained by the selected characteristics of sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership. No variance in students' intent to teach was found.

Research Objective Nine – Predict Students' Intent to Teach from Beliefs

Stepwise multiple linear regression was used to predict the students' intent to teach from the sub-constructs of beliefs (expert career, high demand, social status, teacher morale, and salary). Eleven percent of students' intent to teach can be explained by the belief sub-constructs of "teacher morale" and "expert career."

Research Objective Ten – Predict Students' Intent to Teach from Attitude

Stepwise multiple linear regression was used to predict the students' intent to teach from the sub-constructs of attitude (ability, intrinsic career value, fallback career, job security, time for family, job transferability, shape the future of adolescents, enhance social equity, make social contribution, work with adolescents, prior teaching and learning experiences, social influences). Of the 13 sub-constructs, four sub-constructs surfaced. 61% of students' intent to teach can be explained by the sub-constructs of "fallback career," "working with adolescents," "intrinsic career value," and "job security."

Research Objective Eleven – Variance in Intent to Teach Accounted for by Attitude

Hierarchical regression was used to determine the amount of unique variance in the students' intent to teach that can be accounted for by attitude when controlling for beliefs.

Seventeen percent of students' intent to teach can be accounted for by attitude when controlling for beliefs.

Conclusions, Implications and Recommendations

The following conclusions, implications and recommendations are made as a result of the evaluation of the beliefs, attitude and intent to teach of the senior level agricultural education students. Conclusions and implications are drawn from the findings and then offer recommendations. Recommendations include practical recommendations that can be implemented by teacher educators, secondary agriculture education teachers, Team Ag Ed and others interested in supporting the recruitment efforts of the National Council for Agricultural Education and 10 x 15 - The Long Range Goal for Agricultural Education. Recommendations for further research in this area are offered as well.

Research Objective One – Characteristics of Respondents

With almost 95% of the institutions participating in this study, it can be concluded that the factors that influence students' choice to teach is important to the teacher educators who assisted with this study. While, the female respondents only outnumbered the male respondents by 10, this may suggest a new trend in agricultural education. Will there continue to be an influx of female students in agricultural education? If so, what, if any, modifications are needed to current curriculum and program planning that can assist females in a typically male dominated field? Will there be a need for special retention programs specifically designed for the female agriculture teacher? Secondary agricultural education teachers and teacher educators must be aware of this event and be mindful of the unique characteristics that females bring to the workforce.

The vast majority of these students' took high school agricultural education, were members of the FFA, had an SAE project, were members of the 4-H, and had more agriculture experience than their peers. The students in this study represented the typical agriculture education student; they had some agriculture experience, were involved in the local agricultural education program and were 4-H members. Yet, these factors did not explain why students chose to become agricultural education teachers.

With students enrolled in high school agricultural education, and involved in 4-H the opportunity for high school agriculture teachers and extension educators to promote the profession is well-timed. Agricultural Education teacher preparation programs across the country typically attract the same type of student. They typically "look" the same, they had high school agriculture education, and they were members of FFA and 4-H and had a SAE. This does not mean efforts should be refocused to another demographic, but there is an untapped resource of students out there. Interestingly, there were a slight few that did not share the typical background of the majority of the agricultural education students, they were not in high school agricultural education, did participate in the FFA, had no SAEs, and were not members of 4-H. This minor population may provide the additional teachers agricultural education needs to fill vacancies across the country. Students in urban, sub-urban and rural communities that do not have access to an agricultural education program may be potential recruits. The lack of prior experience in agricultural education should not deter recruitment efforts. National and state staff and teacher educators should develop strategies to reach out to the non-traditional audiences while continuing to recruit from the long-established source of students in high school agriculture education programs. This effort would bring about diversity in agriculture

education as well as have the potential to reach out to communities wanting to incorporate agriculture programs into their existing curriculum.

Research Objective Two – Beliefs about Teaching Agricultural Education

A total of 15 statements with reference to students' beliefs about teaching were rated from definitely disagree to definitely agree by the students. Eight items fell into the agree category. Based on the findings, from these eight items two sub-constructs are identified, first is "expert career" or the beliefs about what teachers need to know or be able to do. Stiegelbauer (1992) supports this statement identifying that students wish to share personal knowledge and expertise about the subject. These findings suggest that students' beliefs about teaching regard it as a highly skilled occupation that is emotionally demanding, and requires technical and expert knowledge. Do current teacher preparation programs prepare students' adequately for the profession in the technical content areas they are expected to teach? Students believe that agricultural education is a highly expert career, but are they prepared to teach the content they are expected to? What areas of agriculture do students feel least prepared to teach, and what improvements should be made to current teacher preparation curriculum? The second sub-construct identified was "social status"; this is reflected in a study by Hayes (1990) who suggested that students thought teaching was a highly respected career. It is also believed that teachers have high morale, are perceived as professionals and are well respected. In regards to social status, students believe that teaching agriculture is a highly respected career.

If agricultural education desires to tap into the talents and interests of students across the U.S. and recruit the best possible candidates into the classroom, then

promoting teaching as a professional career is imperative. Even though these students' had experience in agriculture it does not mean that they have the skills necessary to teach the subject. Teacher educators must provide students' with the opportunity to gain the technical expertise they will need to become quality agriculture educators. Developing a curriculum for pre-service teachers that includes a variety of technical courses in animal science, plant science, soil science, natural resources, business, economics, agriculture mechanics, and others is essential in the development of their expertise. Teacher educators should work with individual students to create a plan of study that will not only build upon their current skills, but expand areas of technical expertise that are underdeveloped. Not only is it important for students' to take these courses in the technical content areas, it is vital that they have the opportunity to practice teaching the subjects as well. Teacher educators should encourage students to create lesson plans and teach in a safe setting. As with any job, there is some degree of "learning on the job" that takes place; but, if students' are be given the opportunity to practice their skills before student teaching it will improve their confidence.

Contrary to the findings of Richardson and Watt (2006) who found that participants thought of teaching as a career that was low in return, this group of students' perceived teaching as a career high in return. These students' believe that teaching is a highly respected career. National and state FFA organizations should continue to reward the quality agriculture teachers and continue to promote the profession. The National Association of Agricultural Educators and American Association of Agricultural Educators should also continue to recognize the outstanding teaching efforts of the quality teachers in the profession. Secondary agricultural education teachers should

acknowledge the recommendations made by Park and Rudd (2005) and be professional, respect students, mentor, and exhibit positive teacher attitudes as these behaviors tend to produce future teachers, while the opposite attitudes and practices tend to discourage students from teaching. Secondary agricultural education teachers must take advantage of the professional development opportunities that exist convey to their students the positive aspects about the profession. Additional efforts must be made by all parties interested in recruiting future agriculture education teachers and create advertising and marketing materials that promote agricultural education as a highly skilled, professional career.

The sub-constructs “salary” and “high demand” were rated as not sure by the students’. This indicates that students are still unsure of how well it pays to be agriculture teacher and are uncertain of the demands placed on teachers. Since this study took place prior to student teaching, perhaps students are not aware of the actual demands placed on agriculture teachers, even though they feel they have the skills necessary to perform the job. Teacher educators must provide opportunities for students’ to observe agriculture teachers prior to student teaching and give them the chance to reflect on what they’ve seen. Utilizing quality agriculture teachers as panel experts in a pre-service teacher preparation course could also provide students the opportunity to ask about the real demands of the job. Students are unsure of their beliefs about salary. This could be due to the other beliefs students held as important including “expert career” and “social status.” Perhaps a belief about salary is a reflection of Herzberg’s (1968) two- factory theory. Salary is an element of the hygiene factors and does not necessarily provide positive satisfaction and motivation to choose a career, however, true satisfaction comes from having a sense of achievement (Herzberg). Teacher educators should capitalize on this

belief where students can showcase their skills and provide a service to others regardless of the salary they expect to earn.

Research Objective Three – Attitude toward Teaching Agricultural Education

Forty items regarding students' attitude toward teaching agriculture education were rated definitely disagree to definitely agree. Two items were rated definitely agree, "I like teaching about agriculture" and "I want to help adolescents learn." Teacher educators must determine the positive aspects about the teaching profession to promote for recruitment purposes. It is suggested that it is these two statements are the feature points that promote agricultural education and should drive recruitment campaigns.

Worthy of note is the students' certainty about teaching agriculture as a career. Agriculture education was not a last resort career for these students. This may be a reflection of the period of time these students were in. As senior level students, prior to student teaching they may be questioning their ability, searching for affirmation of their strengths, and are embarking on an emotional journey of growth. While teaching agriculture was not a last resort for these students, teacher educators must continue to foster students' development throughout this period of time. It appears that teaching is by and large a career of choice and not something people fall back and was rated as a low motivation for entering the profession (Watt & Richardson, 2007). Students are confident about their choice to teach agricultural education. Teacher educators and cooperating teachers, during the student teaching experience, must continue to cultivate that confidence. Students' are expected to identify their career interests early in their college experience; therefore, curriculum should continue to provide early field experiences and practical teaching experiences.

Items relating to family time, holidays, and short working days were rated not sure. This would indicate that students are not sure if agriculture teachers have time to devote to their personal life. It is critical that students learn early about work and family life balance and time management before entering the secondary classroom. There is some apprehension with these students' in regards to personal and family time. During this period of time not only are students' making one of the largest decisions of their lives with their choice of career, they are also making personal decisions as well. It is disconcerting that students' already have an uncertain attitude toward teaching agricultural education in regards to family life. They are unsure of job demands, but recognize that they will spend a lot of time in and out of the classroom. Teacher educators should be more aware of this perception. Lessons on time and stress management would be welcome additions to current curriculum. National, state and local agriculture educators must make it a priority to assist students' and current teachers develop strategies to balance work and family life. It is difficult to expect today's agriculture teachers to spend exorbitant amounts of time at the school or at school related activities. Peske et al. (2001) suggest that the career conditions of current teachers are vastly different from the retiring cohort of teachers from 30 years ago. Today's prospective teachers do not view teaching as a lifelong career choice because they have multiple career options, that are more attractive, pay well and offer promotion, additionally they regard loyalty to a single career as obsolete (Peske et al.).

Because there are other options for students' majoring in agricultural education other than becoming a teacher, innovative and aggressive changes should be made to make the profession more attractive. The purpose of school based agricultural education,

FFA, and SAE should be intensely evaluated and scrutinized. Curriculum, activities and programs that are no longer considered necessary should be eliminated, and the job of the high school agriculture teacher should be streamlined.

With regard to the 13 attitude about teaching sub-constructs, five emerge as being most important; they include making a social contribution, prior teaching and learning, ability, work with adolescents, and intrinsic career value. Overall, this indicates students' have a favorable attitude about teaching agriculture. Students value the social contribution they can make as a teacher and the ability to give back to society. Since local agricultural education programs are known for community service projects, promoting service to others through agriculture education is vital. Should servant leadership be a focus in the teacher preparation coursework? Students will complete student teaching, take their first job and be expected to participate in several community service activities. By adding a service learning component to the teacher preparation curriculum could it aid in the students transition into the community?

Both prior teaching and learning experiences and being able to work with adolescents were positive for these students, and were significant in determining their attitude toward teaching agricultural education. Based on these findings, it could be suggested that current high school agricultural education teachers and teacher educators make a conscious effort to make learning a positive experience. Additionally, programs that give high school students early experience teaching others about agricultural should be conducted. Promotion of SAEs in agricultural education could provide additional recruitment opportunities for institutions. However, does an SAE in agricultural education contribute to students' interest in pursuing a career in teaching? Finally, early

field experiences in teaching are essential in agricultural education teacher preparation programs and should continue to be an integral part of any program.

An additional area of importance was students' attitude about their ability in agriculture education. Ability is reflected in the competence in agriculture or teaching due to the skills, training or qualifications one has. These findings suggest that because of their past experience and preparation in agriculture, agricultural education, FFA, SAE, and 4-H, students are confident in their ability to teach agriculture. This further supports the belief that agriculture education is a highly expert career and a significant amount of technical knowledge is needed. While the majority of these students have experience in agriculture education, FFA, SAE, and 4-H, does experience alone contribute to the technical knowledge that is needed to teach? Technical content knowledge is taught in teacher preparation programs as students are required to take courses in animal science, plant science and others. For those students majoring in agricultural education that do not have the prior experience in agriculture education, FFA, SAE, and 4-H are there modifications that should be made to give them the additional experiences?

It has been well documented in the literature that students choose a career in teaching to make a positive difference in the lives of adolescents, have a desire to be a role model for students, and enjoy working with adolescents (Hayes, 1990; Stiegelbauer, 1992; Weiner, 1993). Capitalizing on the opportunity to work with adolescents is an additional factor that should be utilized in marketing and recruitment aids. The development of the agricultural education SAE and proficiency award area is a step in the right direction when marketing teaching to high school students. National FFA should continue to develop strategies that target high school students and focus on agriculture

teacher recruitment. An increased restoration of programs such as Partners in Active Learning Support (PALS) will also provide students the opportunity to work with children. Once more, an increasing emphasis on early field experiences should be conducted by teacher educators.

Finally, students' intrinsic career value was rated high as well. Intrinsic career value refers to the passion and enjoyment one gets from completing a task. With regard to teaching it could be suggested that these students simply enjoy teaching about agriculture. Hayes (1990) identified that students majoring in education were strongly drawn to teaching for reasons other than monetary rewards. In regards to recruitment of teachers into agricultural education the enjoyment and passion about teaching could be considered another area to focus marketing efforts.

Harms and Knobloch (2005) support the sub-construct "intrinsic career value," identifying that individuals teach to satisfy their needs. The students' intent to teach may be due to the enjoyment they get from teaching about agriculture. Promoting teaching as a career that one can obtain fulfillment and enjoyment out of is an additional item that can be used in recruitment materials. National FFA, NAAE, state associations, teacher educators and high school teachers should encourage students' to enter a profession that they are able take pleasure in.

Research Objective Four – Intent to Teach Agricultural Education

Respondents indicated that they have carefully thought about the decision to teach, are satisfied and happy with the choice to teach and indicated that others influenced their decision to become an agriculture teacher. In general they were pleased with their choice to teach agricultural education. At this point in their undergraduate

program students are finalizing their decisions about their future career. While it is extremely positive that these students' have a solid hold on their future career choice, discouragement from others was not a strong factor in students' choice of teaching as a career. This contradicts Richardson and Watt (2006) who reported strong experiences with social dissuasion from teaching. Perhaps the design of teacher education coursework has created a positive impact on assisting students with their career decisions. Students take many courses early on in their undergraduate coursework that are required for certification, perhaps teacher preparation coursework helps to solidify their career choice. Students' were unsure about the amount that others dissuaded them from a career in teaching agricultural education. It is necessary that secondary agriculture teachers make certain they are not discouraging students who want to become agriculture teachers. A joint effort to market and promote the profession is needed by all those involved in agricultural education.

Research Objective Five – Relationship between Beliefs about Teaching and Characteristics

The relationships between students' beliefs about teaching secondary agricultural education and sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership were found to be low or negligible. While it seems intuitive that the more experience in agriculture and agricultural education the stronger their beliefs should be. However, this is not the case, therefore what other characteristics should be accounted for to determine students' beliefs about teaching agriculture education. There does not seem to be a difference in sex of students and their

beliefs about teaching agricultural education, suggesting that females and males hold the same beliefs about the profession. Negligible relationships were found with participation in 4-H, agriculture experience, participation in high school agricultural education, SAE, and years in 4-H. These findings indicate inconsequential relationship about beliefs about teaching agricultural education. This may support the idea of recruiting students from outside of the typical agriculture background.

Research Objective Six – Relationship between Attitude and Characteristics

The relationships between students' attitude toward teaching agricultural education and the selected characteristics were found to be low or negligible. The strongest relationship with attitude toward teaching high school agricultural education was the number of years students were FFA members and the number of years enrolled in high school agricultural education. Nevertheless, they were still low, positive relationships. Participation in SAEs and 4-H were also reported low, negative relationships. Findings suggest that the longer students are members of the FFA, enrollment in high school agricultural education, participation in SAEs, 4-H membership do not affect their attitude toward a career teaching high school agricultural education.

Negligible relationships were found with sex, agriculture experience, and participation in 4-H, participation in high school agricultural education, and participation in the FFA. Findings would suggest that sex, agriculture experience and other experience is not a factor in determining students' attitude about teaching agricultural education. The question remains, if past experience does not affect students' attitude toward a career in teaching, should recruitment efforts be focused outside of local agricultural education programs? Obviously, the majority of students majoring in agricultural education have

past experience, but are there others who would be interested in teaching agriculture that don't fit the typical profile of students.

Research Objective Seven – Relationship between Intent to Teach and Characteristics

The relationships between students' intent to teach and the selected characteristics of sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership were found to be moderate, low and negligible. The strongest relationship was a moderate, positive relationship between participation in high school agricultural education and the students' intent to teach. This suggests that students who were enrolled in high school agricultural education have a greater intent to teach high school agricultural education. Years of enrollment in high school agricultural education had a low, positive relationship with intent to teach. Sex had a low, negative relationship with intent to teach, indicating that females were more slightly more likely to teach than males. Participation in SAEs had a low, negative relationship with intent to teach.

Negligible relationships were found with participation in FFA, agriculture experience, years of 4-H membership, years of FFA membership and participation in 4-H. Findings would suggest that participation in FFA, agriculture experience, years of 4-H membership, years of FFA membership and participation in 4-H do not factor into students intent to teach. What other characteristics factor into students' intent to teach?

Continuing to make teacher recruitment a priority in agricultural education is vital to its growth and recruiting from the traditional source has proved to be successful. However, recruiting from outside of agricultural education may prove to be beneficial as

well. Teacher educators should continue to recruit from their classic source. National and State FFA should make it a priority to recognize students who excel in the agricultural education SAE by continuing to provide sponsorships to that proficiency award area. Workshops designed to teach students about a career in agricultural education are also called for. The Missouri Department of Education in cooperation with local agriculture teachers has provided a workshop titled “Teach Ag Ed” at the State FFA convention for the past three years. This high energy one day workshop introduces students to the profession and helps FFA members identify teacher education programs in the state that provide preparation in agricultural education. The factors identified in this study should be incorporated into this workshop, promoting agricultural education as a career that taps into students’ experience, provides a steady career, contributes to society, supports the idea that agriculture teachers are considered professionals, and is a career where they get to work with kids. Other state FFA organizations and National FFA should consider modeling workshops after this one. Providing unique resources such as the “Teach Ag” link posted on the National Association of Agricultural Educators website is beneficial, but perhaps is targeting the wrong audience. The NAAE website audience is secondary agriculture teachers, high school students would be more likely to visit websites geared toward them. Perhaps a link on the National FFA home page directly linking students to agricultural education teacher preparation programs across the country would assist with recruitment efforts.

As mentioned earlier, reaching out to other populations may be beneficial when developing recruitment strategies. Students in urban, sub-urban and rural communities that do not have access to an agricultural education program may provide the number of

students needed to fill agriculture teacher vacancies. Lack of prior experience in agricultural education should not be considered a detriment to future recruitment efforts. National and state staff and teacher educators should develop recruitment strategies that reach out to the non-traditional audiences that highlight the positive characteristics of teaching high school agriculture education. As well as continue to recruit from the traditional source of students in high school agriculture education programs. Not only would this effort bring about diversity in agriculture education but has the potential to reach out to communities wanting to incorporate agriculture programs into their existing curriculum and to students' who have a passion to teach agriculture.

Research Objective Eight – Variance in Intent to Teach by Characteristics

Stepwise multiple linear regression was used to determine the amount of variance in students' intent to teach (satisfaction with choice) that can be accounted for by sex, perceived agriculture experience compared to their peers, years enrolled in school-based agricultural education courses, years of FFA membership, participation in SAE, and years of 4-H membership. No variance was found. This suggests that these characteristics cannot be utilized to identify intent to teach. This begs the question, what additional characteristics should be measured? Since the majority of these students' had a similar background, what would the results be with a population of students who didn't have a strong traditional background?

Research Objective Nine – Predict Students Intent to Teach from Beliefs

Eleven percent of students' intent to teach can be explained by the belief sub-constructs of "teacher morale" and "expert career." The sub-construct "teacher morale" indicates that the students' intent to teach is based on their belief that teachers have high

enthusiasm, confidence and loyalty to the profession; they are valued by society, and have a well-respected career. Teaching high school agricultural education could be promoted in this fashion. Organizations such as the National Association for Agricultural Educators and state agriculture teacher associations should create programs and promote the profession as one that teachers enjoy and is well-respected.

The sub-construct “expert career” suggests that students value the complexity of the skills set that teaching requires in, and appreciate the high level of specialized and technical knowledge they need to be successful. Richardson and Watt (2006) agree supporting the notion that individuals are attracted to teaching as an intellectually demanding and cognitively stimulating career. Do current teacher preparation programs prepare students’ adequately for the profession in the technical content areas they are expected to teach? What areas of agriculture do students feel least prepared to teach, and what improvements should be made to current teacher preparation curriculum? Students believe that a career in teaching will give them the opportunity to share their personal knowledge and expertise about the subject which is supported by the sub-construct “expert career.” Teacher educators must be aware that students’ appreciate this characteristic of teaching agriculture education, and maintain or update current curriculum to incorporate technical content. Students’ should also be aware of the expertise that is needed as an agriculture teacher and pursue other opportunities to gain the technical skills they need. For example, students’ could be encouraged to take a welding or woodworking class at a local community college if such coursework is not available from their institution.

Research Objective Ten – Predict Students’ Intent to Teach from Attitude

Through stepwise multiple linear regression it was found that four sub-constructs including “fallback career,” “working with adolescents,” “intrinsic career value,” and “job security” account for 61% of students’ intent to teach. The sub-construct “fallback career” would indicate that students are confident about their choice of career and did not choose teaching secondary agricultural education as a fallback career. “Working with adolescents” was another sub-construct the indicates that having the opportunity to work with adolescents and helping them learn is an additional factor that influences students’ choice to teach. Stiegelbauer (1992), Hayes (1990), and Weiner (1993) conclude that one of the main reasons students choose to teach is based on the opportunity to work with young people. The sub-construct “intrinsic career value” indicates that students have an instinctive passion about teaching and genuinely enjoy it. Harms and Knobloch (2005) suggest teachers choosing formal education as a career had intrinsic motives. Finally, the sub-construct “job security” offers students’ a steady career path, reliable income and secure job. Furthermore, students’ value the security that a career in teaching provides. Careful attention to these sub-constructs will assist in the development of recruitment materials and could be utilized in addition to current recruitment plans and marketing initiatives to attract students to agriculture education. Secondary agriculture teachers and teacher educators should promote the agricultural education as a career that is a match for students’ if they have a passion for teaching, want to work with adolescents and want a job that offers a steady career path. Many secondary agriculture teachers and teacher educators promote the profession as a “fallback career” to students; maybe it is worthwhile to continue those efforts. Perhaps when students’ enroll in agricultural

education with the assumption that it is a fallback career by the time they are seniors they are certain it is the career they want.

Research Objective Eleven – Variance in Intent to Teach Accounted for by Attitude

Eleven percent of students' intent to teach can be accounted for by attitude about teaching agriculture education when controlling for beliefs. Fishbein and Ajzen (1975) stated an individual will hold a positive attitude toward a given behavior if he/she believes that the performance of the behavior will lead to mostly positive outcomes. These findings suggest that the students' possess a positive attitude toward teaching agricultural education, not only are they confident about their career choice, they are comfortable teaching about agriculture. This level of comfort may be attributed to the early field experiences, reflective teaching and other teaching and learning experiences these students have had. Teacher educators should continue to support the students' confidence in their career choice. This could be done through positive teaching and learning experiences and capitalize on the student' teaching abilities. Teacher educators should continue to provide opportunities for students' to work with adolescents and encourage students to acquire the technical and expert knowledge needed to be a successful agriculture teacher. Nevertheless, there continues to be 89% of the variance unaccounted for. What other factors explain students' intent to teach agricultural education?

Identifying the characteristics of students' choosing to enter a career in teaching agricultural education in the current climate of teacher shortages can provide valuable information for national and state agricultural education, FFA, teacher education, and secondary agriculture teachers. These findings indicate that students' perceive themselves

as having the abilities to teach well and utilizes expert and technical knowledge, that teaching is intrinsically gratifying and is a satisfying occupation, they perceive that teaching agricultural education will provide them with a high level of job security, that teaching is a well respected career, and has the potential to influence adolescents. Furthermore, there are minor concerns about how to balance work and family life. Finally, this study of senior level agricultural education majors at 18 institutions suggests that there is a variety of factors that influence students' choice to teach. It is critical for all parties interested in agriculture education teacher recruitment to target the diversity of factors that collectively impact the decision to enter the agricultural education teaching profession.

Recommendations for Further Research

The struggle to recruit young people into agricultural education is well documented and according to Kantrovich (2007) agricultural education has not seen a single year since 1965 in which all teaching positions have been filled.

The National Council for Agricultural Education's (2008) efforts to support and promote teacher recruitment is well documented:

Under the direction of the National Council for Agricultural Education, 10x15 is the most ambitious effort ever to address critical issues affecting quality and growth of the Agricultural Education/FFA program. Success in these initiatives will contribute significantly to preparing a well-trained workforce for American agriculture; helping students develop their personal, academic and career potential; and providing principled leadership for local communities and the nation.

The commitment at the national level to recruit quality agriculture education teachers emphasizes its importance. The current 10 x 15 status report from February 2009 shows significant steps toward securing an abundant supply of well-trained, highly qualified agricultural educators (National Council for Agricultural Education, 2008^a), and has outlined five phases to focus their recruitment efforts:

1. Researching factors affecting recruitment
2. Assembling a work committee
3. Identifying target audiences
4. Developing products and strategies
5. Implementing a total recruitment program

The question becomes, however, what type of recruitment aids are needed for National and state staff, teacher educators and local agriculture teachers? The findings of this study indicate that students' beliefs and attitude about teaching agricultural education is significant in their intent to teach.

The National Council for Agricultural Education's (2008) 10 x 15 initiative is the most ambitious effort ever to address critical issues affecting teacher quality and recruitment of teachers into agricultural education. According to Team Ag Ed and the National Council for Agricultural Educations February 2009 Status Report, the first phase of the 10 x 15 initiative must be to research the factors that affect recruitment into agricultural education. Therefore, several recommendations are being made for further research and evaluation concerning to teacher recruitment.

Undeniably, continued evaluation of the factors that influence students' intent to teach is essential. Dyson (2005) voices a concern over the amount of reviews that have

been conducted in teacher education over the last thirty years, because we continue to struggle with understanding why people are attracted to teaching in the first place.

Richardson and Watt (2006) suggest that a different approach to teacher recruitment, induction and retention is needed. What is that approach?

With regard to future research, one recommendation is to conduct a study with atypical agricultural education majors assessing the factors that influence their choice to teach agricultural education. Such a study would allow comparisons of typical and atypical agricultural education students. This would help determine what factors are influential to those atypical students and assist in the development of initiatives and materials to attract atypical students into agricultural education. Furthermore, it would provide additional strength in identifying the factors that continue to attract students from the typical agricultural education background.

Conceivably, agricultural education could be impacted due to the increased number of female students. Understanding the difference in the factors that influence females and males to the profession would provide additional insight into teacher recruitment. Moreover, ethnic diversity was not considered in this study. It would be beneficial to look at the factors that influence students' choice to teach agricultural education by ethnicity. This has the potential to offer additional recruitment strategies to agricultural education.

Future research should go beyond this study to focus on time management and work family balance among secondary agriculture education teachers. Identifying practiced strategies that agricultural education teachers can use to manage their time, balance work and family, and create programs that offer advice to pre-service teachers

and current agricultural education teachers is important if agriculture education expects to remain a viable profession.

This study has identified the factors that influence students' choice to teach agricultural education. The variety of factors that were identified is important when determining how to promote the profession and recruit quality students. With collaboration from Team Ag Ed and the National Council for Agricultural Education and the renewed importance of identifying the factors that influence students' choice to teach progress towards creating a plentiful supply of well trained, highly qualified agriculture teachers and is within reach.

REFERENCES

- 4-H. (2009). About us. Retrieved April 15, 2009, from <http://4-h.org/b/Pages/Layouts/GroupPage87f1.html?SiteId=2317&PersistentTheme=4H>.
- Ajzen, I., & Fishbein, M. (Eds.). (1980). *Understanding attitudes and predicting social behavior*. New Jersey: Prentice-Hall.
- Allen, M. (2003). Eight questions on teacher preparation: What does the research say? A summary of the findings. Education Commission of the States. (ERIC Document Reproduction Service No. ED479051). Retrieved February 23, 2009 from <http://www.eric.ed.gov>.
- American Association for Agricultural Education (2007). Directory. Retrieved, August 28, 2009, from <http://www.aaaeonline.org>.
- Arrington, L. R. (1985). Relationship of student attitudes about vocational agriculture to selected student, school, and program variables. *The Journal of the American Association of Teacher Educators in Agriculture*, 26(1), 48-56.
- Ary, D., Jacobs, L. C., & Razavieh, A. (2002). *Introduction to research in education* (6th ed.). Belmont, California: Wadsworth Thompson Learning.
- Atkinson, J. W. (1957). Motivational determinants of risk taking behavior. *Psychological Review*, 64, 359-372.
- Backes, C. & Burns, J.Z. (2008). New career-technical teachers: Who gets them, and why is it important to know? *Journal of Industrial Teacher Education*, 45(1), 100-112.
- Bacolod, M. (2007). Who teaches and where they choose to teach: College graduates of the 1990s. *Educational Evaluation and Policy Analysis*, 29(3), 155-168.
- Ballou, D., & Podgursky, M. (1998). Teacher recruitment and retention in public and private schools. *Journal of Policy Analysis and Management*, 17(3), 393-417.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Clis, NJ: Prentice-Hall.
- Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (2001). Self-efficacy beliefs as shapers of children's aspirations and career trajectories. *Child Development*, 72(1), 187-206.
- Berry, W. D., & Feldman, S. (1985). *Multiple regression in practice: Quantative applications in the social sciences*, Vol. 50. Newbury Park, CA: Sage Publications.

- Borders, A., Earleywine, M. & Huey, S. (2004). Predicting problem behaviors with multiple expectancies: Expanding Expectancy Value Theory. *Adolescence*, 39, 539-551.
- Borg, W. L., & Gall, M. D. (1989). Educational research: An introduction (5th ed.). White Plains, NY: Longman.
- Brookhart, S. M. & Freeman, D. J. (1992). Characteristics of entering teacher candidates. *Review of Educational Research*, 62, 37-60.
- Brunetti, G. J. (2001). Why do they teach? A study of job satisfaction among long-term high school teachers. *Teacher Education Quarterly*, 23(3), 49-74.
- Camp, W. G. (1998). A national study of the supply and demand for teachers of agricultural education in 1995. Blacksburg, VA: Virginia Polytechnic Institute and State University.
- Camp, W. G. (2000). A national study of the supply and demand for teachers of agricultural education in 1999-2001. Blacksburg, VA: Virginia Polytechnic Institute and State University.
- Camp, W. G., Broyles, T., & Skelton, N. S. (2002). A national study of the supply and demand for teachers of agricultural education in 1999-2001. Blacksburg, VA: Virginia Polytechnic Institute and State University.
- Chochran-Smith, M. (2005). The new teacher education: For better or for worse? *Educational Researcher*, 34(7), 3-17.
- Cole, L. (1984). Oregon vocational agriculture teacher placement and retention factors. *Journal of Agricultural Education*, 25(3), 2-12.
- Craig, D. G. (1980). A study of fifteen-year trends of the supply and demand of vo-ag teachers in the United States. Agriculture Teachers Directory. Greensburg, PA: C.M. Henry Printing
- Crow, G. M., Levine, L., & Nager, N. (1990). Nor more business as usual: Career changers who become teachers. *American Journal of Education*, 98, 197-223.
- Darling-Hammond, L. & Sykes, G. (2003). Wanted: A national teacher supply policy for education: The right way to meet the 'highly qualified teacher' challenge. Educational Policy Analysis Archives, 11 (33). Retrieved January 8, 2009 from <http://epaa.asu.edu/epaa/v11n33/>.
- Darling-Hammond, L. (1997). Doing What Matters Most: Investing in Quality Teaching. NY: National Commission on Teaching and America's Future, Teachers College, Columbia University.
- Darling-Hammond, L., & Sclan, E. M. (1996). Who teaches and why: Dilemma of building a profession for twenty-first century schools. In j. Sikula, T. Buttery & E. Guyton (Eds.),

- Handbook for research on teacher education: A project of the Association of Teacher Educators (2nd ed.) New York: Macmillan.
- Davis, J.A. (1971). *Elementary survey analysis*. Englewood Cliffs, NJ: Prentice-Hall.
- Decker, L. E., & Rimm-Kaufman, S. E. (2008). Personality characteristics and teacher beliefs among teachers. *Teacher Education Quarterly*, 35(2), 45-64.
- DeVellis, R. F. (1991). *Scale Development: theory and applications* (Applied Social Research Methods Series, Vol. 26). Newbury Park, CA: Sage Publications.
- Dillman, D. A. (2007). *Mail and internet surveys: The tailored design method* (2nd ed.) Hoboken, NJ: John Wiley & Sons, Inc.
- Dyson, M. (2005). Australian teacher education: Although reviewed to the eyeballs is there evidence of significant change and where to now? *Australian Journal of Teacher Education*, 30(1), 37-54.
- Eccles, J. S. & Wigfield, A. (2002). Motivational beliefs, values and goals. *Annual Review of Psychology*, 53, 109-132.
- Eccles, J. S., Adler, T. F., Futterman, R., Gof, S. B., Kaczala, C. M., & Meece, J. L. (1983). Expectancies, values and academic behaviors. In J.T. Spence (Ed.), *Achievement and achievement motivation* (p. 75-146). San Francisco: Freeman.
- Edwards, M. C., & Briers, G. E. (2001). Selected variables related to expected longevity in teaching on entry-phase agriculture teachers. *Journal of Career and Technical Education*, 18(1), 7-18.
- Esters, L. T., & Bowen, B. E. (2008). Factors influencing career choices of urban agricultural education students. *Journal of Agricultural Education*, 46(2), 24 – 35.
- Fishbein, M. (1963). An investigation of relationships between beliefs about an object and the attitude toward that object. *Human Relations*, 16, 233-240.
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.
- Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction* (6th ed.). White Plains, NY: Longman.
- Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational research: An introduction* (7th ed.). Boston, MA: Allyn and Bacon.

- Garson, G. D. (2008, March). Scales and standards of measures. Retrieved October 23, 2008, from <http://www2.chass.ncsu.edu/garson/PA765/standard.htm>.
- Gay, L. R., & Airasian, P. (2000). *Educational research: competencies for analysis and application* (6th ed.). Upper Saddle River, NJ: Prentice-Hall, Inc.
- Guerra, A. L. & Braungart-Rieker, J. M. (1999). Predicting career indecision in college students: The roles of identify formation and parental relationship factors. *Career Development Quarterly*, 47, 255-266.
- Gysbers, N. C., Heppner, M. J., & Johnston, J. A. (2003). *Career counseling: Process, issues, and techniques*. Boston: Allyn and Bacon.
- Hammond, M. (2000). Why Teach? A case study investigating the decision to train to teach ICT. *Journal of Education for Teaching*, 28(2), 135-148.
- Hanusheck, E. A. & Pace, R. R. (1995). Who chooses to teach (and why)? *Economics of Education Review*, 14(2), 101-117.
- Harms, B. M., & Knobloch, N. A. (2005). Perservice teachers' motivation and leadership behaviors related to career choice. *Career and Technical Education Research*, 30(1), 1-21.
- Hayes, S. (1990). Students' reasons for entering the educational profession. (ERIC Document Reproduction Service no ED366234). Retrieved March 2, 2009 from <http://www.eric.ed.gov>.
- Herzberg, F. (1968) One more time: how do you motivate employees? *Harvard Business Review*, 46(1), 53-62.
- Hillison, J., Camp, W. G., & Burke, S. R. (1986). Why undergraduates choose agricultural education as a major: 1980 vs. 1985. *Journal of Agricultural Education* 28(2), 2-7, 32.
- Hillman, J. (1994). Undergraduate perceptions of teaching as a career, in: *National Commission on Education Insights into Education and Training*, papers selected by the Paul Hamlyn Foundation (London, Heinemann).
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources.
- Hoover, T. S., & Scanlon, D. C. (1991). Recruitment practices: A national survey of agricultural educators. *Journal of Agricultural Education*, 32(3), 29-34.
- Huck, S. W. (2008) *Reading statistics and research* (5th ed.). New York: Allyn & Bacon.

- Jacobs, J. E., & Eccles, J. S. (2000). Parents, task values, and real-life achievement-related choices. In C. Sansone & J.M. Harackiewicz (Eds.) *Intrinsic and extrinsic motivation: The search for optimal motivation and performance* (p. 405-439). San Diego, CA: Academic Press.
- Jarvis, C. D. (1921). *Agricultural education, Bulletin 1921, No. 40*. Washington D.C.: Department of the Interior
- Kantrovitch, A.J., (2007). *A national study of the supply and demand for teachers of agricultural education from 2004 -2006*. Morehead, KY: Morehead State University.
- Kim, D., Markham, F. S., & Cangelosi, J. D. (2002) Why students pursue the business degree A comparison of business majors across universities. *Journal of Education for Business*, 78(1), 28-32.
- Kotrlik, J. W., & Harrison, B. C. (1987). Factors related to the career decisions of seniors who have taken vocational agriculture. *The Journal of the American Association of Teacher Educators in Agriculture*, 25(3), 13-21.
- Kyriacou, C., & Coulthard, M. (2000). Undergraduate views of teaching as a career choice. *Journal of Education for Teaching*, 26(2), 117-126.
- Lent, R. W., Brown, S. D., & Hackett G. (1996). Career development from a social cognitive perspective. In D. Brown & L. Brooks (Eds.) *Career choice and development* (3rd ed.). San Francisco: Jossey-Bass.
- Lortie, D. (1975). *Schoolteacher: A sociological study*. Chicago, IL: University of Chicago Press.
- Lyons, G. (1981). *Teacher careers and career perceptions in the secondary comprehensive school*. Windsor: NFER-Nelson.
- McLean, R. C., & Camp, W. G. (2000). An examination of selected preservice agricultural teacher education programs in the United States. *Journal of Agricultural Education*, 41(2), 25-35.
- Merriam Webster Online. (2007-2008). Merriam-Webster, Inc. Retrieved August 28, 2008, from <http://www.merriam-webster.com/>.
- Mueller, J. E., & Miller, W. W. (1993). Are the more academically able agriculture teacher candidates not entering or remaining in the teaching profession? *Journal of Agricultural Education*, 34(3), 64-71.
- National Commission of Excellence in Education (1983). *A Nation at Risk: The imperative for educational reform*. Washington, DC: U.S. Government Printing Office.

- National Council for Agricultural Education, (2008). "10 x 15": The Long-Range Goal for Agricultural Education: Every student. Every classroom. Every day. <http://www.ffa.org/teamaged/10x15/index.html>, retrieved August 28, 2008.
- National Council for Agricultural Education, (2008^a). 10 x 15 Status Reports – February 2009 http://www.ffa.org/teamaged/10x15/documents/10x15_status_report2-7-09.pdf, retrieved April 6, 2009.
- National FFA Organization (2009). The FFA Mission. . Retrieved April 15, 2009, from http://www.ffa.org/index.cfm?method=c_about.mission.
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.
- Oliver, J., & Hinkle, D. (1982). Occupational educational research: Selecting statistical procedures. *Journal of Studies in Technical Careers*, 4 (3), 199 - 207.
- Organization for Economic Cooperation and Development. (2002). The teaching workforce: Concerns and policy challenges. In: Education policy analysis. Paris: Organization for Economic cooperation and Development.
- Park, T. D., & Rudd, R. (2005). A description of the characteristics attributed to students' decisions to teach agriscience. *Journal of Agricultural Education*, 46(3), 82-94.
- Parmley, J. D., Bowen, B. E., & Warmbrod, J. R. (1979, August). The supply and demand of teachers of agriculture: Can the situation be explained, Paper presented at the annual meeting of the Central Region Conference in Agricultural Education, Manhattan, KS.
- Patton, M. Q. (2002). *Qualitative Research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Peske, H. G., Liu, E., Johnson, S. M., Kauffman, D., & Kardos, S. M. (2001). The next generation of teachers: Changing conceptions of a career in teaching. *Phi Delta Kappan*, 83(4), 304-311.
- Porter, S. R., & Umbach, P. D. (2006). College major choice An analysis of the person-environment fit. *Research in Higher Education*, 47(4), 429-449).
- Priyadharshini, E., Robinson-Pant, A. (2003). The attraction of teaching: an investigation into why people change careers to teach. *Journal of Education for Teaching International Research and Pedagogy*, 29(2), 95-112.
- Ramsay, G., (2000). Quality matters. Revitalizing teaching: Critical times, critical choices. Report of the review of teacher education. Sydney, Australia: NSW Department of Education and Training.

- Reid, I., & Caudwell, J. (1997). Why did secondary PGCE students choose teaching as a career? *Research in Education*, 58, 46-58.
- Reis, R., & Kahler, A. A. (1997). Factors influencing enrollment in agricultural education programs as perceived by Iowa secondary agricultural education students. *Journal of Agricultural Education*, 38(2), 38-48.
- Richardson, P. W. & Watt, H. M. G. (2006). Who chooses teaching and why? Profiling characteristics and motivations across three Australian universities. *Asia-Pacific Journal of Teacher Education*, 34(1), 27-56.
- Richardson, P. W., & Watt, H. M. G. (2003, 17-20 September). Rethinking research into the choice of teaching as a career Application of a new theoretical approach. Paper presented at the European Conference on Educational Research, Hamburg, Germany.
- Roberts, T. G., & Dyer, J. E. (2004). Inservice needs of traditionally and alternatively certified agriculture teachers. *Journal of Agriculture Education*, 45(4), 57-70.
- Seng Yong, B.C. (1995). Teacher trainees' motives for entering into a teaching career in Brunei Darussalam. *Teacher and Teacher Education*, 11(3), 275-280.
- Serow, R. C. & Forrest, K. D. (1994). Motives and circumstances: Occupational-change experiences of prospective late-entry teachers. *Teachers and Teacher Education*, 10(5), 555-563.
- Spector, P. E. (1992). Summated rating scale construction: An Introduction: Quantative Applications in the Social Sciences, Vol. 82. Newbury Park, CA: Sage Publications.
- Stiegelbauer, S. (1992). Why we want to be teachers: New teachers talk about their reasons for entering the profession. Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA).
- Stuphin, D. H., & Newsom-Stewart, M. (1995). Student's rationale for selection of agriculturally related courses in high school by gender and ethnicity. *Journal of Agricultural Education*, 36(2), 54-61.
- Super, D., Savickas, M., & Super, C. (1996). The life-span, life-space approach to careers. In D. Brown, L. Brooks, & Associates (Eds.), *Career Choice and Development* (3rd ed.) San Francisco: Jossey Bass.
- Swanson, J. L. & Fouad, N. A. (1999). *Career theory and practice*. Thousand Oaks, CA: Sage Publications.
- Thompson, J. C., & Russell, E. B. (1993). Beliefs and intentions of counselors, parents, and students regarding agriculture as a career choice. *Journal of Agricultural Education*, 34(4), 55-63.

- Washburn, S. G., Garton, B. L., & Vaughn, P. R. (2002). Factors influencing college choice of agriculture students college-wide compared with students majoring in agricultural education. Proceedings of the 24th National Agricultural Education Research Conference, Las Vegas, NV, 24, 327-333.
- Watt, H. M. G., & Richardson, P. W. (2007). Motivational factors influencing teaching as a career choice: Development of the FIT-Choice scale. *The Journal of Experimental Education*, 75(3), 167-202.
- Watt, H. M. G., Richardson, P. W., & Pietsch, J. (2007). Choosing to teach in the “STEM” disciplines: Characteristics and motivations of Science, ICT, and Mathematics Teachers, Proceedings of the 30th Annual conference of the Mathematics Education Research Group of Australia. *Tasmania*, 2, 795-804.
- Weaver, W. T. (1984). Solving the problem of teacher quality, Part 1. *Phi Delta Kappan* 66(2), 108-115.
- White, P. (2007). Education and career choice: A new model of decision making. Basingstoke: Palgrave Macmillan.
- Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology*, 25, 68-81.
- Wildman, M., & Torres, R. M. (2001). Factors identified when selecting a major in agriculture. *Journal of Agricultural Education*, 42(2), 46-55.
- Wright, M. D., & Custer, R. L. (1998). Why they want to teach: Factors influencing students to become technology education teachers. *Journal of Technology Education*, 10(1), 58-70.

APPENDICIES

APPENDIX A

Instrument use agreement

From: Helen Watt [Helen.Watt@education.monash.edu.au]
Sent: Monday, September 24, 2007 11:55 PM
To: Lawver, Rebecca Grace (UMC-Student)
Cc: paul.richardson@education.monash.edu;
helen.watt@education.monash.edu.au
Subject: Re: FIT-choice scale
Attachments: Watt&Richardson_JXE2007.pdf;
Richardson&Watt_APJTE2006.pdf; FIT_survey_copyrighted.pdf

Dear Rebecca (cc to Paul),

you are most welcome to use our scale. I have attached to this email:

- the formatted scale as we had it laid out
- the scale validation publication (JXE)
- descriptive statistics obtained across a large teacher education Australian sample using the FIT-Choice scale (APJTE), which also contains a helpful table documenting which items tap which subscales.

We would be interested to know more about your context and planned study. It may also prove useful to contrast our findings in a joint publication down the track.

best regards,
Helen.

Lawver, Rebecca Grace (UMC-Student) wrote:
Dear Professor Watt,

My name is Rebecca Lawver and I am working on research in agricultural education at the University of Missouri in Columbia, MO, USA. I found your article on the Motivational Factors Influencing teaching as a Career Choice and really like what you have done and I think it will fit nicely with a current study we are working on.

I was writing to ask if it would be possible for me to potentially replicate this study here in the US and if you would be willing to share your survey instrument you used.

Thank you for your time and consideration.

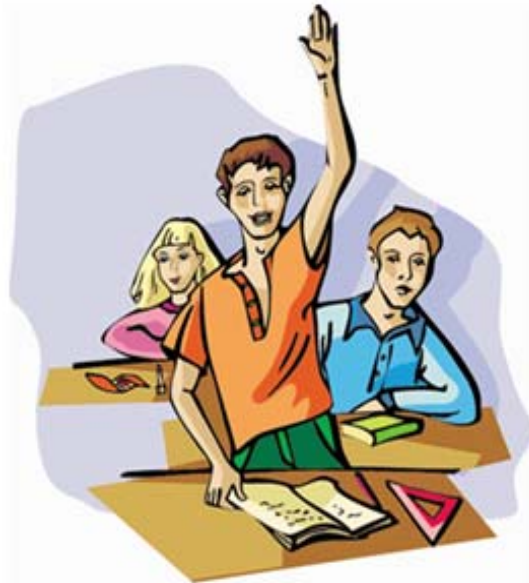
Sincerely,

Rebecca G. Lawver
Graduate Research and Teaching Assistant
Agricultural Education
124 Gentry Hall
Columbia, MO 65211
573-884-7561

APPENDIX B

Ag-Ed FIT-Choice Questionnaire

Teaching High School Agricultural Education



University of Missouri
125A Gentry Hall
Columbia, MO 65211



Thank you for participating in this study.

The purpose of this study is to determine the factors that influence your choice as a senior agricultural education major to choose a career as a high school agricultural education teacher.

Your participation is voluntary. If you choose to participate in the study, it will take approximately 20 -30 minutes of your time.

All your responses will be kept confidential. Only those directly involved with this project will have access to the data.

If you have any questions about the study, please feel free to contact me at 573-882-2200.

Thank you for taking the time to assist me with this study.

Sincerely,

Rebecca G. Lawver



Part 1:
Attitude toward Becoming a High School Agriculture Teacher

Directions: For each statement below, please rate your level of agreement (*definitely disagree to definitely agree, or uncertain*) regarding your career decision to teach high school agricultural education. Please bubble in the circle that best reflects your attitude.

An example is provided.

<i>"I want to become a high school agriculture teacher because..."</i>	Definitely Disagree	Disagree	Not Sure	Agree	Definitely Agree
<i>Example: I am interested in teaching.</i>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>This person is not sure about his/her interest in teaching.</i>					
1. I am interested in teaching high school agriculture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. teaching agriculture could allow for more family time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. my friends think I should become a High School agriculture teacher.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. agriculture teachers have lengthy holidays.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I have the qualities of a good agriculture teacher.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. teaching agriculture allows me to provide a service to society.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I have always wanted to become an agriculture teacher.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. teaching agriculture will be a useful job for me to have when traveling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. teaching agriculture will allow me to shape adolescent values.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Continued...

<i>"I want to become a high school agriculture teacher because..."</i>	Definitely Disagree	Disagree	Not Sure	Agree	Definitely Agree
10. I want to help adolescents learn.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I was unsure of what career I wanted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I like teaching about agriculture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I want a job that involves working with adolescents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. teaching agriculture will offer a steady career path.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. teaching hours will fit with the responsibilities of having a family.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. I have had inspirational agriculture teachers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. as an agriculture teacher I will have a short working day.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. I have good teaching skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. teachers make a worthwhile social contribution.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. a teaching qualification is recognized everywhere.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. teaching agriculture will allow me to influence the next generation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. my family thinks I should become an agriculture teacher.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. I want to work in an adolescent-centered environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. teaching will provide a reliable income.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. school holidays will fit in with family commitments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. I have had good teachers as role-models.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Continued...

	Definitely Disagree	Disagree	Not Sure	Agree	Definitely Agree
<i>"I want to become a high school agriculture teacher because..."</i>					
27. teaching agriculture will enable me to 'give back' to society.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. teaching agriculture is not my first career choice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. teaching will allow me to raise the ambitions of underprivileged youth.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. I like working with adolescents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. teaching agriculture will be a secure job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. I have had positive classroom learning experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. people I've worked with think I should become an agriculture teacher.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. teaching agriculture is a career suited to my abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. a teaching job will allow me to choose where I wish to live.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. I chose teaching as a last-resort.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37. teaching will allow me to benefit the socially disadvantaged.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. teaching is a fulfilling career	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39. teaching agriculture will allow me to have an impact on adolescents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40. teaching agriculture will allow me to work against social disadvantage.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Part 2:
Your Beliefs About Teaching

Directions: For each statement below, please rate your level of agreement (*definitely disagree to definitely agree, or uncertain*) regarding your beliefs about teach high school agricultural education. Please bubble in the circle that best reflects your beliefs.

An example is provided.

		Definitely Disagree	Disagree	Not Sure	Agree	Definitely Agree
"Compared with other professionals (e.g., sales persons, managers, science teachers)...						
<i>Example: teachers are well paid.</i>		<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>This person is "not sure" about his/her belief that teachers are well paid</i>						
1	agriculture teachers are well paid.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	agriculture teachers have a heavy work load.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	agriculture teachers earn a good salary.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	agriculture teachers are perceived as professionals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	agriculture teachers have high morale.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	teaching agriculture is a highly skilled occupation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	teaching agriculture is emotionally demanding.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	teaching agriculture is a high-status occupation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	agriculture education teachers feel valued by society.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	teaching agriculture requires a high level of expert knowledge.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Continued...

	Definitely Disagree	Disagree	Not Sure	Agree	Definitely Agree
11. teaching agriculture is hard work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. teaching agriculture is a well-respected career.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. agriculture teachers feel their occupation has a high social status.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. agriculture teachers need high level of technical knowledge.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. agriculture teachers need highly specialized knowledge.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Part 3:
Your Decision to Become a Teacher

Directions: For each statement below, please rate your level of agreement (*definitely disagree to definitely agree, or uncertain*) regarding your decision to become high school agriculture teacher. Please bubble in the circle that best reflects your belief.

An example is provided.

	Definitely Disagree	Disagree	Not Sure	Agree	Definitely Agree
<i>Example: I have carefully thought about becoming a teacher.</i>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>This person is "not sure" about how careful he/she thought about becoming a teacher.</i>					
1. I have carefully thought about becoming an agriculture teacher.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I was encouraged to pursue careers other than teaching agriculture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I am satisfied with the choice to become an agriculture teacher.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Others have told me that teaching agriculture was not a good career.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I am happy with my decision to become an agriculture teacher.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Others influenced me to become an agriculture teacher.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Part 4: About You

Directions: Please share more about yourself, by bubbling in the circle of the response that best represents you.

1. What is your gender?
 - Female
 - Male

2. Compared to your peers, how much agriculture experience do you have?
 - Less than others
 - The same as others
 - More than others

3. Have you ever been a member of 4H?
 - Yes
 - If "Yes"
How many years were you a member? _____
 - No

4. Have you ever been a member of FFA?
 - Yes
 - If "Yes"
How many years were you a member? _____
 - No

5. Did you take agricultural education in high school?
 - Yes
 - If "Yes"
How many years did you take? _____
 - No



6. Did you have a Supervised Agricultural Experience (SAE) project? If "Yes" please describe your project(s) in the table below: a) identify the SAE type and, b) provide a description.

Yes

No

Key: SAE Types
Entrepreneurship
Placement
Research/Experimentation
Exploratory

SAE Type	Description
<i>Ex. Entrepreneurship</i>	<i>Beef Production</i>
1.	
2.	
3.	
4.	
5.	

7. What is the highest FFA degree you have received?
(please bubble)

Discovery

Greenhand

Chapter

State

American

Have not received a degree



12. Please take this opportunity offer any additional comments about your career decision you wish to offer.

Thank you very much contributing
your thoughts and beliefs to understanding why persons
decide to teach high school agriculture!



APPENDIX C

Panel of Experts

PANEL MEMBERS

DR. MOLLIE ASCHENBRENER
CALIFORNIA STATE UNIVERSITY, CHICO
Lecturer
Agriscience and Education

DR. BRYAN GARTON
UNIVERSITY OF MISSOURI
Interim Associate Dean and Director
College of Agriculture, Food and Natural Resources

DR. AMY R. SMITH
UNIVERSITY OF MISSOURI
Lecturer
Agricultural Education

DR. ROBERT TERRY, JR.
UNIVERSITY OF MISSOURI
Professor & Department Chair
Agricultural Education

DR. ROBERT M. TORRES
UNIVERSITY OF MISSOURI
Professor & Director of Graduate Studies
Agricultural Education

DR. JONATHAN D. ULMER
TEXAS TECH UNIVERSITY
Assistant Professor
Agricultural Education & Communication

DR. HELEN WATT
MONASH UNIVERSITY
Melbourne, Australia
Associate Professor
Education

APPENDIX D

Sub-constructs of the Ag Ed FIT-Choice Instrument

AG ED FIT-CHOICE SUB-CONSTRUCTS AND ITEMS^a

Higher-Order Factor	Factor	Item #	Question
N/A	Ability	B5	I have the qualities of a good agriculture teacher
N/A		B18	I have good teaching skills
N/A		B34	Teaching agriculture is a career suited to my abilities
N/A	Intrinsic Career Value	B1	I am interested in teaching secondary agriculture
N/A		B7	I have always wanted to become an agriculture teacher
N/A		B12	I like teaching about agriculture
N/A	Fallback Career	B11	I was unsure of what career I wanted
N/A		B28	Teaching agriculture is not my first career choice
N/A		B36	I chose teaching as a last resort
Personal Utility Value	Job Security	B14	Teaching agriculture will offer a steady career path
		B24	Teaching will provide a reliable income
		B31	Teaching agriculture will be a secure job
	Time for Family	B2	Teaching agriculture could allow for more family time
		B15	Teaching hours will fit with the responsibilities of having a family
		B25	School holidays will fit in with family commitments
		B4	As an agriculture teacher I will have lengthy holidays
		B17	As an agriculture teacher I will have a short working day
	Job Transferability	B8	Teaching agriculture will be a useful job for me to have when traveling
		B20	A teaching qualification is recognized everywhere
		B35	A teaching job will allow me to choose where I wish to live
Social Utility Value	Shape the future of adolescents	B9	Teaching agriculture will allow me to shape adolescent values
		B21	Teaching agriculture will allow me to influence the next generation
		B39	Teaching agriculture will allow me to have an impact on adolescents

Higher-Order Factor	Factor	Item #	Question
	Enhance Social Equity	B29	Teaching will allow me to raise the ambitions of underprivileged youth
		B37	Teaching will allow me to benefit the socially disadvantaged
		B40	Teaching agriculture will allow me to work against social disadvantage
Social Utility Value	Make Social Contribution	B6	Teaching agriculture allows me to provide a service to society
		B19	Teachers make a worthwhile social contribution
		B27	Teaching agriculture enables me to 'give back' to society
	Work With Adolescents	B13	I want a job that involves working with adolescents
		B23	I want to work in an adolescent-centered environment
		B30	I like working with adolescents
N/A	Prior Teaching and Learning Experiences	B16	I have had inspirational agriculture teachers
		B26	I have had good teachers as role-models
		B32	I have had positive learning experiences
	Social Influences	B3	My friends think I should become a secondary agriculture teacher
		B22	My family thinks I should become an agriculture teacher
		B33	People I've worked with think I should become an agriculture teacher
Task Demand	Expert Career	C10	Agriculture education teachers feel valued by society
		C14	Agriculture education teachers need high level of technical knowledge
		C15	Agriculture education teachers need highly specialized knowledge
	High Demand	C2	Agriculture teachers have a heavy work load
		C7	Teaching agriculture is a highly skilled occupation
		C11	Teaching agriculture is hard work
Task Return	Social Status	C4	As an agriculture teacher I will have lengthy holidays
		C8	Teaching agriculture is a high-status occupation
		C12	Teaching agriculture is a well-respected career

Higher-Order Factor	Factor	Item #	Question
	Teacher Morale	C5	Agriculture teachers have high morale
		C9	Agriculture education teachers feel valued by society
		C13	Agriculture education teachers feel their occupation has a high social status
	Salary	C1	Agriculture teachers are well paid.
		C3	Agriculture teachers earn a good salary.
N/A	Social Dissuasion	D2	Agriculture education teachers feel their occupation has a high social status
		D4	Others have told me that teaching agriculture was not a good career
		D6	Others influenced me to become an agriculture teacher
N/A	Satisfaction With Choice	D1	I have carefully thought about becoming an agriculture teacher
		D3	I am satisfied with the choice to become an agriculture teacher
		D5	I am happy with my decision to become an agriculture teacher

^aAdapted from Watt and Richardson (2006)

APPENDIX E

Email Letter to panel members

September 8, 2008

Dear{INSERT NAME HERE},

Good morning! I hope this email finds you enjoying the start of the new school year! As a third year doctoral student at the University of Missouri, I have been working on the preparations for my dissertation – which addresses the factors that influence students' choice to become a secondary agriculture teacher. Because of your expertise I would like to ask for your assistance and to serve on my “panel of experts.” I am currently in the final stages of preparing my dissertation instrument and would appreciate your input and assistance in determining its validity. I realize that the beginning of the year can be very busy, however I hope you can assist me with this. Your knowledge and expertise is very valuable to me.

I would particularly like your feedback regarding both face and construct validity of the instrument. The instrument will be mailed to participants, however I have emailed a Word attachment to you for ease of reading and tracking changes (if you desire). Please feel free to comment on word choice, ambiguity and whether or not items align with the constructs.

You will notice four sections in the instrument Part 1 determines attitudes about teaching agriculture, Part 2 identifies the beliefs of career in teaching, Part 3 addresses the decision to become an agriculture teacher and Part 4 is a demographic section. Parts 1 – 3 come directly from the FIT-Choice scale and have been adapted for this study. I have also attached the FIT-Choice subscales (see Figure 1) for your information. This should aid with construct validity.

Feel free to draft comments or concerns in a reply email message to this email. Should you have any questions please contact me by phone at 573-882-2200 by fax at 573-884-4444 or email at rgl4z7@mizzou.edu. I would appreciate any feedback you can provide by September 15th.

Finally, I would like to leave you with the research objectives for my dissertation.

Purpose of the Study

The purpose of this study was to determine the factors that influence the choice of senior agricultural education majors at twenty six institutions in the Midwest to choose a career as a secondary agricultural education teacher.

Research Objectives

1. Describe the demographic characteristics of seniors majoring in agricultural education at twenty six intuitions (gender, agriculture and agricultural education background, FFA experience, SAE experience, hometown, certification or non-certification option).
2. Describe the students' attitudes toward a career in teaching secondary agricultural education.
3. Describe the students' beliefs of teaching as a career.
4. Identify the students' intentions to teach secondary agricultural education after graduation.
5. Compare the students' attitudes and beliefs about teaching secondary agricultural education and their, certification or non-certification, agricultural education background and intentions to teach.

Thank you in advance for your help with this!! Hopefully with your feedback and feedback from others this instrument will be useful for others when wishing to assess the factors that influence students' choice to become agriculture teachers.

Sincerely,

Becki Lawver
University of Missouri

APPENDIX F

Initial Email to faculty at selected institutions

SUBJECT LINE: Question regarding dissertation

September 12, 2008

Dear Dr. {INSERT NAME HERE},

I am in the process of securing participants for my dissertation – *Factors Influencing the Choice to Teach: A Study of Agricultural Education Majors*, and was wondering if you may be able to help.

I have submitted an application to the University of Missouri Institutional Review Board (IRB), and prior to contacting students I must receive IRB approval from MU as well as contact your institutional IRB.

In order for me to utilize my time effectively could you please answer a few questions for me?

- #1 Do you have access to senior agricultural education (teacher certification) students this fall?
Ex. In a methods course
- #2 If so, how many teacher certification seniors are there?
- #3 How many will be student teaching in the Spring?
- #4 Would you be willing to distribute and collect my dissertation instrument to these students?

For your information, I have included the purpose and research objectives of my study. Your role would be minimal and would only ask for you to distribute and collect instruments if possible.

Thank you for your consideration!

Purpose of the Study

The purpose of this study was to determine the factors that influence the choice of senior agricultural education majors at 26 selected institutions to become secondary agricultural education teachers.

Research Objectives

1. Describe the demographic characteristics of seniors majoring in agricultural education at 26 institutions (sex, agriculture and agricultural education background, FFA, SAE, and 4-H experience).
2. Describe the students' attitudes toward a career in teaching secondary agricultural education.
3. Describe the students' beliefs of teaching as a career.
4. Identify the students' intentions to teach secondary agricultural education after graduation.
5. Compare the students' attitudes and beliefs of teaching secondary agricultural education and their, agriculture and agricultural education background, FFA, SAE, and 4-H experience.

Sincerely,
Rebecca G. Lawver
University of Missouri
Graduate Teaching Assistant

APPENDIX G

Pre-notice Email and instructions to consenting institutions

SUBJECT LINE: Teach Ag Ed Study

November 3, 2008

Dear Dr. {INSERT NAME HERE},

Good afternoon, I hope the semester is treating you well.

In the next few days, you will be receiving a packet of questionnaires for a study entitled *Factors influencing students' choice to teach: A study of agricultural education majors*. This is your official invitation to aid with this study. Again, all I am asking is for your assistance in the distribution and collection of instruments. A more detailed letter and instructions will be included in the packet.

I hope to receive the questionnaires back by November 21st, prior to students leaving campus for Thanksgiving break. However, if you have any time constraints or foresee any issues returning the questionnaire by then, please don't hesitate to contact me at rgl4z7@mizzou.edu.

Once again your assistance is very important; I look forward to the responses! If you have any questions or concerns please contact me.

Purpose of the Study

The purpose of this study was to determine the factors that influence the choice of senior agricultural education majors at 25 selected intuitions to become secondary agricultural education teachers.

Research Objectives

1. Describe the demographic characteristics of seniors majoring in agricultural education at 25 intuitions (sex, agriculture and agricultural education background, FFA, SAE, and 4-H experience).
2. Describe the students' attitudes toward a career in teaching secondary agricultural education.
3. Describe the students' beliefs of teaching as a career.
4. Identify the students' intentions to teach secondary agricultural education after graduation.
5. Compare the students' attitudes and beliefs of teaching secondary agricultural education and their, agriculture and agricultural education background, FFA, SAE, and 4-H experience.

Thank you again.

Rebecca G. Lawver
University of Missouri
Graduate Teaching Assistant

APPENDIX H

Letter included in questionnaire packet

November 3, 2008

Dear Dr. {INSERT NAME HERE},

Thank you for assisting with this research, your help is greatly appreciated.

Need for Study: This study is to determine the factors that influence the choice of senior agricultural education majors at 19 selected institutions on becoming secondary agricultural education teachers. Students in secondary agricultural education classrooms need teachers who are certified, have knowledge of the discipline, and are committed to the profession. With a high demand for qualified agricultural education teachers, it is essential to understand what draws them to the profession.

Your responsibility: Please distribute the enclosed questionnaires to the senior agricultural education students who will be student teaching next semester. After completion of the questionnaire, please collect and return the questionnaires in the self addressed, stamped envelope by **November 21, 2008**.

Time required: The questionnaire should take approximately 20 – 30 minutes for individuals to complete.

If you have any questions about this research project you may contact me at (573)882-2200. There are no anticipated risks, compensation or other direct benefits to you or the students as participants in this study. Students are free to withdraw consent to participate and may discontinue participation in the interview at any time without consequence. This study has been reviewed and approved by the University of Missouri Institutional Review Board, IRB # 1122237.

Again, thank you for supporting me in this endeavor.

Sincerely,

Rebecca G. Lawver
University of Missouri
Graduate Teaching Assistant

APPENDIX I

Thank you Email to faculty members

SUBJECT LINE: Teach Ag Ed Study

December 4, 2008

Dear {INSERT NAME HERE},

Thank you for your assistance in the “Teach Agricultural Education” study. I appreciate your willingness to help.

Rebecca (Becki) G. Lawver
Graduate Teaching Assistant
University of Missouri
125A Gentry Hall
Columbia, MO 65211
573-882-2200 office
402-719-0111 cell

APPENDIX J

Follow-up Email to faculty members

SUBJECT LINE: Teach Ag Ed Study

December 4, 2008

Dear {INSERT NAME HERE},

Good afternoon! Recently, you received a packet of questionnaires asking for your help in collecting data from your students. I was writing to inquire about the status of the “teach high school agricultural education” questionnaires that you were sent in November. If you could please send them to me by **December 15th**, that would be great!

Thanks again for all your help. I really appreciate it.

Rebecca (Becki) G. Lawver
Graduate Teaching Assistant
University of Missouri
125A Gentry Hall
Columbia, MO 65211
573-882-2200 office
402-719-0111 cell

APPENDIX K

Reminder Email

SUBJECT LINE: Teach Ag Ed Study

January 2, 2009

Dear {INSERT NAME HERE},

Good afternoon! I Hope you are having a great start to your new year. Recently, you received a packet of questionnaires asking for your help in collecting data from your students. I was writing to find if you needed more time or additional copies of the questionnaires. Please let me know as soon as possible so that I can assist you.

Thanks again for all your help. I really appreciate it.

Rebecca (Becki) G. Lawver
Graduate Teaching Assistant
University of Missouri
125A Gentry Hall
Columbia, MO 65211
573-882-2200 office
402-719-0111 cell

APPENDIX L

Letter included with replacement packet of questionnaires

January 27, 2009

Dear Dr. {INSERT NAME HERE},

Thank you for assisting with this research, your help is greatly appreciated.

Need for Study: This study is to determine the factors that influence the choice of senior agricultural education majors at 20 selected institutions on becoming secondary agricultural education teachers. Students in secondary agricultural education classrooms need teachers who are certified, have knowledge of the discipline, and are committed to the profession. With a high demand for qualified agricultural education teachers, it is essential to understand what draws them to the profession.

Your responsibility: Please distribute the enclosed questionnaires to the senior agricultural education students who will be or are student teaching this year. After completion of the questionnaire, please collect and return the questionnaires in the self addressed, stamped envelope as soon as possible.

Time required: The questionnaire should take approximately 20 – 30 minutes for individuals to complete.

If you have any questions about this research project you may contact me at (573)882-2200. There are no anticipated risks, compensation or other direct benefits to you or the students as participants in this study. Students are free to withdraw consent to participate and may discontinue participation in the interview at any time without consequence. This study has been reviewed and approved by the University of Missouri Institutional Review Board, IRB # 1122237.

Again, thank you for supporting me in this endeavor.

Sincerely,

Rebecca G. Lawver
University of Missouri
Graduate Teaching Assistant

APPENDIX M

Final contact with faculty members Email reminder

SUBJECT LINE: Teach Ag Ed Study

February 2, 2009

Dear {INSERT NAME HERE},

In the past few weeks you have been sent a reminder to assist with the “Teach agricultural education” study. This is your final chance to participate. Included is a brief reminder of your responsibilities and the time required for the students. Please return the questionnaires in the self addressed stamped envelope by **February 20th**.

Your responsibility: Please distribute the enclosed questionnaires to the senior agricultural education students who will be or are student teaching this year. After completion of the questionnaire, please collect and return the questionnaires in the self addressed, stamped envelope as soon as possible.

Time required: The questionnaire should take approximately 20 – 30 minutes for individuals to complete.

Again, thank you!

Rebecca (Becki) G. Lawver
Graduate Teaching Assistant
University of Missouri
125A Gentry Hall
Columbia, MO 65211
573-882-2200 office
402-719-0111 cell

APPENDIX N

Test for Assumptions for Multiple Linear Regression

Tests for Linearity Research Objective 8

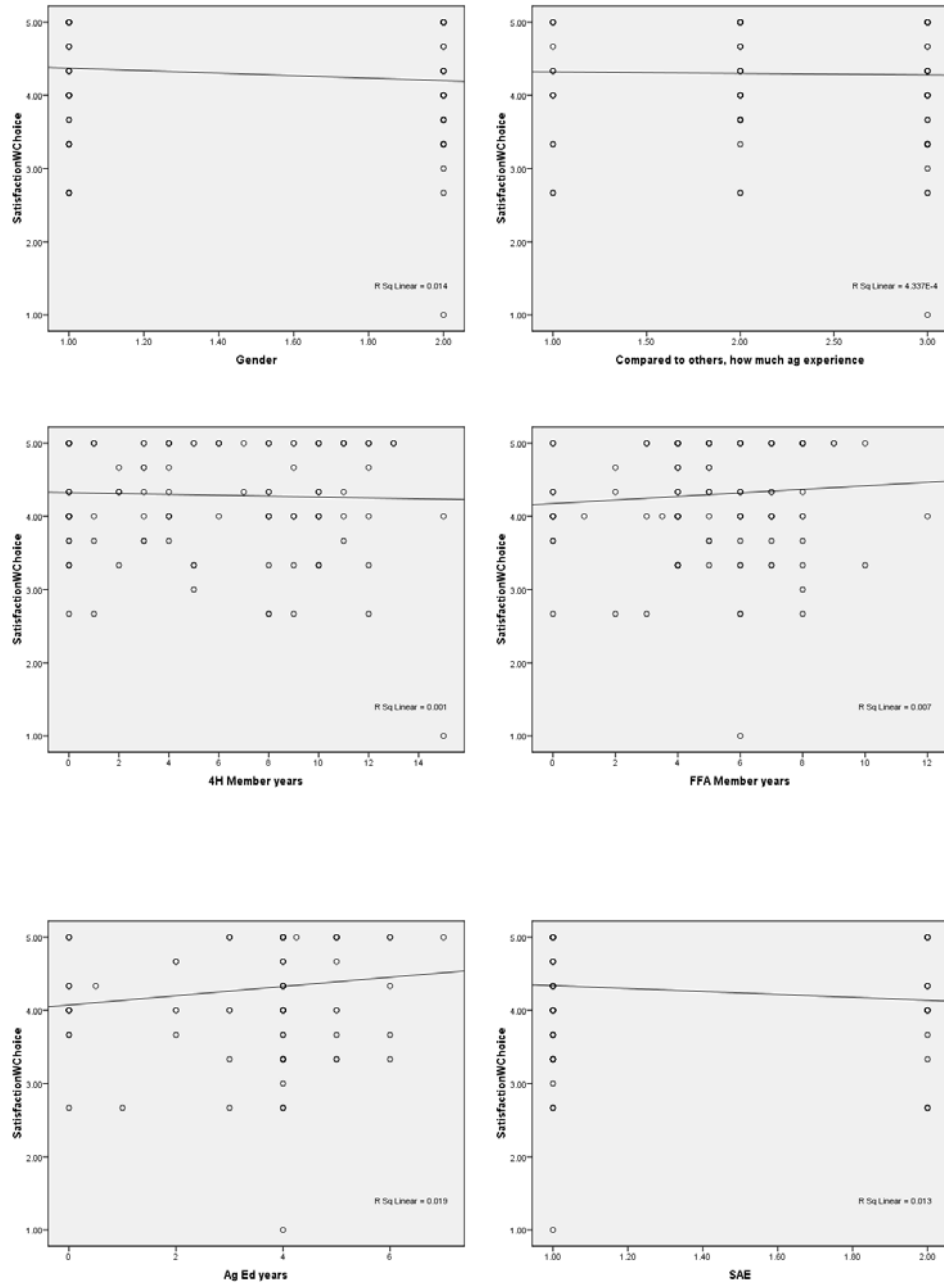


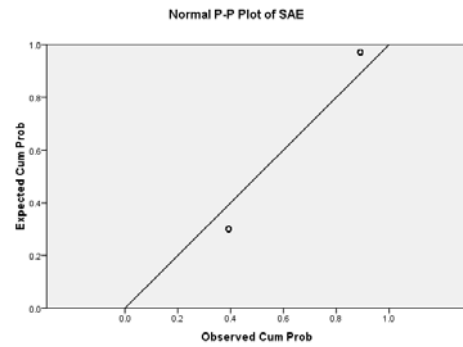
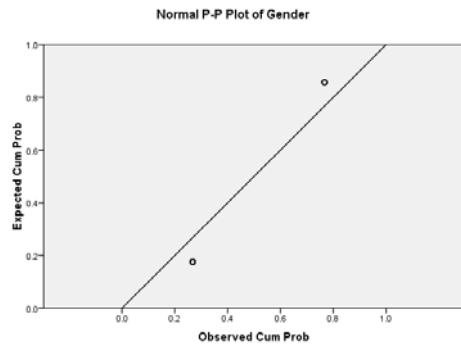
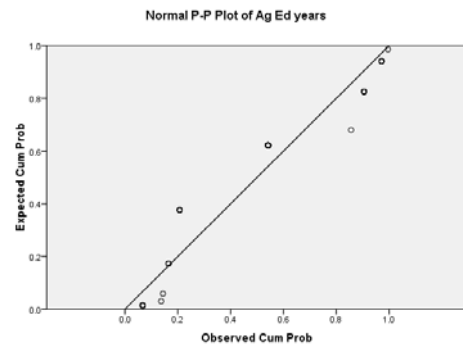
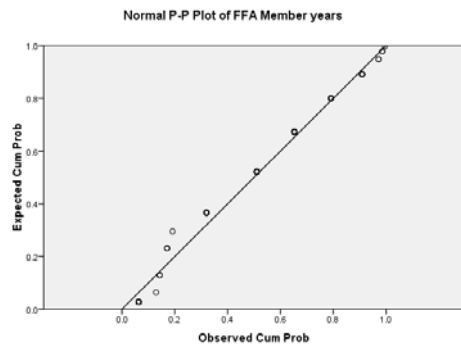
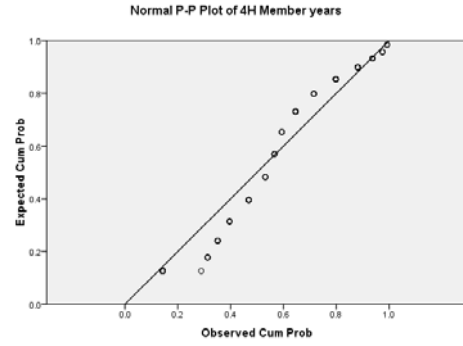
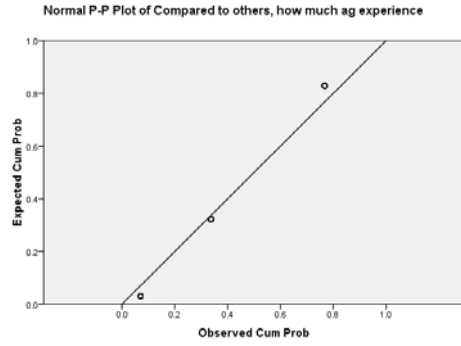
Table 21

Summary Table of Bivariate Intercorrelation between Characteristics (n = 145)

Variable	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	Y ₁
Sex ^a (X ₁)	1.00	.23	-.19	-.10	-.02	.08	-.11
Ag Experience Compared to Peers ^b (X ₂)		1.00	.22	.25	.38	-.19	-.02
Years in 4-H (X ₃)			1.00	.15	.24	-.15	-.05
Years in FFA (X ₄)				1.00	.64	-.64	.08
Years in School Based Ag Ed (X ₅)					1.00	-.63	.14
SAE Participation ^c (X ₆)						1.00	-.11
Satisfaction with Choice (Y ₁)							1.00

Note. Sex^a; 1 = Female, 2 = Male; Ag Experience Compared to Peers^b; 1 = Less than, 2 = Same as, 3 = More than; SAE^c; 1 = Yes, 2 = No

Test for Normality Research Objective 8



Tests for Linearity Research Objective 9

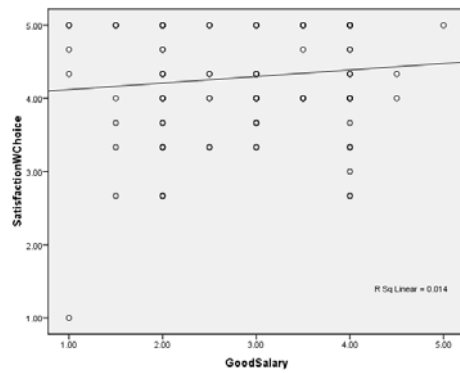
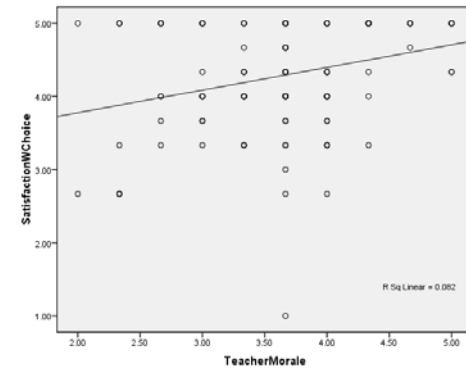
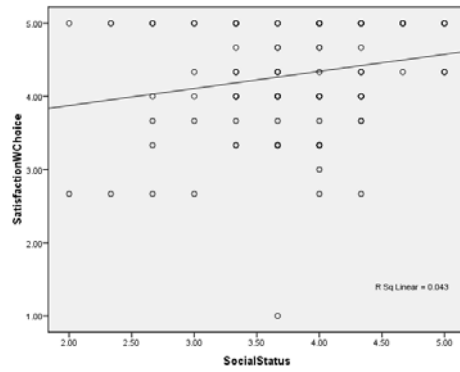
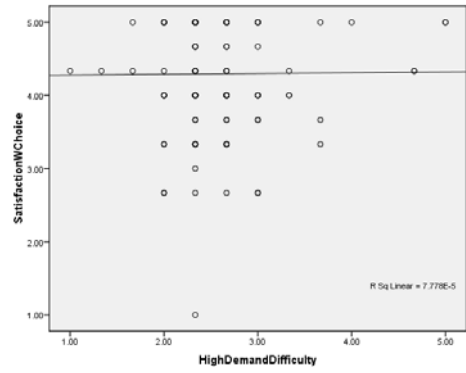
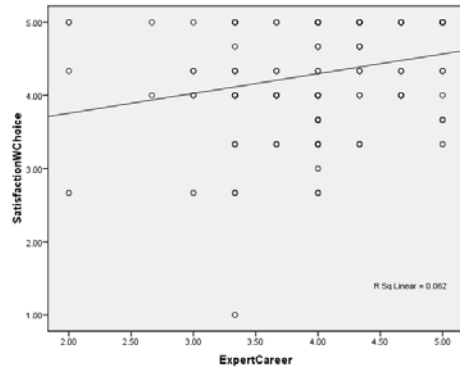


Table 22

Summary Table of Bivariate Intercorrelation between Sub-Constructs of Belief (n = 145)

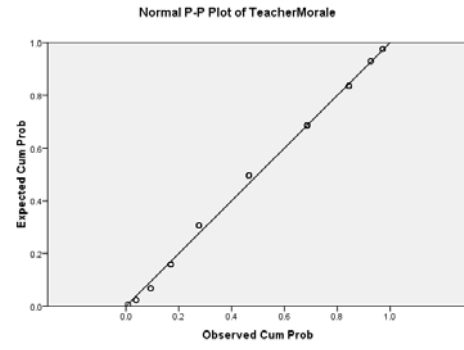
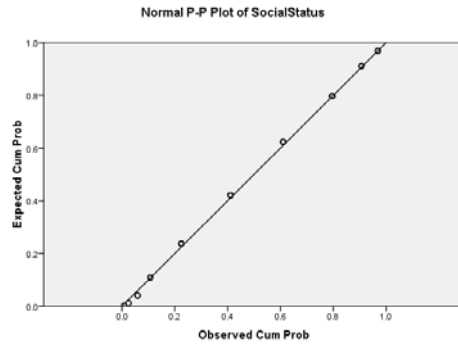
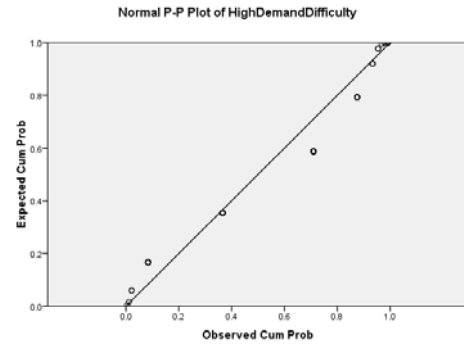
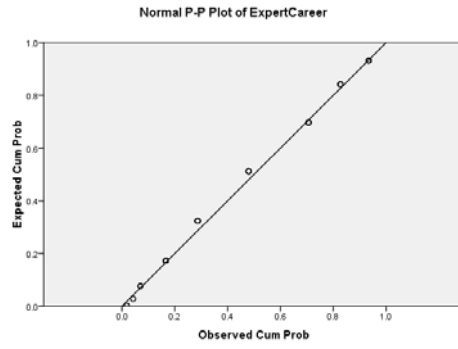
Variable	X ₁	X ₂	X ₃	X ₄	X ₅	Y ₁
Expert Career (X ₁)	1.00	.07	.20	.25	-.02	.25
High Demand (X ₂)		1.00	-.06	-.15	.01	.01
Social Status (X ₃)			1.00	.73	.34	.21
Teacher Morale (X ₄)				1.00	.24	.29
Salary (X ₅)					1.00	.12
Satisfaction with Choice (Y ₁)						1.00

Table 23

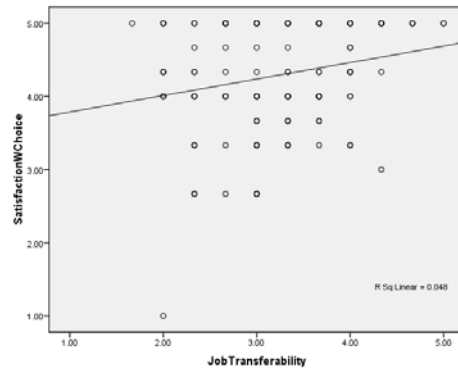
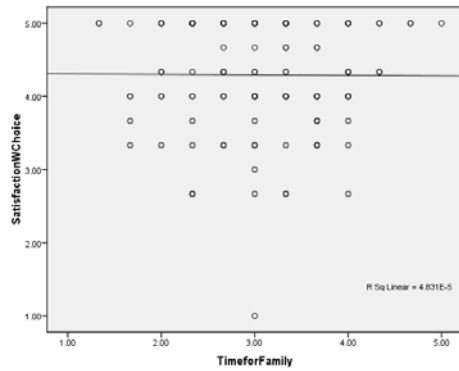
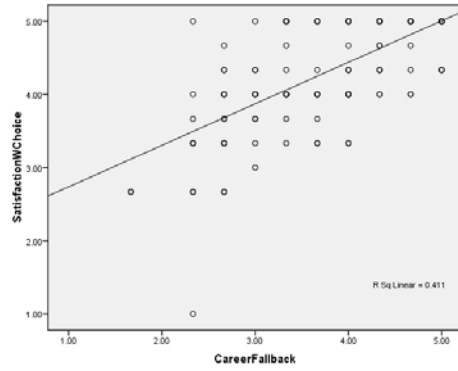
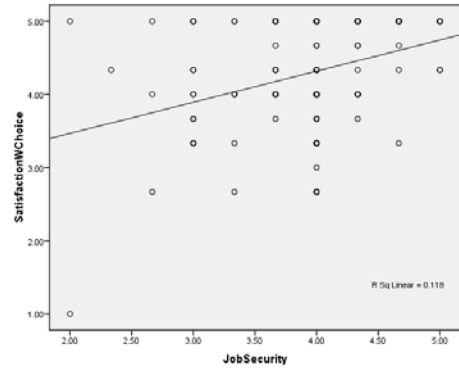
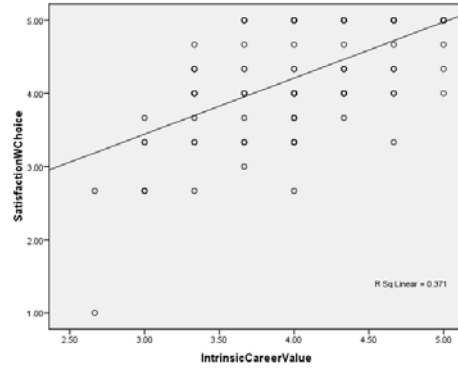
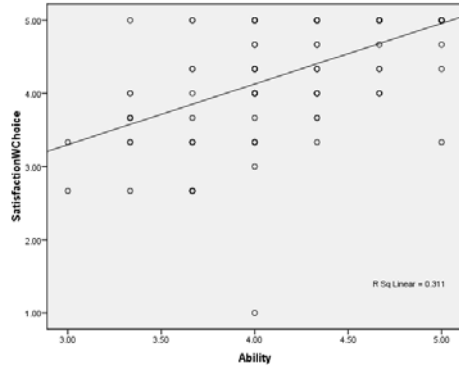
Tolerance for Regression on Sub-Constructs of Belief (n = 145)

Variable	Tolerance
High Demand	.97
Social Status	.44
Salary	.94

Test for Normality Research Objective 9



Tests for Linearity Research Objective 10



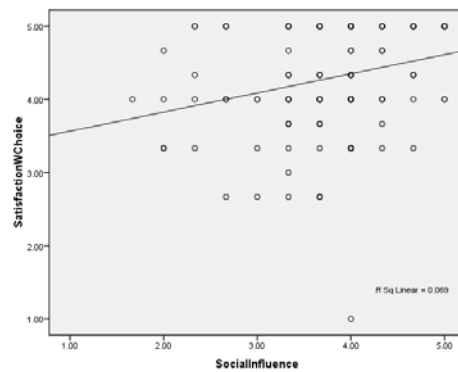
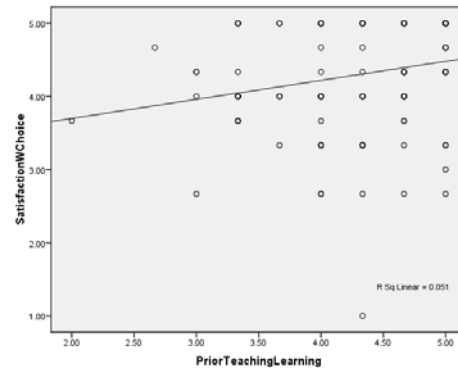
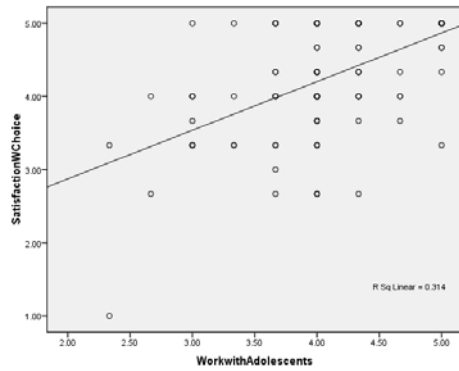
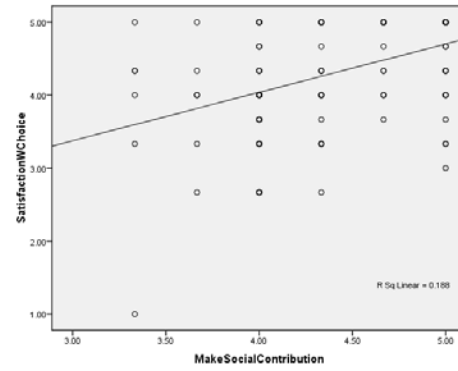
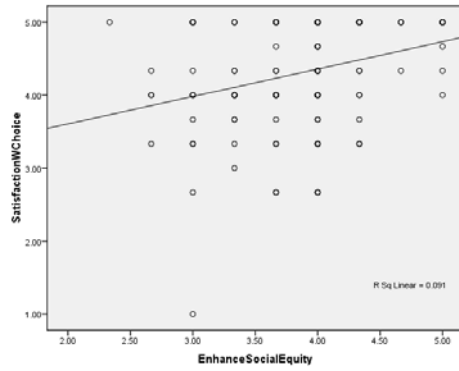
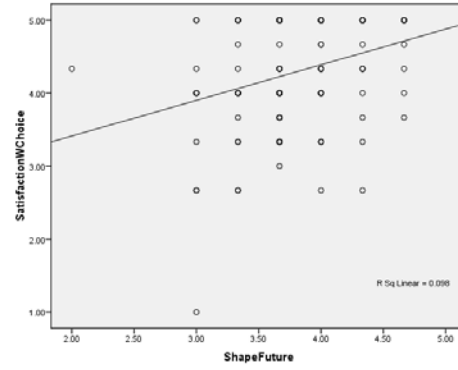
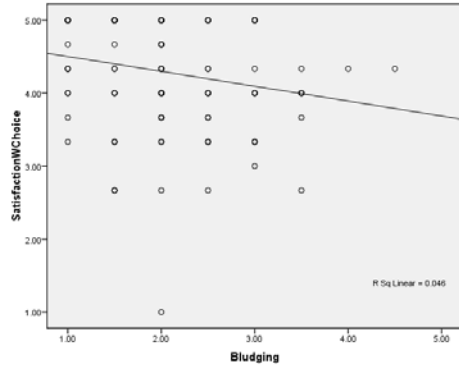


Table 24

Summary Table of Bivariate Intercorrelation between Sub-Constructs of Attitude (n = 145)

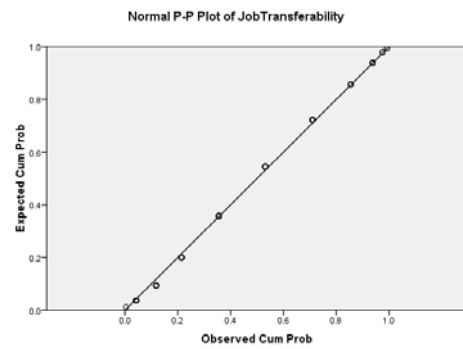
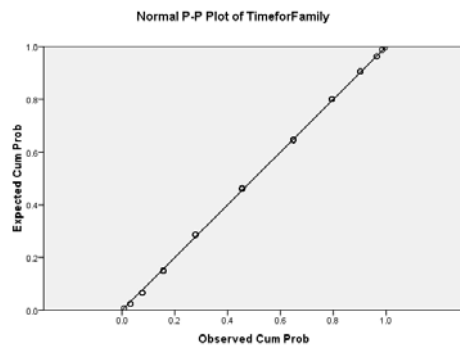
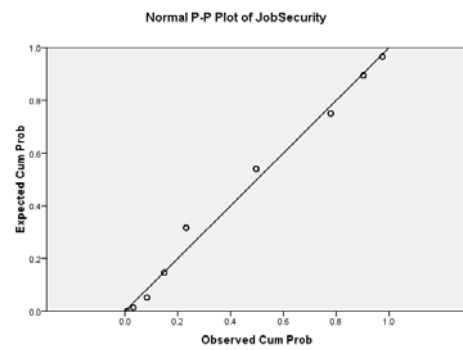
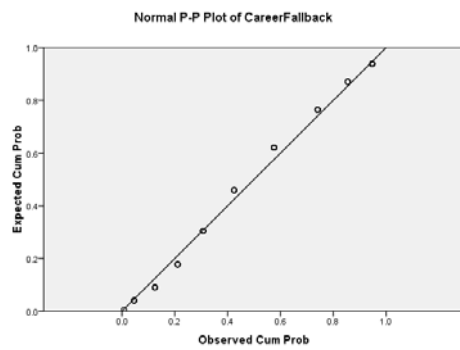
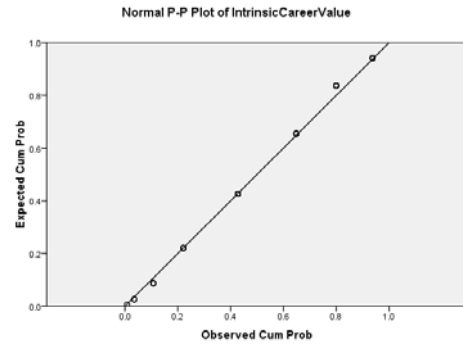
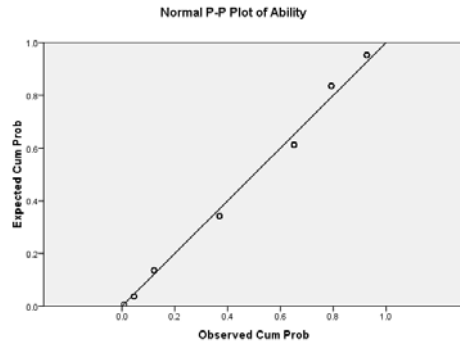
Variable	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₁	X ₁₂	X ₁₃	Y ₁
Ability (X ₁)	1.00	.49	.39	.45	.09	.32	-.20	.38	.36	.54	.49	.32	.34	.56
Intrinsic Career Value (X ₂)		1.00	.63	.22	-.01	.18	-.10	.24	.16	.38	.30	.29	.31	.61
Fallback Career (X ₃)			1.00	.08	-.11	.03	-.20	.17	.12	.20	.31	.23	.25	.64
Job Security (X ₄)				1.00	.21	.29	-.10	.31	.29	.42	.28	.21	.26	.34
Time for Family (X ₅)					1.00	.32	.41	.59	.16	.19	.05	-.09	.26	-.01
Job Transferability (X ₆)						1.00	.16	.32	.36	.49	.18	.06	.27	.22
Bludging (X ₇)							1.00	.18	-.08	-.11	-.25	-.10	.08	-.21
Shape the Future (X ₈)								1.00	.40	.52	.39	.12	.40	.31
Enhance Social Equity (X ₉)									1.00	.58	.48	.17	.33	.30
Make Social Contribution (X ₁₀)										1.00	.47	.20	.36	.43
Work with Adolescents (X ₁₁)											1.00	.25	.24	.56
Prior Teaching & Learning (X ₁₂)												1.00	.17	.23
Social Influence (X ₁₃)													1.00	.26
Satisfaction with Choice (Y ₁)														1.00

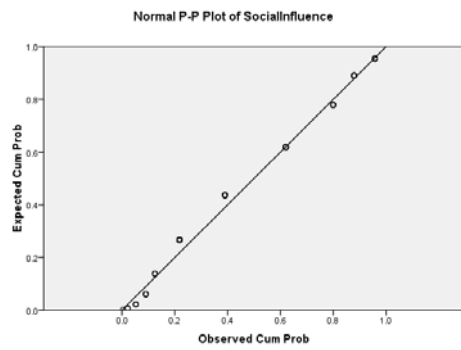
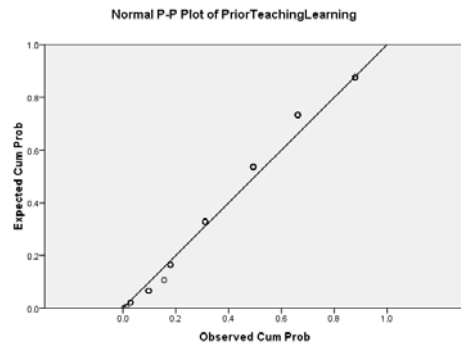
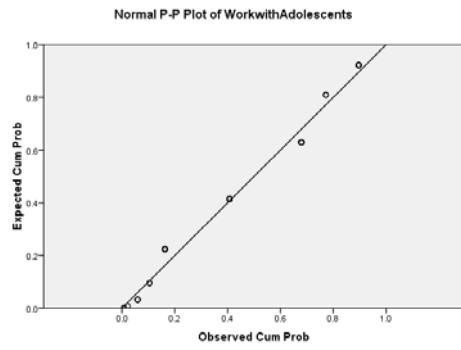
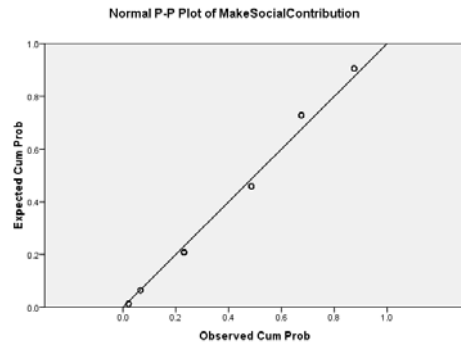
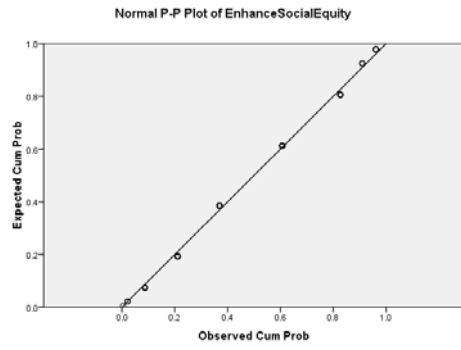
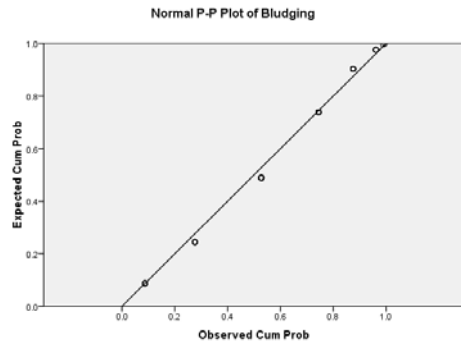
Table 25

Tolerance for Regression on Sub-Constructs of Attitude (n = 145)

Variable	Tolerance
Ability	.55
Time for Family	.94
Job Transferability	.88
Bludging	.92
Shape the Future	.79
Enhance Social Equity	.73
Make Social Contribution	.64
Prior Teaching & Learning	.87
Social Influence	.85

Test for Normality Research Objective 10





Tests for Linearity Research Objective 11

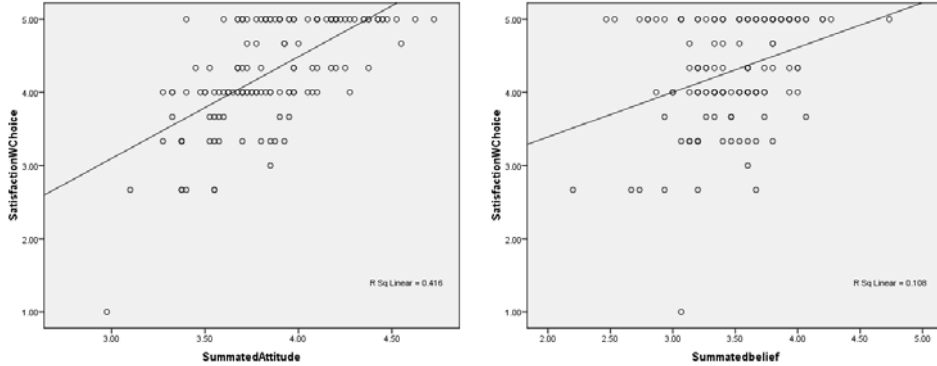


Table 26

Summary Table of Bivariate Intercorrelation between Attitude & Belief (n = 145)

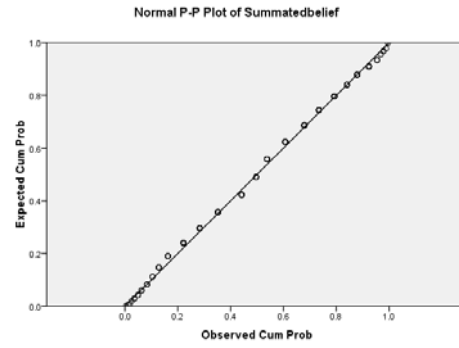
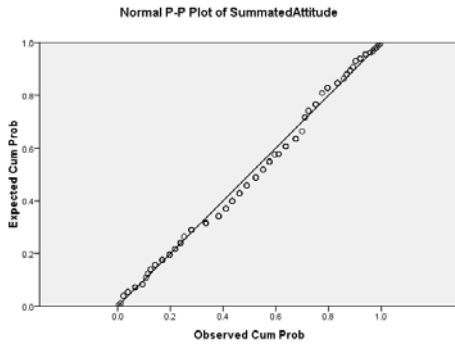
Variable	X ₁	X ₂	Y ₁
Attitude (X ₁)	1.00	.48	.64
Belief (X ₂)		1.00	.33
Satisfaction with Choice (Y ₁)			1.00

Table 27

Tolerance for Attitude and Beliefs (n = 145)

Variable	Tolerance
Summated Attitude	.76
Summated Beliefs	.76

Test for Normality Research Objective 11



VITA

Rebecca (Becki) Grace Lawver was born April 27, 1973 in Omaha, Nebraska. After earning her high school diploma from Elkhorn Public Schools in 1991, Becki attended the University of Nebraska in Lincoln, NE. Although Becki has a non-traditional background, she thanks her parents for allowing her to discover her career in agricultural education and believes that it is through her grandparents that she has acquired the passion for agriculture and teaching. She earned a Bachelor of Science in Agricultural Education, Leadership and Communications (1996), a Master's of Science in Leadership Education (2007), both from the University of Nebraska; and Doctorate of Philosophy in Agricultural Education from the University of Missouri (2009). Becki is married to Mark Alan Lawver, originally from Weston, NE. They have two children Caleb and Grace.

REFEREED JOURNAL ARTICLES

- Torres, R. M., Lawver, R. G., & Lambert, M. D. (2008). Job-related stress among agricultural education teachers: A comparison study. *Accepted in Journal of Agricultural Education*.
- Ulmer, J. D., Lawver, R.G., & Wall, A. B. (2009) Identifying priorities of first-year teachers and mentor teachers. *In review for Journal of Agricultural Education*.

REFEREED CONFERENCE PROCEEDINGS AND PRESENTATIONS

- Torres, R. M., Lawver, R. G., & Lambert, M. D. (2009). An investigation of job-related stress among secondary agricultural education teachers in Missouri and North Carolina. *Proceedings of the National Conference of the American Association for Agricultural Education*, Louisville, KY. *Accepted*.
- Torres, R. M., Lambert, M. D., & Lawver, R. G. (2009). Job Stress Among Secondary Agriculture Teachers: an explanatory study. *Proceedings of the National*

Conference of the American Association for Agricultural Education, Louisville, KY. Accepted.

- Lawver, R. G., Ulmer, J. D., & Wall, A. B. (2009). Teacher Induction Programs: Determining Priorities of First-Year Teachers and Mentor Teachers. *Proceedings of the National conference of the American Association for Agricultural Education, Louisville, KY. Accepted.*
- Ulmer, J. D., Lawver, R. G., & Wall, A. B. (2009). The priorities of first-year teachers and their mentors. *Proceedings of the Western Region Conference of the American Association for Agricultural Education, Lake Tahoe, NV.*
- Torres, R. M., Lawver, R. G., & Lambert, M. D. (2008). Job stress among secondary agriculture teachers: Highs and lows. *Proceedings of the North Central Region Conference of the American Association for Agricultural Education, Ithaca, NY, 6, 217-228.*
- Torres, R. M., Lambert, M. D., & Lawver, R. G. (2008). Predictors of job stress among agriculture education teachers. *Proceedings of the North Central Region Conference of the American Association for Agricultural Education, Ithaca, NY, 6, 204-216.*
- Lawver, R. G., Torres, R. M., & Husmann, D. (2008). Work and family life balance among secondary agriculture teachers. *Proceedings of the National Agricultural Education Research Conference, Reno, NV, 35, 856-869.*

REFEREED POSTER PRESENTATIONS

- Lambert, M. D., Lawver, R. G., & Terry, R., Jr. (2009). Technology training: An exploration of the interest of agriculture faculty. *Proceedings of the North American Colleges and Teachers of Agriculture Conference, Stillwater, OK, Accepted.*
- Lawver, R. G., Lambert, M. D., Frazier, D. C., Strid, M., & Garton, B. L. (2008). Using podcasts as an instructional tool in verbal communications: Interactivity, connectivity and processing. *Proceedings of the 2008 National Agricultural Education Research Conference, Reno, NV, 35, 1177-1179.*

NON-REFEREED PUBLICATIONS

- Lawver, R. G. & Lambert, M. D. (2008). Do you have AI (Appreciative Inquiry) in your toolbox? *The Agricultural Education Magazine, 80(6), 11-12.*

Nebraska Agricultural Education Essential Learning's – Descriptive Chapter
Chairperson: Agricultural Literacy, 1997.

National FFA Local Program Success – Promising Practices – Professional Growth – Ag
Ed Café: www.ffa.org, December 2005.