

ABSTRACT

DAVIS, ROBERT JASON. Job Satisfaction of Agricultural Education Teachers in North Carolina. (Under the direction of committee co-chairs Dr. James L. Flowers and Dr. David W. Jones).

Expansion of schools spawned by population growth and changes in agricultural education curriculum have helped to increase the number of agricultural education programs and the need for agricultural education teachers in North Carolina. Lack of compensation, salary increases, and public criticism of teachers have created a unique situation that warrants the investigation of the current levels of job satisfaction of North Carolina agricultural teachers. Job satisfaction levels have been used as a predictor of an individual's decision to leave or end employment. The purpose of this study was to determine the overall levels of job satisfaction of teachers, to compare intrinsic and extrinsic job satisfaction levels, and to investigate relationship or differences between factors related to job satisfaction.

This study used a descriptive research design. The instrument was developed by combining the Minnesota Satisfaction Questionnaire-MSQ short form with demographic variables to help determine the relationship between these variables and the level of job satisfaction of the respondents.

The agriculture teachers in this study reported a very high level of overall job satisfaction. The teachers also reported a very high level of intrinsic job satisfaction and a high level of extrinsic job satisfaction. Though the extrinsic level of job satisfaction is high, there is room for improvement by providing praise for fellow teachers, recognizing accomplishments through award and recognition programs, and providing coping mechanisms as a part of professional development programs to address areas of lower satisfaction.

There were no reported significant relationships between salary, age, experience in years of teaching, highest educational level completed, or the number of placement changes. The listed variables do not explain the job satisfaction levels of the agriculture teachers.

Gender, racial/ethnic group, marital status, and entry route into teaching did not have an impact on the job satisfaction levels of the agriculture teachers. School setting may have some impact on the job satisfaction levels of the teachers.

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North Carolina Agricultural Teachers' Job Satisfaction

by
Robert Jason Davis

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APPROVED BY:

Dr. James L. Flowers
Committee Co-Chair

Dr. David Jones
Committee Co-Chair

Dr. Wendy Warner

Dr. Gary E. Moore

DEDICATION

This work is dedicated to my parents, Charlotte and the late Robert “Bobby” Davis.

BIOGRAPHY

Robert Jason Davis was born in Goldsboro, North Carolina on August 16, 1976. He entered elementary school in 1981 at Hobbton Elementary and graduated from Hobbton High School in Newton Grove, North Carolina in June 1994.

In high school Mr. Davis was very active in the National FFA Organization. He participated in several career development events and served as the Hobbton FFA Chapter Vice President. Mr. Davis was also involved in the Beta Club, quiz bowl, and his church. After graduation from North Carolina State University with a B.S. in Agricultural Education in December 1998, he began teaching agriculture at Hobbton High School. While teaching, he enrolled in the master's program at North Carolina State University, which he completed in May of 2003. Mr. Davis taught Horticulture, Agricultural Mechanics and Introduction to Agriscience at Hobbton High School for seven and a half years. In 2005, Mr. Davis was selected to serve as the State FFA Coordinator in the Department of Agricultural and Extension Education at North Carolina State University to provide leadership to the North Carolina FFA Association.

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CHAPTER 1

Introduction

Job satisfaction is a complex phenomenon attributed to every vocation on earth (Aziri, 2011). Studies on job satisfaction are valued for both their humanistic and financial benefits (Worrell, 2004). Studies have examined the levels, determinants, and factors associated with levels of job satisfaction from every vocation ranging from nursing to sales, but more commonly in careers where high rates of attrition are common. These studies have all attempted to identify the factors associated with job satisfaction. Employees who are satisfied tend to care more about their work, are more committed to the organization, have higher retention rates, and tend to be more committed to the organization (Bravendam Research Incorporated, 2002). Spector (1997) suggested exploring job satisfaction studies can provide valuable insight for developing policies and programs to address problems with job satisfaction.

Studies on job satisfaction from various occupations continue to emerge. When employees are satisfied, generally they care more about their work, are more committed, have higher retention rates, and are more productive (Bravendam Research Incorporated, 2002). Findings from job satisfaction studies also help to examine the emotional wellness and mental well-being of employees or members of an organization (Spector, 1997). Within the field of agricultural education, demands both in and out of the classroom have led many to question the level of job satisfaction among agricultural education teachers as a way to address issues facing the profession (Chenevey, Ewing, & Whittington, 2008).

Defining Job Satisfaction

Job satisfaction has been described in a variety of ways. Robert Hoppock (1935) offered one of the earliest descriptions of the concept of job satisfaction. He described job satisfaction as any number of combinations of psychological, physiological and environmental circumstances that produce an employee's positive feeling of his or her work. Under Hoppock's description, external factors are negated by intrinsic factors. These factors determine how the employee feels, and thus their level of job satisfaction. Smith, Kendall, and Hulin (1969) defined job satisfaction as simply a feeling an individual has about his or her job. Locke (1976) depicted job satisfaction as "the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values" (p. 1342). Vroom (1982) defined job satisfaction as a worker's emotional orientation toward current job roles in the workplace. Spector (1997) viewed job satisfaction as "the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs" (p. 2).

While the definition of job satisfaction has evolved, one common thread has remained: all of these various definitions allude to the belief that job satisfaction is a work-related positive affective reaction (Worrell, 2004). Much like the definition of job satisfaction, varying opinions exist regarding the causes and factors associated with job satisfaction. Wexley and Yukl (1984) reported job satisfaction is the combination of many factors, including personal traits and job characteristics. The presence or absence of these factors could determine one's job satisfaction level. These factors can be grouped into two categories: internal to the person (intrinsic) or external to the job (extrinsic). These levels

have been strongly linked to job satisfaction and therefore warrant investigation (O'Driscoll & Randall, 1999).

Intrinsic & Extrinsic Factors

Job satisfaction is the result of the combination of various factors. Factors such as the nature of the work, salary, advancement, management and working condition all affect job satisfaction levels. Factors in the study of job satisfaction are commonly associated as either intrinsic or extrinsic factors. Intrinsic factors are based on personal perceptions and internal feelings. Intrinsic factors typically include factors such as recognition, advancement, and responsibility. Examples of intrinsic factors include interaction among peers, positive relationships, positive professional image, and a feeling of purpose and fulfillment (Arnett & Polkinghorne, 2010). Higher levels of intrinsic factors tend to result in higher levels of job satisfaction. Teachers with higher levels of job satisfaction reportedly provide more instructional support for students and remain in their position longer (Locke & Sirota, 1976).

In contrast to intrinsic factors, extrinsic factors are generally predictors of job dissatisfaction. Extrinsic factors are external job related variables that include salary, working conditions and supervision. Examples of extrinsic factors include increased paperwork, student characteristics, negative perceptions of the teacher, and problematic relations with student parent/guardians (Arnett & Polkinghorne, 2010).

Rue and Byars (2003) proposed that job satisfaction can be affected by factors such as managers' concern for people, job design (scope, depth, interest, perceived value), compensation (external and internal consistency), working conditions, societal relationships,

perceived long-range opportunities, perceived opportunities elsewhere, levels of aspiration, and need for achievement.

Another factor that has been shown to contribute to lower levels of job satisfaction is their attachment and affinity for the organization. This attribute, commonly referred to as organizational commitment, is characterized by the strength of the individual's identification with or involvement in the organization (Mowday, Porter, & Steers, 1982). Organizational commitment has been found to be a strong predictor in teacher turn-over and job satisfaction (Moran, 2005). Older studies link organizational commitment to agricultural teacher organizations or a sense of brotherhood amongst the agricultural teachers (McCracken & Etuk, 1985).

Effects of Job Satisfaction

Job satisfaction should be considered when examining the efficiency and the effectiveness of any business or organization (Aziri, 2011). The phrase "A satisfied employee is a happy employee and a happy employee is a successful employee" (Bullock, 1984, p. 79) should not be ignored. While job satisfaction can contribute to positive outcomes, dissatisfaction can produce negative effects such as lack of loyalty, increased absenteeism, and the increased number of accidents. Spector (1997) concluded job satisfaction will result in positive behavior, and dissatisfaction from work will result in negative behaviors.

Agricultural Teacher Job Satisfaction

Agricultural education researchers have discovered that agriculture teachers were fairly or moderately satisfied with their job (Jewell, Beavers, Malpeidi, Flowers, 1990;

Grady, 1985; Flowers & Pepple, 1988). Meanwhile, agricultural teachers now commonly leave the profession within the first five years of teaching (Kantrovich, 2007). Teachers who leave the profession often attribute some degree of job dissatisfaction as their reason for leaving the profession (Flowers & Pepple, 1988). Teacher attrition is a common concern among the leadership in the profession, and many states work to fill agricultural teaching positions produced by growth and expansion in agricultural education programs, loss of current teachers, and shortages of graduates (Camp, 2000). “In light of the importance of highly qualified teachers as a prerequisite for the success of any agriculture programs and the relationship between job satisfaction and teacher turnover, there appeared to be a need for investigating the factors which contribute to the agricultural teacher job satisfaction in North Carolina,” (Jewell, Beavers, Malpeidi, Flowers, 1990, p. 52). Furthermore, demands on teachers have changed. In the past ten years educational reform, mandated testing programs, and budget cuts have all contributed to changes in the educational profession (Brown, 2016). In addition to changes in the profession, students, teaching practices, and societal influences are different than they were even a decade ago, therefore warranting a reinvestigation of the job satisfaction levels of agricultural teachers in North Carolina (Brown, 2016).

Factors Related to Agricultural Teacher Job Satisfaction

A review of the literature shows that numerous variables and their relationships with job satisfaction have been investigated. Demographic variables such as age, gender, race, school setting, and income have been the focus of discussion as they relate to job satisfaction levels. Within job satisfaction levels, differences between intrinsic factors such as recognition, advancement, and responsibility, and extrinsic factors such as working

environmental factors, supervision, and working conditions have all been examined to determine their respective effects (Moran, 2005). The overall question is, do these factors in fact influence job satisfaction levels? Although these factors have been examined before, many findings are not consistent.

Age has often been a focus of research when examining job satisfaction. Herzberg et. al, (1957) believed that job satisfaction levels mimicked the shape of an inverted bell curve, or upside down “U,” in which job satisfaction starts high, dips mid-career, and finishes again at a high level. Herzberg attributed this transformation to the maturing of the employee during his or her career (Herzberg et. al, 1957). Often age is also very similar to tenure and experience and therefore should be expected to follow the same model.

Gender has also received much attention in studies related to job satisfaction. Many studies question, if there are differences in the levels of job satisfaction of men versus women. Much like gender, inequalities between races are also perceived. Is a person’s race or the treatment that they have perceived to receive related to their reported level of job satisfaction?

Rural schools exist in a unique environment compared to those in suburban or urban settings (Arnold, 2005). Often rural schools operate under the same mandates as schools in urban and suburban areas but without the same quantity and quality of support or resources. Changes in living conditions of school setting and perceived opportunities outside of teaching may affect teacher job satisfaction levels.

Educational Climate in North Carolina

While the teaching profession nationwide faces challenges, the teaching profession in North Carolina faces its own unique set of challenges. The media have shared that many teachers and the public have a negative perception of North Carolina public education, which has resulted in many teachers leaving the profession to pursue other opportunities (Scott & Smith, 2013). Over the past ten years, the state of North Carolina and its education system have experienced a tremendous amount of change. This change has come in the form of more technology, increased security, and increased standards and testing (Brown, 2016). The effects of a growing population and a recession have decreased revenues for education. In many instances, this has resulted in less funding for textbooks, teacher assistants, extracurricular activities, and school supplies and more far reaching effects, such as increased class size.

In 1997, North Carolina worked to raise teacher salaries to the national average as part of a movement to increase the state's educational rankings (Hinchcliffe & Johnson, 2016). By 1999, North Carolina had increased teacher pay and was ranked 19th nationally. Within a few years, North Carolina's economy was slowed by an economic recession, cuts in federal funding, and lower state tax revenues. These factors resulted in a fall in the state's teachers' pay ranking to 47th nationally in 2013-2014 (Hinchcliffe & Johnson, 2016). In 2016, when salaries were adjusted for inflation, the average North Carolina teacher salary had decreased by more than 13% since 1999. The study found the average teacher salary in North Carolina is \$47,985, nearly \$10,000 below the national average of \$58,064 (Hinchcliffe & Johnson, 2016).

Many blame the state government of North Carolina's actions and its lack of investment in teaching (Brennan, 2015). In 2015, North Carolina initiated a proposal for a 7% pay increase for teachers; however, this raise did not impact the salaries of all teachers employed throughout the state. Instead, beginning teachers received the bulk of the raise, and more experienced teachers with more than 20 years of experience received little more than 1%. The North Carolina legislature, meanwhile, failed to raise teacher salaries for a number of years prior to 2015, removed incentives for master degree pay in 2013, attempted to end teacher tenure, and did not reinstate the teacher yearly increase in salary based on years of experience. These actions by North Carolina have all contributed to the perception of dissatisfaction among teachers within the state's education system (Brennan, 2015). One Texas school system has even attempted to capitalize on the dissatisfaction of North Carolina teachers by publicly recruiting North Carolina teachers by offering substantially higher salaries (Cassella, 2014).

Teachers have also borne the intense scrutiny and criticism of the public, reformers, and civic leaders. The negative attention has created a perception among the public that teachers are the sole source of students' low test scores and minimal achievement gains, and not the student, parental or community support (Wagoner, 2015). These critics often view the profession of teaching as teaching a few lessons, grading assessments, and taking long vacations. However, these perceptions are a misrepresentation of the profession, which is comprised of numerous additional duties outside of the actual act of teaching including; student afterschool activities, counseling, correspondence, meetings, additional training, and documentation (Sidebotham, 2015).

Supply and Demand for Agricultural Teachers

The supply of agricultural teachers compared to the demand is not only a North Carolina concern, but a national concern, as well. The National Agricultural Education Supply and Demand Study of 2014 reported that there is an increased demand for new programs and additional teachers (Foster, Lawyer, & Smith, 2015). The same study reported 7,424 school-based agricultural education programs, which employed 10,874 teachers. As the report was compiled in September of 2014, there were 1,366 new hires (Foster, et al, 2015). Despite this growth, 27 states reported a teacher deficit and not enough teachers available to fill positions, which resulted in the loss of 67 teaching positions and 45 programs. Additionally, agriculture teachers left the profession for a variety of reasons as reflected in Table 1.

Table 1

Reported Reasons for Leaving School-based Agricultural Education in 2014-2015

Source	<i>f</i>	%
Retirement	204	24.5
Employed in business/industry	118	14.2
Other	102	12.2
Not offered a contract/terminated	64	7.7
Employed in school administration	53	6.4
Employed in production Agriculture/Farming	49	5.9
Employed in another educational content area (Outside of Ag Ed)	41	4.9
Stay at home parent/caregiver	39	4.7
Moved out of state	21	2.5
Continuing education/grad school	15	1.8
Health	9	1.1
Unknown	8	1.0
Employed in postsecondary education	8	1.0
Employed in adult education/FBM	5	.6
Death	3	.4

(Source: National Agricultural Education Supply & Demand Study; Foster, et al., 2015)

As Table 1 reports, agricultural teacher attrition nationally is a multi-faceted scenario that may be segmented into several areas attributed to numerous factors.

Changes in public perceptions of education and the perceived lack of support from state government have all impacted teachers' perceptions about their job and their levels of job satisfaction. A suitable supply of highly qualified teachers is necessary for the sustainability of the profession. Teacher turnover and attrition has been associated with job satisfaction, which in turn is affected by many unique factors that contribute to this phenomenon. Agricultural education in North Carolina has been affected by public perceptions of teaching and changes in the education profession, resulting in teacher attrition. Agricultural teachers are also unique because their program extends beyond the walls of the classroom and instructional day to potentially include labs, facilities, livestock, plants, student competition practices, student home visits and professional meetings that extend throughout the year with very few if any breaks. The effects of these additional responsibilities, in light of the recent changes in education in North Carolina, warrant a thorough study of potential factors that may influence teacher job satisfaction levels.

Statement of the Problem

A thorough examination of agricultural educators' job satisfaction levels has not been performed in North Carolina in 25 years. Since the last significant examination, the state's educational policy changes, increased teacher demands, and public perceptions have created a unique scenario, which warrants a timely examination of job satisfaction levels. These factors threaten the supply of teachers and the sustainability of the profession. This study

attempts to examine the factors that attribute to the satisfaction levels of agriculture teachers. The findings of this study will help to identify factors used to develop programs and policies to increase teacher job satisfaction and decrease job dissatisfaction.

Implications and Educational Significance

The American Association for Agricultural Education National Research Agenda recognized the need to examine and support the success of agricultural teachers at all stages of their careers (Roberts, Harder, & Brashears, 2016). Research has shown high quality teachers and good teaching is important (Larson, 2011; Teacher Quality, 2011). The consensus is that high quality and highly trained teachers are capable of inspiring significantly greater learning gains than other teachers who are not as prepared or experienced (Larson, 2011). Teachers' job satisfaction may impact teachers' decisions to stay in the profession. Studies have shown a relationship between teacher turnover and negative impacts in student achievement scores (Meyer, 2013). Another challenge for school systems is the economic cost to train new teachers. The Alliance for Excellent Education (2014) reported that teacher attrition costs the nation \$2.2 billion annually. Dissatisfied teachers cost school systems in terms of lower student performance and decreased teacher productivity (Larson, 2011). Savings in these areas will be beneficial in a system with limited resources. Identifying the level of satisfiers may help to retain teachers.

Purpose of the Study

The purpose of this study was to investigate and describe the overall, intrinsic, and extrinsic job satisfaction levels of North Carolina high school agriculture teachers who taught

last school year and who were teaching during the fall semester of 2016. The issue of job satisfaction in this study was focused on the following research objectives:

1. Investigate the level of intrinsic, extrinsic and overall job satisfaction of North Carolina high school agriculture teachers as measured by the Minnesota Satisfaction Questionnaire (MSQ) short form.
2. Examine the relationship between the intrinsic, extrinsic, and overall level of job satisfaction of North Carolina agriculture teachers and specific variables; salary, age, experience level in number of years in teaching, highest educational level completed, and the number of placement changes.
3. Examine the differences in intrinsic, extrinsic, and overall job satisfaction based upon North Carolina agriculture teachers' school setting, gender, racial/ethnic group, marital status, and entry route into teaching.

Assumptions of the Study

The following assumptions were made in the planning of this study: the agricultural teachers in this study provided complete answers and were truthful in their responses.

Definition of Terms

Career and Technical Education (CTE): Schools, institutions, and educational programs that specialize in the skilled trades, applied sciences, modern technologies, and career preparation through both academic and career-oriented courses often in the form of internships, apprenticeships, shadowing, and certification programs (Hidden Curriculum, 2014).

Agricultural Education: A systematic program of instruction to teach students about the science, business, and technology of plant and animal production and/or the environmental and natural resources systems. Through the use of classroom/lab instruction, student organization recognition and achievement (the FFA, formerly known as the Future Farmers of America), and experiential learning, students are prepared for successful careers and a lifetime of informed choices on global, food, fiber, and natural resources systems (National FFA Organization, 2016).

Job Satisfaction: The positive perception resulting from an evaluation of the characteristics of the job itself (Miller, 2015).

Job Satisfiers (Intrinsic Job Factors): Motivators, or satisfiers, allude to the more intrinsic qualities of the job: challenge, accountability, recognition, advancement, growth and responsibility.

Job Dissatisfiers (Extrinsic Job Factors): Hygiene factors, or dissatisfiers, are the qualities that are linked to the environment of the job: pay, security, supervision and physical working conditions.

Placement Change: When a teacher moves from one school to another school.

Summary

Job satisfaction is a complex phenomenon that has been the focus of countless studies across several occupations for the last 100 years. Several researchers have offered their own definition to describe job satisfaction. A common thread among all researchers' definitions is that job satisfaction is a feeling or perception of how one feels about their job.

How an individual comes to develop their level of job satisfaction is the result of several factors that neither research, nor researchers tend to agree upon.

In North Carolina, 25 years have passed since the last significant attempt to measure agricultural teacher job satisfaction. During the last seven years changes in the public's perception of teachers, the loss of many incentives, and changes in the management of education at the state level have created a negative perception of the profession. Low levels of job satisfaction and high levels of dissatisfaction cost school systems economically and also in student achievement scores (Meyer, 2013). In light of these events, this periodic maintenance is needed to determine the areas of satisfaction and dissatisfaction among the profession and to insure an adequate supply of highly trained and qualified teachers.

CHAPTER 2

Review of the Literature

The purpose of this study was to investigate and describe the levels of general job satisfaction of North Carolina high school agricultural teachers. This chapter was written to review and summarize literature relevant to this study. Theories of job satisfaction that support the theoretical framework for this study are discussed. This chapter conceptualizes job satisfaction and the idea that it can be measured, which also implies that it may be understood. The level of job satisfaction or dissatisfaction is determined by factors. A thorough discussion of the presence or absence of factors and their influence on the level of job satisfaction is presented.

Theoretical Framework

Research in the field of job satisfaction has been based on the theories of motivation due to their overlapping nature (Juliet, Teoh, & Cox, 2016). The following theories lay a theoretical framework for this study: Maslow's hierarchy of needs theory (which proposed that needs and wants are the driving force of human interaction) and Herzberg's motivational-hygiene theory (which states that internal and external factors affect job satisfaction and that they can be measured). By determining the factors associated with agricultural teachers' job satisfaction and measuring them, adjustments can be made to the work environment to increase satisfaction and decrease dissatisfaction.

Maslow's Hierarchy of Needs

Maslow (1943) saw human motivation in terms of needs that humans work to meet. Maslow believed people possessed a set of motivational systems unrelated to rewards or

unconscious desires, which contrasted the philosophical theories of his day (Huitt, 2007). He theorized people were motivated by needs, which he grouped into tiers: physiological, safety, social, love, esteem, and growth (McLeod, 2014). The needs of each of these tiers ranged from the basic primal human needs of food and shelter to feeling loved and accepted. Maslow believed the desire to satisfy needs is what motivates human behavior. In Maslow's hierarchy of needs theory, human psychology is more than a mindless mechanism; it is a complex set of desires that change as needs are met or not met (Maslow, 1943).

Physiological and safety needs, more commonly referred to as lower level needs, must be met before the person can acquire more advanced needs. Progress from lower level physiological needs to self-actualization is commonly presented in the diagram below.

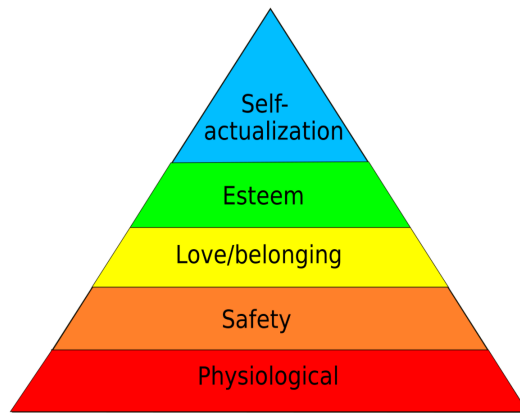


Figure 1. Maslow's Hierarchy of Needs (McLeod, 2014).

The ultimate goal is for a person to meet the pinnacle of Maslow's hierarchy, self-actualization. Everyone is capable, but few individuals ever reach the point of self-actualization due to setbacks in other need areas (McLoud, 2014). A self-actualized individual has come to terms with his or her own abilities and shifted from the extrinsic rewards of the lower levels of the hierarchy to the intrinsic rewards of their work. In the workplace, self-actualized individuals may be motivated by a desire to learn, grow as an individual, and most importantly to help others, but this must be identified and addressed by employers (Maslow, 1970).

Individuals enter a career with expectations and perceptions of what they want. Individuals may also find it difficult to articulate exactly what they want from their employers and careers. Due to these communication issues, as people grow and progress through their careers, their needs change in reflection to Maslow's hierarchy. As an individual advances through an organization or career, opportunities to satisfy their needs should also change and develop (Gawel, 1999).

Practical implications of Maslow's hierarchy of needs theory is the view in which needs are met in a hierarchical manner and in which needs are aroused in a specific order from lowest to highest. Lower level needs must be at least partially fulfilled before the next order need is triggered. Once needs are fulfilled, they no longer trigger motivation. Needs that are not met, will continually draw resources and energy from the individual until the need is satisfied.

According to Sergiovanni (1984) and Davis and Newstrom (1989), survival needs were unlikely to motivate most workers because most jobs fulfill the basic physiological

needs of food and shelter. Therefore, higher needs of social, esteem, and self-actualization may very well influence a person’s motivation in the workplace (Davis & Newstrom, 1989).

In the education profession, Maslow’s (1954) theory of motivation has been transcribed from the view of individual needs (Lunenberg & Ornstein, 2000). Teacher dissatisfaction and decisions to stay or leave the profession must take into consideration Maslow’s motivational needs and individual needs. Lunenberg & Ornstein (2000) translated the levels of Maslow’s hierarchy and needs to factors that affect teacher job satisfaction, as described below in Table 2.

Table 2

Maslow’s Hierarchy of Needs as described by Lunenberg & Ornstein (2000)

Needs Levels	General Factors	Organizational Factors
Self-Actualization (Most Complex of Needs)	Growth, Achievement, Advancement	Challenging job, Advancement in Organization, Achievement in Work
Esteem	Self-esteem, Esteem from others, Recognition	Titles, Status Symbols, Promotions
Social	Affection, Acceptance, Friendship	Quality of supervision, Compatible work groups, Professional friendships
Safety	Safety, Security, Stability	Safe working conditions, Fringe Benefits, Job Security
Physiological (Most Basic of Needs)	Water, Food, Shelter	Heat and air conditioning, Base Salary, Working Conditions

Herzberg's Motivational-Hygiene Theory

Herzberg (1987) believed satisfaction was a complex interaction of people and perceptions in an effort to get someone to do something. Researchers have attempted to theorize what makes an individual satisfied with his or her job and to what point does dissatisfaction lead to a departure or decrease in productivity. Theorists in the study of job satisfaction have placed job satisfaction and dissatisfaction at opposite ends of the continuum or scale (Herzberg, 1968). An individual's gravitation toward either of these poles is determined by the presence or absence of factors in his or her working environment (Gruneberg, 1979).

Herzberg's motivation-hygiene theory explains how job satisfaction (or satisfiers) and job dissatisfaction (or maintenance factors) operate independently from one another because they are driven by different factors (Herzberg, et al., 1959). Herzberg believed that satisfaction and dissatisfaction are not on the same continuum and are therefore not opposites (Pardee, 1990). Motivators, or satisfiers, allude to the more intrinsic qualities of the job: challenge, accountability, recognition, advancement, growth, and responsibility. Hygiene factors, or dissatisfiers, are the qualities that are linked to the environment of the job: pay, security, supervision, and physical working conditions (Herzberg, 1968). Motivational factors are those aspects of the job that make people want to perform. Factors associated with satisfaction are commonly attributed to motivation are achievement, recognition and promotion. Herzberg theorized individuals are encouraged more by motivators than by maintenance factors

Castillo (1999), Padilla-Velez (1993), and Bowen (1980) defined each of the first level factors identified by Herzberg, et al (1959):

Table 3

Herzberg's Motivator Factors (James, 2013)

Factors	Examples
Recognition	Acts of notice, praise, or blame supplied by one or more superior, peer, colleague, management person, client, and/or the general public.
Achievement	Accomplishment of endeavors including instances wherein failures were experienced.
Possibility of Growth	Whether a change in status was possible irrespective of the fact that change could be upward or downward in status.
Advancement	Designated an actual change in job status.
Salary	All sequences of events in which compensation played a major role.
Interpersonal Relations	Relationships involving superiors, subordinates, and peers.
Supervision	The supervisor's willingness or unwillingness to delegate responsibility and willingness to teach subordinates.
Responsibility	Satisfaction derived from being given control of personal work, the work of others, and/or new job responsibilities.
Company Policy & Administration	Events in which some or all aspects of the company were related to job dissatisfaction.
Work Itself	The actual job performance as it related to job satisfaction.
Working Conditions	Physical working conditions, the facilities, and the quantity of work as related to job dissatisfaction.

As with Maslow's theories, higher level needs such as esteem and self-actualization correspond with Herzberg's motivator factors, and lower level needs like survival, safety, and social needs correspond with Herzberg's hygiene factors. Hygiene factors must be met to avoid dissatisfaction in the same way that Maslow's lower level needs are met before the motivator factors can lead to motivation and thus job satisfaction (Major, 2012). Herzberg suggested that motivator or intrinsic factors contributed to job satisfaction due to the employee's need for growth and self-actualization (Herzberg, 1966). Similarly, hygiene or extrinsic factors contribute to job dissatisfaction due to the individual's need to elude the negative.

Leaders of an organization or workforce that employs Herzberg's work must monitor maintenance factors such as pay and compensation to prevent individuals from leaving (Strong & Harder, 2009). Satisfying maintenance factors by the leadership of the group may work to build opportunities for motivational factors to make the job more appealing, enjoyable, and to provide a culture for growth.

Within the profession of agricultural education, the presence of hygiene factors can lead to stress and job dissatisfaction. Bennet, Iverson, Rohs, Longone, and Edwards (2002) reported varying levels of job satisfaction between secondary agricultural education teachers who remained in teaching and those who experienced burnout, which led to the burnout teachers leaving the profession. Inverse relationships have been reported between job satisfaction and teacher burnout among secondary agricultural education instructors (Newcomb, Betts, & Cano, 1986).

Conceptual Framework

The motivational hygiene theory's premise is that job satisfaction is measurable (Herzberg, Mausner & Synderman, 1959). The theory states that jobs have factors that produce either satisfaction or dissatisfaction. Castillo and Cano (1999) summarized this relationship:

Job satisfying (motivator) factors included achievement, recognition, work itself, responsibilities, and advancement. Job satisfying factors allowed individuals to satisfy their psychological potential and were usually related to the work itself. Job dissatisfying (hygiene) factors were related to the work environment and were pursued in order to prevent job dissatisfaction or discomfort. Job dissatisfying factors included pay, working conditions, supervisions, policies, and interpersonal relationships (p.67).

This study is built on the theoretical framework outlined by Herzberg, Mausner, and Synderman (1959) in the motivator-hygiene theory. This framework contends that if aspects of an employee's perceptions could be measured and understood, then conditions in the working environment could be adjusted to increase satisfaction and decrease dissatisfaction.

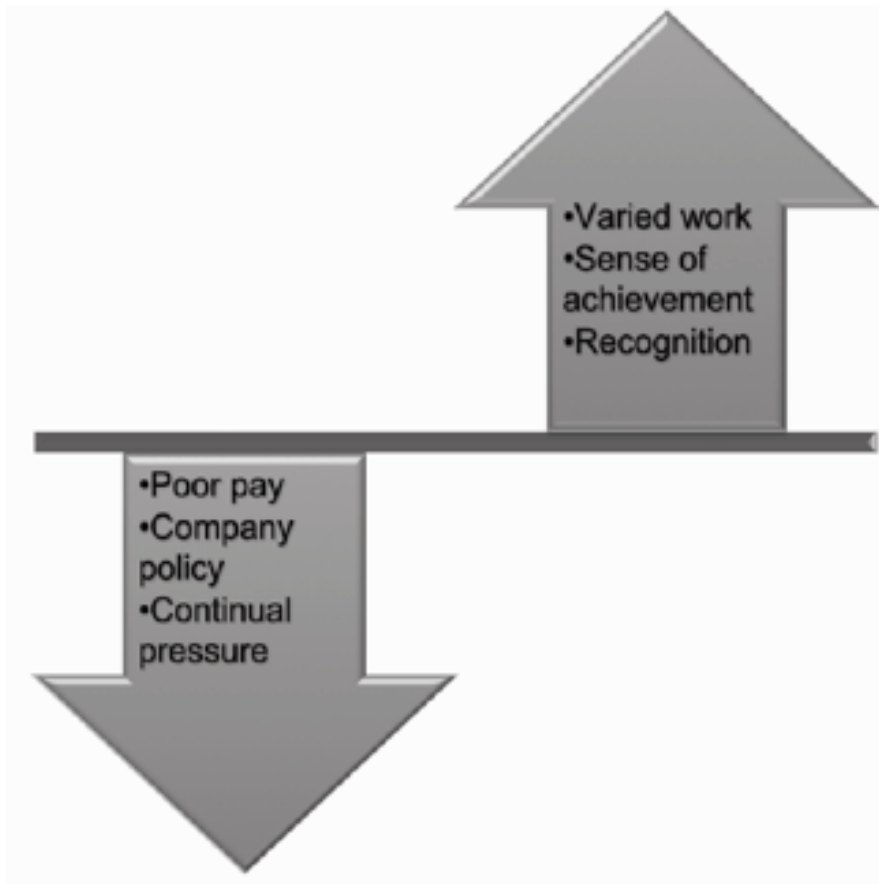


Figure 2. Herzberg's Two-Factor Theory (Herzberg, 1968)

Before any organizational changes may take place, the factors identified as important by the employees must be accounted for and analyzed by administrators. Scott, Swartzel, and Taylor (2005) concluded that by identifying what employees want, administrators may develop opportunities to produce maximum job satisfaction while reducing dissatisfaction.

Studies on Teacher Job Satisfaction

In a study of 375 North Carolina agriculture teachers during the 1985-86 school year utilizing the Minnesota Satisfaction Questionnaire, Jewell, et. al (1990) found a moderate

level of general job satisfaction among the respondents to the survey and average levels of intrinsic and extrinsic job satisfaction. The teachers in the study were characterized by much higher intrinsic job satisfaction as compared to extrinsic job satisfaction (Jewell et al, 1990). North Carolina agriculture teachers reported lower levels of job satisfaction in factors involving problem students, non-instructional duties, and working with lower level academic students. North Carolina agriculture teachers were also more dissatisfied with their financial support than their working environment. Overall, teachers were satisfied with their professional acceptance among other vocational, CTE teachers, members of the North Carolina Agriculture Teachers Association (NCATA), and principals, but there was a moderate relationship between supervisors and job satisfaction.

A national study in 1993 of 36,000 elementary and secondary school teachers and principals from both public and private schools found that administrative support/leadership, student behavior, school atmosphere, and teacher autonomy are working conditions associated with teacher job satisfaction (Perie & Baker, 1997). Private school teachers tend to be more satisfied than public school teachers, and elementary school teachers tend to be more satisfied than secondary school teachers. However, this data is dependent on the amount of parental support perceived by the teachers at these respective schools (Perie & Baker, 1997).

Determinants of Job Satisfaction

Many factors are attributed to job satisfaction. These factors can be positive or negative (Wood, 2014). Identifying factors that impact agricultural education teachers' job satisfaction will impact the profession in North Carolina for years to come. Studies on teacher job satisfaction have related job satisfaction and dissatisfaction to different

demographic variables. The studies differ in methodologies, instruments, and populations, but their findings and recommendations contain some overarching themes.

Intrinsic & Extrinsic Factors

“Work is unquestionably an intrinsic part of people’s lives” (Worrell, 2004, p. 24). Intrinsic factors of work are relevant to the study of job satisfaction. In contrast to the extrinsic rewards of work like pay, economic security, and other tangible rewards, intrinsic factors include employees’ level of responsibility, variety of task, meaningful work, recognition, and the ability to make their own decisions. Herzberg et. al. (1957) found these potentially rewarding aspects of job satisfaction play an important role in participants’ job satisfaction levels.

Brunetti (2001) found in a study on 426 experienced high school teachers from various subject matters in California that intrinsic rewards such as collegiality, student interaction, and professional autonomy highly correlated with teacher job satisfaction levels. The study also found a stronger relationship between job satisfaction and the opportunity to demonstrate professional competency than with extrinsic factors including salary and advancement.

Martinez-Ponz (1990), in a sample of 100 elementary teachers in Metropolitan New York, found intrinsic rewards were more effective for increasing job satisfaction and commitment among teachers than financial incentives. Teachers in this study had higher degrees of intrinsic motivation and a slightly higher degree of commitment to teaching.

Reyes, Madsen, and Taylor (1989) found in a random sample of 250 first year teachers and 250 second year teachers in a random Mid-Western state intrinsic rewards had more influence on educators than any organizational rewards.

Age

Age has consistently been associated with teacher job satisfaction. Research, however, is not conclusive. There is the suggestion that the relationship is curvilinear, with beginning/younger teachers and teachers reaching retirement more likely to have higher levels of job satisfaction compared to teachers in the middle of their career (Herzberg et. al., 1957). Herzberg relates this relationship to the maturation of employees.

Herzberg (1987) reported the relationship between job satisfaction and age as a “U” shape or inverted arch. In this diagram job satisfaction starts high, declines over a period of time, and then begins to increase over time. To explain this shift, Herzberg (1987) hypothesized that older individuals adjust to work and life situations, which in turn increases satisfaction rates. Hassard, Teoh, and Cox (2016) provide the following explanations to determine this relationship:

- Older employees might have lowered their expectations over time and learned to be more satisfied
- Unhappy older employees may be more likely to take early retirement and leave the workforce, leaving the more satisfied older employees.
- Older employees would have had more time to change jobs and end up in a position with which they are happy.

- Due to a lack of longitudinal studies, the differences between younger and older employees may be due to a generational difference.

Quinn, Staines, and McCullough (1974) in a national study of 1,297 adult Americans examined the relationship between job satisfaction and leisure and found the relationship between leisure and job satisfaction to be low. However, they did attribute older worker job satisfaction to promotions, titles and leadership positions that the individuals gain later in their career rather than workplace adjustment.

Studies in occupations, including the field of education, and more importantly, agricultural education, have concluded that as age increases, so does job satisfaction (Bems, 1989; Grady, 1985). Bems (1989) linked increased age with job satisfaction in a study of agricultural teachers in Northwest Ohio, while Grady (1985) also found a relationship between age and increased levels of job satisfaction in a study of Louisiana agricultural teachers. This relationship has been challenged by other studies that find either a weak or no relationship with age and job satisfaction (Cano & Miller, 1992). Cano and Miller (1992) warn researchers about making such broad generalizations regarding job satisfaction.

A national study of public and private, elementary and secondary teachers found teacher age and years of experience were related to job satisfaction (Perie & Baker, 1997). The same study concluded younger and less experienced teachers in public schools have higher job satisfaction levels than the older and more experienced teachers in the same setting. The same study also concluded that levels of job satisfaction for teachers in private schools coincided with Herzberg's findings, with the very youngest and less experienced

teachers and the most experienced teachers both conveying the highest levels of job satisfaction.

Experience

Years of teaching experience, also associated with individual's age, are commonly positively associated with higher job satisfaction. As teachers advance in their career, possibly by obtaining higher degrees and certifications, their job satisfaction levels also increase.

Walker, Garton, and Kitchel (2004), in a study of 149 Missouri agricultural teachers found that job satisfaction increased among agriculture teachers that remained in the profession by maturing and becoming accustomed to the job responsibilities. It was also reported in the same study that many agriculture teachers reach a plateau or homeostasis in their professional career. Many of these agricultural teachers initiated energy saving behaviors and entered into a complacent mindset. Because of these perceptions and attitudes, their careers were neither satisfying nor dissatisfying.

Flowers and Pepple (1988) in a study of 76 beginning teachers with two years or less of experience in Illinois, found the participants were moderately satisfied with their jobs. Flowers and Pepple (1988) recommended future studies be conducted to determine if teacher experience affects levels of morale and job satisfaction.

A study of 149 Missouri secondary agricultural teachers in 2004 investigated the extent to which job level satisfaction changed from the initial year of teaching to the current level of employment, either in teaching or industry (Walker, Garton, & Kitchel, 2004). Teachers were placed into three subgroups: stayers, movers, and leavers. Stayers were

classified as those who started teaching during the five-year period at the same school district and remained through the period. Movers were classified as teachers who may have changed school district, location, or state but continued to teach agriculture full time in a secondary public school during the selected five-year period. Leavers were classified as those who were no longer teaching at the end of the five-year period in a public secondary school. It was concluded that all three groups of teachers were initially satisfied with their first year of teaching. The respondents were also generally satisfied with their current employment position and had the same degree of job satisfaction over time.

Gender

Gender of teachers and levels of job satisfaction are of interest as more females join the profession and the demographics of the profession change. The research on gender and job satisfaction is also inconclusive. In an analysis of six years of studies on teacher job satisfaction, Thompson and McNamara (1997) found no significant difference between male and female job satisfaction levels

In a study of 414 agricultural teachers in Ohio, Cano and Miller (1992) found both male and female teachers were satisfied with their jobs and did not differ significantly in terms of their overall job satisfaction scores. Female teachers did show moderate and significant difference between levels of job satisfaction and tenure status, as female teachers with tenure reported higher levels of job satisfaction (Cano & Miller, 1992).

In another study of job satisfaction of Ohio agricultural teachers, with a random sample of 171 Ohio male agricultural teachers and a census of 60 females, Castillo, Conklin, and Cano (1999) reported that achievement, advancement, recognition, and the work itself

were related to female satisfaction scores but not to males. Job dissatisfiers like relationships, policy, salary, supervision, and working conditions were related to female but not to the male teachers' job satisfaction levels. The male teachers in this study tended to be significantly older, more experienced in years of teaching, and had been in their current positions longer than the female teachers in the study.

In a national study comparing personal life factors of 363 teachers and how they relate to teacher effectiveness and job satisfaction, Bruening and Hoover (1991) found that the teachers surveyed were fulfilled with teaching. They also found, however, that parenting was the highest ranked negative factor reported by the respondents (Bruening & Hoover, 1991). It can be assumed that personal and family obligations will also be a concern of educators, but as the demographics continue to shift among agricultural education from the once male dominated profession to the present with a growing female percentage, this concern will only continue to grow (Foster, Lawyer, & Smith, 2015).

Race

There are few studies in agricultural education have included race factors for determining job satisfaction. Research on race and job satisfaction has yielded mixed results and is also inconclusive. In a meta-analysis of 21 independent job satisfaction studies and over 10,000 employees from manufacturing, service and government, Brush, Mooch and Pooyan (1987) found no significant racial differences. Weaver (1980) reported non-whites are less satisfied than white employees in a study comparing various American workers. There is some conceptual basis shared among researchers that racial differences do exist between whites and non-whites due to treatment in the workplace (Worrell, 2004).

Educational Level

In an *ex post facto* census study of 244 agricultural teachers in Iowa, Thobega and Miller (2003) found educational level was positively and significantly related to job satisfaction and the intent to remain in teaching. Teachers in the study with high levels of education expressed a higher level of job satisfaction.

In a study of Northwest Ohio vocational teachers, Bems (1989) reported that teachers with a master's degree were significantly more satisfied with their teaching positions compared to those with only a bachelor's degree.

Salary

Though salary can be indirectly viewed as a function of working conditions, it is also perceived as important enough to maintain an independent focus. For the past 80 years, salary has been a focus of much research on job satisfaction. Early studies suggested salary was not a significant predictor of job satisfaction (Herzberg, Mausner, Capwell, 1957; Hoppock, 1935), but later work predicted salary was a factor in job satisfaction to a point (Herzberg, 1966). Lawler (1971) argued low salary was a cause of dissatisfaction, but higher salaries were not correlated to satisfaction. In a series of national studies on teacher supply, demand, and quality consisting of a sample of 53,000 teachers, 12,000 administrators, 4500 districts, from primary and secondary schools, Ingersoll (2003) found that poor salaries were the biggest reason for dissatisfaction of general education teachers, accounting for 25% of teachers leaving the field of teaching in the first five years because of dissatisfaction. The number one cause of dissatisfaction is poor salary (Ingersoll, 2003). Spector (1997) focused on the connection to perceptions of equity and fairness over the dollar amounts to predict

satisfaction levels. Adams (1965) elaborated further on this connection by explaining that employees must perceive an equitable balance between the amount of work and the compensation or salary they receive. If the amount of salary for the amount of work is perceived to be small, then dissatisfaction occurs.

In a longitudinal study of 50,000 Indiana full time public school teachers, Kirby and Grissmer (1993) cited salary as one of the top reasons for teacher attrition. In their study, over half of the participants ranked salary as the single most important factor that may prevent teacher attrition. Though this finding would lead one to believe that raising teacher salaries would prevent teacher attrition, in the sample surveyed, two-thirds of the respondents stated a 20% raise would not affect their decision to stay in the classroom (Kirby & Grissmer, 1993).

Marital Status

Often social research has neglected the impact of marital status upon job satisfaction. In an analysis of the General Social Survey (GSS), which comprises a national representative sample of the United State adult population, Knerr (2001) concluded married people generally possess higher job satisfaction levels than their single counterparts. The study found a statistically significant correlation between males under the age of 30, females aged 30 to 49, and both males and females over the age of 50. Knerr (2001) explains that females pursuing careers and waiting to marry and start a family may factor into the results of the study. For males age 30 to 49, the weak correlation between marital status and job satisfaction may be the result of the proverbial “mid-life” crisis.

In a study of 248 Georgia agriculture teachers, Tippins (2010) reported agricultural teachers in Georgia were generally satisfied. Tippins (2010) did, however, report a difference in the job satisfaction levels and their self-perceived likelihood of retention between female agricultural teachers and male agricultural teachers. Based on previous research, this difference could be the product of unintended bias from predominately male administrators (Castillo & Cano, 1999) or gender differences and preferences (Cano & Miller, 1992). The pressures of family life and the duties and expectations of an agricultural teacher can place strain and stress on the teacher, which relates directly to their overall job satisfaction levels (Tippins, 2010). The duties of the agricultural teacher go beyond the walls of the classroom and the closing bell of school to career development events, practices, field trips, and Supervised Agricultural Experience (SAE) visits to students' homes or employment. These additional duties add hours to the job and the work week and can make it difficult to fulfill family obligations (Tippins, 2010).

Entry Method into Teaching

Many teachers attend a university or college with a teacher preparatory program. However, not all teachers enter teaching through this method and may come from industry or related programs and gain a provisional teaching license through alternative licensure programs, which differ from state to state. Most alternative licensure programs require additional training or classes in which participants are engaged in the pedagogy of instruction. These additional courses place another strain or stress on the participants to participate and to complete or risk being terminated by their employer. Additionally, there is

the potential for teacher frustration because they may not have the experience or knowledge to perform their duties.

Research concerning alternative licensure programs compares teachers who have completed an alternative route program with those that have completed a four-year baccalaureate teacher preparation program. In a study of 103 alternatively certified CTE teachers in Georgia, Moran (2005) reported slightly higher job satisfaction levels for pre-service teachers than alternatively licensed teachers. Moran (2005) concluded there were no significant differences between the levels of job satisfaction between pre-service teachers and those certified through alternative licensure.

Number of Placement Changes

Agricultural teachers have the opportunity to change schools during their career for various reasons. In a study of 149 teachers in Missouri, Walker, Garton, and Kitchel (2004) divided their respondents into groups that they classified as “leavers” (those that left the profession), “movers” (those that changed schools), and “stayers” (those that stayed at the same school) during the duration of a five-year period of the study. The study concluded that the “movers” had the highest level of job satisfaction overall during the period of the study. The “movers” and “stayers” maintained relatively the same levels of job satisfaction the first year of teaching, but over time, the “movers” levels of job satisfaction increased.

School Setting

School setting is often a point of interest for researchers. Urban workers’ living conditions provide them more opportunities for jobs, better schools, better salaries and higher prestige (Worrell, 2004). Rural area living conditions on the other hand offer smaller

communities and lower crime rates. Arnold and Seekins (1997) found higher job satisfaction levels in urban areas than those in rural settings. In a national study of public and private schools and primary and secondary education, Perie and Baker (1997) reported job satisfaction levels to be the highest in suburban areas, and the lowest levels of dissatisfaction were found in rural areas. The absence of dissatisfiers in rural areas showed that they were more satisfied than teachers in urban and suburban areas. Secondary teachers in the same study as a whole were less satisfied than those in primary schools regardless of school setting.

Summary

Over the past 70 years, several studies have examined the job satisfaction levels of teachers, agriculture teachers, and various careers along with the underlying factors associated with each group's level of job satisfaction. Maslow's hierarchy of needs theory influenced Herzberg and his colleagues, who created the dual factor motivator-hygiene theory. The motivator-hygiene theory proposed that there was not one continuum, but dual continuums which operate independently of each other. Herzberg's dual continuums are comprised of motivation factors (satisfiers), which represent the intrinsic nature of the job, and hygiene factors (dissatisfiers), which represent environmental extrinsic factors (Herzberg, 1987). The concept that job satisfaction is measurable is a premise of the motivator-hygiene theory and serves as the theoretical framework for this study (Herzberg, Mausner & Snyderman, 1959). By identifying employee factors associated with satisfaction and dissatisfaction, employers may take steps to alter workplace conditions.

Several attempts have been made to investigate job satisfaction for several high stress career areas that show high rates of attrition. Teachers, more importantly for this study, agriculture teachers, have been the focus of research to identify factors attributed to job satisfaction. In previous research, intrinsic variables strongly correlated with higher levels of job satisfaction. Relationships and differences between demographic variables such as age, gender, race, educational experience, number of years teaching, school setting, and job satisfaction have been examined in various settings and populations with varied findings. Findings concerning demographic variables are inconclusive at best.

CHAPTER 3

Methodology

This study was conducted to investigate and describe the overall, intrinsic and extrinsic levels of job satisfaction of North Carolina high school agriculture teachers who taught last year and are currently teaching during the 2016-2017 school year. In addition to teacher overall job satisfaction levels, data on several independent variables was collected. A review of related research studies suggested that these variables could possibly impact job satisfaction levels of the teachers in this study. These variables were measured by an additional set of questions. Relationships between the overall level of job satisfaction and the following variables were determined: age, experience level in number of years, highest educational level completed, and the number of placement changes. Differences between the overall level of satisfaction and the following variables were determined: school setting, gender, race/ethnic group, marital status, and entry route into the teaching profession. Job satisfaction was measured using the Minnesota Satisfaction Questionnaire-MSQ short form.

Research Design

This study used a descriptive research design. The study incorporated aspects of a quantitative exploratory survey research method as a snapshot in time of the perspectives of the respondents. The instrument for this study consisted of the Minnesota Satisfaction Questionnaire (MSQ) short form and demographic variables found in the literature that were believed to be associated with job satisfaction.

Population

The population frame of this study consisted of all high school agriculture teachers employed in North Carolina during the 2016-2017 school year teaching agriculture courses in the fall (N=370) and who were teaching in North Carolina in the spring semester of 2016. Newly hired teachers in the fall of 2016 were not included in the population because they had not been teaching long enough to assess their levels of job satisfaction at the time that data were collected. Names and contact information were obtained from the North Carolina agriculture teacher directory located on the North Carolina FFA website at www.ncffa.org (North Carolina FFA, 2016) and verified by the state leaders in agricultural education. Efforts were made to eliminate all participants that did not meet the parameters of the population frame of this study. This population would be considered a sample of North Carolina agricultural teachers in time.

Instrumentation

The instrument utilized for this study was a questionnaire consisting of two sections: a teacher profile section and the Minnesota Satisfaction Questionnaire (MSQ) short form (See Appendix A). The teacher profile was developed by a review of current literature with the input and counsel of a panel of experts in the field of agricultural education. The experts on this panel included the dissertation committee and the state staff for agricultural education for North Carolina. The teacher profile section gathered data on age, gender, race/ethnic group, marital status, educational level, entry method into teaching school setting, income from teaching, number of placement changes, and the number of years of teaching experience.

Minnesota Satisfaction Questionnaire

The Minnesota Satisfaction Questionnaire (MSQ) short form was utilized for the second portion of the questionnaire. This instrument was designed by Weiss, et al (1967) through the Work Adjustment Project to address the adjustment problems relevant to vocational rehabilitation services. The instrument was developed to measure an employee's satisfaction with his or her job and the degree to which vocational needs and values are satisfied on the job. The instrument is gender neutral, may be administered to groups or individuals, and is written on a 5th grade reading level (Weiss, et. al., 1967). The MSQ is a commonly used instrument to examine job satisfaction. Content validity of the instrument was assumed due to extensive use in the profession. The MSQ short form was also selected based on its ability to be given to individuals to determine an overall job satisfaction score, an intrinsic job satisfaction score, and an extrinsic job satisfaction score (Weiss, et. al., 1967). Reliability coefficients of the MSQ short form ranges for various occupational groups were reported by Weiss, et. al (1967) at .84 to .91 for the intrinsic scale, .77 to .84 for the extrinsic scale, and .87 to .92 for the overall satisfaction scale.

The short form of the MSQ consists of 20 questions from the long-form that represent the intrinsic and extrinsic scales of the instrument (Minnesota Satisfaction Questionnaire, 2010). For each of the 20 questions on the MSQ portion of the survey, the developers of the MSQ provided the respondents a 5 point Likert type scale comprised of the following choices: *1-extremely satisfied, 2-very satisfied, 3-satisfied, 4-somewhat satisfied, and 5-not satisfied*. Higher levels of job satisfaction are typically associated with higher numeric

values. Therefore, during the analysis of the data, these scores were reverse coded to provide higher numeric values for higher levels of job satisfaction. Factor Analysis of the 20 items results in three factors: intrinsic, extrinsic and overall satisfaction. Intrinsic satisfaction was measured by 13 of the 20 items, and the 7 remaining questions measured the extrinsic factors. All 20 items were used to measure overall satisfaction (Weiss, et al., 1967).

The Minnesota Satisfaction Questionnaire-MSQ has been used for over 50 years to gather data on individual job satisfaction. The MSQ is a self-administered assessment primarily provided in the form of a survey instrument (Weiss, et al., 1967). The MSQ short form is comprised of 20 scales that represent reinforcers from the work environment. The respondent indicates how satisfied he or she is with the reinforcer on their present job (see Table 4). The short form consists of one question from each scale of the long form. The short form was selected because it provided data on both intrinsic and extrinsic variables, which were of interest to this study. The short form takes from 10 to 20 minutes for the average respondent to complete.

Table 4

Twenty Scales of the MSQ

Scale	Item
Ability Utilization	Doing something that makes use of abilities
Achievement	Feeling of accomplishment from the job
Activity	Being able to keep busy all of the time
Advancement	Chances of advancement on the current job
Authority	Chance to tell others what to do
Company Policies & Practices	The way company policies are put into practice
Compensation	Pay for the amount of work done
Co-Workers	The way co-workers get along with one another
Creativity	Chance to try own methods of doing the job
Independence	Chance to work alone
Moral Values	Ability to do job without going against conscience
Recognition	Praise for doing a good job
Responsibility	Freedom to use own judgment
Security	Providing for steady employment
Social Service	Chance to do things for other people
Social Status	The chance to be “somebody” in the community
Supervision-Human Relations	The way the supervisors handles the supervisees
Supervision-Technical	Competence of supervisor in making decisions
Variety	The chance to do different things from time to time
Working Conditions	Overall working conditions

Source: Weiss, Dawis, England, & Lofquist, (1967) Manual of the Minnesota Satisfaction Questionnaire.

Data Collection

The questionnaire was distributed through an email message sent to high school agriculture teachers who were listed in the North Carolina Agricultural Education Directory and who had taught in the state the spring semester prior to this study and were teaching at the beginning of the school year (N=370). Five email addresses were returned as undeliverable. These five respondents were removed from the study, which yielded 365 accessible participants.

The initial email message included a message asking for their participation in the study, a description of the purpose of the study, and a link to the questionnaire (See

APPENDIX C). The message also explained that when the participants click on the link to the questionnaire, they have agreed to participate in the study. The questionnaires were self-administered with directions stated on the first page of the instrument. The web-based system Qualtrics was utilized to collect data.

At the end of the first week after the initial email message, 101 responses were received, which yielded a 28% response rate. Qualtrics software was used to track responses from the participants that were invited to participate in the survey. At the completion of the first week, Qualtrics software was utilized to send a reminder email message to those who did not respond to the initial message (See APPENDIX D). This yielded 82 additional responses for another 22% response rate for the second message. At the completion of the second week, another email message was sent to the non-respondents (See APPENDIX E), resulting in 51 more responses, and a total of 234 responses to the questionnaire and an overall response rate of 64%.

The survey software maintained customer confidentiality and anonymity while still tracking the time of the responses. Non-response error was addressed by comparing early and late respondents (Linder, Murphy, & Briers, 2001). Responses to the first two email messages (n=183) were classified as early respondents, and responses to the third and final email message were classified as late responses (n=51). Mean scores were compiled for overall, intrinsic, and extrinsic job satisfaction for the early and late respondents. The mean average for overall job satisfaction of the early respondents was 3.84 (SD=.60) and 3.81 (SD=.54) for late respondents. The mean average for intrinsic job satisfaction of the early respondents was 4.16 (SD=.53), and 4.14 (SD=.49) for late respondents. The mean average

for extrinsic job satisfaction of the early respondents was 3.27 (SD=.85) and 3.18 (SD=.78) for late respondents. No difference was found between the early and late respondents; therefore, the results of the study can be generalized to the population of the study (Miller & Smith, 1983).

Data for this study were analyzed using the Statistical Package for Social Science-SPSS 24. Responses to the demographic questions in the survey were summarized using frequencies and percentages. Questions on the MSQ form were separated into intrinsic and extrinsic scales and summarized using mean scores and standard deviations. Relationships between overall job satisfaction levels and age, experience level, educational level, and placement changes of the respondents were analyzed using correlation coefficients and Pearson product moment correlations. Differences in school setting, gender, race/ethnic group, marital status, entry route into teaching and salary were analyzed using analysis of variance.

Summary

This chapter provided a description of the quantitative research methods chosen for this study and their respective justifications. This study was an investigation of the job satisfaction of secondary agricultural education teachers in North Carolina during the fall of 2016. Teachers were only selected to participate if they had also taught in the state of North Carolina the following spring semester. A questionnaire was developed, which was comprised of two parts. The first was the Minnesota Satisfaction Questionnaire short form to assess the level of job satisfaction of the teachers in the study. The second section was a teacher profile section which collected teacher demographic information on variables

examined in the study that were believed to impact job satisfaction. The instrument was issued in an electronic format via an email message to the respondents. Three contacts to the sample respondents resulted in a 64% response rate. Early and late respondents' responses were also compared to assess non-response error. Overall job satisfaction, intrinsic job satisfaction, and extrinsic job satisfaction levels were computed using scores on the Minnesota Job Satisfaction short form.

CHAPTER 4

Findings

This chapter presents the analysis of data collected in the study of job satisfaction of agricultural education teachers in North Carolina. The following sections are included in this chapter: (a) demographic characteristics of the respondents, (b) intrinsic factor data, (c) extrinsic factor data, (d) overall job satisfaction data, (e) relational data, (f) differences data, and (g) key findings.

Using a descriptive research design, this study utilized an electronic survey administered through the web-based Qualtrics system. The instrument was comprised of two portions (See APPENDIX A). The first portion consisted of demographic questions. The second part was comprised of the Minnesota Job Satisfaction Questionnaire short form to examine the teachers' overall, intrinsic, and extrinsic job satisfaction levels. The population of this study consisted of all high school agriculture teachers employed in North Carolina during the 2016-2017 school year teaching agriculture courses in the fall (N=365) and who were teaching in North Carolina the spring semester of 2016. An invitation was provided to the population of the study via email message followed by two reminder email messages, which garnered a total of 234 responses and a 64% response rate. The statistical software SPSS-Statistical Software for Social Sciences 24 was utilized to perform the analysis of data.

Demographic Data

Participants' responses to items on the teacher profile section of the instrument were used to describe the population and to identify relationships and differences between demographic variables and job satisfaction levels. The demographic characteristics examined

in this study included: gender, ethnicity, age, educational level, entry method into teaching, marital status, income, teaching experience and number of placement changes from one school to another. The variables in Table 5 are reported in the order in which they appeared in the survey instrument and summarize the demographic characteristics of North Carolina high school agricultural education teacher respondents (n=234) that provided data for this study.

Table 5

Demographic Data

		<i>f</i>	<i>%</i>
Gender	Male	124	54
	Female	107	46
Ethnicity	White	207	90
	African American	14	6
	Latino/American Indian/Multi Racial	8	4
Age	23-34 Years	112	49
	35-44 Years	59	26
	45-54 Years	39	17
	55 + Years	20	9
Educational Level	Bachelor's Degree	105	46
	Master's Degree	117	50
	Advanced Degrees	8	4
Entry Method	Four-year college teacher prep	169	73
	Alternative Licensure	61	27
School Setting	Rural	161	70
	Suburban	52	23
	Urban	27	7
Marital Status	Single (Never Married)	48	21
	Married	160	70
	Single (Formerly Married)	21	9

Table 5 (continued).

Demographic Data

		<i>f</i>	%
Income	\$30,000-\$39,999	40	18
	\$40,000-\$49,999	77	34
	\$50,000-\$59,999	51	22
	\$60,000-\$69,999	45	20
	\$70,000 +	14	6
Years of Teaching Experience	1-5	91	39
	6-10	42	18
	11-15	28	12
	16-20	33	14
	21-25	18	8
	26-30	7	3
	31+	14	6
Number of Placement Changes	0	113	48
	1	46	20
	2	41	18
	3	26	11
	4 or more changes	7	3

Respondents were almost evenly distributed with respect to gender with 124 (54%) male and 107 (46%) female as shown in Table 5. A very small percentage of the respondents were non-white (10%), with African Americans making up a majority of the 10% of non-white respondents. The respondents ranged in age from 22 to 68 years of age. The mean age of high school agricultural education teachers in this study was 37.8 (SD=11.2). The largest category of ages of teachers that responded to the survey was the group below the age of 34 (49%).

The educational level of the respondents of this study was almost evenly split between those with bachelor degrees 105 (46%) and those with master's degrees 117 (50%).

The remaining 4% of teachers were divided between those who have obtained a 6th year certificate and those who have obtained a doctoral degree.

The average number of years of teaching experience of the teachers in this study was 11.2 years (SD=9.1). The total years of teaching experience of the respondents ranged from 1 to 38 years. Almost half of the respondents (47%) had ten years or less of teaching experience, and the largest group (39%) were those with five years of experience or less.

The mean number of placement changes of the respondents to this study is 1.04 (SD=1.26). The number of placement changes ranges from 0 to as many as 7 changes during the career of the teacher. The largest group, however, was the group of respondents with 0 placement changes (48%).

In general, the population for this study reflects the demographics of the agricultural educators of the state as a whole; predominately white and teaching in rural school settings. Almost half of the teachers were below the age of 34 (49%), and over half (54%) of the respondents had advanced degrees beyond a bachelor's degree.

Research Objectives

Research Objective 1

Investigate the level of intrinsic, extrinsic and overall job satisfaction of North Carolina high school agriculture teachers as measured by the Minnesota Satisfaction Questionnaire (MSQ) short form.

This research objective focused on the intrinsic and extrinsic factors that North Carolina high school agricultural education teachers perceived about their present employment as measured by the Minnesota Job Satisfaction Questionnaire (MSQ) short

form. Respondents were asked to report how satisfied they were with different aspects of their job. Data presented in Table 6 reveals the mean scores of each question of the MSQ short form. Frequencies for each item on the MSQ short form are located in Appendix B.

Teachers were asked to rate their level of job satisfaction for the 20 items on the MSQ short form. A Likert scale was used to determine the level of satisfaction where 1 = “*Not Satisfied*”, 2 = “*Somewhat Satisfied*”, 3 = “*Satisfied*”, 4 = “*Very Satisfied*”, and 5 = “*Extremely Satisfied*”. For the purpose of this study, the following interpretation scale was used: 1-1.50=Not Satisfied, 1.51-2.50=Somewhat Satisfied, 2.51-3.50=Satisfied, 3.51-4.50=Very Satisfied, 4.51-5=Extremely Satisfied. The respondents to this questionnaire averaged a mean intrinsic job satisfaction score of 4.16 (SD=0.52), which was classified as very satisfied. The respondents’ mean extrinsic score was 3.26 (SD=0.84), which was classified as satisfied. The overall level of job satisfaction for the respondents to this survey was 3.83, which was classified as a very satisfied level of job satisfaction.

Table 6 displays the 20 items of the MSQ short form, their mean scores, and standard deviation per each item. The items were categorized as either intrinsic or extrinsic. The items were also ranked from highest to lowest mean scores per their respective group.

Table 6

Intrinsic, Extrinsic & Overall Job Satisfaction Levels of North Carolina Agricultural Education Teachers

Intrinsic Job Satisfaction Items of the MSQ	Mean	Standard Deviation
The chance to do things for other people	4.57	0.64
The way my job provides for steady employment	4.56	0.67
The chance to do different things from time to time	4.45	0.72
The chance to do something that makes use of my abilities	4.42	0.73
Being able to keep busy all the time	4.38	0.84
Being able to do things that don't go against my conscience	4.15	0.90
The chance to be "somebody" in the community	4.14	0.89
The chance to try my own methods doing this job	4.07	0.91
The feeling of accomplishment I get from the job	4.07	0.91
The chance to do work alone on the job	4.04	0.96
The way my co-workers get along with each other	3.88	1.08
The freedom to use my own judgment	3.82	1.03
The chance to tell people what to do	3.36	0.86
Total Intrinsic Job Satisfaction	4.16	0.52
Extrinsic Job Satisfaction Items of the MSQ		
The working conditions	3.79	1.13
The way my boss handles his/her workers	3.59	1.25
The competence of my supervisors in making decisions	3.55	1.24
The praise that I get for doing a good job	3.43	1.21
The way policies are put into practice	3.01	1.17
The chances for advancement at my job	2.83	1.07
My pay and the amount of work that I do	2.61	1.19
Total Extrinsic Job Satisfaction	3.26	0.84
Overall Job Satisfaction	3.83	

Note: 1="Not Satisfied", 2="Somewhat Satisfied", 3="Satisfied", 4="Very Satisfied", and 5="Extremely Satisfied".

The short form of the MSQ contained 13 items related to intrinsic job satisfaction of teachers and is reported in Table 6. The intrinsic items on the MSQ relate to the respondents' level of responsibility, variety of tasks, meaningful work, recognition, and their own ability

to make decisions. The intrinsic items were interpreted primarily as very satisfied with a few exceptions. Only one intrinsic item on the survey instrument was reported that was not classified as extremely or very satisfied; “The chance to tell people what to do.” For the respondents, the item “The chance to do things for other people” produced the highest score with a mean of 4.57 (SD=0.64). This item was also ranked satisfied or higher for all but two respondents in the study and the highest frequency of extremely satisfied of all the items in the study (n = 141). “The way my job provides for steady employment,” produced the second highest mean score with 4.56 (SD=0.67) and a high frequency of extremely satisfied respondents (n = 140). It should also be noted that all but three respondents found this item to be at least satisfied.

Once sorted by mean scores, the intrinsic items’ mean scores of the MSQ could be ranked into three subgroups: those that related to the nature of teaching, personal motivators, and management. Among the intrinsic factors, the items relating to the nature of the job of teaching (“The way my job provides for steady employment,” “The chance to do different things from time to time,” and “Being able to keep busy all the time”) yielded the highest mean scores and were categorized as extremely satisfied and very satisfied. Personal motivators related to intrinsic job satisfaction such as “The chance to be somebody in the community” and the “Feeling of accomplishment I get from the job” received a very satisfied interpretation. Items “The chance to do work alone on the job” to “The chance to tell people what to do,” were categorized as management type items. Although these items’ mean scores were not as high as other items in the intrinsic category, they were still classified very satisfied to satisfied.

The seven remaining items of the MSQ measured the extrinsic level of job satisfaction for the respondents. The extrinsic items measured the respondents' attitudes and perceptions of pay, economic security, and tangible rewards. Items in the extrinsic category based on mean scores could be classified in two categories: those items that relate to administrative factors and those that relate to compensation. Those items that related to compensation received the lowest mean job satisfaction scores of the instrument. The respondents rated the extrinsic factors on the instrument lower than the intrinsic factors. Most of the items would be interpreted as satisfied, but not at the level of job satisfaction shown for the intrinsic items of the questionnaire. For the extrinsic factors, "The way my boss handles his or her worker," received the highest score with a mean score of 3.59 (SD=1.25). It should be noted 24% of the respondents ranked this item somewhat or not satisfied. The lowest mean score for any of the measures of the MSQ short form was "The pay for the amount of work that I do," which received a mean score of 2.61 (SD=1.19). For this item 54% of the participants were somewhat satisfied or unsatisfied as compared to 28% of the participants that ranked this item very or extremely satisfied.

Research Objective 2

Examine the relationship between the intrinsic, extrinsic, and overall level of job satisfaction of North Carolina agriculture teachers and specific variables; salary, age, experience level in number of years in teaching, highest educational level completed, and the number of placement changes.

The relationship between the level of intrinsic, extrinsic and overall job satisfaction and the variables; experience, highest educational level completed and the number of

placement changes were calculated using the Pearson Product Moment Correlation analysis utilizing SPSS 24 software.

Table 7

Relationships Between Teacher Job Satisfaction and Selected Demographic Variables

Demographic Variable	Overall	Intrinsic	Extrinsic
Years of Teaching Experience	.085 (p=0.207)	.164 (p=0.015)	-.019 (p=0.784)
Age	-.022 (p=0.741)	.029 (p=0.671)	-.079 (p=0.244)
Educational Level	.016 (p=0.816)	.041 (p=0.543)	-.015 (p=0.822)
Placement Changes	-.138 (p=0.042)	-.066 (p=0.335)	-.201 (p=0.003)

Teaching experience ($r = .16$) was positively related to intrinsic job satisfaction ($p=.015$), but the relationship was considered negligible (Davis, 1971). Further, this variable accounted for only 3% of the variance in intrinsic job satisfaction. As shown in Table 7, there were no statistically significant relationships between teaching experience, age of the teacher, and overall, intrinsic, and extrinsic job satisfaction levels. The number of placement changes or number of times that a teacher has changed school locations was related to job satisfaction for both overall ($p = 0.042$) and extrinsic ($p = 0.003$) job satisfaction. Overall job satisfaction was negatively related to teacher placement changes. As the number of placement changes increased, the job satisfaction level decreased. The relationship between job satisfaction and placement changes was also considered negligible (Davis, 1971). This

variable accounted for less than 1% of the variance in extrinsic job satisfaction. There were no statistically significant relationships between the number of placement changes and intrinsic job satisfaction.

Research Objective 3

Examine the differences in intrinsic, extrinsic, and overall job satisfaction based upon North Carolina agriculture teachers' school setting, gender, racial/ethnic group, marital status, and entry route into teaching.

For this research objective, a one-way ANOVA was used to determine whether there were any statistically significant differences between the means of two or more independent groups listed for each demographic variable. Table 8 below displays the mean scores and standard deviation for each category of salary listed in the survey instrument and the mean, standard deviation, degrees of freedom, and p value for intrinsic, extrinsic and overall job satisfaction.

Teachers were asked to select the category for their income from teaching based on the following categories; \$30,000-39,999, \$40,000-49,999, \$50,000-59,999, \$60,000-69,999, \$70,000 and higher. Mean scores with standard deviations were reported for each income level (see Table 8). The results for differences in intrinsic, extrinsic, and overall job satisfaction mean scores are also presented in Table 8.

Table 8

Job Satisfaction Mean Scores Based Upon Salary Level of Teachers

Salary Level	Intrinsic Factors		Extrinsic Factors		Overall	
	M	SD	M	SD	M	SD
\$30,000-39,999	4.02	0.54	3.26	0.66	3.76	0.56
\$40,000-49,999	4.13	0.56	3.30	0.87	3.84	0.63
\$50,000-59,999	4.23	0.49	3.19	0.87	3.87	0.58
\$60,000-69,999	4.23	0.53	3.28	0.91	3.90	0.62
\$70,000 & higher	4.18	0.28	3.07	0.76	3.80	0.39

Intrinsic factor mean scores for all categories of income were classified as very satisfied, while all mean scores for extrinsic factors for all categories of income were classified as satisfied. There were no differences in intrinsic job satisfaction ($p = 0.42$) ($F=0.995$) ($df=217$), extrinsic job satisfaction ($p = 0.92$) ($F=0.292$) ($df=217$) or overall job satisfaction ($p = 0.92$) ($F=0.284$) ($df=217$) based upon income levels of the agriculture teachers.

Teachers were asked to report whether they entered teaching after completing a pre-service teacher education program or as an alternative licensure program. Mean scores and standard deviations were reported for entry route into teaching (see Table 9). The results for differences in intrinsic, extrinsic, and overall job satisfaction mean scores are also presented in Table 9.

Table 9

Differences in Job Satisfaction Based upon Entry Route Into Teaching

	4 Year Education Degree		Alternative Licensure Program		F	(df)	p
	M	SD	M	SD			
Intrinsic Factors	4.19	0.51	4.08	0.55	1.95	219	0.164
Extrinsic Factors	3.26	0.82	3.23	0.88	0.06	219	0.804
Overall	3.87	0.57	3.79	0.63	0.36	219	0.356

Intrinsic scores for both groups of teachers in this study were all categorized as very satisfied, and extrinsic scores for teachers with 4-year education degree and those that completed an alternative licensure entry were reported in the satisfied range. Overall job satisfaction scores for both 4-year education degree and alternative licensure programs were categorized as very satisfied. There were no differences in intrinsic job satisfaction, extrinsic job satisfaction, or overall job satisfaction based on entry route into teaching for the agriculture teachers.

Respondents in this study were asked to report their gender as either male or female. Mean scores with standard deviation were reported for gender (see Table 10). The results for differences in intrinsic, extrinsic, and overall job satisfaction mean scores are presented in Table 10.

Table 10

Differences in Job Satisfaction based upon Gender

	Male		Female		F	df	p
	M	SD	M	SD			
Intrinsic Factors	4.22	0.51	4.09	0.54	3.52	219	0.062
Extrinsic Factors	3.29	0.87	3.22	0.80	0.31	219	0.578
Overall	3.90	0.59	3.79	0.59	1.84	219	0.18

Mean scores for job satisfaction are relatively the same for both genders. There were no differences in intrinsic, extrinsic, and overall job satisfaction based upon gender of the agriculture teachers.

Respondents to this study were asked to report their race or ethnicity as White, African American, Asian/Pacific Islander, Native American, or Latino. Individual analysis was not possible for all of the groups listed in the questionnaire because of the very small number of respondents in some groups. Therefore, Asian/Pacific Islander, Native American, and Latino categories were merged together into a group referred to as “other”. Mean scores with standard deviations were reported for each ethnicity (See Table 11). The results for differences in intrinsic, extrinsic, and overall job satisfaction mean scores are also presented in Table 11.

Table 11

Differences in Job Satisfaction Based upon Ethnicity

	African American		White		Other		F	df	p
	M	SD	M	SD	M	SD			
Intrinsic Factors	4.18	0.52	3.44	0.52	4.22	0.65	0.20	217	.938
Extrinsic Factors	3.44	0.51	3.25	0.85	2.96	0.72	0.96	217	.439
Overall	3.93	0.45	3.35	0.60	3.78	0.73	0.42	217	.791

All ethnic groups reported very satisfied or higher in intrinsic levels of job satisfaction. Extrinsic scores for all ethnic groups were ranked satisfied. All overall job satisfaction means for each ethnic group were classified as satisfied. There were no differences in intrinsic job satisfaction, extrinsic job satisfaction, and overall job satisfaction based on ethnicity of the agriculture teachers.

Respondents were asked to report whether they classified the school district in which they taught to be predominately rural, suburban, or urban. Mean scores with standard deviations were reported for each school setting (See Table 12). The results for differences in intrinsic, extrinsic, and overall job satisfaction mean scores are also presented in Table 12.

Table 12

Differences in Job Satisfaction Based upon School Setting

	Rural		Suburban		Urban		F	df	p
	M	SD	M	SD	M	SD			
Intrinsic Factors	4.20	0.51	4.12	0.55	3.86	0.49	2.96	219	0.054
Extrinsic Factors	3.36	0.81	3.12	0.81	2.66	0.89	5.99	219	0.003
Overall	3.91	0.58	3.78	0.59	3.44	0.57	4.84	219	0.009

Intrinsic factors for rural, suburban, and urban were classified as very satisfied. Extrinsic factors for all categories were classified as satisfied. Overall job satisfaction for rural, and suburban areas were classified as very satisfied, and urban areas were classified as satisfied.

There were statistically significant differences among the teachers who taught in rural and urban schools as determined by a one-way ANOVA in overall job satisfaction and extrinsic job satisfaction. A LSD post hoc test of the data revealed a difference between rural and urban respondents ($p=.003$) in overall job satisfaction. The results of that test are reported in Table 13.

Table 13

Post Hoc Test Results for School Setting and Overall Job Satisfaction

		Mean Difference	Std Error	p
Rural	Suburban	.130403	.09356	.165
	Urban	.46351*	.15664	.003
Suburban	Rural	-.13043	.09356	.165
	Urban	.33309	.17010	.051
Urban	Rural	-.46351*	.15664	.003
	Suburban	-.33309	.17910	.051

Cohen's d is a statistic used to measure effect size. The effect size is a measure of the practical importance of a difference in mean scores between two groups to determine if the difference is large enough to be of importance. Cohen's effect size was calculated ($d=.59$) ($r=.028$) for the difference between rural and urban respondents in overall job satisfaction. A moderate level of importance was reported in the difference between the mean scores on overall job satisfaction between the teachers in rural and urban areas.

Table 14

Post Hoc Test Results for School Setting and Extrinsic Job Satisfaction

		Mean Difference	Std Error	p
Rural	Suburban	.23947	.13202	.071
	Urban	.70417*	.22102	.002
Suburban	Rural	-.23947	.13202	.071
	Urban	.46471	.24001	.054
Urban	Rural	-.70417*	.22102	.002
	Suburban	-.46471	.24001	.054

Differences in mean scores were also found among teachers who taught in rural and urban schools ($p=.002$) in extrinsic job satisfaction. Cohen’s d statistic was selected to measure the effect size or the practical importance of the difference in mean scores. Cohen’s effect sizes were calculated for the differences between rural and urban respondents ($d=0.82$) ($r=0.38$). A moderate level of importance was reported in the difference between the mean scores on extrinsic job satisfaction between the teachers in rural and urban schools.

Respondents were asked to report their present marital status as single (never married), married, separated, divorced, or widowed. Individual analysis was not performed because of the low number of respondents that reported that they were separated, divorced or widowed, so these categories were combined to a new category, single-formerly married. Mean scores with standard deviations were reported for each marital status (See Table 15). The results for differences in intrinsic, extrinsic, and overall job satisfaction mean scores are also presented in Table 15.

Table 15

Differences in Job Satisfaction based upon Martial Status

	Single (Never Married)		Married		Single (Formerly Married)		F	df	p
	M	SD	M	SD	M	SD			
Intrinsic Factors	4.07	0.54	4.18	0.51	4.22	0.82	0.395	218	0.812
Extrinsic Factors	3.23	0.77	3.23	0.86	3.29	1.29	0.368	218	0.831
Overall	3.78	0.58	3.85	0.59	3.95	0.97	0.50	218	0.91

Intrinsic factor mean scores for all categories were classified as very satisfied. All extrinsic factor categories were classified as satisfied. All overall job satisfaction scores for all categories of marriage were classified as very satisfied. There were no differences in overall job satisfaction, intrinsic job satisfaction, or extrinsic job satisfaction based upon marital status of the agriculture teachers.

Summary

The descriptive design in this study utilized an electronic survey. The survey was comprised of two parts: demographic factor questions about the respondents and the short form of the Minnesota Job Satisfaction Questionnaire. The demographic results of the study reveal that the respondents were evenly split between males and females and between those with bachelor and master degrees. The largest portion of the sample respondents (50%) were between 23 to 34 years of age. Subsequently, 57% of the respondents had ten years or less of teaching experience.

The mean scores for overall job satisfaction levels show that overall the teachers in this study were very satisfied. Intrinsic scores were higher for the respondents than extrinsic scores.

In reviewing relationships between age, experience, level of education, and placement changes, statistical significance was found in intrinsic levels found with age, experience level, and the number of placement changes. A statistical analysis of the values determined that though these scores were found to be statistically significant, they were not found to be practically insignificant.

In reviewing differences between levels of job satisfaction and income levels, entry method into teaching, gender, ethnicity, school setting, and marital status, the only statistical significance was found for school setting at the overall and extrinsic levels. Cohen's d statistic was used to calculate the effect size of the differences in mean scores between teachers from urban and suburban areas in overall and extrinsic job satisfaction. A moderate level of importance was reported for the differences in mean scores on overall and extrinsic job satisfaction between teachers in rural and urban areas.

CHAPTER 5

Summary, Conclusions, Implications, & Recommendations

Job satisfaction is a complex phenomenon attributed to every vocation on earth (Aziri, 2011). Studies on job satisfaction have been valued not only for their financial implications, but also for their humanistic benefits (Worrell, 2004). For the agricultural education profession, demands both in and out of the classroom have led many to examine the level of job satisfaction of agricultural education teachers to combat issues facing the profession (Chenevy, Ewing, & Whittington, 2008).

Several factors have been associated with job satisfaction. The presence and absence of these factors could determine one's job satisfaction level. Typically, these traits are categorized as internal-intrinsic or external-extrinsic. Internal job satisfaction factors are based on personal perceptions and internal feelings. Examples of intrinsic factors may include recognition, advancement, and responsibility. Extrinsic factors, however, are external to the job such as salary and increased paperwork. A review of literature produced numerous variables related to job satisfaction. Demographic variables such as age, gender, race, school setting, and income and their relationship with job satisfaction have all been investigated.

The teaching profession in North Carolina has faced a unique set of challenges over the past five years or more. Changes in the form of increased technology, increased security, decreased funding, increased testing and standards, the elimination of teaching tenure, stagnant salaries, and increased public scrutiny have created a unique climate that warrants a

study on the level of current teacher job satisfaction. The previously mentioned factors threaten the supply of agricultural teachers and the sustainability of the profession.

The Purpose of the Study & Objectives

The purpose of this study was to investigate and describe the levels of overall job satisfaction of North Carolina high school agriculture teachers who taught last year and who were teaching during the fall semester of 2016. Several researchers have attempted to link job satisfaction levels to certain factors that can be related to attributes of the employees themselves, ranging from age and race to gender and educational levels.

The issue of job satisfaction in this study was focused on the following research objectives:

1. Investigate the level of intrinsic, extrinsic and overall job satisfaction of North Carolina high school agriculture teachers as measured by the Minnesota Satisfaction Questionnaire (MSQ) short form.
2. Examine the relationship between the intrinsic, extrinsic, and overall level of job satisfaction of North Carolina agriculture teachers and specific variables; salary, age, experience level in number of years in teaching, highest educational level completed, and the number of placement changes.
3. Examine the differences in intrinsic, extrinsic, and overall job satisfaction based upon North Carolina agriculture teachers' school setting, gender, racial/ethnic group, marital status, and entry route into teaching.

Theoretical Rationale

Because job satisfaction is commonly associated with employee needs, Maslow's hierarchy of needs theory was used as a starting point in this study. In Maslow's hierarchy of needs theory, people are driven by basic needs. As needs are met, higher order needs become the focus of the individual until one is self-actualized at which point the focus of their life and work is to improve others. Maslow's work on human needs influenced the work of Herzberg and colleagues who created the dual factor Motivation-Hygiene theory. Herzberg's theory explains how job satisfaction (or satisfiers) and job dissatisfaction (or maintenance factors) operate independently from one another because they are driven by different factors (Herzberg, et al., 1959). In this theory, the motivators, or satisfiers, are the intrinsic qualities of the job: challenge, accountability, recognition, advancement, growth, and responsibility. Hygiene factors, or dissatisfiers, are the qualities that relate to the environment of the job: pay, security, supervision, and physical working conditions (Herzberg, 1968). Herzberg theorized that individuals are encouraged more by motivators, than by maintenance factors. As with Maslow's theories, higher level needs such as esteem and self-actualization correspond with Herzberg's motivator factors and lower level needs; survival, safety, and social needs correspond with Herzberg's hygiene factors. Motivator or intrinsic factors contribute to job satisfaction through employee growth, but hygiene factors must be met to avoid dissatisfaction (Major, 2012)

The concept that job satisfaction is measurable is a premise of the Motivator-Hygiene theory and serves as the theoretical framework for this study (Herzberg, Mausner & Snyderman, 1959). By identifying employee factors associated with satisfaction and

dissatisfaction, employers may take steps to alter workplace conditions to increase satisfaction levels. Factors such as age, gender, degree status, entry route into teaching, and school setting have been the focus of several studies, but results are inconclusive and differ from study to study.

Research Design

This study used a descriptive research design. The instrument was developed by combining the items on the Minnesota Satisfaction Questionnaire-MSQ short form with additional items to measure the demographic variables associated with job satisfaction from a review of the literature. The population of this study consisted of all high school agriculture teachers employed in North Carolina during the 2016-2017 school year who taught agriculture courses in the fall of 2016 (N=370) and had taught the previous school year. Newly hired teachers were not included in the population because they had not been teaching long enough to assess their level of job satisfaction at the time the data were collected. The 2016-2017 agriculture teachers in this population were considered a sample in time of the agriculture teachers who had taught during the years since recent changes affecting teachers in North Carolina had been implemented.

The questionnaire was distributed through an email message sent to the email addresses for the teachers listed in the North Carolina Agricultural Teacher Directory at www.ncffa.org (North Carolina FFA, 2016). The initial email message included a message asking for their participation in the study, a description of the purpose of the study, and a link to the questionnaire.

Data related to the research objectives were summarized using descriptive statistics. Data were collected via the Qualtrics software program 24. All data were collected in a two-and-a-half-week period in October 2016. Three email contacts to the agricultural teachers in the population resulted in a 64% response rate. Data from early and late respondents were also compared to assess non-response error (Linder, et al., 2001). Responses to the demographic questions in the survey were summarized using frequencies and percentages. Data for this study were analyzed using the Statistical Package for Social Sciences-SPSS 24. A Likert scale was used to determine the level of satisfaction where 1="Not Satisfied", 2="Somewhat Satisfied", 3="Satisfied", 4="Very Satisfied", and 5="Extremely Satisfied". For this study, the following interpretation scale was used to interpret mean scores: 1-1.50=Not Satisfied, 1.51-2.50=Somewhat Satisfied, 2.51-3.50=Satisfied, 3.51-4.50=Very Satisfied, 4.51-5=Extremely Satisfied.

Items on the MSQ short form were separated into intrinsic and extrinsic scales and summarized using mean scores and standard deviations. Relationships between intrinsic, extrinsic, and overall job satisfaction and age, experience level, educational level, and placement changes were analyzed using Pearson product moment correlations. Differences in job satisfaction based on school setting, gender, race/ethnic group, marital status, entry route into teaching and salary were analyzed using ANOVA.

Demographics

The male to female demographic for this study was almost evenly split between males (54%) and females (46%). Of the participants, 90% of the respondents were White while the remaining 10% were made up of African Americans (6%) and others. Most of the

participants (73%) received their teaching license through a four-year college teacher prep program. The remaining 27% earned, or were in the process of earning, their teaching license through an alternative licensure program. Almost half of the teachers in this study were between the ages of 23 and 34 years of age. The average age of the respondents was 37.8 (SD=11.2). The remaining categories combined make up the remaining 50% of the respondents. When the educational level of the teachers was examined, a little more than half of the teachers in the study have advanced degrees of a master's degree or higher.

Summary of Findings

The results of this study are summarized in the following section for each of the research objectives that formed the basis for this study.

Levels of Job Satisfaction

The findings suggest that the majority of the agriculture teachers in this study were very satisfied with their current positions. The overall mean job satisfaction score generated by all of the items of the MSQ was 3.83, which was interpreted as very satisfied. Intrinsic items on the MSQ short form yielded a mean score of 4.16, which was interpreted as very satisfied. Extrinsic items on the questionnaire were rated slightly lower than intrinsic items. Extrinsic items resulted in a mean score of 3.26, which was interpreted as satisfied.

Relationship Between Selected Factors & Job Satisfaction

The relationship between the level of overall, intrinsic, and extrinsic job satisfaction levels and experience level in number of years in teaching, highest educational level completed, and the number of placement changes were calculated using SPSS 24 software. Pearson Product Moment Correlations were utilized to determine correlations between the

stated factors and overall, intrinsic, and extrinsic job satisfaction. Teaching experience ($r = .16$) was positively related to intrinsic job satisfaction ($p = .015$), but the relationship was considered negligible (Davis, 1971). Further, this variable accounted for only 3% of the variance in intrinsic job satisfaction. There were no statistically significant relationships between teaching experience, age of the teacher and overall, intrinsic, and extrinsic job satisfaction levels. The number of teacher placement changes was related to overall job satisfaction ($r = -.138$) ($p = 0.042$) and extrinsic job satisfaction ($r = -.21$) ($p = 0.003$) of the agriculture teachers. Overall job satisfaction is negatively related to teacher placement changes. As the number of placement changes increased, the job satisfaction level decreased. The relationship between extrinsic job satisfaction and placement changes and overall job satisfaction and placement changes was also considered negligible (Davis, 1971). This variable accounted for less than 1% of the variance in extrinsic job satisfaction and 3% of the variance in overall job satisfaction. There were no statistically significant relationships between the number of placement changes and intrinsic job satisfaction.

Differences Between Selected Factors & Job Satisfaction

Differences between overall, intrinsic, and extrinsic job satisfaction levels and the selected demographic factors were determined using a one-way ANOVA. The selected factors were: gender, race/ethnicity, entry method into teaching, marital status, school setting, and income level. There were no reported differences in intrinsic, extrinsic, and overall job satisfaction based upon the teachers' gender, racial/ethnic group, marital status, or entry route into teaching.

There were no reported differences in intrinsic job satisfaction levels based upon the teachers' school setting. There were statistically significant differences in job satisfaction levels among the teachers who taught in rural, urban, and suburban schools as determined by a one-way ANOVA in overall job satisfaction and extrinsic job satisfaction. An LSD post hoc test of the data revealed a difference between rural and urban respondents ($p=.003$) in overall job satisfaction.

The practical importance of the difference in overall job satisfaction between rural and urban agriculture teachers was determined by calculating Cohen's d , a measure of effect size. The effect size for the difference in overall job satisfaction between these two groups was $d=.59$, which is considered a moderate level of importance.

There was also a difference in extrinsic job satisfaction based upon school location. Agriculture teachers from rural school settings reported higher levels of job satisfaction than agriculture teachers in urban school settings. The practical importance of the difference in extrinsic job satisfaction between rural and urban agriculture teachers was determined by calculating Cohen's d . The effect size for the difference in overall job satisfaction between these two groups was $d=.82$, which is considered a moderate level of importance.

Discussion

Job Satisfaction Levels

An investigation of the job satisfaction levels of agriculture teachers is not only beneficial for the profession from a financial viewpoint, but a more humanistic view, resulting in higher retention rates and less turnover. Studies have shown that satisfied employees tend to care more about work quality, they show higher levels of organizational

commitment, have higher retention rates, and are generally more productive (Bravendam Research Incorporated, 2002).

The respondents of this study collectively reported a “very satisfied” mean score for overall job satisfaction. This is significant despite issues in North Carolina attributed to lack of salary increases, compensation, and criticism faced by teachers. Intrinsic values for the respondents were interpreted as “very satisfied,” and extrinsic scores were interpreted as “satisfied.”

The difference in mean scores between intrinsic items and extrinsic items supports Herzberg’s motivational hygiene theory, which distinguishes between intrinsic and extrinsic factors. This theory classifies motivational factors with intrinsic values and hygiene factors with extrinsic values (Herzberg, 1968). Higher intrinsic scores are commonly associated with higher levels of teacher job satisfaction.

In a similar study of the job satisfaction level of North Carolina agriculture teachers Jewell, et al. (1990) reported a moderate level of job satisfaction and average levels of intrinsic and extrinsic job satisfaction.

Higher levels of intrinsic and extrinsic job satisfaction were also found by Brunetti (2011) who reported that teachers’ intrinsic levels of job satisfaction were correlated with higher levels of teacher job satisfaction.

Factors Attributed to Job Satisfaction Levels

Age is typically correlated with higher levels of job satisfaction. The “very satisfied” overall ranking for this study could be attributed to the large number of participants who had just begun their careers in this study, with as much as 49% of the participants below the age

of 34. The findings of this study support those of Perie and Baker (1957) in which younger teachers have higher job satisfaction levels. Experience is closely related to age. Often, as the age of the teacher increases, so does the experience level of the teacher proportionally. Herzberg related this relationship as a curvilinear correlation in which job satisfaction starts high, drops through the midpoint of one's career, and then increases to higher levels before completion (Herzberg, 1987). Teaching experience was positively related to intrinsic job satisfaction, but the relationship was considered negligible (Davis, 1971). Further, this variable accounted for only 3% of the variance in intrinsic job satisfaction.

Gender is another factor that is commonly attributed to job satisfaction levels. The findings of this study support the findings of Thompson and McNamera (1997), which reported no significant difference between male and female respondents. The findings also support the work of Cano and Miller (1992), which found that both male and female respondents to their study were satisfied and did not differ significantly.

No differences were reported between intrinsic, extrinsic, and overall job satisfaction levels of the agriculture teachers based on the agriculture teachers' race/ethnicity. Bruch, Mooch, and Pooyah (1987) also reported no difference in job satisfaction levels between different races or ethnicities.

No significant relationships were reported between intrinsic, extrinsic, and overall job satisfaction levels of the agriculture teachers of this study based on the educational level of the agriculture teachers. This conflicts with the findings of Thobega and Miller (2003) and Bems (1989) who reported higher educational levels correlated with significantly higher job satisfaction levels.

Salary is often investigated in relation to job satisfaction. This study found no significant difference between salary and job satisfaction of agriculture teachers. This supports the work of Hoppock (1935) and Herzberg, Mausner, & Capwell (1957) who reported that salary was not a significant predictor of job satisfaction. Herzberg (1966) believed that salary was an indicator of job satisfaction to a certain point. Lower (1971) reported that higher salaries are not a satisfier but low salary was a dissatisfier.

No differences were reported among intrinsic, extrinsic, and overall job satisfaction levels of the agriculture teachers based on marital status. This contrasts the findings of Knerr (2001) who reported higher job satisfaction levels for married respondents.

No differences were reported between intrinsic, extrinsic, and overall job satisfaction of the agriculture teachers based on their entry method into teaching. This supports the work of Moran (2005) who reported no statistical difference between teachers' job satisfaction levels based on their entry method into teaching.

A difference was reported in overall and extrinsic job satisfaction levels of the agriculture teachers based on school setting. Agriculture teachers in urban areas reported significantly lower levels of job satisfaction in overall and extrinsic job satisfaction. Specifically, urban teachers reported lower levels of job satisfaction on items that were associated with school leadership, working conditions, praise, compensation, and opportunities for advancement compared to agriculture teachers from rural areas. No differences were reported in intrinsic job satisfaction levels of the agriculture teachers based upon school setting. This contrasts the findings of Arnold and Seekins (1997) who reported higher levels of job satisfaction in general academic teachers in urban areas.

Conclusions

Job satisfaction is not a problem for the agriculture teachers in North Carolina. The teachers in this study reported a very high level of overall job satisfaction, a very high level of intrinsic job satisfaction and a high level of extrinsic job satisfaction. Herzberg theorized that individuals are encouraged more by intrinsic than by extrinsic factors (Herzberg, 1968). Though the extrinsic level of job satisfaction is high, there is room for improvement. It can be concluded that job satisfaction is not a problem among the agricultural teachers in North Carolina.

Demographic variables do not explain variations in job satisfaction levels of North Carolina agricultural teachers. There were no reported significant relationships between salary, age, experience in years of teaching, highest educational level completed, or the number of placement changes. The listed variables do not explain the job satisfaction levels of the agriculture teachers. Gender, racial/ethnic group, marital status, and entry route into teaching did not have an impact on the job satisfaction levels of the agriculture teachers. School setting may have some impact on the job satisfaction levels of the teachers. Excluding school setting, the demographic variables were not predictors of job satisfaction.

Recommendations for Practice

Knowledge of the job satisfaction levels of agricultural teachers and the factors that attribute to these scores are beneficial on many levels. First, teachers that are satisfied with their current jobs provide better education for students. Research has shown that compensation and other hygiene factors are motivators to a point, but the intrinsic factors of

being able to make decisions and recognition for their work should be a priority to all administrators.

1. Data collected in this study reported a difference in teacher job satisfaction in urban and rural areas. Consideration could be provided in the future by state staff, teacher educators, and professional organizations in agricultural education to emphasize teacher visits, in-service, and other resources in urban areas for teachers who experienced the lowest levels of job satisfaction. In-service topics and programming should be developed to provide coping strategies for teachers to address policies or items that are beyond their control.
2. This study reported higher mean scores of intrinsic items on the questionnaire compared to the extrinsic items. Many of the extrinsic items such as compensation and administration are beyond the control of the teachers in this study and may not change for the foreseeable future. The findings of this study should be shared not only with state agricultural education staff and teacher educators, but also with education policy makers and school administrators. Lower levels of job satisfaction were reported in items related to school leadership, school working conditions, praise, and opportunities for advancement by urban teachers. Administrators may use this information to eliminate as many hygiene factors as possible, provide praise, and improve the working environment and climate at the school. The teachers may be able to support their perceptions about their own work and intrinsic motivation through their professional organizations by recognizing accomplishments and milestones through their awards and recognition programs.

3. The agricultural teachers in this study reported a very high level of overall job satisfaction. North Carolina may be used as a model for other states addressing similar changes in growth, economics, and educational policies.

Recommendations for Future Research

Based on the conclusions of this study, the following recommendations are presented for consideration to strengthen research in agricultural education and job satisfaction:

1. A periodic assessment every 5 to 10 years of job satisfaction is necessary to determine the needs of teachers, increase satisfiers, and decrease dissatisfiers. Studies on job satisfaction should be periodically held to intelligently direct time, labor, and resources unless warranted by special events or a situational change.
2. This study was only a snapshot in time of job satisfaction of the respondents at a particular time. In the future, a longitudinal study of a group of teachers throughout their career should be conducted to determine changes in job satisfaction with age and tenure and to determine if there is a pattern to job satisfaction.
3. The demographic variables used in this study, excluding school location, were not strong predictors of intrinsic, extrinsic, and overall job satisfaction levels of agricultural teachers in North Carolina. Future research should look to other variables as potential predictors of job satisfaction such as: the total number of agricultural teachers at the school, number of children that the teacher has, the age of the children, extra workload required for school facilities such as livestock barns, greenhouses, and land labs, and the number of weekends spent working.

4. Future investigations into job satisfaction should also explore why some teachers leave the profession and others remain to determine if there are factors that affect teachers' decisions to leave.

Future investigations into job satisfaction should look into items that were ranked very low to determine if any strategies, coping mechanisms, or in-service opportunities could be provided to assist teachers.

REFERENCES

- Adams, J. S. (1965). Inequity in social exchange. *Advances-Experimental Social Psychology*, (2) New York: Academic Press.
- Arnett, S. E., & Polkinghorne, F. W. (2010). Job dissatisfaction: A factor in maintaining a highly-qualified family & consumer sciences teacher workforce. *Journal of Workforce Education and Development*. 4(4). Retrieved 8-1, 2016 from: <http://opensiuc.lib.siu.edu/ojwed/vol4/iss4/2/>
- Arnold, M. L. (2005). Rural education: A new perspective is needed at the U.S. Department of Education. *Journal of Research in Rural Education*, 20(3).
- Arnold, N. L. & Seekins, T. (1997). A comparison of vocational rehabilitation counselors: urban and rural differences. *Rehabilitation Counseling Bulletin*, 41(1), 2-14.
- Aziri, B. (2011). Job satisfaction: A literature review. *Management Research & Practice*. 3(4), 77-86. Retrieved 10-12, 2016 from: <http://mrp.ase.ro/no34/f7.pdf>
- Ball, J. (2016.) Teacher supplements vary widely in North Carolina. *Citizen Times*. Retrieved 1-23-17 from: <http://www.citizen-times.com/story/news/local/2016/05/17/teacher-supplements-vary-widely-north-carolina/84287184/>
- Bems, R. G. (1989). Job satisfaction of vocational education teachers in Northwest Ohio. Northwest Ohio Vocational Education Personnel Development Regional Center. Bowling Green, OH: Bowling Green State University.
- Bowen, B. E. (1980). *Job satisfaction of teacher educators in agriculture*. Unpublished doctoral dissertation, The Ohio State University-Columbus. Retrieved 1-21-17 from:

- https://etd.ohiolink.edu/!etd.send_file?accession=osu1487091559667229&disposition=inline
- Bravendam Research Incorporated (2002). Effective management through measurement: Special report. Retrieved 8-1, 2016 from: www.employeesatisfactions.com
- Brennan, R. (2015, October). Teacher attrition continues to plague North Carolina. *Education Week*. 6. Retrieved 8-1, 2016 from: <http://www.edweek.org/ew/articles/2015/10/14/teacher-attrition-continues-to-plague-north-carolina.html>
- Brown, K. (2016). Carolina Curious: Public Education and Ten Years of Change. Retrieved 8-1, 2016 from: <http://www.wfdd.org/story/carolina-curious-public-education-and-ten-years-change>
- Bruening, T. H., & Hoover, T.S. (1991). Personal Life Factors as Related to Effectiveness and Satisfaction of Secondary Agricultural Teachers. *Journal of Agricultural Education*, 32(4), 37-43.
- Brunetti, G. J. (2001). Why do they teach? A study of job satisfaction among long-term high school teachers. *Teacher Education Quarterly*, 28(3), 49-74.
- Brush, D. H., Moch, M.K., & Pooyan, A. (1987). Individual demographic differences and job satisfaction. *Journal of Occupational Behavior*, 8, 139-155.
- Camp, W. G. (2000). A National Study of the Supply and Demand Teachers of Agriculture Education in 1996-1998. Blacksburg, VA: Virginia Polytechnic Institute and State University.

- Cano, J. and Miller, G. (1992). A gender analysis of job satisfaction, job satisfier factors, and job dissatisfier factors of agricultural education teachers. *Journal of Agricultural Education*. 27(2), 40-46.
- Cassella, M. (2014). Houston school district aiming to recruit North Carolina's teachers. *The Charlotte Observer*. Retrieved 4-12, 2016 from:
<http://www.charlotteobserver.com/news/local/education/article9143855.html>
- Castillo, J. X. (1999). *The level of job satisfaction among agricultural teacher educators*. Unpublished doctoral dissertation. The Ohio State University – Columbus.
- Castillo, J. X., & Cano, J. (1999). A Comparative Analysis of Ohio Agriculture Teachers' Level of Job Satisfaction. *Journal of Agricultural Education*, 40(4), 67-79.
- Castillo, J. X., & Conklin, E.A., Cano, J. (1999). Job satisfaction of Ohio agricultural education teachers. *Journal of Agricultural Education*, 40(2), 19-27.
- Chenevey, J. L., Ewing, J.C., & Whittington, M.S. (2008). Teacher burnout and job satisfaction among agricultural education teachers. *Journal of Agricultural Education*, 49(3). 12-22.
- Davis, K. & Newstrom, J.W. (1989). *Human Behavior at work: Organizational behavior*. (8th ed.) New York: McGraw Hill.
- Flowers, J. & Pepple, J.D. (1988). Assessment of the morale of beginning vocational agriculture teachers in Illinois. *Journal of the AATEA*. 29(2), 2-6.
- Foster, D., Lawyer, R. G., & Smith, A. R. (2015). Ag Teacher Supply and Demand Overview. Retrieved 1-28, 2016 from: www.naae.org/teachag

- Gawel, J. E. (1999). Herzberg's theory of motivation and Maslow's hierarchy of needs. *Practical Assessment, Research & Evaluation*, 5(11). Retrieved 3-15, 2017 from: <http://PAREonline.net.getvn.asp?v5&n=11>.
- Grady, T. L. (1985). Job satisfaction of the vocational agriculture teachers in Louisiana. *Journal of the American Association of Teacher Educators in Agriculture*, 26(3), 70-78.
- Hassard, J., Teoh, K., Cox T. (2016). *Job Satisfaction: Theories and Definitions*. Birkbeck University of London.
- Herzberg, F. (1966). *Work and the nature of man*. New York: The World Publishing Company.
- Herzberg, F. (1987). *One more time: How do you motivate employees?* Harvard Business Review. September-October 1987, 5-16.
- Herzberg, F., Mausner, B., Peterson, R., & Capwell, D. (1957). *Job attitudes: Review of research opinion*. Pittsburg: Psychological Services of Pittsburgh.
- Herzberg, F., Mausner, B., & Snyderman, B.B. (1959). *The motivation to work*. New York: John Wiley & Sons.
- Hinchcliff, K., & Johnson, C. (2016). After inflation, N.C. Teacher pay has dropped 135 in the past 15 years. WRAL. Retrieved 9-16, 2016 from: www.wral.com/after-nc-teacher-pay-has-dropped-13-in-past-15years.15624302/
- Huitt, W. (2007). Maslow's hierarchy of needs. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved 1-15, 2017 from: <http://www.edpsycinteractive.org/topics/regsys/maslow.html>

- Ingersoll, R. M. (2003). *Is There Really a Teacher Shortage?* Center for the Study of Teaching and Policy and the Consortium of Policy Research in Education. University of Washington.
- James, E. M. (2013.) *Importance of Factors Considered by Ohio Secondary Agricultural Education Teachers in Their Decision to Remain in Teaching*. Unpublished masters thesis - The Ohio State University – Columbus.
- Jewell, L. R, Beavers III, K.C., Malpiedi, B. J., and Flowers, J.L. (1990). Relationships between levels of job satisfaction expressed by North Carolina vocational agriculture teachers and their perceptions toward the agricultural education teaching profession. *Journal of Agricultural Education*, 52-57.
- Kane, D., (2015). NC Teachers Lose Bonus Pay, But Others Still Cash In. *The News & Observer*. Retrieved 8-16, 2016 from: <http://www.newsobserver.com/news/politics-government/state-politics/article10231820.html>
- Kantrovich, A. J. (2007). *A national study of the supply and demand for teachers of Agricultural Education: 2004-2006*. American Association of Agricultural Education. Retrieved 9-1, 2016 from: <https://www.naae.org/teachag/2007%20Supply%20Demand%20Study%20.pdf>
- Kirby, S. N., & Grissmer, D.W. (1993). *Teacher Attrition: Theory, Evidence, and Suggested Policy Options*, Washington DC: U.S. Department of Education (ERIC Document Reproduction Service No. ED 364-533).

- Knerr, M. J., (2001). An Empirical Analysis of the Relationship between Martial Status and Job Satisfaction. *Undergraduate Research Community Research Journal*. Villanova University. Retrieved 8-1, 2016 from: <https://www.kon.org/urc/v4/knerr.html>
- Larson, M. (2011). Job Satisfaction of Family and Consumer Sciences Teachers in Wisconsin. Retrieved 1-12, 2016 from:
<http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=3023&context=etd>
- Lawler, E. E. (1971). *Pay and organizations effectiveness*. New York: McGraw-Hill.
- Linder, J. R., Murphy, T.H., & Briers, G.E. (2001). Handling nonresponse in social science research. *Journal of Agricultural Education*, 42(4), 43-53.
- Locke, E. A. (1976). The Nature and Causes of Job Satisfaction. *Handbook of Industrial and Organizational Psychology*, Rand McNally, pp. 1297-1350.
- Locke, E. A., & Sirota, D. (1976). An experimental case study of the successes and failures of job enrichment in a government agency. *Journal of Applied Psychology*, 61(6), 701-745.
- Major, A. E. (2012). Job design for special education teacher. *Current Issues in Education*. 15(2), 1-8.
- Martinez-Ponz, M. (1990). *Test of a three-factor model of teacher commitment*. Paper presented at the annual conference of the New England Educational Research Organization, Maine.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50, 370-396.
- Maslow, A. H. (1970). *Motivation and personality* (2nd ed.) New York: Harper & Row.

- McCracken, J. D., & Etuk, L.A. (1985). Commitment of Ohio Vocational Agriculture Teachers to Their Profession. Retrieved 6-10, 2016 from:
<http://pubs.aged.tamu.edu/jae/pdf/vol27/27-02-02.pdf>
- McLeod, S. A. (2014). Maslow's Hierarchy of Needs. Retrieved 4-12, 2016 from: <http://www.simplypsychology.org/maslow.html>
- Miller, J. (2015). Job Satisfaction Compared to Maslow's Hierarchy of Needs. Retrieved 3-29, 2016 from: <https://www.linkedin.com/pulse/job-satisfaction-compared-maslows-hierarchy-needs-jessica-miller>
- Miller, L. E., & Smith, K.L. (1983). Handling non-response issues. *Journal of Extension*, 21(5). Retrieved 3-12, 2017 from: [www.joe.org/joe.1983september/83-5-a7.pdf](http://www.joe.org/joe/1983september/83-5-a7.pdf)
- Miller, N. J. (1985). *A description of secondary school principals in Minnesota and their job satisfaction*. An authorized facsimile of an unpublished doctoral dissertation (University of North Dakota, Grand Forks, 1985)
- Miller, R. T., Murnane, R.J., and Willett, J.B. (2008). Do Teacher Absences Impact Student Achievement? Longitudinal Evidence from One Urban School District. *Educational Evaluation and Policy Analysis*, 30(2), 181-200.
- Minnesota Satisfaction Questionnaire (MSQ) (2010). Retrieved 1-12, 2016 from:
www.vpr.psych.umn.edu
- Meyer, L. (2013). Teacher turnover negatively impacts students' achievement in Math and English. *The Journal*. Retrieved from: www.thejournal.com

- Moran, G. A. (2005). *Job Satisfaction, Commitment, and Teaching Status Among Alternatively Certified Career and Technical Education Teachers*. Retrieved 9-1, 2016 from: https://getd.libs.uga.edu/pdfs/moran_gwen_a_200512_phd.pdf
- Mowday, R., Porter, L., & Steers, R. (1982). *Employee-organization linkages: The psychology of commitment, absenteeism, and turnover*. New York: Academic Press.
- Newcomb, L. H., Betts, S.I., & Cano, J. (1986). Extent of burnout among teachers of vocational agriculture in Ohio. *Journal of Agricultural Education*, 26-33.
- O'Driscoll, M. P., & Randall, D.M. (1999). Perceived organizational support, satisfaction with rewards, and employee job involvement and organizational commitment. *Applied Psychology: An International Review*, 48(2), 197-209.
- Padilla-Velez, D. (1993). *Job satisfaction of vocational teachers in Puerto Rico*. Unpublished doctoral dissertation. The Ohio State University – Columbus.
- Pardee, R. L. (1990). Motivation Theories of Maslow, Herzberg, McGregor and McClelland- A Literature Review of Selected Theories Dealing with Job Satisfaction and Motivation. ERIC
- Perie, M. & Baker, D.P. (1997). Job Satisfaction among America's Teachers: Effects of Workplace Conditions, Background Characteristics, and Teacher Compensation. ERIC
- Quinn, R. P., Staines, G.L., & McCullough, M.R. (1974) Job satisfaction: Is there a trend? Manpower Research Monograph No. 30, U.S. Department of Labor. Washington, DC: Government Printing Office.

- Reyes, P., Madsen, J., & Taylor, B. (1989). *Organizational incentives, teacher commitment, morale, and job satisfaction: Is the program achieving its goals?* Paper presented at the annual meeting of American Education Research Association, San Francisco, CA.
- Roberts, T. G., Harder, A., & Brashears, M.T. (2016). American Association for Agricultural Education national research agenda: 2016-2020. Gainesville, FL: Department of Agricultural Education and Communication.
- Rue, L. W. and Byars, L. (2003). *Management, Skills and Application*, 10 ed., McGraw-Hill/Irwin, New York, p. 259
- Scott, I., & Smith, R. (2013). *Listening to those on the Front Lines: North Carolina Teacher and Administrators Respond to State Legislative Changes*. Watson College of Education, University of North Carolina-Wilmington.
- Sergiovanni, T. J. (1984). *Handbook of effective department leadership: Concepts and practices in today's secondary schools* (2nd ed.). Boston: Allyn and Bacon.
- Sidebotham, J. (2015). Here's What People Think Teachers Do All Day – And What They Actually Do. *Business Insider*. Retrieved 3-12, 2016 from:
<http://www.businessinsider.com/heres-what-people-think-teachers-do-all-day-and-what-they-actually-do-2015-9>
- Scott, M. Swartzel, K.A., & Taylor, W.N. (2005). The relationship between selected demographic factors and the level of job satisfaction of extension agents. *Journal of Southern Agricultural Education Research*. 55(1), 102-115.
- Smith, P. C., Kendall, L.M., & Hulin, C.L. (1969). *The measurement of satisfaction in work and retirement*. Chicago: Rand McNally.

- Spector, P. E. (1997). *Job Satisfaction: Application, assessment causes and consequences*. Thousand Oaks, CA: Sage Publications.
- Strong, R., & Harder, A. (2009). Implications of maintenance and motivation factors on extension agent turnover. *Journal of Extension*, 47(1), 1-8.
- Teacher Quality. (2011). Editorial Projects in Education Research Center. Education Week. Retrieved 6-12, 2016 from: www.edweek.org/ew/issues/teacher-quality/
- Thobega, M, & Miller, G. (2008). Perceptions of Supervision Practices by Agricultural Education Student Teachers. *Journal of Agricultural Education*, 49(3), 65-75.
- Thompson, D., & McNamara, J. (1997). Job satisfaction in educational organizations: A synthesis of research findings. *Educational Administration Quarterly*, 33(1), 1-31.
- Tippins, A. S. (2010). *Georgia Agriculture Teacher Attrition*. Unpublished master's thesis, University of Georgia – Athens.
- Vroom, V. H. (1982). *Work and motivation* (Rev. ed). Malabar, FL: Robert E. Krieger Publishing Company.
- Wagoner, L. (2015) *Losing its Luster*. Retrieved from: www.ncpolicywatch.com/2015/12/09losing-its-luster/
- Walker, W. D., Garton, B., & Kitchel, T.K. (2004). Job satisfaction and retention of secondary agriculture teachers. *Journal of Agricultural Education*. 45(2), 28-38.
- Weaver, C. (1980). Job Satisfaction in the United States in the 1970's. *Journal of Applied Psychology*, 65, 364-367.
- Weiss, D. J., Dawis, R.V., England, G.W., & Lofquist, L.H. (1967). *Manual for the Minnesota satisfaction questionnaire*. The work adjustment project. Industrial

- Relations Center. University of Minnesota. Retrieved from:
[www.http://vpr.psych.umn.edu/assets/pdf/Monograph%20XXII%20-%20Manual%20for%20the%20MN%20Satisfaction%20Questionnaire.pdf](http://vpr.psych.umn.edu/assets/pdf/Monograph%20XXII%20-%20Manual%20for%20the%20MN%20Satisfaction%20Questionnaire.pdf)
- Wexley, K. & Yukl, G. (1984). *Organizational Behavior and Personnel Psychology*. Homewood, IL: Richard D. Irwin.
- Woods, A. M. & Weasmer, J. (2002). Maintaining job satisfaction: Engaging professionals as active participants. *The Clearing House*, 75(4), 21-35.
- Wood, M. M. (2014). *Plugging the Holes in the Bucket: A Qualitative Study to Determine Perceptions of Agriculture Teachers who have Left the Agricultural Education Profession*. Unpublished doctoral dissertation. North Carolina State University-Raleigh. Retrieved 10-1, 2016 from:
<https://repository.lib.ncsu.edu/bitstream/handle/1840.16/9952/etd.pdf?sequence=2&isAllowed=y>
- Worrell, T. G. (2004). *School Psychologists' Job Satisfaction: Ten Years Later*. Unpublished Doctoral Dissertation. Virginia Polytechnic Institute and State University-Blacksburg VA. Retrieved from: <https://theses.lib.vt.edu/theses/available/etd-05252004-122551/unrestricted/Travisdiss.pdf>

APPENDICES

Appendix A

Survey Instrument

Please select the response from the questions below that best describes you or your teaching career.

1. Gender (Please check one)

Male

Female

2. Ethnicity: (Please check the category that best describes you)

Asian/Pacific Islander

African American

Latino

American Indian

White

Multi Racial or other race not listed: _____

3. What is your age? (Please select one)

Under 25

25-30

31-40

41-50

51-60

60+

4. What is the highest level of education completed? (select one)

Bachelor degree

Master degree

5th year certificate

Doctorate degree

5. How did you enter into the teaching profession

4 year education degree

alternative licensure program

6. Is the school district in which you teach predominately:

Rural

Suburban

Urban

7. What is your current marital status (Select one)

Singe (never married)

Married

Separated

Divorced

Widowed

Would rather not say

8. What is your yearly income from teaching? (Select one)

30,000-39,999

40,000-49,999

50,000-59,999

60,000-69,999

70,000-79,999

80,000 or more

9. How many years have you taught agricultural education?

0-45 (Pull down tab)

10. In your career, how many times have you changed placements as an agriculture teacher?

1-12 (Pull down tab)

Please read each statement carefully and decide how you feel about the aspects of your job described by the statement. Please be frank and honest with your responses, giving a true picture of your feelings about your present job.

Ask yourself: How satisfied am I with this aspect of my job?

	Extremely Satisfied	Very Satisfied	Satisfied	Somewhat Satisfied	Not Satisfied
Being able to keep busy all the time	5	4	3	2	1
The chance to work alone on the job	5	4	3	2	1
The chance to do different things from time to time	5	4	3	2	1
The chance to be "somebody" in the community	5	4	3	2	1
The way my boss handles his/her workers	5	4	3	2	1
The competence of my supervisor in making decisions	5	4	3	2	1
Being able to do things that don't go against my conscience	5	4	3	2	1
The way my job provides for steady employment	5	4	3	2	1
The chance to do things for other people	5	4	3	2	1
The chance to tell people what to do	5	4	3	2	1

Ask yourself: How satisfied am I with this aspect of my job?

	Extremely Satisfied	Very Satisfied	Satisfied	Somewhat Satisfied	Not Satisfied
The chance to do something that makes use of my abilities	5	4	3	2	1
The way policies are put into practice	5	4	3	2	1
My pay and the amount of work that I do	5	4	3	2	1
The chances for advancement at my job	5	4	3	2	1
The freedom to use my own judgment	5	4	3	2	1
The chance to try my own methods of doing this job	5	4	3	2	1
The working conditions	5	4	3	2	1
The way my co[workers get along with each other	5	4	3	2	1
The praise that I get for doing a good job	5	4	3	2	1
The feeling of accomplishment I get from the job	5	4	3	2	1

(Modified Minnesota Satisfaction Questionnaire-Copyright 1967, Vocational Psychology Research, University of Minnesota. Reproduced by permission.)

Appendix B
Frequencies

Intrinsic Job Satisfaction	M	SD	Not Satisfied <i>f</i>	Somewhat Satisfied <i>f</i>	Satisfied <i>f</i>	Very Satisfied <i>f</i>	Extremely Satisfied <i>f</i>
The chance to do things for other people	4.57	0.64	0	2	12	65	141
The way my job provides for steady employment	4.56	0.67	1	2	10	67	140
The chance to do different things from time to time	4.45	0.72	2	4	22	69	122
The chance to do something that makes use of my abilities	4.42	0.73	1	6	7	91	115
Being able to keep busy all the time	4.38	0.84	2	4	22	69	122
Being able to do things that don't go against my conscience	4.15	0.90	4	5	37	82	91
The chance to be "somebody" in the community	4.14	0.89	0	19	40	93	68
The chance to try my own methods doing this job	4.07	0.91	3	17	15	111	73
The feeling of accomplishment I get from the job	4.04	0.96	4	16	25	98	77
The chance to do work alone on the job	3.95	0.91	0	19	40	93	68
The way my co-workers get along with each other	3.88	1.08	8	21	31	88	71
The freedom to use my own judgment	3.82	1.03	5	27	29	100	58
The chance to tell people what to do	3.36	0.86	2	4	109	57	48

Extrinsic Job Satisfaction	M	SD	Not Satisfied <i>f</i>	Somewhat Satisfied <i>f</i>	Satisfied <i>f</i>	Very Satisfied <i>f</i>	Extremely Satisfied <i>f</i>
The working conditions	3.79	1.13	9	32	18	96	64
The way my boss handles his/her workers	3.59	1.25	13	42	34	64	67
The competence of my supervisors in making decisions	3.55	1.24	14	42	33	72	59
The praise that I get for doing a good job	3.43	1.21	15	38	54	63	50
The way policies are put into practice	3.01	1.17	19	71	39	69	21
The chances for advancement at my job	2.83	1.07	24	62	78	41	15
My pay and the amount of work that I do	2.61	1.19	40	83	31	53	12

Appendix C

Introduction Letter

Action Requested by Wednesday September 28, 2016

Dear Agricultural Educators,

I am currently in the process of gathering information on the level of job satisfaction of agricultural teachers in our state. If you have completed this survey, thank you. If you have not, please provide your input by Wednesday September 28th. As an agricultural teacher, your opinion is extremely important. I ask that you please take 2-3 minutes of your time to complete an anonymous questionnaire which is available here: **Follow this link to the Survey:** [\\${l://SurveyLink?d=Take the survey}](#)

Or copy and paste the URL below into your internet browser: [\\${l://SurveyURL}](#)

While your response to this request is voluntary, I would greatly appreciate your assistance with this important study. Please complete this in a private setting. At the completion of the study please clear all history and cookies from your electronic devices used to complete the electronic questionnaire. Results compiled from this study will be extremely valuable. There is minimal risk associated with this research, you will be answering items about job satisfaction and your boss, this risk is mitigated by the survey being anonymous. There is no compensation or other direct benefits to you as a participant in the study. Your completion of the survey questions included on Qualtrics indicates your willingness to participate and your consent for the use of your responses in further research. You are free to withdraw your consent to participate and may discontinue your participation in the study up to the point in which you submit your responses. If you have any questions regarding this research study, please feel free to contact me at jason_davis@ncsu.edu or 919-515-4206.

Sincerely,

Jason Davis

Follow the link to opt out of future emails: [\\${l://OptOutLink?d=Click here to unsubscribe}](#)

Appendix D

Follow Up Letter

Action Requested by Wednesday September 28, 2016

Dear Agricultural Educators,

I am currently in the process of gathering information on the level of job satisfaction of agricultural teachers in our state. If you have completed this survey, thank you. If you have not, please provide your input by Wednesday September 28th. As an agricultural teacher, your opinion is extremely important. I ask that you please take 2-3 minutes of your time to complete an anonymous questionnaire which is available here: **Follow this link to the Survey:** [\\${l://SurveyLink?d=Take the survey}](#)

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Sincerely,

Jason Davis

Follow the link to opt out of future emails: [\\${l://OptOutLink?d=Click here to unsubscribe}](#)

Appendix E

FINAL LETTER

Dear Agricultural Educators,

I am currently in the process of gathering information on the level of job satisfaction of agricultural teachers in our state. If you have completed this survey, thank you. If you have not, please provide your input by Wednesday September 28th. As an agricultural teacher, your opinion is extremely important. I ask that you please take 2-3 minutes of your time to complete an anonymous questionnaire which is available here: **Follow this link to the Survey:** [\\${1://SurveyLink?d=Take the survey}](#)

Or copy and paste the URL below into your internet browser: [\\${1://SurveyURL}](#)

While your response to this request is voluntary, I would greatly appreciate your assistance with this important study. Please complete this in a private setting. At the completion of the study please clear all history and cookies from your electronic devices used to complete the electronic questionnaire. Results compiled from this study will be extremely valuable. There is minimal risk associated with this research, you will be answering items about job satisfaction and your boss, this risk is mitigated by the survey being anonymous. There is no compensation or other direct benefits to you as a participant in the study. Your completion of the survey questions included on Qualtrics indicates your willingness to participate and your consent for the use of your responses in further research. You are free to withdraw your consent to participate and may discontinue your participation in the study up to the point in which you submit your responses. If you have any questions regarding this research study, please feel free to contact me at jason_davis@ncsu.edu or 919-515-4206.

Sincerely,

Jason Davis

Follow the link to opt out of future emails: [\\${1://OptOutLink?d=Click here to unsubscribe}](#)

Appendix F

Dear Robert Davis:

Date: September 21, 2016

IRB Protocol 9320 has been assigned Exempt status

Title: Job Satisfaction of Agricultural Teachers in North Carolina

PI: Davis, Robert J

The research proposal named above has received administrative review and has been approved as exempt from the policy as outlined in the Code of Federal Regulations (Exemption: 46.101. Exempt b.2). Provided that the only participation of the subjects is as described in the proposal narrative, this project is exempt from further review. This approval does not expire, but any changes must be approved by the IRB prior to implementation.

- 1 This committee complies with requirements found in Title 45 part 46 of The Code of Federal Regulations. For NCSU projects, the Assurance Number is: FWA00003429.
- 2 Any changes to the protocol and supporting documents must be submitted and approved by the IRB prior to implementation.
- 3 If any unanticipated problems or adverse events occur, they must be reported to the IRB office within 5 business days by completing and submitting the unanticipated problem form on the IRB website:
<http://research.ncsu.edu/sparcs/compliance/irb/submission-guidance/>.
- 4 Any unapproved departure from your approved IRB protocol results in non-compliance. Please find information regarding non-compliance here:
http://research.ncsu.edu/sparcs-docs/irb/non-compliance_faq_sheet.pdf.

Please let us know if you have any questions.

Sincerely,

Deb Paxton
919.515.4514

IRB Administrator
dapaxton@ncsu.edu
NC State IRB Office

Jennie Ofstein
919.515.8754
IRB Coordinator
irb-coordinator@ncsu.edu
NC State IRB Office