Factors Contributing to the Retention of Alabama School Based Agricultural Educators

by

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Abstract

The purpose of this study is to explore the relationship between career retention factors and selected demographic characteristics of school based agricultural educators within the state of Alabama. Identifying these factors will help state leaders determine what is or is not working and how to make changes that will have the largest impact on programs across the state. This study will make valuable contributions to other researchers, teacher education programs, professional organizations, and administrators at all levels.

A quantitative research instrument was distributed, which surveyed SBAE teachers in the state of Alabama regarding the factors contributing to their retention in the classroom. Data for this study was gathered using a census sampling method in distributing a research-designed survey originally compiled by Crutchfield (2010). Crutchfield's survey was a combination of four previous instruments used independently by researchers to measure independent variables of interest. The previous instruments were then compiled to form Crutchfield's instrument broken down into three segments to analyze the factors and their relationship to the teacher's decision to remain in the classroom. The three segments were: work engagement, work-life balance, and occupational commitment. Additionally, this instrument was modified to accommodate the intent of this study, which surveyed Alabama SBAE teachers specifically and the factors that contributed to their retention in the classroom.

The findings of this study found that in regard to career retention factors, teachers felt that specific Alabama Agricultural Education factors were the most important, while other factors such as work engagement, work-life balance, and occupational commitment were found to be valuable but not as important. The data showed that there was not a statistically significant

difference in importance of work engagement factors, work-life balance factors, or occupational commitment factors when compared across career phases. There was also not a statistically significant difference in importance of Alabama Agricultural Education factors when compared across career phases (p = .08). The results yielded that there was not a statistically significant difference in importance of work engagement factors or occupational commitment factors between male and female participants. However, there was a statistically significant difference in importance of work-life balance factors and Alabama Agricultural Education factors between male and female participants with male's viewing work-life balance factors as significantly more important for retention than their female counterparts and female's viewing Alabama Agricultural Education factors as significantly more important for retention than their male counterparts.

Acknowledgements

My passion for agricultural education has been ingrained in me my entire life. As a third generation Agricultural Education teacher, I have been exposed to Agricultural Education for as long as I can remember. While my entire life has been rooted around Agricultural Education, it was not until recently that I decided to pursue a Ph.D. within this field.

To my wife, thank you for your constant love and support throughout this endeavor. Tackling a Ph.D. during the process of starting a family and having two children under the age of three is not an easy task. It has left you single-handedly taking care of our family while I worked on completing each step of this process. I appreciate your patience, support, encouragement, and tough love over the last two years.

To my family, thank you for believing in me. While you all thought I was crazy, I knew that you supported me through the various stages of this process as you checked in on my progress. I appreciate the optimism of believing I could get it done no matter how challenging the task may be.

To my committee and faculty advisors, thank you for your guidance and direction along the way. Your knowledge and wisdom have been invaluable during this process. I appreciate your advice, corrections, suggestions, and challenges during the last two years.

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Chapter 1

Introduction

The shortage of qualified teachers nationwide is not new or surprising information. In fact, there has been a shortage of teachers for many years. The problem is continuing to get worse with teachers leaving the profession at higher rates than ever before. (Diliberti & Schwartz, 2023) reported that teacher turnover increased four % above pre pandemic levels, reaching 10% nationally at the end of the 2021–2022 school year. The decline in individuals interested in the teaching profession has been reported and studied for many years. Enrollment in teacher preparation programs stands at 70% of what it was 10 years earlier (Saenz-Armstrong, 2023). In addition to the decline in interest, attrition rates have increased as educators are leaving the classroom at an alarming rate. The teaching profession can expect to lose between 30% and 50% of teachers within their first five years on the job (Darling-Hammond, 2003; Ingersoll, 2003; Levine & Haselkorn, 2008; Strizek et al., 2006; National Commission on Teaching and America's Future, 2003).

Agricultural education is no different, as programs across the nation are experiencing rates at equal or greater levels than other educational fields. Only 59% of traditionally trained agriculture education graduates are entering the teaching profession on top of extremely high rates of attrition among early career teachers (Camp et al., 2002). These numbers and statistics are alarming but it is a problem that agricultural education programs have experienced for many years. The 2007-2010 National Research Agenda for Agricultural Education and Communications (Osborne, n.d.) identified preparing and providing an abundance of fully qualified and highly motivated agricultural educators at all levels as a priority area. Kantrovich (2007) reported a nationwide shortage of agricultural educators dating back to 1965.

Many research studies have been conducted and aimed to discover the reason teachers leave the classroom. Brill and McCartney (2008) stated that there are a "plethora of causes of teacher attrition, although most involve non-salary related dissatisfaction, such as excessive workload and high-stakes testing, disruptive student behavior, poor leadership and administration within schools, and views of teaching as a temporary profession" (p. 750). Former teachers reported a vast array of reasons to leave, everything from family and personal circumstances to a low degree of efficacy that led to low motivation; from demoralization to burnout (Borman & Dowling, 2008; Cano & Miller, 1992; Castillo & Cano, 1999; Hendrix et al., 2024; Newcomb et al., 1987). Despite studies implying a focus on retention, close inspection of teacher shortage issues shows a tendency for researchers to focus on attrition, using subjects who have chosen to leave the teaching profession or surveying early career teachers wrestling with the choice of staying or leaving (Crutchfield, 2010). However, there is a population of educators who have been studied far less often. These are the teachers who have stuck it out and have remained in the classroom for 20 or 30 year careers. Finding out what factors contributed to them staying in the classroom could have a huge impact on solving the problem because it is far better to retain teachers than to replace them.

Statement of the Problem

Barnes et al., (2007) and The National Commission on Teaching and America's Future (2003) clearly outlined the recognition of an educator retention problem. It has also widely been documented that teacher turnover and attrition rates contribute to poor educational outcomes. This problem is continuing to drain tax dollars, undermine teaching quality, and hinder student achievement (Barnes et al., 2007; NCTAF, 2003). However, teachers that have more experience

and longer terms of employment have yielded better results. While difficult to measure, new, inexperienced educators are far less effective than their veteran counterparts (Day et al., 2006).

While there has been plenty of research and documented studies on why teachers have left the classroom, a problem lies in the fact that we have rarely focused on retention factors and what contributed to long term educators remaining in the classroom. Very few have attended to the question of why educators continue teaching (Cochran-Smith, 2004; Inman & Marlow, 2004; Nieto, 2003). Knowing the factors contributing to retention are even more critical for ag teachers. Castillo and Cano (1999) reported that turnover of agricultural educators had greater impact because students can be enrolled in a secondary agriculture program for up to four years. McKibben et al (2022) reported that teachers with activity not related to work show significantly more positive feelings about staying. If agricultural educator shortages are to be reduced, a clear understanding of the factors that influence their decision to remain must be gained (Crutchfield, 2010).

Purpose of the Study

Researchers have proven that we know why teachers are leaving the classroom. Our focus should also be on why teachers are staying. If those discovered factors can be replicated, a process can be put into play to emphasize those areas in order to begin to address the teacher shortage in the education system. Each educational program and each state have implemented certain strategies to help address the attrition of school teachers. Within the agricultural education world, programs and policies have been put into place to offer assistance to help reduce the burden and workload of the program. Specifically, within the state of Alabama, significant steps have been taken to keep programs open and productive.

Teachers are in the profession by choice, despite experiencing increased demands and conflict created by professional expectations and personal life pressure (Crutchfield, 2010). Therefore, the purpose of this study is to explore the relationship between career retention factors and selected demographic characteristics of school based agricultural educators within the state of Alabama. Identifying these factors will help state leaders determine what is or is not working and how to make changes that will have the largest impact on programs across the state. This study will make valuable contributions to other researchers, teacher education programs, professional organizations, and administrators at all levels.

Research Objectives

The objectives in this study replicate the study performed by Crutchfield (2010), then again by Sorensen & McKim (2014), and by Solomonson (2022) which explored the relationship of work engagement, work-life balance, and occupational commitment and how it affected the decision of agricultural educators to remain in the teaching profession. This study expanded on that research to determine which factors contributed to retention of school based agricultural educators in Alabama specifically, as well as, how these factors changed based on the teachers' career phase and gender. Therefore, the following objectives were used in this study:

1. Describe the demographics of participating agricultural educators using central tendencies.
2. Identify factors contributing to the retention of SBAE teachers in Alabama.
3. Assess the statistical differences in factors contributing to retention based on career phase.

4. Assess the statistical differences in factors contributing to retention based on gender.

Definition of Terms

Agricultural Education: A portion of the Career and Technical Education curriculum that prepares students for successful careers as well as providing informed choices concerning global agriculture, food, fiber and natural resource systems (National FFA Organization, 2015).

Attrition—teachers who leave a teaching assignment for reasons other than retirement.

Career and Technical Education (CTE): "Organized education activities that— (A) Offer a sequence of courses that— (i) Provides individuals with coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions; (ii) Provides technical skill proficiency, an industry-recognized credential, a certificate, or an associate degree; (iii) May include prerequisite courses (other than a remedial course) that meet the requirements of this subparagraph; and (B) Include competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of an industry, including entrepreneurship, of an individual" (Carl D. Perkins Act, 2006).

Occupational Commitment—intent to teach as measured by Blau et al., (1993).

Retention—teachers who remain in the teaching profession as a classroom instructor.

Secondary Agricultural Educator—teacher engaging students in grades seventh through twelfth .

Work engagement- positive work-related state of fulfillment that is characterized by vigor, dedication, and absorption as measured by Schaufeli & Baker (2003).

Work-family conflict—form of inter-role conflict, work and family roles are incompatible (Greenhaus & Beutell, 1985) as measured by Gutek et al., (1991).

Work-life balance—ability to manage the conflict between the pressures of work and family roles (Greenhaus & Beutell, 1985) as measured by Chaney (2007) and Gutek et al., (1991).

Limitations

Limitations are a set of conditions that exceed the control of the researcher thereby placing possible restrictions on the conclusions of the study, as well as their implementation to other situations (Mitchell, 2008). This study was conducted for school-based agricultural educators in the state of Alabama, therefore limiting the possible survey participants to 308 teachers ranging over 67 counties within the state.

Delimitations

The delimitations of this study are set at including only school based agricultural educators in Alabama. Due to the delimitations set forth, no generalizations may be formed outside of the population of this study.

Assumptions

It was assumed that survey participants would answer all questions within the survey and that they were truthful in their responses. It was also assumed that all school based agricultural educators within the state of Alabama were given equal opportunity to participate in the survey.

Organization of the Study

Chapter 1 includes an introduction of the study, statement of the problem, purpose of the study, objectives, definition of terms, limitations, delimitations, and assumptions.

Chapter 2 gives a review of literature related to the study regarding factors contributing to retention as well as policies and procedures enacted.

Chapter 3 includes the procedures used in this study, including the sample, research design, instrumentation, validity and reliability, data collection, and data analysis.

Chapter 4 outlines the results of the study.

Chapter 5 provides a summary of the findings, conclusions, and recommendations for further research.

Chapter 2: Review of Literature

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Overview

The American public educational system has struggled for decades to address teacher retention (Foster et al., 2020; Moore & Camp, 1979; Shen, 1997). According to Ingersoll et al. (2018), 44% of classroom teachers chose to leave the profession within five years and the trend is likely to continue (Eck & Edwards, 2019; Foster et al., 2020). For decades, the issue of teacher attrition has plagued American public education (Shen, 1997). Over 150,000 teachers leave the profession each year and over 230,000 transfer schools (Mack et al., 2019). This attrition issue causes a financial hardship on the educational system, costing between $2.2 and $7 billion annually (Haynes, 2014; Mack et al., 2019). School administrators and community members often believe that high turnover rates actually save districts and taxpayers money (Barnes et al., 2007). This money saving myth resonates with stories of how turnovers allow districts to cut costs by keeping teachers at the lower end of the salary scale, rather than expending funds to pay veterans for their years of experience (Barnes et al., 2007). However, the loss of teachers is a colossal drain on coffers as school districts increase expenditures in the form of increased costs

of recruiting, hiring, and training new employees; reduced morale of remaining employees; degraded relationships between remaining employees; projection of an unfavorable image of the organization as a place to work; interruption of daily activities; organizational instability; and, diminished ability of the organization to grow (Barnes et al., 2007; Ingersoll, 2001; Mowday, 1984). According to NCTAF (Barnes et al., 2007), turnover requires school districts to spend between $6,250 to $70,000 per teacher to recruit, hire, and train replacements, depending on whether a district is nonurban or urban, respectively.

Agricultural education is no different and has faced the exact same problem for years. In our own contextual area of agricultural education, Knight (1978) identified the potential for calamity as early as early as the 1970's. Kantrovich (2007) reported a pattern of agricultural educator shortage reaching back to 1965. Whether school-based agricultural education (SBAE) teachers are relevant, applicable, or important in the current school system is an issue of ongoing debate (Igo & Perry, 2019). In a world where science and business have expanded research into food, fiber, and natural resources, SBAE teachers are needed not only to educate students about agriculture but also in agriculture (Mercier, 2015; Vaughn, 1999). SBAE programs reach beyond secondary classrooms and laboratory environments and enter the surrounding communities as SBAE students eventually transition into active community members (Mercier, 2015; Vaughn, 1999). Having a community of informed consumers and producers is essential in creating an agriculturally literate society (Mercier, 2015). In addition to becoming more agriculturally literate, there are positive relationships between student involvement in SBAE programs and state standardized test scores (Chiasson & Burnett, 2001), school and community engagement (Balschwield & Talbert, 2001), and the likelihood of attending a two- or four-year college (Balschweid & Talbert, 2001).

The demand for school based agricultural educators has increased while the supply of such teachers has decreased (Blackburn et al., 2017; Clemons et al., 2021; Hainline et al., 2015; Lemons et al., 2015; Mack et al., 2019; Solomonson & Retallick, 2018; Solomonson et al., 2021; Traini et al., 2021). The increase in demand is evident as there are increases in National FFA membership, total national enrollment of secondary agriculture students, and the number of secondary agricultural programs (Foster et al., 2020; Smith et al., 2022). While the demand is increasing, the total number of available teachers is decreasing. According to the National Association of Agricultural Educators (NAAE), over 605 SBAE teachers that were teaching in the 2018-2019 school year would not return for the 2019-2020 school year (Foster, et al., 2019). In 2021-2022, the National Association of Agricultural Education (NAAE) identified over 30 states had a deficit of agricultural educators (Smith et al., 2022). This high attrition rate is contrasted with low teacher education enrollment. In 2019, there were 1,420 agricultural teacher vacancies and only 904 individuals completing a teacher licensure program in agricultural education (Solomonson, et al., 2019).

When looking at teacher attrition, analyzing trends helps to identify some of the areas of concern. For example, studies show that nearly 41% of educators leave the teaching field in their first five years (Ingersoll et al., 2014), but that teachers with more than five years of experience are more likely to remain in the profession (Billingsley, 2004; Mack et al., 2019; Shen, 1997; Solomonson et al., 2019). This means that the first five years of teaching is a critical time in the educator's decision-making process for a long term career. It is imperative that factors are identified that contribute to teacher retention past the five year mark. Specifically, induction-level agriculture teachers have indicated many areas where they need assistance, including in classroom management (Garton & Chung, 1996; Mundt & Connors, 1999; Myers et al., 2005;

Touchstone, 2015), planning FFA events and activities (Garton & Chung, 1996; Myers et al., 2005; Touchstone, 2015), utilizing an advisory committee (Myers et al., 2010; Sorensen et al., 2014; Touchstone, 2015), incorporating other content areas (Haynes & Stripling, 2014, McKibben et al, 2021; 2024), and recruitment (Myers et al., 2005; Touchstone, 2015). In contrast to the needs of the induction-phase teacher, whose needs are largely related to classroom management skills and competencies (Sorensen et al., 2014), teachers with five or more years of experience have several noticeably different perceived needs. In particular, non-induction-phase teachers perceived work/life balance, organizational skills, time management, and stress management as their most important perceived needs (Sorensen et al., 2014). Understanding teachers' needs is paramount to examining their career decisions (Clemons, et al., 2018). Using established theoretical frameworks that cater to the career decisions of teachers allows for more in-depth examinations of these reasons.

Many researchers in the 1980's and 90's focused on the characteristics of the teachers as the driving force behind whether or not one stays or goes (Chapman & Hutcheson, 1982; Haggstrom et al., 1988; Murnane, 1981; Murnane et al., 1988). Looking for an alternative explanation, Ingersoll approached the phenomenon from a different perspective and spent considerable time and energy determining the effects of the organization or school district on the teacher's decision to remain or leave (Crutchfield, 2010). Ingersoll (2001) reported that the shortage of educators is not due to an increase in student population or the growing number of retirees, it is due to the large number of teachers who leave teaching for other jobs. This approach to explaining employee attrition and turnover had been utilized in other arenas but lacked application to the teaching profession (Ingersoll, 2001).

More recently, the common focus of research has included job satisfaction, burnout, school climate and cultural influences, induction, self efficacy, commitment to teaching, the effects of school reform efforts, and workload; all looking to explain why teachers leave the profession. Shirom (2003) defines burnout as a reaction to stress that creates negative work outcomes such as lack of commitment, increased absenteeism, lack of engagement, and eventual turnover. There are a plethora of variables that contribute to teacher burnout: student misbehavior and classroom management (Hastings & Bham, 2003); demands of home (Cinamon & Rich, 2005); large classes, working with special needs students, and student achievement (Maslach et al., 2001). In addition, Neito (2003) created core study groups and facilitated the exploration of why teachers chose to stay in the profession despite obstacles and deprivations. She found that they remained more for matters of the heart, intrinsic reasons, rather than extrinsic rewards such as salary or prestige (Nieto, 2003). Neito (2003) found teachers deeply engaged with their work, committed in all ways, and a common shared view of teaching "as a way to live in the world" (pg 101). Findings from these studies suggest that looking at both intrinsic and extrinsic factors would be beneficial to determine the cause.

Several individuals have reported that issues and concerns start during the pre-service teaching experience and therefore, retention factors should be discussed in teacher preparation programs to combat issues before they arise. By identifying pre-service teachers' concerns about becoming career educators, teacher educators can better address these concerns through teacher preparation programs (Paulsen et al., 2015; Roberts et al., 2009a; Roberts et al., 2009b). Preservice teachers have repeatedly described working conditions, self-efficacy, classroom management, and lack of support as career concerns (McKibben et al, 2022;3; Paulsen et al., 2015). The student teaching experience is portrayed as a critical period in the development of

teacher candidates (Edgar et al., 2011, Smith et al., 2015a; 2015b) and may be a challenging time for pre-service teachers (Knobloch & Whittington, 2002). Upon entering and completing student teaching, teaching intentions display either very little or no change (Roberts et al., 2009a; Roberts et al., 2009b). Addressing the concerns of pre-service teachers before they begin student teaching is essential in guiding students into careers as agricultural educators, and addressing the needs of beginning teachers entering the profession is vital to retaining them. Teachers' needs may also change based on their career state and experiences (Kahler, 1974). Identifying and addressing the needs of teachers in different career phases may support career longevity (Sorensen et al., 2014; Touchstone, 2015).

Studies have reported various reasons teachers leave. While there are numerous reasons for teachers leaving the profession, the most common reason cited is career dissatisfaction (Mack, et al., 2019). This dissatisfaction stems from a multitude of sources including lower pay than other similarly educated careers, presumably better career options, student discipline, workplace conditions, and administrative interference (Mack, et al., 2019). The national average starting salary for teachers with a bachelor's degree is $41,163 according to the National Education Association (NEA) (National Education Association, 2021). This compares to an average starting salary of $50,944 for all recent graduates of a bachelor's degree reported by the National Association of Colleges and Employers (NACE) (2021).

Workplace conditions also play a major role in teacher's attrition rates. Teachers who are employed in urban schools and schools with limited resources or overcrowded classrooms have all indicated a higher intent to quit (Mack, et al., 2019). Some studies have also found that teachers have higher amounts of stress, more health issues caused by stress, and report an overall lower quality of life than people in other careers (Mack, et al., 2019).

Administrative influence has also been a major influencer in teacher's perception of their position. According to Igo & Perry (2019), Montana State students who graduated in their agricultural teacher education program, entered teaching, and decided to leave the profession cited inadequate administrative leadership and Administrator's actions did not support teaching staff as two of the most influential factors in their job dissatisfaction and their overall reason for leaving. Multiple other studies have shown similar results in that poor administrative actions cause a significant dissatisfaction among teachers (Moore & Camp, 1979; Mack, et al., 2019; Shen, 1997).

With so many reasons to leave, the question is: why do some teachers choose to stay in the classroom (Crutchfield, 2010). While there are many studies and information on why teachers leave the profession, there is little on why teachers choose to stay (Phillips, 2015). Because of this, it is important to understand why teachers stay and figure out ways to retain more of them. One of the ways to reduce the effects of attrition on agricultural education is to retain quality educators (McKim, 2020; Solomonson et al., 2022). According to Solomonson et al. (2021), some of the top retention factors of agricultural educators were "Teacher's Ability to Engage Students", "Having a Supportive Family", "Supportive School Building Administration & School Board", and a "Teacher's Attitude Towards Students". Furthermore, Ismail and Miller (2021) found that intrinsic factors such as "Felt teaching would be enjoyable", "Fits well with personality" "Enjoys working with children", and "Chance to serve as a positive role model for children" and extrinsic factors such as "Having nice benefits associated with their jobs", "Teachers having flexibility in their schedules", and "Having a pleasant working environment" all impacted an educator's decision to remain in the profession. Other studies have shown that positive administrative support (Clark et al., 2014; Rice et al., 2001) and teacher preparedness

strongly correlated to a teacher's decision to stay in the classroom (Darling-Hammond et al., 2002; Tippens et al., 2013), as are high levels of self-efficacy (Blackburn et al., 2017). Another study found that influential career retention factors, such as high levels of occupational commitment, work engagement, and the ability to balance work and life responsibilities, have also been shown to influence teacher retention rates (Crutchfield et al., 2013; Sorensen & McKim, 2014).

This study expanded on the study performed by Crutchfield (2010), Sorensen and McKim (2014), and Solomonson et al. (2022) which explored the relationship of work engagement, work-life balance, and occupational commitment and how it affected the decision of agricultural educators to remain in the teaching profession.

Crutchfield's (2010) research specifically explored the relationship among these factors as they related to the professional career stage of the agricultural educator. Their study discovered positive relationships between both work engagement and work-life balance with their current career stage. They also found that occupational commitment at some rate can be credited to the levels of work engagement and work-life balance and that SBAE teachers were moderately to strongly committed to the teaching profession.

Sorensen and McKim (2014) further explored Crutchfield's (2010) findings by looking at career retention factors in relation to specific demographic characteristics. Their study looked at occupational commitment and found little to no effects as it related to gender, marital status, parental status, or career phase (Sorensen & McKim, 2014). They recommended further research exploring relationships among other demographic characteristics.

This is where Solomonson et al.'s (2022) study picked up. Their study sought to look at career retention factors in relation to different demographic characteristics. They found that there

were no significant differences among the career retention factors and gender, marital status, parental status, possessing CASE certification, length of teaching contract, or the number of teachers employed in the agriculture department (Solomonson et al., 2022). However, they did find that occupational commitment was significantly higher for both teachers who were fully certified and those with an advanced degree. They recommended further research to explore these relationships of SBAE teachers in other states and as well as replicating the study every five years as the demographics of population and culture change.

Therefore, this study expanded on that research to determine which factors contributed to retention of school based agricultural educators in Alabama specifically, as well as, how these factors changed based on the teachers' career phase and gender.

The retention factors in the replicated studies were grouped into three categories: work engagement, work-life balance, and occupational commitment.

Work engagement originated in the field of organizational behavior (Kahn, 1990) and is typically defined as a "positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli et al., 2002, p. 74). Schaufeli & Bakker (2004) defined vigor as possessing "high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties" (p. 295), dedication as "being strongly involved in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge" (p. 295), and absorption as "by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work." (p. 295). Schaufeli & Bakker (2003) also produced evidence that work engagement levels can be improved through access to support

resources and motivators, such as professional development, mentoring, task variety, and co-worker support.

Work-life balance refers to the ability to manage the potential conflict between the pressures of family roles and the workplace (Greenhaus & Beutell, 1985). Stressors and additional responsibilities make achieving balance difficult (Blackburn et al., 2017; Murray et al., 2011; Sorenson et al., 2016). Teacher's attitudes towards their job or life outside of their job can be negatively affected when stressors from one aspect spill over to the other and interrupt that work-life balance (Sorenson et al., 2016; Wilensky, 1960). McKibben et al. (2022) showed that the opposite could also be true and positive outside activity can lead to positive feelings about the stressors of teaching agriculture.

Occupational commitment is an individual's attitude toward their chosen profession. (Blau et al. 1993). Higher levels of occupational commitment have been related to both teachers with high self-efficacy (Knobloch & Whittington, 2003; McKim & Valez, 2015) and those with strong social connections with other teachers in their school (Moser & McKim, 2020). Strong levels of occupational commitment have also been found to be a positive predictor of teacher retention (Chapman, 1983; Crutchfield et al., 2013; Singh & Billingsley, 1996).

Each of the three retention factors were studied in relation to how these factors changed based on the teachers' career phase and gender.

Career phases are used to group the population into different demographics groups based on years of experience. Because of the likelihood of early teachers leaving the profession, a large amount of research focuses on beginning and early career teachers (Ritz, 2009). However, there has been a push to study more experienced educators and what sustains them to remain in the classroom and compare to other career phases (Ingersoll, 2001). There are several options on

how to determine career phases. This study followed the stages set forth in Roberts et al.'s (2020) study on *The Dimensions of Professional Development Needs for Secondary Agricultural Education Teachers Across Career Stages*. Roberts et al. (2020) categorized participants into distinct cases based on their years of experience: Early Career Teachers – zero to five years of teaching experience; Mid-Career Teachers – six to 15 years of teaching experience; and Career Teachers –16 or more years of teaching experience.

The gender makeup of SBAE is changing as more females enter the occupation (Lee, 2009; Ritz, 2009). Smethem (2007) found that female teachers feel torn between their career and their families. Castillo & Cano (1999) found that female teachers leave the profession faster than males. Kersaint et al., (2007) found that those who remain in the teaching profession still value their family and responsibilities associated with it above all else, but females are more likely to leave for jobs that are less time consuming and reduce conflicts.

Career and Technical Education

The One Hundred and Ninth Congress of the United States defined Career and Technical Education in the Carl D. Perkins Act of 2006 as,

> Organized education activities that— (A) Offer a sequence of courses that— (i) Provides individuals with coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions; (ii) Provides technical skill proficiency, an industry-recognized credential, a certificate, or an associate degree; and (iii) May include prerequisite courses (other than a remedial course) that meet the requirements of this subparagraph; and (B) Include competency-based applied learning

> that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation specific skills, and knowledge of all aspects of an industry, including entrepreneurship, of an individual. (S—250-4)

Career and technical education programs are offered at the secondary, post-secondary and adult levels at a multitude of settings, such as career academies, regional technical centers, technical high schools, technical and community colleges, and comprehensive high schools (National Association of State Directors of Career Technical Education Consortium, 2013). Career and technical education provide employability and scholastic skills that place a higher emphasis on technical and occupational skills, which are considered foundational and transferable within the twenty-first century economy (National Association of State Directors of Career Technical Education Consortium, 2014). Nationally, an estimated 12.5 million secondary and post 23 secondary students are enrolled in career and technical education programs (Career Tech, 2017).

Alabama has an increasing number of high school students who are obtaining specialized career-related credentials (Alabama State Department of Education, 2013a). In 2013, 461,000 Alabama high school students, which were approximately two out of every three high school students, participated in a career and technical education program (Alabama State Department of Education, 2013). Furthermore, the Alabama State Department of Education (2013a) defined career and technical education programs within the state as, "a rigorous, progressive, and vital part of the total educational system, which is committed to providing students with rewarding opportunities to learn valuable career and life skills" (p. 1). Alabama offers 16 different career clusters for students to choose from. Alabama's sixteen Career Clusters include: (1) Agriculture, Food and Natural Resources, (2) Architecture and Construction, (3) Arts, A/V Technology and

Communications, (4) Business Management and Administration, (5) Education and Training, (6) Finance, (7) Government and Public Administration, (8) Health Science, (9) Hospitality and Tourism, (10) Human Services, (11) Information Technology, (12) Law, Public Safety, Corrections and Security, (13) Manufacturing, (14) Marketing, (15) Science, Technology, Engineering and Mathematics, and (16) Transportation, Distribution and Logistics (Career Tech, i.e).

Overview of Agricultural Education

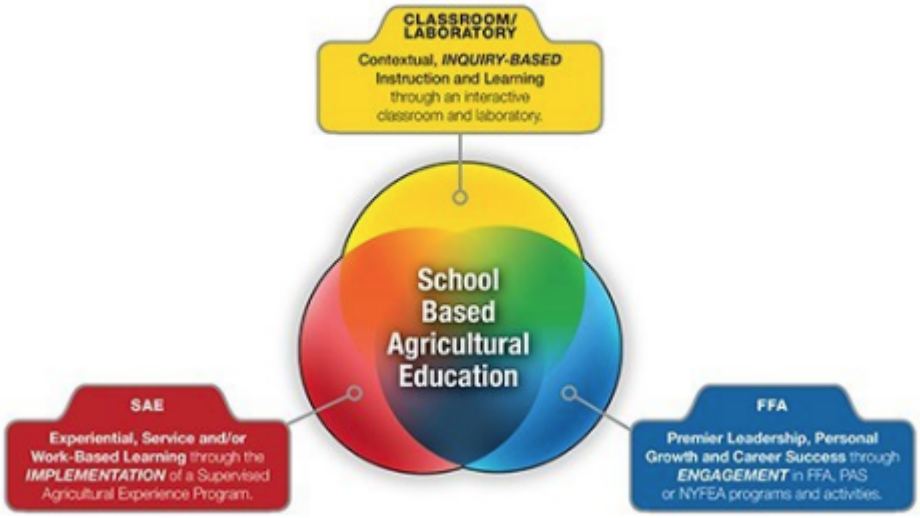
While agricultural education existed in public education before 1917, the Smith-Hughes Act exponentially increased its enrollment (Friedel, 2011; Fristoe, 2017). In fact, enrollment in agriculture programs was limited to 31,000 students in 1930 but had expanded to 548,000 students by 1940, and is presently at an enrollment of over 1 million students (Friedel, 2011). When the Smith-Hughes Act passed in 1917, it appropriated $1.7 million to the advancement and betterment of vocational education in the areas of agriculture, home economics, and trade/industrial education "… to prepare students for entry-level jobs in occupations requiring less than a baccalaureate degree" (Friedel, 2011, p. 2). This purpose was continued through the passing of the George-Reed Act that appropriated $1 million annually from 1930-1934 (Friedel, 2011). The annual funding from the Smith-Hughes Act was also increased to $7.2 million through 1925-1926 (Friedel, 2011). By 1936, the George-Dean Act appropriated an additional $14 million annually to all vocational education programs (Friedel, 2011). The introduction of the Future Farmers of America (FFA) in 1928 had a significant impact on the exponential growth of the agricultural education programs (Friedel, 2011). This impact was evident in 1946 with the introduction of the George-Barden Act (Friedel, 2011). This legislation was the first to

acknowledge the impact of Vocational Student Organizations (VSO's). Friedel (2011) explains this relationship as:

> This act was the first federal law to recognize vocational student organizations (VSOs) by stating that federal funds could be used for vocational agricultural teacher activities related to the vocational student organization. In 1950, the Act to Incorporate the Future Farmers of America (PL 740) officially chartered the Future Farmers of America (FFA). This act set the precedent for USDE recognition of VSOs as an essential component to quality vocational education (p. 40).

The impact of VSO's, now called Career and Technical Student Organizations (CTSO's), forever changed the landscape of vocational education, and helped the program maintain its relevance over the past century. The Three-Component Model Agricultural education is comprised of a three-circle model (Figure 1) that includes classroom instruction, participation in a student organization, called the National FFA Organization (FFA), and a work-based learning program, called a Supervised Agricultural Experience (SAE) (Ahrens et al., 2015; National FFA Organization, 2019). The items in the three-circle model are considered necessary for a complete agricultural education experience (Ahrens et al., 2015; National FFA Organization, 2019).

Figure 1



National FFA Organizations' (2019) Three Component Model

The National FFA Organization (FFA)

FFA or the National FFA Organization is a critical and integral part of the total Agricultural Education program. Agricultural education is grounded on a three-circle integrated model (Figure 1): (1) instruction, (2) Supervised Agricultural Experiences (SAEs), and (3) the participation in an agricultural youth organization such as the National FFA Organization, National Young Farmer Educational Association, and National Post-Secondary Agricultural Student Organization (Ahrens et al., 2015; National FFA Organization, n.d.). Agricultural educators provide students with real-life scenarios that provide students with an opportunity to apply knowledge acquired in the classroom (Fristoe, 2017). Croom (2008) noted that FFA programs are designed to promote stronger academic performance for students. Furthermore, through the FFA students are provided an opportunity to improve their leadership ability, personal communication skills, and personal work habits (Croom et al., 2009).

According to Hughes and Barrick (1993) the classroom and laboratory component of the FFA enable students to learn technical competencies, as well as providing students an opportunity to participate in learning activities that promote agricultural literacy, leadership abilities, and personal qualities. As the general population continues to increase the promotion of agricultural literacy becomes more important (Clemons, et al., 2018; 2024). FFA assists students entering the workforce by its ability to provide personal and professional development (Croom et al., 2009). Students enrolled in agricultural education courses can participate in SAEs, which may otherwise be known as independent learning programs or work-based experiences (Croom, 2008; Ramsey & Edwards, 2012). Moreover, the students' experience in the SAE component of the three-circle integrated model is what separates it from other programs or subjects in numerous secondary schools (Ramsey & Edwards, 2012).

Work Engagement

Brayfield & Rothe (1951) believed that job satisfaction could be inferred from an individual's attitude toward their work. As such, the Brayfield Index of Job Satisfaction has been used by previous researchers (Cano & Miller, 1992; Newcomb et al., 1987; Walker et al., 2004). The instrument proved valuable when examining educational professionals, including those in agricultural education (Camp, 1987). Bruening & Hoover (1991) found that teachers who are satisfied with their work and have a strong sense of purpose will have programs that produce successful students. Personal fulfillment, a strong sense of purpose, and strong interpersonal relationships are indicators of job satisfaction (Pajak & Blase, 1989). In the profession of agricultural education, practicing teachers have been found to be overall satisfied with their jobs when utilizing instruments based on the Brayfield Index of Job Satisfaction (Cano & Miller, 1992; Newcomb et al., 1987, Walker et al., 2004); however, most have experienced a degree of

job dissatisfaction stemming from the factors associated with burnout (Newcomb et al., 1987). Focusing on Ohio's agricultural educators, Newcomb et al. (1987) studied the extent of burnout and its relation to job satisfaction and coping skills. They found that the teachers were not making use of recreation and self-care coping skills that could lead to a lower degree of burnout among the respondents (Newcomb et al., 1987). Cano & Miller (1992) also found Ohio's agricultural educators satisfied nine years later. They found that the teachers' age, position, years of experience, and level of education were not related to job satisfaction (Cano & Miller, 1992), contrary to Grady (1990) who stated that as the number of years of experience increased, the degree of job satisfaction increased. Walker et al. (2004) confirmed Cano & Miller (1992) finding their sample of Missouri agricultural educators overall satisfied with very little change in the degree of satisfaction from their first year to their current position.

Work-life Balance

A fairly new vein of research, the exploration of work-life balance is becoming an increasingly popular branch of vocational and organizational psychological research (Carlson & Kacmar, & Williams, 2000; Grzywacz & Marks, 2000). In 1985, Greenhaus & Beutell found that work-family conflict grows when either work or family roles are salient and central to a person's image of self; the more important the role is to the individual, the more effort they will invest in that role. One should note teachers' personal lives are intimately linked to their performance in their professional lives (Day, 2008). The multiple roles assumed by educators (e.g., guide, friend, coach, surrogate parent, teacher, spouse, parent, sibling) influences both the professional life and the personal life (Flores & Day, 2006). Adams et al., (1996) reported that the relationship between work and family life is a bidirectional phenomenon, whereby both can interfere and

support the other. Cinamon & Rich (2002a, 2002b, 2005) confirmed the interaction of work and family conflict. As one moves through different stages of life, roles change, as does one's sense of commitment to various roles; as life circumstances evolve, conflicts between work and family may evolve as well (Cinamon & Rich, 2002b). Flores & Day (2008) illustrated how teacher identities are shaped and reshaped over time. Those identities are influenced by personal and professional histories, professional training, school culture, and leadership influences (Flores & Day, 2006). Gutek et al. (1991) examined the two most important domains in adult lives: work and family. The two roles are often in conflict, work with family (long hours, reduced presence at home, missed activities) and family with work (child illnesses and absenteeism) (Gutek et al., 1991). The more job involvement, the higher the work-family conflict, leading to increased burnout, reduced job satisfaction, and reduced commitment (Adams et al., 1996). The more preoccupied and reduced effectiveness due to that preoccupation, the higher the work-family conflict (Gutek et al., 1991). There is a disproportion in the degree of conflict reported by gender (Cinamon & Rich, 2002a, 2005; Gutek et al., 1991). One should note that as experience grows, regardless of gender, work-life conflicts decline (Cinamon & Rich, 2005). Cinamon & Rich (2005) attribute this to the ability to adjust work requirements to accommodate family situations. Individuals who are work-oriented make accommodations that meet their need for challenges while allowing for career enrichment (Cinamon & Rich, 2005). Individuals who are family-oriented will seek accommodations to minimize conflicts with family requirements (Cinamon & Rich, 2005). Pajak & Blase (1989) found that teachers perceived their personal lives having a positive influence on their professional lives. Fredrickson (2001) developed the broadenand-build theory to explain the effect of positive emotions on work-life balance and the ability to develop resiliency as a result. This state of resiliency, or lack thereof, creates a link between

work engagement, work-life balance, and occupational commitment. Bruening & Hoover (1991) found that personal life factors do influence the professional performance of agricultural educators. Foster (2001) found that balancing work and personal lives was one of the most challenging aspects for female agricultural educators. Myers et al., (2005) confirmed her findings in a study of beginning agriscience teachers. Chaney (2007) found that as work-life balance increased, attrition decreased. Work taking away too much time from family and an inability to balance work and personal commitments is a key factor in the decision to leave (Chaney, 2007).

Occupational Commitment

Commitment is an antecedent to teacher performance, burnout, attrition or retention, as well as teacher influences on student cognitive, social, behavioral, and affective outcomes (Day, 2008; Day et al., 2006; Singh & Billingsley, 1996). Past researchers focused on teachers' reasons for leaving (Allen, 2005). According to Day (2008), current researchers need to identify the factors that sustain their commitment, motivation, and effectiveness over the duration of their careers and lead to the decision to stay. Commitment is an outward expression of a teacher's psychological attachment to their profession, motivation, willingness to learn, and belief they do make a difference in the learning and achievement of students (Sammons et al., 2007). Commitment may rise or fall depending on the teacher's life and work experiences (Day, 2008). Day et al., (2005) identified commitment as a predictor of teacher performance, burnout, attrition, and influences on student cognitive, social, behavioral, and affective outcomes. Nias (1989) defined commitment as a sense of caring, dedication, and a sense of pride in their profession. Nais (1989) discussed four dimensions of teacher commitment that overlap and co-exist: caring for children, attainment of high occupational standards, seeing themselves as

teachers, and viewing the teaching profession as a career one cannot afford to leave. Tyree (1996) confirmed Nias' (1989) findings when he reported four dimensions of commitment as caring, commitment as occupational competence, commitment as identity, and commitment as career continuance. The need to engage with teachers with the same degree of commitment was so great that teachers sought schools with a culture of commitment to sustain them (Nias, 1989). Tyree (1989) found, through personal interviews with teachers, that their ideological belief in commitment did not diminish over time but that there are times of waning due to external, environmental events. The personal and family changes affected the balance in their life but their overall commitment to teaching persisted (Tyree, 1989). Grady (1990) found that those who persisted in the teaching profession have a higher degree of initial commitment to teaching than those who leave. Singh & Billingsley (1996) stated that commitment is an antecedent of retention. If employees are committed, they are less likely to leave the organization (Singh & Billingsley, 1996). Gu & Day (2007) stressed that research needs to move toward identifying factors that influence commitment in an effort to sustain it during times of change. Personal factors, such as role conflicts, influence teacher's endeavors to sustain their professional commitment (Gu & Day, 2007; Singh & Billingsley, 1996). Grady (1990) used initial commitment to teaching as a factor in evaluating agricultural educators' cognitive and emotional responses to professional success in his study of social learning theory. He found no difference in initial commitment between those who stayed in teaching and those who left. Knobloch and Whittington (2003) examined the differences in efficacy as it related to career commitment of agriculture teachers. They found that teachers who had a higher degree of career commitment were more resilient and maintained efficacy after the first ten weeks of school (Knobloch & Wittington, 2003). The researchers recommended that commitment be included in multiple

regression analyses to determine its relationship with other factors (Knobloch & Wittington, 2003).

Career Phases

Huberman (1993) first identified the career entry phase as one of survival and discovery characterized by the shock of reality in the classroom. The entry phase gives way to the stabilization phase where teachers make a conscious decision to either stay or leave (Huberman, 1993). Huberman's (1993) stabilization phase is characterized by the development of a professional identity, a sense of commitment and responsibility, and belonging to the profession. Stabilization gives way to a phase of diversification and change (Huberman, 1993). Teachers begin to broaden their instructional repertoire, design new assignments and become more flexible in their responses to students. Mid-Career teachers find themselves taking stock in their career, reflecting on their current professional situation, and considering alternative opportunities (Huberman, 1993). Huberman (1993) found that the final stage of teachers' careers can go several different ways and even incorporate them all: serenity, affective distance, and conservatism. Teachers can feel rejuvenated, motivated, recommitted during this phase; begin working mechanically, anticipating everything that can happen in the classroom; and/or bemoan the newest students as undisciplined and untrained (Huberman, 1993).

Career phases are used to group the population into different demographics groups based on years of experience. Because of the likelihood of early teachers leaving the profession, a large amount of research focuses on beginning and early career teachers (Ritz, 2009). However, there has been a push to study more experienced educators and what sustains them to remain in the classroom and compare to other career phases (Ingersoll, 2001). There are several options on how to determine career phases. This study followed the stages set forth in Roberts et al.'s

(2020) study on *The Dimensions of Professional Development Needs for Secondary Agricultural Education Teachers Across Career Stages*. Roberts et al. (2020) categorized participants into distinct cases based on their years of experience: Early Career Teachers – zero to five years of teaching experience; Mid-Career Teachers – six to 15 years of teaching experience; and Career Teachers –16 or more years of teaching experience.

Gender

Burris et al. (2008), Chaney (2007), Lee (2009), and Ritz (2009) all recognize that the gender dynamic of the agricultural education profession is changing as more females become agricultural educators. Foster (2001) and Smethem (2007) found that female teachers feel torn between their career and their families. Cinamon & Rich (2005) found responses to work-family conflict statements to differ between males and females, females reporting higher degrees of work-family conflict than males. The agricultural education profession was a male dominated career field in the past (Kantrovich, 2007; Lee, 2009); however, there has been a clear shift in demographics of SBAE teachers from historically male to majority female (McKibben et al., 2022). Castillo & Cano (1999) found that female teachers leave the profession faster than males. Kersaint et al., (2007) found that those who remain in the teaching profession still value their family and responsibilities associated with it above all else, but females are more likely to leave for jobs that are less time consuming and reduce conflicts.

Summary

The literature review brings forth the knowledge of the extensive amount of research conducted on the attrition of teachers. This is understandable considering that the lack of agricultural educators has largely been contributed to teacher attrition (Blackburn et al., 2017; Clemons et al., 2021; Hainline et al., 2015; Lemons et al., 2015; Mack et al., 2019; Solomonson

& Retallick, 2018; Solomonson et al., 2021; Traini et al., 2021). If agricultural education is going to improve attrition rates and retain qualified teachers, it is imperative that education stakeholders understand why active agricultural educators remain in the profession (Clemons et al., 2021; Solomonson et al., 2021). Levin (2008) stated that "finding and keeping quality educators should be a preoccupation of every school, district, and government that is involved in education…. High turnover of teachers imposes significant costs on an education system, not only in training and developing new teachers, but also in the lost productivity of experienced and capable people" (pg 223).

Previous studies have grouped factors affecting retention into three categories: work engagement, work-life balance, and occupational commitment. This study was designed to evaluate those factors on the decision to remain in the classroom for SBAE teachers in Alabama and to determine if a relationship exists when compared to the educator's career phase or gender.

Chapter 3: Methods

Introduction

This chapter will include the purpose of the study, research objectives, sample population, instrumentation, research design, data collection, and data analysis used in this research study.

Purpose of the Study

Researchers have shown that we know with relative levels of certainty some of the main reasons teachers are leaving the classroom. Our focus should also be on why teachers are staying. If those discovered factors can be replicated, a process can be put into play to emphasize those areas in order to begin to address the teacher shortage in the education system. Each educational program and each state have implemented certain strategies to help address the attrition of school teachers. Within the agricultural education world, programs and policies have been put into place to offer assistance to help reduce the burden and workload of the program. Specifically, within the state of Alabama, significant steps have been taken to keep programs open and productive.

Teachers are in the profession by choice, despite experiencing increased demands and conflict created by professional expectations and personal life pressure (Crutchfield, 2010). Therefore, the purpose of this study is to explore the relationship between career retention factors and selected demographic characteristics of school based agricultural educators within the state of Alabama. Identifying these factors will help state leaders determine what is or is not working and how to make changes that will have the largest impact on programs across the state.

Research Objectives

The objectives in this study replicate the study performed by Crutchfield (2010), then again by Sorensen & McKim (2014), and by Solomonson (2022) which explored the relationship of work engagement, work-life balance, and occupational commitment and how it affected the decision of agricultural educators to remain in the teaching profession. This study expanded on that research to determine which factors contributed to retention of school based agricultural educators in Alabama specifically, as well as, how these factors changed based on the teachers' career phase and gender. Therefore, the following objectives were used in this study:

1. Describe the demographics of participating agricultural educators using central tendencies.
2. Identify factors contributing to the retention of SBAE teachers in Alabama.
3. Assess the statistical differences in factors contributing to retention based on career phase.
4. Assess the statistical differences in factors contributing to retention based on gender.

Sample

The population of interest for this study was SBAE teachers employed for the 2023-2024 school year in Alabama. The study was announced at each of the three Association of Alabama Agricultural Educators (AAAE) meetings across the state. Teachers from the North, Central, and South FFA districts participated in the meetings at their prospective locations.

Following the meetings and the questionnaire's announcement, each SBAE teacher in Alabama received an email asking them to participate in the study. A census was attempted to ensure equivalent representation of all SBAE teachers in the state of Alabama. Email addresses from all 308 teachers were assumed accurate and updated since the Alabama State Department of Education Agriscience Staff were willing to send the survey request through their updated listserv. This survey method reached all 308 teachers in the state. Out of 308 surveys, 153 were started and 128 returned after 4 attempts and following Dillman's Tailored Design Method.

Procedures

Approval to collect data via the survey was obtained from IRB (24-679) before the study began (Appendix A). The instrument was sent to all SBAE teachers in February of 2024. This time was selected because it was close to midway through the school year. It was long enough after winter break to be back in the flow and gave participants a chance to answer the questions while reflecting on their past semester and look forward to a new one.

Research Design

A quantitative research instrument was distributed, which surveyed SBAE teachers in the state of Alabama regarding the factors contributing to their retention in the classroom. Quantitative research is described as emphasizing facts, relationships, and causes (Wiersma and Jurs, 2009). A goal of quantitative research is to prove or disprove a hypothesis, which is accomplished by acquiring a sizable response from participants (Arghode, 2012).

A descriptive correlational research design was used to collect data. Descriptive statistics refer to information analyzed to reveal the basic features of data collected or used in a study (Fowler, 2013). When using descriptive data, it is common to have certain patterns emerge that

make it easier for researchers to understand the data. Descriptive correlational design is used in research studies that aim to provide static pictures of situations as well as establish the relationship between different variables (McBurney & White, 2009).

Instrumentation

Data for this study was gathered using a previously designed instrument, originally compiled by Crutchfield (2010). Crutchfield's instrument was a combination of four previous instruments used independently by researchers to measure independent variables of interest. The previous instruments were then compiled to form Crutchfield's instrument broken down into three segments to analyze the factors and their relationship to the teacher's decision to remain in the classroom. The three segments were: work engagement, work-life balance, and occupational commitment.

The work engagement portion of Crutchfield's instrument incorporated the Utrecht Work Engagement Scale, or UWES, to measure work engagement (Schaufeli & Bakker, 2003). The Cronbach's alpha coefficient for UWES was .94. The work-life balance component of Crutchfield's instrument included Chaney's (2007) five questions that measured the respondent's perception of balance achievement. The Cronbach's alpha coefficient for Chaney's questions was .95. To further supplement this section, Crutchfield included eight items from Gutek et al. (1991) work-family conflict instrument that measured work-family and family-work conflict that occurs when work interferes with family or family interferes with work. The Cronbach's alpha coefficient for Gutek et al. instrument was .83. The occupational commitment portion of Crutchfield's instrument included a portion of Blau et al.'s (1993) Work Commitment Index used to measure agricultural educator's commitment to teaching. Blau et al. (1993) defined occupational commitment as one's attitude, including affect, belief, and behavioral intention,

toward their chosen occupation. The Cronbach's alpha coefficient for the Work Commitment Index was .91.

Dr. Crutchfield was contacted through email for her permission to use her instrument (Appendix B). Additionally, this instrument was modified to accommodate the intent of this study, which surveyed Alabama SBAE teachers specifically and the factors that contributed to their retention in the classroom.

Validity and Reliability

The items included in the questionnaire were derived from the instrument originally created by Crutchfield (2010) and then modified to include Alabama specific factors. A panel of subject matter experts assisted in developing the instrument and determined its validity and usability (Crutchfield, 2010). Directions were stated clearly in each category to facilitate reliable responses.

A Cronbach's Alpha reliability analysis was conducted on a pilot survey of SBAE teachers from Tennessee (n = 18) using the Statistical Package for Social Sciences (SPSS). The Cronbach's Alpha for the work engagement sections was .83. The Cronbach's Alpha for the work-life balance section was .88. The Cronbach's Alpha for the occupational commitment section was .77 and the Cronbach's Alpha for agriscience education factors was .85.

Data Collection

Permission to collect data via the survey was obtained from the Auburn University Institutional Review Board (24-679) before the study began (Appendix A). The AAAE president was contacted, and permission was granted to present the study at all three district AAAE meetings across the state. At said meetings, the topic was presented and teachers were

encouraged to participate and respond. The instrument was distributed via Qualtrics in February of 2024. The survey link was sent out by the Alabama State Department of Education Agriscience Education staff to ensure all current SBAE teachers in the state of Alabama received the email.

Following recommendations from Dillman et al. (2014), five points of contact were scheduled over four weeks. The first point of contact was to provide information on the study and invite the population to participate. The second point of contact was the initial request to fill out the attached electronic survey followed by three follow up emails as a reminder, each scheduled one week apart. This method reached 308 teachers and resulted in 153 surveys to be started and 128 to be completed. This yielded a 42% response rate (n=128).

Non-response bias was a concern based on the lack of a census being achieved. Non-response was handled based on the recommendations made by Lindner et al (2001). Mean scores of the work engagement factors, work-life balance factors, and occupational commitment factors of those individuals responding in the first week to those in the last week of data collection. No significant differences between groups (p<.05) were found. An acceptable method of determining non-response bias in agricultural education research is comparing the early and late responders (Lindner et al. 2001; Lindner, 2002).

Data Analysis

Data analysis was performed using SPSS software. The alpha level of .05 was used to determine a level of statistical significance.

Research Objective One: Describe the demographics of participating agricultural educators using central tendencies. To address objective one, Alabama SBAE teacher's (n=128) characteristics were analyzed for gender, educational degree held, contract length,

certification type, teachers in the program, years of experience, and future career plans. Frequency, percentages, and mode were used to analyze the categorical data.

Research Objective Two: Identify factors contributing to the retention of SBAE teachers in Alabama. To address objective two, frequency, percentages, means scores, ranges, and standard deviations were used to describe how Alabama SBAE teacher's (n=128) felt about each factor grouped into four categories. These four categories were work engagement, work-life balance, occupational commitment, and Alabama agriscience education factors. Several factors were reversed coded so that a high score equaled a positive ranking.

Research Objective Three: Assess the statistical differences in factors contributing to retention based on career phase. For objective three, a one-way analysis of variance (ANOVA) was used to assess the statistical differences in factors contributing to retention based on career phase. This study followed the career phases set forth in Roberts et al.'s (2020) study on *The Dimensions of Professional Development Needs for Secondary Agricultural Education Teachers Across Career Stages*. Roberts et al. (2020) categorized participants into distinct cases based on their years of experience: Early Career Teachers – zero to five years of teaching experience; Mid-Career Teachers – six to 15 years of teaching experience; and Career Teachers – 16 or more years of teaching experience.

Research Objective Four: Assess the statistical differences in factors contributing to retention based on gender. To address objective four, an independent sample t-test was conducted to assess the statistical differences in factors contributing to retention based on gender. A t-test was run with the mean scores of each of the four categories listed to determine if a difference existed between male and female participants.

Chapter 4: Results

Introduction

This chapter will outline the information collected in this study and include a description of a statistical analysis of the data.

Purpose of the Study

Researchers have proven that we know why teachers are leaving the classroom. Our focus should also be on why teachers are staying. If those discovered factors can be replicated, a process can be put into play to emphasize those areas in order to begin to address the teacher shortage in the education system. Each educational program and each state has implemented certain strategies to help address the attrition of school teachers. Within the agricultural education world, programs and policies have been put into place to offer assistance to help reduce the burden and workload of the program. Specifically, within the state of Alabama, significant steps have been taken to keep programs open and productive.

Teachers are in the profession by choice, despite experiencing increased demands and conflict created by professional expectations and personal life pressure (Crutchfield, 2010). Therefore, the purpose of this study is to explore the relationship between career retention factors and selected demographic characteristics of school based agricultural educators within the state of Alabama. Identifying these factors will help state leaders determine what is or is not working and how to make changes that will have the largest impact on programs across the state.

Research Objectives

The objectives in this study replicate the study performed by Crutchfield (2010), then again by Sorensen and McKim (2014), and by Solomonson (2022) which explored the relationship of work engagement, work-life balance, and occupational commitment and how it affected the decision of agricultural educators to remain in the teaching profession. This study expanded on that research to determine which factors contributed to retention of school based agricultural educators in Alabama specifically, as well as, how these factors changed based on the teachers' career phase and gender. Therefore, the following objectives were used in this study:

1. Describe the demographics of participating agricultural educators using central tendencies.
2. Identify factors contributing to the retention of SBAE teachers in Alabama.
3. Assess the statistical differences in factors contributing to retention based on career phase.
4. Assess the statistical differences in factors contributing to retention based on gender.

Population

The population of focus for this study was SBAE teachers currently employed for the 2023-2024 school year in the state of Alabama. The research study was announced at each of the three Association of Alabama Agricultural Educators (AAAE) meetings across the state. Teachers from the North, Central, and South FFA districts participated in the meetings at their prospective locations.

Following the meetings and the announcement of the instrument, each SBAE teacher in the state of Alabama received an email asking for them to participate in the study. A census survey attempted to ensure equal representation of all SBAE teachers in the state of Alabama. Email addresses from all 308 teachers were accurate and updated since the Alabama State Department of Education Agriscience Staff were willing to send the survey request through their updated listserv. This survey method reached all 308 teachers in the state. Out of 308 surveys, 153 were started and 128 returned after 4 attempts and following Dillman's Tailored Design Method.

Results

Research Objective One

The first research objective was to address the demographic characteristics of participating agricultural educators. The information was analyzed in regard to individual characteristics (gender, years of experience, highest degree held, certification type, and future career plans), family characteristics (relationship status and number of children at home), and agriscience education program characteristics (annual contract length from system and annual contract length with extended grant).

When looking at individual characteristics, it was noted that less than one third of the participants, 27% (n = 35), were female. Majority of the respondents were male agricultural educators, 73% (n = 93). Years of total teaching experience was broken down into three categories. These categories were early career (0-5 years experience), mid-career (6-15 years experience), and late career (more than 15 years experience). There were 25% (n =32) early career teachers, 36% (n = 46) mid-career teachers, and 40% (n = 50) late career teachers that

participated in the study. Respondents were also asked to identify their high degree held. Data shows that 38.3% (n = 49) held a bachelor's degree, 44.5% (n = 57) held a master's degree, 15.6% (n = 20) held a specialist degree, and only 1.6% (n = 2) held a doctorate degree. When comparing certification type between traditional and alternatively certified, it was discovered that 63% (n = 80) were traditionally certified while 37% (n = 47) were alternatively certified. Participants were also asked to identify their career plans within the next five years. These results were staggering as only 66.9% (n = 85) of teachers plan to be teaching Agricultural Education in the next five years. The other 33.1% (n = 43) plan to either retire (15.8%), leave education completely (7.1%), or pursue another education related job outside of agriculture education. Table 1 and Table 2 summarizes these characteristics.

Table 1

Participant's Individual Characteristics

Description	*f*	%
Gender		
Male	93	73
Female	35	27
Highest Degree Held		
Bachelors	49	38.3
Masters	57	44.5
Specialist	20	15.6
Doctorate	2	1.6
Certification Type		
Traditional	80	63
Alternative	47	37
Years of Teaching Experience		
1-5 Years	32	25
6-15 Years	46	36
16+ Years	50	40

Table 2

Participants Individual Characteristics continued

Description	*f*	%
Continue teaching Ag Education where I am employed	79	62.2
Continue teaching Ag Education at a different location	6	4.7
Leave the classroom and pursue another education related job	13	10.2
Leave the classroom and pursue another job outside of education	9	7.1
Retire	21	15.8

Family characteristics also varied between respondents when looking at relationship status and number of children at home. The majority of the teachers, 77.2% (n = 98) were married at the time of instrumentation. The number of children living in the home was also assessed and the data showed that almost half, 49.5% (n = 54), of the respondents only had 1 child or less living in the home. The percentage of teachers with higher numbers of children dropped drastically with each child and only 6.4% (n = 7) had 4 or more children living in the home. Table 3 summarizes these characteristics.

Table 3

Participants Family Characteristics

Description	*f*	%
Relationship Status		
Single	11	8.7
In relationship, not married	11	8.7
Married	98	77.2
Divorced / Widowed	7	5.4
Number Children at Home		
1 Child or less	54	49.5
2 Children	38	34.9
3 Children	10	9.2
4 or more Children	7	6.4

Analyzing program characteristics helped shine light on contract lengths that the participants held both from their school system and with the extended school year grant. The study found that without the Extended School Year Grant, the majority of the teachers were either on a 9 month contract, 47.7% (n = 61), or a 10 month contract, 32% (n = 41). However, when considering the Extended School Year Grant, 56.5% (n = 70) of teachers were on either an 11 or 12 month contract with only 23.4% (n = 29) remaining on a 9 month contract. Table 4 summarizes these findings.

Table 4

Participants Program Characteristics

Description	*f*	%
Annual Contract Length from School System		
9 Month	61	47.7
10 Month	41	32.0
11 Month	5	3.9
12 Month	21	16.4
Total Contract including Extended School Year Grant		
9 Month	29	23.4
10 Month	25	20.2
11 Month	26	21.0
12 Month	44	35.5

Research Objective Two

The purpose of the second research objective was to identify factors contributing to the retention of SBAE teachers in Alabama. To assess this, this study replicated the study performed by Crutchfield (2010), then again by Sorensen and McKim (2014), and by Solomonson (2022) which explored the relationship of work engagement, work-life balance, and occupational commitment and how it affected the decision of agricultural educators to remain in the teaching profession. The goal was to identify which of these factors were deemed important to agricultural teachers in Alabama. In addition, this study expanded on that research to determine

what additional factors specific to the state of Alabama would contribute to retention of school based agricultural educators.

Questions and factors were asked on a 5-point Likert scale (Lindner, 2024). The higher the score the more likely that topic is to be a factor affecting retention. Questions were broken down to explore factors sorted by topics. The topics include work engagement, work-life balance, occupational commitment, and Alabama agricultural education factors.

The first topic analyzed is work engagement. Work engagement originated in the field of organizational behavior (Kahn, 1990) and is typically defined as a "positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli et al., 2002, p. 74). Schaufeli & Bakker (2004) defined vigor as possessing "high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties" (p. 295), dedication as "being strongly involved in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge" (p. 295), and absorption as "by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work." (p. 295). Schaufeli & Bakker (2003) also produced evidence that work engagement levels can be improved through access to support resources and motivators, such as professional development, mentoring, task variety, and co-worker support.

When analyzing the work engagement factors, the most notable factors contributing to the decision for teachers to remain in the classroom were "I find the work that I do full of meaning and purpose" with a mean score of 4.00 out of 5.00 and "I am proud of the work that I do" with a mean score of 4.29 out of 5.00. All mean scores and standard deviations of work engagement factors can be found in Table 5. Another interesting factor was "To me, my job is

challenging" with a mean score of 3.87 out of 5.00. However, when you analyze it closer, 67.1% (n = 94) of teachers said their job was either often or always challenging (Table 6).

Table 5

Mean and Standard Deviation for Work Engagement Factors

Description	M	SD
At my work, I am bursting with energy	3.24	0.65
I find the work that I do full of meaning and purpose	4.00	0.74
Time flies when I'm working	3.94	0.83
At my job, I feel strong and vigorous	3.41	0.82
I am enthusiastic about my job	3.84	0.74
When I am working, I forget everything else around me	3.11	0.98
My job inspires me	3.71	0.77
When I get up in the morning, I feel like going to work	3.57	0.93
I feel happy when I am working intensely	3.96	0.71
I am proud of the work that I do	4.29	0.69
I am immersed in my work	3.80	0.76
I can continue working for very long periods at a time	3.76	0.83
To me, my job is challenging	3.87	0.83
I get carried away when I am working	3.50	0.81
At my job, I am very resilient mentally	3.60	0.86
It is difficult to detach myself from my job	3.35	1.12
At my work, I always persevere, even when things do not go well	3.97	0.75

Table 6

Breakdown of Work Engagement - To me, my job is challenging

Rank	*f*	%
Never	0	0
Rarely	6	4.3
Sometimes	40	28.6
Often	60	42.9
Always	34	24.2

The next topic analyzed was work-life balance. Work-life balance refers to the ability to manage the potential conflict between the pressures of family roles and the workplace (Greenhaus & Beutell, 1985). Stressors and additional responsibilities make achieving balance difficult (Blackburn et al., 2017; Murray et al., 2011; Sorenson et al., 2016). Teacher's attitudes towards their job or life outside of their job can be negatively affected when stressors from one aspect spill over to the other and interrupt that work-life balance (Sorenson et al., 2016; Wilensky, 1960).

When analyzing the work-life balance factors, there were several interesting findings. Factors "A good work-life balance for ag teachers helps provide a more effective and successful ag education program" and "A good work-life balance for ag teachers helps retain teachers in the profession" had a mean score of 4.33 and 4.40 respectively (Table 7).

Table 7

Mean and Standard Deviation for Work-Life Balance Factors

Description	M	SD
You are able to balance quality time between your work and your personal commitments	3.37	1.20
You are able to balance work demands without unreasonable compromises on personal responsibilities	3.28	1.16
You are able to have a fulfilling personal life and adequately perform your work responsibilities	3.5	1.09
A good work-life balance for ag teachers helps provide a more effective and successful ag education program	4.33	0.70
A good work-life balance for ag teachers helps retain teachers in the profession	4.40	0.80
After work, I come home too tired to do some of the things I'd like to do	2.29	1.27
On the job, I have so much work to do that it takes away from my personal interests	2.42	1.23
My family/friends dislike how often I am preoccupied with my work while I am at home	3.07	1.13
My work takes up time that I'd like to spend with family/friends	2.71	1.18
I'm often too tired at work because of the things I have to do at home	3.40	1.14
My personal demands are so great that it takes away from work	3.55	1.07
My admin and peers dislike how often I am preoccupied with my personal life while at work	4.22	0.90
My personal life takes up time that I'd like to spend at work	4.33	0.86

This shows that an overwhelming majority of the teachers believe that having a good work-life balance is absolutely critical to having a successful program and being able to remain in the classroom. However, 34.6% (n = 45) of the teachers said that they either somewhat or strongly disagree that they are able to balance work demands without unreasonable compromises on family/personal responsibilities. For comparison, 90.8% (n = 118) believe that work-life balance is needed for a successful agricultural education program (table 9) and 87.6% (n = 113) believe that work-life balance is needed for agricultural teachers to remain in the profession (table 10) but 34.6% (n = 45) said that they cannot find a healthy balance without unreasonable compromises of their family/personal responsibilities.

Table 8

Breakdown of "You are able to balance work demands without unreasonable compromises on family/personal responsibilities"

Rank	*f*	%
Strongly Agree	18	13.8
Somewhat Agree	50	38.5
Neither agree or disagree	17	13.1
Somewhat Disagree	40	30.8
Strongly Disagree	5	3.8

Table 9

Breakdown of "A good work-life balance for agriscience teachers help provide a more effective and successful agricultural education profession"

Rank	*f*	%
Strongly Agree	57	43.9
Somewhat Agree	61	46.9
Neither agree or disagree	11	8.5
Somewhat Disagree	0	0
Strongly Disagree	1	0.7

Table 10

Breakdown of "A good work-life balance for agriscience teachers helps retain teachers in the profession"

Rank	*f*	%
Strongly Agree	71	55
Somewhat Agree	42	32.6
Neither agree or disagree	13	10.1
Somewhat Disagree	2	1.6
Strongly Disagree	1	0.8

This is concerning, considering the participants' response to several of the work-life balance factors. For example, Table 11 and 12 shows that 69.7% (n = 90) of teachers said that they either somewhat or strongly agree with the statement "After work, I come home too tired to do some of the things I'd like to do" compared to only 24.6% (n = 32) of teachers that said they either somewhat or strongly agree with the statement "I'm often too tired at work because of the

things I have to do at home". In addition, table 13 and 14 shows that 59.7% (n = 77) of teachers said that they either somewhat or strongly agree with the statement "On the job, I have so much work to do that it takes away from my personal interests" compared to only 17.7% (n = 23) of teachers that said they either somewhat or strongly agree with the statement "My personal demands are so great that it takes away from work". Also, table 15 and 16 shows that 52.3% (n = 68) of teachers said that they either somewhat or strongly agree with the statement "My work takes up time that I'd like to spend with my family/friends" compared to only 3.1% (n = 4) of teachers that said they either somewhat or strongly agree with the statement "My personal life takes up time that I'd like to spend at work".

Table 11

Breakdown of "After work, I come home too tired to do some of the things I'd like to do"

Rank	*f*	%
Strongly Agree	31	24
Somewhat Agree	59	45.7
Neither agree or disagree	18	14
Somewhat Disagree	13	10.1
Strongly Disagree	8	6.2

Table 12

Breakdown of "I'm often too tired at work because of the things I have to do at home"

Rank	*f*	%
Strongly Agree	6	4.6
Somewhat Agree	26	20.0
Neither agree or disagree	33	25.4
Somewhat Disagree	41	31.5
Strongly Disagree	24	18.5

Table 13

Breakdown of "On the job, I have so much work to do that it takes away from my personal interests"

Rank	*f*	%
Strongly Agree	28	21.7
Somewhat Agree	49	38.0
Neither agree or disagree	29	22.5
Somewhat Disagree	16	12.4
Strongly Disagree	7	5.4

Table 14

Breakdown of "My personal demands are so great that it takes away from work"

Rank	*f*	%
Strongly Agree	4	3.1
Somewhat Agree	19	14.6
Neither agree or disagree	36	27.7
Somewhat Disagree	44	33.8
Strongly Disagree	27	20.8

Table 15

Breakdown of "My work takes up time that I'd like to spend with family/friends"

Rank	*f*	%
Strongly Agree	18	13.8
Somewhat Agree	50	38.5
Neither agree or disagree	24	18.5
Somewhat Disagree	28	21.5
Strongly Disagree	10	7.7

Table 16

Breakdown of "My personal life takes up time that I'd like to spend at work"

Rank	*f*	%
Strongly Agree	0	0
Somewhat Agree	4	3.1
Neither agree or disagree	21	16.2
Somewhat Disagree	33	25.4
Strongly Disagree	72	55.4

Occupational commitment was analyzed next. Occupational commitment is an individual's attitude toward their chosen profession (Blau et al. 1993). Higher levels of occupational commitment have been related to both teachers with high self-efficacy (Knobloch & Whittington, 2003; McKim & Valez, 2015) and those with strong social connections with other teachers in their school (Moser and McKim, 2020). Strong levels of occupational commitment have also been found to be a positive predictor of teacher retention (Chapman, 1983; Crutchfield et al., 2013; Singh & Billingsley, 1996).

When assessing the factors under occupational commitment, a 5-point Likert scale was used. The higher the score (5), the higher the satisfaction with the occupation and the lower the score (1) the lower the satisfaction is with the occupation. Data shows that teachers believe that they have the ideal occupation for their life's work (M = 4.04) and that they are not disappointed that they entered this occupation (M = 4.24) (Table 17). In fact, 78.2% (n = 107) said that they agree or strongly agree that "I have the ideal occupation for my life's work" (table 22). With that in mind, it is interesting to note that 31.8% (n = 43) said that they agree or strongly agree that "If

I could, I would go into a different occupation" (table 18), 26.7% (n = 36) said that they agree or strongly agree that "If I could, I would not choose this occupation again" (table 19), and 58.5% (n = 79) said that they agree or strongly agree that "Sometimes I am dissatisfied with this occupation" (table 20).

Table 17

Mean and Standard Deviation for Occupational Commitment Factors

Description	M	SD
If I could, I would go into a different occupation	3.23	1.31
I can see myself in this occupation for many years	3.91	1.07
My chosen occupation is a good choice	4.29	0.82
If I could, I would not choose this occupation again	3.59	1.42
If I had no need for money, I would still continue in this occupation	3.27	1.36
Sometimes, I am dissatisfied with this occupation	2.53	1.08
I like my occupation to well to give it up	3.59	1.08
My education was not for this occupation	3.72	1.58
I have the ideal occupation for my life's work	4.04	0.81
I wish I had chosen a different occupation	3.79	1.25
I am disappointed that I entered this occupation.	4.24	1.05

Table 18

Breakdown of "If I could, I would go into a different occupation"

Rank	*f*	%
Strongly Agree	15	11.1
Agree	28	20.7
Neither	33	24.4
Disagree	29	21.5
Strongly Disagree	30	22.2

Table 19

Breakdown of "If I could, I would not choose this occupation again"

Rank	*f*	%
Strongly Agree	15	11.1
Agree	21	15.6
Neither	20	14.8
Disagree	27	20.0
Strongly Disagree	52	38.5

Table 20

Breakdown of "Sometimes I am dissatisfied with this occupation"

Rank	*f*	%
Strongly Agree	19	14.1
Agree	60	44.4
Neither	29	21.5
Disagree	19	14.1
Strongly Disagree	8	5.9

Table 21

Breakdown of "My education was not for this occupation"

Rank	*f*	%
Strongly Agree	19	14.1
Agree	23	17.0
Neither	9	6.7
Disagree	10	7.4
Strongly Disagree	74	54.8

Table 22

Breakdown of "I have the ideal occupation for my life's work"

Rank	*f*	%
Strongly Agree	40	29.6
Agree	67	49.6
Neither	23	17.0
Disagree	4	3.0
Strongly Disagree	1	0.7

Table 23

Breakdown of "I wish I had chosen a different occupation"

Rank	*f*	%
Strongly Agree	4	3
Agree	26	19.3
Neither	20	14.8
Disagree	30	22.2
Strongly Disagree	55	40.7

Lastly, this study included research to determine what additional factors specific to the state of Alabama would contribute to retention of school based agricultural educators. These factors include items that may or may not be present in other states. The goal was to determine if things that Alabama is specifically doing will help contribute to the retention of agricultural teachers. When assessing these factors, a 5-point Likert scale was used. The higher the score (5)

the more important the factor was on their decision to stay in the profession and the lower the score (1) the less important the factor was on their decision to remain in the classroom.

Data shows that out of all of the Alabama Agricultural Education factors assessed, there were 4 areas that were the most impactful in contributing to the retention of teachers in the classroom. Those areas in order of importance are: support of local school administrators, CTE directors, and the superintendent (M = 4.72), benefits such as health insurance and retirement provided by the Alabama Department of Education (M = 4.72), yearly pay scale increases passed by the state legislature (M = 4.67), and relationships/bonds with agriscience students and FFA members in the program (M = 4.61) (table 24).

Table 24

Mean and standard deviation of Alabama agricultural education factors

Description	M	SD
Assistance from improvement specialist hired by the Alabama FFA Foundation	3.91	1.01
Currently yearly pay scale increases passed by the state legislature	4.67	0.55
FFA affiliate membership dues paid by the state legislature	4.09	0.98
Extended school year contract grant provided by the state legislature	4.08	1.16
Professional development opportunities provided at the ALACTE summer conference	3.46	1.14
Ag Education professional development organized by state staff during the summer	3.91	0.91
Assistance with classroom management practices within Ag Education setting	3.76	1.00
Assistance with awards, applications, and contest offered by Alabama FFA Association	3.99	0.87
Assistance provided by a local FFA Alumni Chapter	3.30	1.14
Support of local school administrators, CTE directors, and the superintendent	4.72	0.55
Benefits such as health insurance and retirement provided by the Alabama Dept of Education	4.72	0.55
Relationships with agriscience students and FFA members within your program	4.61	0.62

A further look into the data collected shows that 98.6% of the teachers said that it was either important or very important to have the "support of local school administrators, CTE

directors, and the superintendent" (table 28), 96.5% of the teachers said that it was either important or very important to have "benefits such as health insurance and retirement provided by the Alabama Department of Education" (table 29), 96.5% of the teachers said that it was either important or very important to have the "relationships with agriscience students and FFA member within your program" (table 30), and 95.8% of the teachers said that it was either important or very important to have "yearly pay scale increases passed by the state legislature" (table 25).

Table 25

Breakdown of "Current yearly pay scale increases passed by the state legislature"

Rank	*f*	%
Not Important at All	0	0
Not Important	0	0
Neutral	6	4.2
Important	36	24.8
Very Important	103	71.0

Table 26

Breakdown of "Extended school year contract grant provided by the state legislature"

Rank	*f*	%
Not Important at All	8	5.5
Not Important	7	4.8
Neutral	23	15.9
Important	34	23.4
Very Important	73	50.3

Table 27

Breakdown of "Assistance with awards, applications, and contest offered by the Alabama FFA Association"

Rank	*f*	%
Not Important at All	2	1.4
Not Important	6	4.1
Neutral	26	17.9
Important	69	47.6
Very Important	42	29

Table 28

Breakdown of "Support of local school administrators, CTE directors, and the Superintendent"

Rank	*f*	%
Not Important at All	1	0.7
Not Important	0	0
Neutral	1	0.7
Important	34	23.6
Very Important	108	75

Table 29

Breakdown of "Benefits such as health insurance and retirement provided by the Alabama State Department of Education"

Rank	*f*	%
Not Important at All	0	0
Not Important	1	0.7
Neutral	4	2.8
Important	29	20.0
Very Important	111	76.5

Table 30

Breakdown of "Relationships with agriscience students and FFA members within your program"

Rank	*f*	%
Not Important at All	1	0.7
Not Important	0	0
Neutral	4	2.8
Important	45	31
Very Important	95	65.5

Research Objective Three

The purpose of the third research objective was to assess the statistical differences in factors contributing to retention based on career phase. Career phases are used to group the population into different demographics groups based on years of experience. Because of the likelihood of early teachers leaving the profession, a large amount of research focuses on beginning and early career teachers (Ritz, 2009). However, there has been a push to study more experienced educators and what sustains them to remain in the classroom and compare to other career phases (Ingersoll, 2001). There are several options on how to determine career phases. This study followed the stages set forth in Roberts et al.'s (2020) study on *The Dimensions of Professional Development Needs for Secondary Agricultural Education Teachers Across Career Stages*. Roberts et al. (2020) categorized participants into distinct cases based on their years of experience: Early Career Teachers – zero to five years of teaching experience; Mid-Career Teachers – six to 15 years of teaching experience; and Career Teachers –16 or more years of teaching experience.

To compare these findings across career phases, an Anova test was run on the data collected from participants on career retention factors. Table 31 shows the descriptives of the career retention factors and the mean and standard deviation of each area are broken down by career phase. The data shows that mean scores were lower for all three factors in the mid-career (6-15 year) phase which means typically early career and late career teachers placed more importance on these factors as a reason for remaining in the classroom while mid-career teachers felt that it did not affect their decision as much as in the other career phases.

Table 31

Career Retention Factor Descriptives by Career Phase

Description	1-5 Years		6-15 Years		16+ Years	
	M	SD	M	SD	M	SD
Work Engagement Factors	3.80	0.33	3.64	0.56	3.72	0.46
Work-life Balance Factors	3.43	0.59	3.36	0.61	3.56	0.61
Occupational Commitment Factors	3.88	0.62	3.60	0.89	3.66	0.69

To start, a Levene's Test for Homogeneity of Variances was run to test if the variances of the three career retention factors over the three career phases were similar. Table 32 breaks down the results of this test. According to Levene's Test for Homogeneity of Variances, we cannot assume there is a homogeneity of variances because there is a statistically significant difference of variances in the mean scores of work engagement factors and occupational commitment factors. Leven's Test for Homogeneity of Variances also showed there is a homogeneity of

variances because there is not a statistically significant difference of variances when comparing the mean scores of work-life balance factors.

Table 32

Levene's Test for Homogeneity of variance for Work Engagement, Work-life Balance, and Occupational Commitment across career phases

Based on Mean of	df1	df2	p
Work Engagement Factors	2	125	0.05*
Work-life Balance Factors	2	125	0.96
Occupational Commitment Factors	2	125	0.04*

*Statically significant findings

When considering the ANOVA test results, Table 33 shows that there was not a statistically significant difference between the mean scores of Work Engagement, Work-life Balance, and Occupational Commitment when looked at across career phases.

Table 33

Anova between Work Engagement, Work-life Balance, and Occupational Commitment and each career phase

Retention Factor	p
Work Engagement	0.36
Work-life Balance	0.26
Occupational Commitment	0.26

In addition to the three areas of career retention factors from previous studies, an Anova was also run on the Alabama Agricultural Education factors to determine if there was a difference in importance according to career phase. Table 34 shows the descriptives of the Alabama Agricultural Education factors and the mean and standard deviation of each area broken down by career phase.

Table 34

Alabama Agricultural Education factor descriptives by Career Phase

Description	Category	M	SD
Assistance from improvement specialist hired by the Alabama FFA Foundation	1-5 Years	4.03	.93
	6-15 Years	4.07	1.02
	16+ Years	3.84	.96
Currently yearly pay scale increases passed by the state legislature	1-5 Years	4.78	.49
	6-15 Years	4.57	.66
	16+ Years	4.66	.52
FFA affiliate membership dues paid by the state legislature	1-5 Years	4.25	.84
	6-15 Years	4.07	1.10
	16+ Years	4.00	1.03
Extended school year contract grant provided by the state legislature	1-5 Years	4.47	.80
	6-15 Years	3.98	1.37

	16+ Years	3.92	1.12
Professional development opportunities provided at the ALACTE summer conference	1-5 Years	3.56	1.19
	6-15 Years	3.39	1.18
	16+ Years	3.44	1.05
Ag Education professional development organized by state staff during the summer	1-5 Years	4.00	.92
	6-15 Years	3.80	1.06
	16+ Years	3.90	.71
Assistance with classroom management practices within Ag Education setting	1-5 Years	3.75	.98
	6-15 Years	3.80	1.11
	16+ Years	3.66	.94
Assistance with awards, applications, and contest offered by Alabama FFA Association	1-5 Years	4.16	.88
	6-15 Years	4.09	.92
	16+ Years	3.80	.78
Assistance provided by a local FFA Alumni Chapter	1-5 Years	3.81	1.31
	6-15 Years	3.04	1.13
	16+ Years	3.08	.83
Support of local school administrators, CTE directors, and the superintendent	1-5 Years	4.91	.30
	6-15 Years	4.76	.44
	16+ Years	4.66	.52

Benefits such as health insurance and retirement provided by the Alabama Dept of Education	1-5 Years	4.75	.57
	6-15 Years	4.63	.40
	16+ Years	4.80	.56
Relationships with agriscience students and FFA members within your program	1-5 Years	4.84	.37
	6-15 Years	4.57	.75
	16+ Years	4.48	.61

To start, a Levene's Test for Homogeneity of Variances was run to test if the variances of the Alabama Agricultural Education factors over the three career phases were similar. Table 35 breaks down the results of this test. According to Levene's Test for Homogeneity of Variances, we cannot assume there is a homogeneity of variances when there is a statistically significant difference of variances in the mean scores which is shown with a "p" value of .05 or lower. Leven's Test for Homogeneity of Variances also shows there is a homogeneity of variances when there is not a statistically significant difference of variances when comparing the mean scores which is shown with a "p" value of >.05.

Table 35

Levene's Test for Homogeneity of variance for Alabama Agricultural Education factors across career phases

Description	df1	df2	p
Assistance from improvement specialist hired by the Alabama FFA Foundation	2	125	0.71
Currently yearly pay scale increases passed by the state legislature	2	125	<.01*

FFA affiliate membership dues paid by the state legislature	2	125	0.60
Extended school year contract grant provided by the state legislature	2	125	0.02*
Professional development opportunities provided at the ALACTE summer conference	2	125	0.65
Ag Education professional development organized by state staff during the summer	2	125	0.06
Assistance with classroom management practices within Ag Education setting	2	125	0.50
Assistance with awards, applications, and contest offered by Alabama FFA Association	2	125	0.72
Assistance provided by a local FFA Alumni Chapter	2	125	<.01*
Support of local school administrators, CTE directors, and the superintendent	2	125	<.01*
Benefits such as health insurance and retirement provided by the Alabama Dept of Education	2	125	0.01*
Relationships with agriscience students and FFA members within your program	2	125	<.01*

*Statically significant findings

When considering the ANOVA test results, Table 36 shows that there was only a statistically significant difference between the mean scores of "Assistance provided by a local FFA Alumni Chapter", "Support of local school administrators, CTE directors, and the

superintendent", and "Relationships with agriscience students and FFA members within your program" when looked at across career phases. In addition, the factor "Extended school year contract grant provided by the state legislature" (p = .08) was not significant.

Table 36

Anova between Alabama Agricultural Education factors and each career phase

Alabama Agricultural Education Factor	*p*
Assistance from improvement specialist hired by the Alabama FFA Foundation	0.48
Currently yearly pay scale increases passed by the state legislature	0.25
FFA affiliate membership dues paid by the state legislature	0.54
Extended school year contract grant provided by the state legislature	0.08
Professional development opportunities provided at the ALACTE summer conference	0.80
Ag Education professional development organized by state staff during the summer	0.62
Assistance with classroom management practices within Ag Education setting	0.78
Assistance with awards, applications, and contest offered by Alabama FFA Association	0.12
Assistance provided by a local FFA Alumni Chapter	<.01*
Support of local school administrators, CTE directors, and the superintendent	0.05*
Benefits such as health insurance and retirement provided by the Alabama Dept of Education	0.32
Relationships with agriscience students and FFA members within your program	0.03*

*Statically significant findings

Research Objective Four

The purpose of the fourth research objective was to assess the statistical differences in factors contributing to retention based on gender. Burris et al. (2008), Chaney (2007), Lee (2009), and Ritz (2009) all recognize that the gender dynamic of the agricultural education profession is changing as more females become agricultural educators. Foster (2001) and Smethem (2007) found that female teachers feel torn between their career and their families. Cinamon and Rich (2005) found responses to work-family conflict statements to differ between males and females, females reporting higher degrees of work-family conflict than males. The agricultural education profession is currently a male dominated career field (Kantrovich, 2007; Lee, 2009). Castillo and Cano (1999) found that female teachers leave the profession faster than males. Kersaint, Lewis, Potter, and Meisels (2007) found that those who remain in the teaching profession still value their family and responsibilities associated with it above all else, but females are more likely to leave for jobs that are less time consuming and reduce conflicts. Therefore, determining if there are statistical differences in how males and females responded to these career retention factors is valuable.

To compare, an independent sample t-test was conducted to assess the statistical differences in factors contributing to retention based on gender. Table 37 shows that there were 128 teachers that completed the survey, 93 male and 35 female. Their scores were recorded on a 1-5 likert scale on the likelihood that that factor would affect their decision to remain in the classroom with 5 being most likely to affect retention and 1 being least likely to affect retention. Mean scores and standard deviations for each factor were reported in Table 38.

Table 37

Frequency and Percentage of Teachers by Gender

Gender	*f*	%
Male	93	73
Female	35	27

Table 38

Mean and Standard Deviation of each Gender for each Career Retention Factor

Career Retention Factor	Male		Female	
	M	*SD*	*M*	*SD*
Work Engagement Factors	3.71	0.46	3.71	0.49
Work-life Balance Factors	3.53	0.59	3.23	0.59
Occupational Commitment	3.73	0.75	3.58	0.73
Assistance from improvement specialist hired by the Alabama FFA Foundation	3.94	1.00	4.06	0.87
Currently yearly pay scale increases passed by the state legislature	4.61	0.57	4.77	0.54
FFA affiliate membership dues paid by the state legislature	3.98	1.06	4.37	0.77
Extended school year contract grant provided by the state legislature	3.95	1.26	4.43	0.77
Professional development opportunities provided at the ALACTE summer conference	3.40	1.09	3.60	1.21
Ag Education professional development organized by state staff during the summer	3.90	0.82	3.85	1.07
Assistance with classroom management practices	3.66	1.04	3.94	0.87

within Ag Education setting				
Assistance with awards, applications, and contest offered by Alabama FFA Association	3.86	0.91	4.34	0.59
Assistance provided by a local FFA Alumni Chapter	3.19	1.11	3.40	1.11
Support of local school administrators, CTE directors, and the superintendent	4.71	0.48	4.89	0.32
Benefits such as health insurance and retirement provided by the Alabama Dept of Education	4.74	0.50	4.69	0.67
Relationships with agriscience students and FFA members within your program	4.56	0.66	4.71	0.51

When comparing mean scores, equal variances are assumed and the variances are not statistically different from each other according to Levene's Test for Equality of Variances when the "p" value is >.05. The data recorded in Table 39 shows the significance value for each factor according to Levene's Test for Equality of Variance.

Table 39

Levene's Test for Equality of Variance for Retention Factors

Teacher Retention Factors	*p*
Work Engagement	0.38
Work-life Balance	0.85
Occupational Commitment	0.68
Assistance from improvement specialist hired by the Alabama FFA Foundation	0.25
Currently yearly pay scale increases passed by the state legislature	0.03*

FFA affiliate membership dues paid by the state legislature	0.38
Extended school year contract grant provided by the state legislature	0.01*
Professional development opportunities provided at the ALACTE summer conference	0.47
Ag Education professional development organized by state staff during the summer	0.01*
Assistance with classroom management practices within Ag Education setting	0.10
Assistance with awards, applications, and contest offered by Alabama FFA Association	0.07
Assistance provided by a local FFA Alumni Chapter	0.76
Support of local school administrators, CTE directors, and the superintendent	<.01*
Benefits such as health insurance and retirement provided by the Alabama Dept of Education	0.23
Relationships with agriscience students and FFA members within your program	0.07

*Statically significant findings

It was determined that from the data shown in Table 40 that males and females had statistically significant differences in mean scores in the following factors:

1). Work-life balance, $t(126)=2.56$, p=.01

2). FFA affiliate membership dues paid by the state legislature, $t(126)=-1.98$, p=.04

3). Extended school year contract grant provided by the state legislature, $t(126)=-2.59$, p=.01

4). Assistance with awards, applications, and contest offered by Alabama FFA Association, $t(126)=2.89$, p=<.01

5). Support of local school administrators, CTE directors, and the superintendent, $t(126)=-2.41$, p=.01

Table 40

t-test of importance of career retention factors by gender

Career Retention Factor	*t*(126)	p
Work Engagement Factors	0.03	0.97
Work-life Balance Factors	2.56	0.01*
Occupational Commitment	0.94	0.34
Assistance from improvement specialist hired by the Alabama FFA Foundation	-0.63	0.53
Currently yearly pay scale increases passed by the state legislature	-1.44	0.15
FFA affiliate membership dues paid by the state legislature	-1.98	0.04*
Extended school year contract grant provided by the state legislature	-2.59	0.01*
Professional development opportunities provided at the ALACTE summer conference	-0.90	0.36
Ag Education professional development organized by state staff during the summer	0.24	0.80
Assistance with classroom management practices within Ag Education setting	-1.44	0.15
Assistance with awards, applications, and contest offered by Alabama FFA Association	-2.89	<.01*
Assistance provided by a local FFA Alumni Chapter	-0.93	0.35
Support of local school administrators, CTE directors, and the superintendent	-2.41	0.01*
Benefits such as health insurance and retirement provided by the Alabama Dept of Education	0.50	0.61
Relationships with agriscience students and FFA members within your program	-1.24	0.21

*Statically significant findings

Chapter 5: Conclusions and Recommendations

Introduction

The shortage of qualified teachers nationwide is not new or surprising information. In fact, there has been a shortage of teachers for many years. The problem is continuing to get worse with teachers leaving the profession at higher rates than ever before. (Diliberti & Schwartz, 2023) reported that teacher turnover increased four % above pre pandemic levels, reaching 10% nationally at the end of the 2021–2022 school year. The decline in individuals interested in the teaching profession has been reported and studied for many years. Enrollment in teacher preparation programs stands at 70% of what it was 10 years earlier (Saenz-Armstrong, 2023). In addition to the decline in interest, attrition rates have increased as educators are leaving the classroom at an alarming rate. The teaching profession can expect to lose between 30% and 50% of teachers within their first five years on the job (Darling-Hammond, 2003; Ingersoll, 2003; Levine & Haselkorn, 2008; Strizek, Pittsonberger, Riordan, Lyter, & Orlofsky, 2006; National Commission on Teaching and America's Future, 2003).

Agricultural education is no different, as programs across the nation are experiencing rates at equal or greater levels than other educational fields. Only 59% of traditionally trained agriculture education graduates are entering the teaching profession on top of extremely high rates of attrition among early career teachers (Camp, Broyles, & Skelton, 2002). These numbers and statistics are alarming but it is a problem that agricultural education programs have experienced for many years. The 2007-2010 National Research Agenda for Agricultural Education and Communications (Osborne, n.d.) identified preparing and providing an abundance of fully qualified and highly motivated agricultural educators at all levels as a priority area. Kantrovich (2007) reported a nationwide shortage of agricultural educators dating back to 1965.

Many research studies have been conducted and aimed to discover the reason teachers leave the classroom. Brill and McCartney (2008) stated that there are a "plethora of causes of teacher attrition, although most involve non-salary related dissatisfaction, such as excessive workload and high-stakes testing, disruptive student behavior, poor leadership and administration within schools, and views of teaching as a temporary profession" (p. 750). Former teachers reported a vast array of reasons to leave, everything from family and personal circumstances to a low degree of efficacy that led to low motivation; from demoralization to burnout (Borman & Dowling, 2008; Cano & Miller, 1992; Castillo & Cano, 1999; Newcomb, Betts, & Cano, 1987). Despite studies implying a focus on retention, close inspection of teacher shortage issues shows a tendency for researchers to focus on attrition, using subjects who have chosen to leave the teaching profession or surveying early career teachers wrestling with the choice of staying or leaving (Crutchfield, 2010). However, there is a population of educators who have been studied far less often. These are the teachers who have stuck it out and have remained in the classroom for 20 or 30 year careers. Finding out what factors contributed to them staying in the classroom could have a huge impact on solving the problem because it is far better to retain teachers than to replace them.

Purpose of the Study

Researchers have proven that we know why teachers are leaving the classroom. Our focus should also be on why teachers are staying. If those discovered factors can be replicated, a process can be put into play to emphasize those areas in order to begin to address the teacher shortage in the education system. Each educational program and each state has implemented certain strategies to help address the attrition of school teachers. Within the agricultural education world, programs and policies have been put into place to offer assistance to help

reduce the burden and workload of the program. Specifically, within the state of Alabama, significant steps have been taken to keep programs open and productive.

Teachers are in the profession by choice, despite experiencing increased demands and conflict created by professional expectations and personal life pressure (Crutchfield, 2010). Therefore, the purpose of this study is to explore the relationship between career retention factors and selected demographic characteristics of school based agricultural educators within the state of Alabama. Identifying these factors will help state leaders determine what is or is not working and how to make changes that will have the largest impact on programs across the state. This study will make valuable contributions to other researchers, teacher education programs, professional organizations, and administrators at all levels.

Research Objectives

The objectives in this study replicate the study performed by Crutchfield (2010), then again by Sorensen and McKim (2014), and by Solomonson (2022) which explored the relationship of work engagement, work-life balance, and occupational commitment and how it affected the decision of agricultural educators to remain in the teaching profession. This study expanded on that research to determine which factors contributed to retention of school based agricultural educators in Alabama specifically, as well as, how these factors changed based on the teachers' career phase and gender. Therefore, the following objectives were used in this study:

1. Describe the demographics of participating agricultural educators using central tendencies.

2. Identify factors contributing to the retention of SBAE teachers in Alabama.
3. Assess the statistical differences in factors contributing to retention based on career phase.
4. Assess the statistical differences in factors contributing to retention based on gender.

Instrumentation

Data for this study was gathered using a census sampling method in distributing a research-designed survey originally compiled by Crutchfield (2010). Crutchfield's survey was a combination of four previous instruments used independently by researchers to measure independent variables of interest. The previous instruments were then compiled to form Crutchfield's instrument broken down into three segments to analyze the factors and their relationship to the teacher's decision to remain in the classroom. The three segments were: work engagement, work-life balance, and occupational commitment.

The work engagement portion of Crutchfield's instrument incorporated the Utrecht Work Engagement Scale, or UWES, to measure work engagement (Schaufeli & Bakker, 2003). The Cronbach's alpha coefficient for UWES was .94. The work-life balance component of Crutchfield's instrument included Chaney's (2007) five questions that measured the respondent's perception of balance achievement. The Cronbach's alpha coefficient for Chaney's questions was .95. To further supplement this section, Crutchfield included eight items from Gutek et al. (1991) work-family conflict instrument that measured work-family and family-work conflict that occurs when work interferes with family or family interferes with work. The Cronbach's alpha coefficient for Gutek et al. instrument was .83. The occupational commitment portion of Crutchfield's instrument included a portion of Blau et al.'s (1993) Work Commitment Index

used to measure agricultural educator's commitment to teaching. Blau et al. (1993) defined occupational commitment as one's attitude, including affect, belief, and behavioral intention, toward their chosen occupation. The Cronbach's alpha coefficient for the Work Commitment Index was .91.

Dr. Crutchfield was contacted through email for her permission to use her instrument (Appendix B). Additionally, this instrument was modified to accommodate the intent of this study, which surveyed Alabama SBAE teachers specifically and the factors that contributed to their retention in the classroom.

Population

The population of focus for this study was SBAE teachers currently employed for the 2023 - 2024 school year in the state of Alabama. The research study was announced at each of the three Association of Alabama Agricultural Educators (AAAE) meetings across the state. Teachers from the North, Central, and South FFA districts participated in the meetings at their prospective locations.

Following the meetings and the announcement of the survey, each SBAE teacher in the state of Alabama received an email asking for them to participate in the study. A census survey method was used to ensure equivalent representation of all SBAE teachers in the state of Alabama. Email addresses from all 308 teachers were accurate and updated since the Alabama State Department of Education Agriscience Staff were willing to send the survey request through their updated listserv. This survey method reached all 308 teachers in the state. Out of 308 surveys, 153 were started and 128 returned after 4 attempts and following Dillman's Tailored Design Method.

Summary of Findings

Research Objective One

Participants in the study (*n*= 128) were asked to provide demographic data in multiple categories so that research could be conducted across various characteristics. The majority of respondents were male (72.7%, *n* = 93) and less than one third were female (27.3%, *n* = 35). Experienced teachers outweighed those with limited experience. For the study, experience levels were broken down into early career (0-5 years experience)(25%, *n* = 32), mid-career (6-15 years experience)(35.9%, *n* = 46), and late career (16+ years experience)(39.1%, *n* = 50). From this sample (*n = 128)*, there were 38.3% (*n* = 49) with a Bachelor's degree, 44.5% (*n* = 57) with a Master's degree, 15.6% (*n* = 20) with a specialist degree, and only 1.6% (*n* = 2) with a Doctorate degree. Majority of the teachers completed a traditional four year degree in Agricultural Education (63%, *n* = 80), while 37% (*n* = 47) were alternatively certified.

As far as agricultural programs go, an overwhelming majority work in a one teacher program (71.1%, *n* = 91) with 18.8% (*n* = 24) working in a two-teacher program, and 10.2% (*n* = 13) working in a program with three or more teachers. When looking at contract lengths directly from the school system, it was found that 47.7% (*n* = 61) are on a 9 month contract, 32% (*n* = 41) are on a 10 month contract, 3.9% (*n* = 5) are on a 11 month contract, and 16.4% (*n* = 21) are on a 12 month contract. However, when the CTE Extended Contract Grant for Agriscience Teachers was taken into consideration, the contract lengths looked different with 23.4% (*n* = 29) on a 9 month contract, 20.2% (*n* = 25) on a 10 month contract, 21.0% (*n* = 26) on a 11 month contract, and 35.5% (*n* = 44) on a 12 month contract. One of the most interesting findings from research objective one was the demographic question where teachers were asked to describe their career plans within the next five years. Research found that 15.7% (*n* = 20) plan to retire in the

next five years, 5.5% (n = 7) plan to leave the classroom and pursue another job outside of education, 10.2% (n = 13) plan to leave the classroom and pursue another education related job, 4.7% (n = 6) plan to continue teaching agricultural education but at a different location, and 62.2% (n = 79) plan to continue teaching agricultural education where they are currently employee. This information is staggering as nearly one third of agricultural teachers in our state plan to leave the classroom in the next five years through one means or another.

Research Objective Two

Data for this objective was gathered using a census sampling method in distributing a research-designed survey originally compiled by Crutchfield (2010). Crutchfield's survey was a combination of four previous instruments used independently by researchers to measure independent variables of interest. The previous instruments were then compiled to form Crutchfield's instrument broken down into three segments to analyze the factors and their relationship to the teacher's decision to remain in the classroom. The three segments were: work engagement, work-life balance, and occupational commitment. Additionally, this instrument was modified to accommodate the intent of this study, which surveyed Alabama SBAE teachers specifically and the factors that contributed to their retention in the classroom. Each question on the instrument was measured with a 5 point Likert-type scale with options ranging from 1 = never to 5 = always, 1 = strongly agree to 5 = strongly disagree, or 1 = very unimportant to 5 = very important. The higher the score the more likely that topic is to be a factor affecting retention. Questions were broken down to explore factors sorted by topics. The topics include work engagement, work-life balance, occupational commitment, and Alabama agricultural education factors.

Research showed that out of these four topics, Alabama Agricultural Education factors (M = 4.10, SD = .53) was the most important in regards to retention. This was followed by work engagement factors (M = 3.70, SD = .46), occupational commitment (M = 3.65, SD = .77), and then finally work-life balance (M = 3.44, SD = .60).

Research Objective Three

The purpose of the third research objective was to assess the statistical differences in factors contributing to retention based on career phase. Career phases are used to group the population into different demographics groups based on years of experience. This study followed the stages set forth in Roberts et al.'s (2020) study on *The Dimensions of Professional Development Needs for Secondary Agricultural Education Teachers Across Career Stages*. Roberts et al. (2020) categorized participants into distinct cases based on their years of experience: Early Career Teachers – zero to five years of teaching experience; Mid-Career Teachers – six to 15 years of teaching experience; and Career Teachers –16 or more years of teaching experience.

To compare these findings across career phases, an Anova test was run on the data collected from participants on career retention factors. Researchers found that there was not a statistically significant difference in career retention factors across career phases in work engagement (p = .36), work-life balance (p = .26), or occupational commitment (p = .26). Data showed that differences across career phases for Alabama Agricultural Education factors (p = .08) were not statistically significant as a whole. When looking at individual factors within the Alabama Agricultural Education factors it was found that statistically significant differences did exist between the mean scores of "Assistance provided by a local FFA Alumni Chapter" (p =

<.01), “Support of local school administrators, CTE directors, and the superintendent” (p = .05), and “Relationships with agriscience students and FFA members within your program” (p = .03) when looked at across career phases.

Research Objective Four

The purpose of the fourth research objective was to assess the statistical differences in factors contributing to retention based on gender. Burris et al. (2008), Chaney (2007), Lee (2009), and Ritz (2009) all recognize that the gender dynamic of the agricultural education profession is changing as more females become agricultural educators. Castillo and Cano (1999) found that female teachers leave the profession faster than males. Kersaint, Lewis, Potter, and Meisels (2007) found that those who remain in the teaching profession still value their family and responsibilities associated with it above all else, but females are more likely to leave for jobs that are less time consuming and reduce conflicts. Therefore, determining if there are statistical differences in how males and females responded to these career retention factors is valuable.

To compare, an independent sample t-test was conducted to assess the statistical differences in factors contributing to retention based on gender. Researchers found that males and females did not have statistically significant differences in their responses to work engagement factors, $t(126)=.03$, p=.97 or in occupational commitment factors, $t(126)=.94$, p=.34. However, males and females did have statistically significant differences in work-life balance factors, $t(126)=2.56$, p=.01 and in Alabama Agricultural Education factors, $t(126)=-2.30$, p=.02.

Conclusions

The following conclusions were based on the findings of this study:

1. There were 128 out of the possible 308 Agricultural Education teachers in this state that participated in this study which is a 42% response rate. Out of the 128 participants, it was found that the majority of the agricultural educators in the state are traditionally certified males that work in a one teacher agricultural program and hold either a Bachelor's or Master's degree. Moreover, it was found that nearly one third of agricultural teachers in the state plan to leave the classroom by one means or another within the next five years.
2. In regards to career retention factors, data showed that teachers felt that specific Alabama Agricultural Education factors were the most important ($M > 4.0$) while other factors such as work engagement, work-life balance, and occupational commitment were found to be valuable but not as important ($M < 3.75$).
3. The data showed that there was not a statistically significant difference in importance of work engagement factors, work-life balance factors, or occupational commitment factors when compared across career phases. There was also not a statistically significant difference in importance of Alabama Agricultural Education factors when compared across career phases ($p = .08$).
4. The results yielded that there was not a statistically significant difference in importance of work engagement factors or occupational commitment factors between male and female participants. However, there was a statistically significant difference in importance of work-life balance factors and Alabama Agricultural Education factors between male and female participants with male's viewing work-life balance factors as significantly more important for retention than their female counterparts and female's

viewing Alabama Agricultural Education factors as significantly more important for retention than their male counterparts.

Recommendations

The following recommendations were based on the findings of this study:

1. Since the majority of this study was focused on factors that affect teachers' decision to remain in the classroom, a subsequent study should be conducted on Alabama agricultural teachers who have recently left the classroom and explore the reasons they decided to leave to see if the findings help validate each other.
2. This study should be conducted in agricultural programs in different states, to assess what factors contribute to teacher retention and if they vary across state lines.
3. This study should be conducted by other sections of Alabama's Career and Technical Education pathways to determine if factors that contribute to teacher retention vary across CTE programs.
4. Due to 32% of Alabama agricultural education teachers planning to leave in the next 5 years, this study should be conducted again in 5-10 years to determine if the factors affecting teacher retention have changed.
5. Results from this study should be taken into consideration by administrators on the local and state level to ensure factors that teachers value when considering to remain in the classroom are explored and utilized.

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Revised 09/13/2023

AUBURN UNIVERSITY HUMAN RESEARCH PROTECTION PROGRAM (H

EXEMPT REVIEW APPLICATION

For assistance, contact: **The Office of Research Compliance (ORC)**

Phone: **334-844-5966** E-Mail: IRBAdmin@auburn.edu Web Address: http://www.auburn.edu/research/vpr/ohs

Submit completed form and supporting materials as one PDF through the IRB Submission Page

Hand written forms are not accepted. Where links are found hold down the control button ("Ctrl) then click the link

1. Project Identification

Today's Date: December 14, 2023

Anticipated start date of the project: January 18, 2023 **Anticipated duration of project: 6 months**

a. **Project Title: Factors Contributing to Retention of Alabama School Based Agricultural Educators**

b. **Principal Investigator (PI): Josh Williams** Degree(s): Ph.D. Rank/Title: Graduate Student
Department/School: Curriculum and Teaching
Role/responsibilities in this project: **Conduct and analyze research**
Preferred Phone Number: **256-677-1209** AU Email: jkw0021@auburn.edu

Faculty Advisor Principal Investigator (if applicable): Jason McKibben
Rank/Title: **Assistant Professor** Department/School: Curriculum and Teaching
Role/responsibilities in this project: **Oversee and assist with study**
Preferred Phone Number: 979 - 587 - 1065 AU Email: jdm0184@auburn.edu

Department Head: Paul Fitchett Department/School: Curriculum and Teaching
Preferred Phone Number: 334 - 844 - 3233 AU Email: pgf0011 @auburn.edu
Role/responsibilities in this project: Oversee and assist with study

c. **Project Key Personnel** – Identify all key personnel who will be involved with the conduct of the research and describe their role in the project. Role may include design, recruitment, consent process, data collection, data analysis, and reporting. (To determine key personnel, see decision tree). *Exempt determinations are made by individual institutions; reliance on other institutions for exempt determination is not feasible. Non-AU personnel conducting exempt research activities must obtain approval from the IRB at their home institution.*

Key personnel are required to maintain human subjects training through CITI. Please provide documentation of completed CITI training, with course title(s) and expiration date(s) shown. As a reminder, both IRB and RCR modules are required for all key study personnel.

Name: Josh Williams **Degree(s): PhD**
Rank/Title: Graduate Student **Department/School: Curriculum and Teaching**
Role/responsibilities in this project: **Analyze and collect information from individuals over the age of 18**
- AU affiliated? X Yes ☐ No If no, name of home institution: Click or tap here to enter text.
- Plan for IRB approval for non-AU affiliated personnel? Click or tap here to enter text.
- Do you have any known competing financial interests, personal relationships, or other interests that could have influence or appear to have influence on the work conducted in this project? ☐ Yes X No
- If yes, briefly describe the potential or real conflict of interest: Click or tap here to enter text.
- Completed required CITI training? X Yes ☐ No If NO, complete the appropriate CITI basic course and update the revised Exempt Application form.
- If YES, choose course(s) the researcher has completed: Choose a course. Expiration Date
Choose a course. Expiration Date

The Auburn University Institutional Review Board has approved this Document for use from 01/17/2024 to ----------
Protocol # 24-679 EX 2401

AUBURN
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CURRICULUM AND TEACHING

Information Letter

Exploring Relationships of Retention Factors Based on Career Phase and Gender of Alabama Agriculture Teachers

You are invited to participate in a research study to determine what factors affect Alabama agricultural teacher retention in the classroom regarding specific demographic characteristics such as gender and career phase. As a current School-Based Agricultural Education instructor in the state of Alabama, you have been identified as someone who can provide valuable first-hand knowledge of the factors that have contributed to your remaining in the classroom.

Things you should know about your participation:
This will take approximately 10 minutes to complete.
Your participation is voluntary.
You may stop participating at any time.
You will not be compensated for participation.
Information about participants will be kept confidential, and no individual responses will be reported.

Are there any risks or discomforts? The risks associated with participating in this study are minimal and no more than encountered in everyday life.

Will you receive compensation for participating? You will not receive any compensation for your participation.

Are there any costs? Other than your time there are no costs associated with your participation.

If you change your mind about participating, you can withdraw at any time by not responding or closing the survey. If you choose to withdraw, your name will be removed, and any data collected. Your decision about whether to participate or to stop participating will not jeopardize your future relations with Auburn University, the College of Education, Curriculum and Teaching, and the Agriscience Education program.

Any data obtained in connection with this study will remain confidential. We will protect your privacy and the data you provide by

5040 Haley Center
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maintaining your confidential responses. No names or individual responses will be reported.

If you have questions about this study, please contact Josh Williams at jkw0021@auburn.edu or Assistant Professor Jason McKibben at jdm0184@auburn.edu or 334.844.4411.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Research Compliance or the Institutional Review Board by phone (334) 844-5966 or e-mail at IRBadmin@auburn.edu or IRBChair@auburn.edu

You may print a copy of this letter to keep. By filling out the survey and providing information, you are providing your willingness to participate and it indicates your consent.

Investigators Obtaining Consent

Josh Williams — Date 2-22-24

Jason McKibben — Date 2-22-24

1040 Haley Center
Auburn, AL 36849-5212

Telephone
334-844-4434

Fax
334-844-6789

Email Invitation

Greetings,

In a few days you will receive a request, via email, to complete an online questionnaire for an important research project being conducted by Josh Williams, a doctoral student at Auburn University.

It concerns variables that have an effect on Alabama agriculture teachers' decisions to remain in the classroom. This survey instrument is intended for all 313 school based agricultural education teachers in the state of Alabama and should only take 10 minutes to complete.

I am writing in advance because many people like to know ahead of time that they will be contacted. The study is an important one that will help our profession identify factors that influence agricultural educators to continue teaching and potentially be used to design professional development events to meet the needs of educators based on their career phases.

Thank you for your time and consideration. It's only with the generous help of people such as yourself that the research can be successful.

Sincerely,

Josh Williams
jlw0021@auburn.edu
256-677-1209

Recruitment Script

Greetings,

My name is Josh Williams, I'm a doctoral candidate for the Agriscience Education Program at Auburn University as well as the current Agriscience Teacher and FFA Advisor at Benjamin Russell High School. I would like to invite you to participate in my research study, for the completion of my degree, which investigates the factors affecting retention of school based agricultural teachers in the state of Alabama.

You are being asked to participate because you are one of the 313 Agricultural Education teachers employed in the state of Alabama. Your participation is completely voluntary, and participation can be discontinued at any time. As a participant, you will be asked to participate by answering an Auburn University Qualtrics survey that will last approximately 10 minutes.

Attached to this email is the consent form which is required of you to participate in this study. If you choose to participate, please click on and complete the Qualtrics survey link that is attached in this email. Your responses will be confidential. If you choose to participate you will be assigned a pseudonym and all identifiable information will be deleted at the conclusion of your participation. I appreciate your time and consideration for this research project. I look forward to viewing your responses.

Sincerely,

Josh Williams
jkw0021@auburn.edu
256-677-1209

DEPARTMENT OF AGRICULTURE

Dr. Jay Solomonson, Ph.D. | Assistant Professor of Agricultural Education
Department of Agriculture | Illinois State University
140 Ropp Agriculture Building | Campus Box 5020 | Normal, Illinois 61790-5020
Phone: 309-438-8084 | Fax: 309-438-5653

Click Here to Schedule a Meeting

From: Solomonson, Jay <jksolom@ilstu.edu>
Sent: Wednesday, May 31, 2023 10:13 AM
To: Jason McKibben <jdm0184@auburn.edu>
Subject: Re: instrument

Hi Jason,

Attached is the survey instrument in word. Essentially, we got it from Nina Crutchfield's dissertation.

As for blue ribbon, Trent and I planned to turn our Flipped classroom study into a paper and present it. We collected another year of data and added to our findings. We might also have a poster, but that is still up in the air.

Jay

DEPARTMENT OF AGRICULTURE

Dr. Jay Solomonson, Ph.D. | Assistant Professor of Agricultural Education
Department of Agriculture | Illinois State University
140 Ropp Agriculture Building | Campus Box 5020 | Normal, Illinois 61790-5020
Phone: 309-438-8084 | Fax: 309-438-5653

Click Here to Schedule a Meeting

From: Jason McKibben <jdm0184@auburn.edu>
Sent: Wednesday, May 31, 2023 9:41 AM
To: Solomonson, Jay <jksolom@ilstu.edu>
Subject: instrument

Alexander City Schools

Josh Williams <jowilliams@acsk12.net>

instrument

6 messages

Jason McKibben <jdm0184@auburn.edu> Thu, Dec 21, 2023 at 11:45 AM
To: "ncrutchfield@astate.edu" <ncrutchfield@astate.edu>
Cc: Josh Williams <jowilliams@acsk12.net>, James Lindner <jrl0039@auburn.edu>

Hey Nina!!! Hope all is well with you and your Christmas break is going well.

Do you have a copy of that instrument you used for your JAE article with Rudy and Scott from 2013? (DOI: 10.5032/jae.2013.02001)

And do you mind sending it to us? Josh Williams (you might remember him from his state officer days in Alabama) is getting to his dissertation and your work is pretty foundational to what he is looking for.

Thanks,

jason

Jason Mc Kibben, Ph.D.

Agricultural Education

Auburn University

jdm0184@auburn.edu

(he/him/his)

www.researchgate.net/profile/jason-mckibben-2

IDEATION-WOO-CONNECTEDNESS-ADAPTABILITY-STRATEGIC

#teachalittleag

@au_aged

"The land-grant university system is being built on behalf of the people, who have invested in these public universities their hopes, their support, and their confidence."- Abraham Lincoln

---

Nina Crutchfield <ncrutchfield@astate.edu> Thu, Dec 21, 2023 at 12:00 PM
To: Jason McKibben <jdm0184@auburn.edu>
Cc: Josh Williams <jowilliams@acsk12.net>, James Lindner <jrl0039@auburn.edu>

Merry Christmas, Jason!

I am always humbled, honored, and a bit amazed to learn someone is reading what I write! That article actually stemmed from my own dissertation. You will find the entire instrument in the appendices.
https://oaktrust.library.tamu.edu/handle/1969.1/ETD-TAMU-2010-05-8055

Happy writing, Josh!

ARKANSAS STATE UNIVERSITY
College of Agriculture

Nina Crutchfield

Assistant Professor of Agricultural Education

College of Agriculture

870-972-2453

ncrutchfield@astate.edu

Experiencing Agriculture Beyond the Classroom

From: Jason McKibben <jdm0184@auburn.edu>
Sent: Thursday, December 21, 2023 11:45 AM
To: Nina Crutchfield <ncrutchfield@astate.edu>
Cc: Josh Williams <jowilliams@acsk12.net>; James Lindner <jrl0039@auburn.edu>
Subject: instrument

This Message Is From an External Sender

This message came from outside your organization. Please be careful.

[Quoted text hidden]

Josh Williams <jowilliams@acsk12.net> Tue, Jan 2, 2024 at 11:05 AM
To: Nina Crutchfield <ncrutchfield@astate.edu>

Thank you for allowing me to use this information. I am looking forward to sharing my findings with you and will be sure to include you in my dissertation with credit for the instrument.

Thanks again!

Josh Williams
Benjamin Russell H.S.
Agriscience Teacher
FFA Advisor
Fishing Coach

[Quoted text hidden]

Exploring Relationships of Retention Factors Based on Career Phase and Gender of Alabama Agriculture Teachers

INSTRUMENT

Work Engagement

The following 17 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, place the '1' (one) in the space in front of the statement. If you have had this feeling, indicate how often you feel it by placing the appropriate number (from 2-5) in the blank that best describes how frequently you feel that way.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

1. _____ At my work, I feel bursting with energy
2. _____ I find the work that I do full of meaning and purpose
3. _____ Time flies when I'm working
4. _____ At my job, I feel strong and vigorous
5. _____ I am enthusiastic about my job
6. _____ When I am working, I forget everything else around me
7. _____ My job inspires me
8. _____ When I get up in the morning, I feel like going to work
9. _____ I feel happy when I am working intensely
10. _____ I am proud on the work that I do
11. _____ I am immersed in my work
12. _____ I can continue working for very long periods at a time
13. _____ To me, my job is challenging
14. _____ I get carried away when I'm working
15. _____ At my job, I am very resilient, mentally
16. _____ It is difficult to detach myself from my job
17. _____ At my work I always persevere, even when things do not go well

Occupational Commitment

The following11 statements concern your view of your job. Please read each statement carefully and decide if you agree or disagree. Please place the appropriate number (from 1 to 5) in the blank that best describes how much you agree or disagree.

1	2	3	4	5
Strongly disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

1. _____If I could, I would go into a different occupation.*
2. _____I can see myself in this occupation for many years.
3. _____My chosen occupation is a good choice.
4. _____If I could, I would not choose this occupation.*
5. _____If I had no need for more money, I would still continue in this occupation.
6. _____Sometimes I am dissatisfied with this occupation.*
7. _____I like my occupation too well to give it up.
8. _____My education was not for this occupation.*
9. _____I have the ideal occupation for my life's work.
10. _____I wish I had chosen a different occupation.*
11. _____I am disappointed that I entered this occupation. *

*Items reverse coded in data analysis so that a high score indicated a high degree of occupational commitment.

Work-Life Balance

The following 13 statements concern your involvement with your job. Please read each statement carefully and decide if you agree or disagree. Please place the appropriate number (from 1 to 5) in the blank that best describes how much you agree or disagree.

1	2	3	4	5
Strongly disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

1. _____You are able to balance quality time between your work and your family/personal commitments.
2. _____You are able to balance work demands without unreasonable compromises on family/personal responsibilities.
3. _____You are able to have a fulfilling personal life and adequately perform your work responsibilities.
4. _____A good work-life balance for agriscience teachers helps provide a more effective and successful agricultural education profession.
5. _____A good work-life balance for agriscience teachers helps retain teachers in the profession.
6. _____After work, I come home too tired to do some of the things I'd like to do.

7. _____On the job, I have so much work to do that it takes away from my personal interests.

8. _____My family/friends dislike how often I am preoccupied with my work while I am at home.

9. _____My work takes up time that I'd like to spend with family/friends.

10. _____I'm often too tired at work because of the things I have to do at home.

11. _____My personal demands are so great that it takes away from my work.

12. _____My administration and peers dislike how often I am preoccupied with my personal life while at work.

13. _____My personal life takes up time that I'd like to spend at work.

Alabama Ag Education Factors

The following xx factors impact Ag teachers specifically in the state of Alabama. Please read each factor carefully and decide how important the factors are in relation to you continuing to teach ag education in the classroom. Please place the appropriate number (from 1 to 5) in the blank that best describes how important each factor is.

1	2	3	4	5
Very Unimportant	Unimportant	Neutral	Important	Very Important

1._____Assistance from Improvement Specialists hired by the Alabama FFA Foundation.
2._____Current yearly pay scale increases passed by the state legislature.
3._____ FFA Affiliate Membership dues paid by the state legislature.
4._____Extended school year contract grant provided by the state legislature.
5._____ Professional development opportunities provided at the ALACTE summer conference.
6._____Ag education professional development during the summer organized by state staff.
7._____ Assistance with classroom management practices with an ag education setting.
8. _____Assistance with awards, applications, and contests offered by the Alabama FFA Association.
9._____ Assistance provided by a local FFA alumni chapter.
10.____ Support of local school administrators, CTE directors, and Superintendent.

Open Response

1. What are several factors that influence your decision to continue teaching agriscience education?

Please complete the following demographic items:

Gender: _____Male _____Female

Degree Held:
_____Bachelors
_____Masters
_____Specialist
_____Doctoral

Annual Contract Length from school system:
____ 12 month
____ 11 month
____10 month
____9 month

Total Contract Length including Agriscience Education Extended School Year Grant

____ 12 month
____ 11 month
____10 month
____9 month

What type of training program did you complete for teaching agricultural education:
_____traditional 4-year degree _____ alternative certification

What retirement plan are you on:
____TRS Tier 1
____TRS Tier 2

Number of teachers in your department:
____ 1 Teacher
____ 2 Teachers
____ 3+ Teachers

Number of complete years of teaching experience:

____ 1-5 Years
____ 6-15 Years
____ 16+ Years

Number of children at home:
____ 1 Child

____ 2 Children
____ 3 Children
____ 4+ Children

What is your relationship status?
___Single
___In a relationship, but not married
___Married
___Divorced/ Widowed

Which of the following best describes your career plans for the next five years?
____Continue teaching Ag Education where I am employed
____Continue teaching Ag Education at a different location
____Leave the classroom and pursue other education related job
____Leave the classroom and pursue another job outside of education
____Retire
____Other