

**Assessing Needs of Middle School Agriculture Teachers in Georgia**

by

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## Abstract

Like their students, middle school agriculture teachers are a unique group with special needs and concerns. And like their students, the needs of middle school teachers and their programs are often misunderstood and overlooked in the professional world when compared to secondary teachers and programs. As middle school programs are still fairly new to the world of agriculture education and are expected to continue to grow across the country, little focus has been placed on the needs of these programs and their teachers (Frick, 1993). In order to ensure success of teachers and to guarantee the longevity of quality middle school agriculture programs, it is necessary to identify areas in which teachers perceive to need assistance in order to improve themselves, their students and their program. This study focused on Georgia middle school agriculture teachers' perceived levels of need in various competency areas. A needs assessment was used to gather data from current Georgia middle school agriculture teachers. The findings of this study indicate that Georgia middle school agriculture teachers' greatest overall needs for in-service training were in community and FFA competency areas. More specifically, teachers indicated to need help writing grants, utilizing the Ag Career Network, completing Secretary, Reporter and Treasurer books, motivating students to learn and recruiting business partners. Determining the needs of this group of teachers will help provide adequate training to ensure that middle school teachers have ample opportunities to be successful both inside and outside of the classroom. Successful teachers will lead successful programs which will directly impact high school agriculture education programs that feed off of these middle school programs.

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## List of Abbreviations

ACN	Ag Career Network
CDE	Career Development Event
CTAE	Career, Technical and Agriculture Education
CTE	Career Technical Education
FFA	National FFA Organization
GVATA	Georgia Vocational Agriculture Teacher's Association
NAAE	National Association of Agriculture Educators
SAE	Supervised Agricultural Experience

## CHAPTER 1: INTRODUCTION

### Background and Setting

Middle schools are unique entities that must be recognized independently from secondary and elementary schools because of the nature of their students (Merenbloom, 1988). Middle school is a critical time for young adolescents. The National Middle School Association (2003) reported that it is imperative for a middle school's organization, curriculum and programs to be based on the developmental needs and interests of its students in order for these students to be successful. Educators must recognize that middle grade students differ significantly from those in elementary and high school and develop their instruction accordingly (Eichhorn, 1966). As early as 1966, Eichhorn recognized that the key to effective middle grades education was the challenge for educators to consider middle school as a unique stage of human development. The National Middle School Association (2003) also recognized that effective middle school teachers understand the uniqueness of this age group, the curriculum they teach and effective learning strategies. It is imperative, then, that middle school educators receive specific grade level preparation before they enter the middle school classroom. These teachers must also continue to receive appropriate continuing education throughout their career (National Middle School Education Association, 2003). In *Turning Points 2000*, a book on educating adolescents, the authors recommend staffing middle grades schools with teachers who are experts at teaching young adults, and engage teachers in ongoing, in-service opportunities that target middle grade students (Jackson & Davis, 2000).



Since middle school programs have only been officially recognized in world of agricultural education since 1988 and are expected to continue to grow across the country, little focus has been placed on the needs of these programs and their teachers (Frick, 1993). A study that examined the nationwide enrollment of middle school agricultural education programs (Rosetti, Padilla, & McCaslin, 1992) recommended that middle school program designers ensure that middle school curricula are distinct from senior high school programs. In order to ensure success of these programs and to guarantee longevity of quality middle school agriculture programs, it is necessary to identify what teachers need professionally and personally in order to provide appropriate, relevant instruction for their students and their program. The Association for Middle Level Education recommended that professional development for middle grades teachers should include appropriate content knowledge, pedagogical knowledge and knowledge about the uniqueness of young adolescent learners (Flowers & Mertens, 2003). Flowers and Mertens (2003) recognized that a one-size-fits-all approach to professional development is not effective and middle level teachers have different needs for professional development; therefore, a wide variety of in-service opportunities should be offered to teachers in order to meet the specific needs of their program and students.

Agriculture is one of America's leading industries. It has been an integral part of our country's growth and development throughout history. Agricultural Education has deep roots in our country, as well as in the state of Georgia. The industry of agriculture also had a large impact on education as we know it today. Although agriculture was taught in thousands of schools prior to 1917 (Moore, 1987), it was only in 1917 that agriculture officially became a part of our public school system as a result of the Smith-Hughes National Vocational Education Act. Moore (1987) called the passage of the Smith-Hughes Act more of an "AMEN" to the teaching

of agriculture rather than the start of it. This act allowed vocational courses, such as agricultural education, to be taught in public schools throughout the country and established strict guidelines for implementation and curriculum development of these programs. Students, primarily boys, who desired to become farmers and either take over their family farms or start farming operations of their own were now able to learn about agriculture in a structured classroom atmosphere. Since the inception of the Smith-Hughes Act, agricultural education programs have spread throughout the country. When agricultural education began, it was explicitly for high school students. In 1988, the National FFA Organization made a change to their constitution to allow middle school students FFA membership. This acceptance of middle school programs was significant because investing in students during middle grades can have serious and enduring effects on shaping the career patterns and life choices of these middle grade students (Anderman and Maehr, 1994).

Career development is an area that is highly emphasized in all middle school career and technical programs. Middle grade agricultural education programs can provide students with an early exposure to the world of agriculture and increase self-understanding in preparation for careers (Frick, 1993). Hughes and Barrick (1993) insisted that preparing students for productive employment and career development involves more than job training and begins before high school. McEwin and Thomason (1989) also suggested that middle school students participate in activities which help them begin the career selection and preparation process. With such an emphasis on career exploration, training courses that allow teachers themselves to explore agricultural careers may be necessary in order for them to be more familiar with careers available to students in the industry.

Today, more than 11,000 teachers deliver cutting-edge agricultural education curriculum to students in all 50 states, as well as, Puerto Rico and the Virgin Islands (National FFA Association, 2010). In 2002, there were approximately 2000 middle school agriculture teachers in the United States and of these, approximately 600 taught exclusively in middle schools (Camp, Broyles, and Skelton, 2002).

### Statement of the Problem

Significant research has been conducted on the needs of secondary agriculture teachers but little research has been found on the needs of middle school agriculture teachers, especially in Georgia. Since this deficiency in literature exists, research in similar areas was examined to determine the need for this study. Both professional and personal needs of teachers have been identified in previous research that can be applied to this study as well as research based on teaching experience or subject area. The importance of in-service programs and proper planning of these programs has also been identified in literature that can be related to this study.

Middle school agricultural education programs are designed to be different from high school programs. Rosetti, Padilla, and McCaslin (1992) recommended that middle school programs be distinct from high school programs. Frick (1993) recommended that, as more middle school programs are implemented, state education agencies and teacher education programs should design in-service and pre-service programs to prepare current and prospective teachers specifically for teaching middle school agricultural education program content. He also suggested that designers of middle school agricultural education programs should ensure that middle school program content is distinct from high school programs. Therefore, it is necessary to ensure that middle school programs and their teachers receive appropriate services in order to effectively serve their students.

## Purpose

The purpose of this study was to determine Georgia middle school agriculture teachers' perceived levels of professional and personal development needs, and use that information to determine in-service needs of Georgia middle school agriculture teachers. More specifically:

1. Determine the demographic characteristics and educational background of Georgia middle school agriculture teachers
2. Identify Georgia middle school agriculture teachers' perceived level of need in specific professional and personal growth areas
3. Determine in-service needs of Georgia middle school agriculture teachers in specific professional and personal development areas.

## Research Questions

The research questions for this study were:

1. What are the demographic characteristics and educational background of Georgia middle school agriculture teachers?
2. What professional and personal needs should be addressed in order to help middle school agriculture teachers in Georgia become more successful?
3. What are specific professional and personal development in-service needs of Georgia middle school agriculture teachers?

## Scope of the Study

This study included all middle school agriculture teachers from each of the three Agricultural Education Regions and six areas in the state of Georgia (Appendix 1). Each teacher was surveyed during the Georgia Vocational Agriculture Teacher's Annual Summer Conference. Those who were not in attendance were sent the survey via mail.

## Assumptions

The following assumptions were made concerning this study:

1. The agriculture teachers surveyed were only teaching middle grades at the time of this survey.
2. The agriculture teachers surveyed were not teaching a class out of field at the time of this survey.

## Delimitations of the Study

The intent of this research was to identify the needs of middle school agriculture teachers in Georgia as well as explore the need for different types of professional development necessary to meet the demands of today's agricultural educators. The feasibility of meeting the needs of these teachers and their programs was examined. The author did not purposefully insert personal opinions on the needs of middle school agriculture teachers.

## Limitations of the Study

Since middle school agriculture education programs are still new and growing, little research has been conducted in this field especially concerning teacher needs. Therefore, little information was available to compare the results of this study. The researcher also had to create a unique, original survey instrument geared toward middle school agricultural education programs and teachers to gather data.

Another limitation was the fact that needs often vary based on teacher experience, geographic locations and program emphasis which may have affected the data collected. The information gathered in this survey is specific to Georgia middle school agriculture teachers and may not be applicable to teachers in other states.

## Significance of the Study

The results of this study will show the area of professional and personal need of middle school agricultural education teachers in Georgia. These results will assist State and Regional Agricultural Education Staff members in Georgia to prepare in-service programs that are relevant and helpful to Georgia middle school agriculture teachers. The results will also assist Georgia Vocational Agriculture Teacher Association (GVATA) board members in planning appropriate breakout sessions at the Georgia GVATA Midwinter and Summer Conferences. By accessing appropriate in-service programs and breakout sessions, middle school agriculture teachers will have more opportunities to grow professionally. These teachers will also improve their programs which in turn will help improve Georgia Agricultural Education as a whole.

Professors in Georgia agricultural education teacher education programs may also find these data useful in preparing curricula for their programs. Exploring the differences in middle school and high school programs will allow future teachers who seek careers in middle grades education to be more prepared when they enter the classroom.

## Operational Definitions

- A. Agricultural Education: agricultural education is a systematic program of instruction available to students desiring to learn about the vast industry of agriculture through classroom learning, FFA and Supervised Agricultural Experience programs (National FFA Organization, 2010)
- B. Career Development Event (CDE): competitions that FFA members are eligible to compete in that help the students develop the abilities to think critically, communicate clearly, and perform effectively in a competitive job market (National FFA Organization, 2010)

- C. Georgia Vocational Agriculture Teachers Association (GVATA): the Georgia agricultural educator professional organization (Georgia Vocational Agriculture Teachers Association, 2010)
- D. National Association for Agricultural Education (NAAE): a federation of state agricultural educators associations that focuses on advocacy for agricultural education, professional development for agricultural educators, and recruitment and retention of current ag educators (National Association of Agricultural Educators, 2010)
- E. National FFA Organization (FFA): a student organization for students in grades 7-12 who are interested in agriculture; FFA is one of the three components of a total Agricultural Education program (National FFA Organization, 2010)
- F. Smith-Hughes National Vocational Education Act: an act that provided for the promotion of vocational education, cooperation with the States in the promotion of such education in agriculture and the trades and industries, cooperation with the States in the preparation of teachers of vocational subjects, and appropriate money and regulate its expenditure (Smith-Hughes National Vocational Education Act, 1917)
- G. Supervised Agricultural Experience Program: one of three components of the total Agricultural Education program consisting of planned activities conducted outside of class time in which students develop and apply agricultural knowledge and skills and learn by doing with help from their agricultural education teachers (National FFA Organization, 2010)

## CHAPTER 2: LITERATURE REVIEW

The purpose of this literature review is to summarize existing information and research in order to form the foundation for the importance of this research study concerning specific needs of middle school agriculture teachers. The foundation topics include: (1) Introduction; (2) Development of Middle School Students; (3) Specific Needs of Middle School Teachers; (4) Identification of Needs; (5) Importance of In-service Education Programs; (6) Professional Development Needs; (7) Personal Development Needs; (8) Need for Research; (9) and Summary.

### Introduction

Little research has been conducted specifically in the area of middle school agricultural education. A great deal of the literature reviewed for this study explores middle grade students, teachers and programs in general. A search expanded to the needs of high school agricultural education teachers as well as teachers outside of agricultural education also generated literature for review for this study.

### Development of Middle School Students

Transescents is defined as the period of human development which spans from late childhood through the early stages of adolescence, thus defining middle school age children (Eichhorn, 1966). During this time period, middle school age students go through a myriad of cognitive, emotional, social and physical changes; all of which can affect their educational experience. The National Middle School Association (2003) reported that young people experience more profound changes that they are aware of between the ages of 10 and 15 than



they do at any other time in their life. There simply is no typical middle school student. Eichhorn (1966) asserted that middle school can be a dynamic educational experience for transescents if educators understand the complexities of this age group and are willing to create relevant programs suited to its unique characteristics. The National Middle School Association (2003) also stated that middle grade students deserve schools that fully support them during this crucial phase of life. Lounsbury (1984) additionally reported that the needs of middle school students are affected greatly by their physical, social and emotional needs and must be addressed by the school program. Merenbloom (1988) identified an effective middle school as one that offers programs that respond to these physical, cognitive, social and emotional needs of early adolescents.

Cognitive developments throughout childhood typically occur in stages. The National Middle School Association (2003) reported that changes in middle grade students' patterns of thinking become evident in ideas they have, questions they pose and reflections of their personal experiences. During this developmental time period, students develop their abilities of thinking about how they learn, considering multiple ideas and planning their own learning (National Middle School Association, 2003). The National Middle School Association therefore recommended that since much of this cognitive growth occurs gradually and at different paces, teachers should implement ongoing, concrete experiential learning experiences in order to help students develop intellectually. Eichhorn (1966) claimed that an educational program has little chance for success if it is not compatible with the nature of the students which it is attempting to educate. Johnston and Markle (1986) also pointed out that effective middle school teachers demonstrate awareness of developmental levels and use a variety of instructional activities and materials to enhance learning for different cognitive levels.

Social development is another major challenge that middle school students face. Eichhorn (1966) recognized that in the early stages of transescence, students depend primarily on their immediate family for security, interest and values but tend to transfer this security base to peer groups toward the end of transescence. Blum and Libbey (2004) reported that many students lack social skills and because of this can become less connected to school as they transition from elementary to middle to high school. They also reported that this lack of connection can negatively affect academic performance, behavior, and health (Blum and Libbey, 2004). Because social processes affect learning, schools must effectively address these aspects of the educational process for the benefit of the students (Elias, et al., 1997). Durlak, et al (2011) report that schools play an important role in raising healthy children by fostering the students' cognitive development as well as their social and emotional development. The National Middle School Association (2003) suggested that developmentally responsive middle schools create curriculum that assist students as they formulate social skills while at the same time respecting consideration of family and community expectations.

From a physical standpoint, it is during the time of transescents that most children encounter more rapid growth unlike any that they have experienced since infancy (Eichhorn, 1966). During early adolescence there is a tremendous variability among students of the same gender and age (National Middle School Association, 2003). Hormonal shifts trigger many physical developments which in turn trigger many emotional developments in these students. Concerns about body image also increase during this time period. Forte and Schurr (1993) recommended that these physical changes be considered when planning lessons and activities for middle grade students and that teachers offer varied activities to allow for physical differences.

## Specific Needs of Middle School Teachers

Clearly the age level, ability level, content level and interests of middle school students is different from high school students. It is therefore reasonable to conclude that middle school agriculture teachers would have different needs from secondary agriculture teachers since their programs and students are quite different. These varying need levels would insist that middle school teachers may potentially have different in-service needs than secondary agriculture teachers. These different needs for professional development are related to factors such as teaching experience and the type of certification (Flowers and Mertens, 2003). Birman, Desimone, Porter and Garet (2000) reported that teachers do not find generic professional development that focuses on teaching techniques without also emphasizing appropriate grade level content to be effective. The fact that middle school students are different from high school students lends itself to the realization that middle school teachers have different needs. According to Flanders (1998) middle grade teachers and administrators emphasized that when compared to high school students, middle grade students need more hands-on activities and more teamwork than individual tasks. Therefore, middle grade teachers have a greater need than high school teachers for curricula and activities that promote these learning styles. Merenbloom (1988) also insisted that a successful staff development program on the middle school level must include a thorough understanding of the middle school concept. In other words it must allow administrators and teachers to know what a middle school is and the best way to meet the needs of middle school students (Merenbloom, 1988).

Specifically to agriculture education, Roberts and Dyer (2003) found that middle school teachers had the greatest need in areas that dealt with broad content areas and agricultural

literacy topics while high school teachers had the greatest needs in highly specific, technical areas. They recommended that when selecting topics for in-service programs in the categories of Technical Agriculture and Instruction & Curriculum that different sessions be directed specifically to middle or high school teachers and that their findings could even suggest that middle school and high school teachers have different needs relating to technical agriculture, curriculum development, and instructional techniques during their pre-service teacher education programs. Frick (1993) also implied through his research in developing middle school agriculture education curriculum that middle school teachers have different needs when he recommended that teacher education programs conduct and modify in-service programs specifically for middle school agriculture teachers.

Merenbloom (1998) asserted that “Just as classroom instruction should be based on the needs of students, the staff development program should be based on the needs of the participants” (p. 18). Birman, Desimone, Porter and Garet (2000) reported that professional development activities that include participation of teachers from the same department, subject or grade are more likely to allow opportunities for active learning and are more likely to be relevant to teachers’ experiences. Collective participation may also allow teachers who teach the same subject and grade level to develop a common understanding of instructional goals, methods, problems and solutions (Ball, 1996; Newmann and Associates, 1996). Johnston and Markle (1986) added that middle school teachers need the opportunity to meet for the sole purpose of talking specifically about their programs and their students. This collaboration allows professionals to share ideas and experiences that are more relevant and meaningful.

## Identification of Needs

Castillo and Cano (1999) reported that need-satisfaction models indicate that the extent to which employees' needs are met by their work situation or environment influences the employees' level of satisfaction on the job. Watson and Hillison (1991) reported that in the United States there is a national problem with teacher satisfaction. They stated that this disenchantment and the associated burnout have evolved from stress, low salaries, increased teacher loads, reduction in force, lack of involvement in program planning, and a myriad of other factors. They found these factors to cause an inability of schools to attract and retain the best teachers, teacher shortages in some areas, and growing teacher dissatisfaction (Watson and Hillison, 1991).

Meeting teacher's needs is important to promoting teacher success and fulfillment. Mertler (1992), as well as Heller, Clay and Perkins (1992), reported that satisfied teachers were more productive, motivated their students more, and increased student achievement. Additionally, Bruening and Hoover (1991) stated that because the performance of agricultural teachers is important to the success of agricultural education programs, factors that influence teacher effectiveness and satisfaction must be identified. Once these needs have been identified, program coordinators can prepare programs that promote the specific needs of teachers in order to help them improve themselves professionally and personally.

Job satisfaction is a key to teacher success. Job satisfaction can be defined as, "a pleasurable positive emotional state resulting in the appraisal of one's job or job experiences" (Locke, 1976, p. 1300). Researchers such as Berns (1990) and Grady and Burnett (1985) have identified teacher effectiveness as a predictor of job satisfaction. Cano and Miller (1992) recognized factors such as achievement, advancement, recognition, responsibility, and the work

itself as a factors influencing job satisfaction. Cano and Miller (1992) also indicated that simply identifying job satisfaction levels was not enough and suggested that determining the factors that lead to satisfaction as just as important.

Assessing teacher's needs is therefore an important first step in addressing needs. Merenbloom (1988) suggested that a formal assessment process be utilized to identify the unique needs of teachers, especially middle school teachers. He also stated that just as classroom instruction must meet the needs of the students in the class, that in-service needs should meet the needs of the teachers involved. Once these needs have been identified, then appropriate and relevant in-service programs can be designed.

#### In-service Education Programs

In-service education is the formal and informal processes and activities that teachers engage in both inside and outside of the school in an effort to improve their teaching skills and increase their content knowledge (Jackson and Davis, 2000). Guskey (2000) reported that never before has professional development been more important to education due to the fact that every proposal for educational reform and school improvement emphasizes the need for high-quality professional development. Research in the past decade supporting the benefits of effective teacher professional development has yielded at least 100 studies that have found that highly skilled, highly effective teachers help students learn more (Mertens and Flowers, 2004).

Teachers who are better prepared and trained appropriately are more effective in the classroom and therefore have a greater impact on student learning (Killion, 1999). The National Staff Development Council (NSDC) identified 26 in-service programs for middle grades teachers that identified the link between staff development and student achievement (Killion, 1999). The results from this study indicated that in-service programs that focus on specific subject matter,

provide teachers with opportunities for hands-on learning, and can be integrated into the daily activities are more likely to produce greater knowledge and skills that positively impact student achievement. Unfortunately, according to Richardson (2003) while there is research that identifies characteristics of effective staff development programs, these characteristics are not often seen in practice when planning such programs.

Over the years, in-service training has received a bad reputation. Some individuals see in-service programs or professional development as an indication that there are deficiencies in knowledge or skills of educators that need to be addressed and that these programs are considered to be corrective measures (Guskey, 2000). This misconception may lead teachers to believe they are being punished by having to attend such programs rather than acknowledge the fact that they are growing as professionals.

In-service training has also been described as workshops or lectures which are imposed on teachers by administrator, lack credibility and do nothing to meet the daily needs of teachers (Neel and Monroe, 2006). Much of this criticism may be due to the lack of meaningful content found in many in-service education programs. Guskey (2000) stated that poorly designed in-service programs can in fact be a waste of time, energy and other valuable resources and even impede the implementation of more productive professional development models. Some educators regard professional development as having little impact on their classroom responsibilities and consider it poor use of their professional time (Guskey, 2000). Guskey (2000) further stated that many teachers participate in in-service programs only because they are required to and are more concerned with getting back to teaching their students than the content of the program.

Unfortunately, teachers and their needs are not always at the center of developing in-service programs. Bailey and Guerra (1984) suggested that expressed needs of classroom teachers have not always been a consideration when developing in-service programs. Additionally, Neel and Monroe (2006) stated that in-service topics are often selected by educators such as administrative personnel, supervisors, or professors acting as consultants to school systems who work outside the classroom. Guskey (2000) added that many in-service programs are seen as being too top-down and too isolated from school and classroom realities. He further stated that many in-service programs are based on fads rather than well documented research or are simply not practical to implement because of insufficient resources or support (Guskey, 2000).

Historically, in-service programs have been conducted to assist agriculture teachers, especially beginning teachers, in learning the knowledge and skills necessary to become productive teachers and maintain quality programs (Barrick, Ladewig, and Hedges, 1983; Birkenholz and Harbstreet, 1987; Nesbitt and Mundt, 1993). According to Anderson, Barrick and Hughes (1992), teachers develop and improve through high quality professional development programs. These researchers also state that due to increased public demand for teacher accountability and technical advancements in Career Technical Education (CTE) programs, CTE teacher professional development has never been more important. In-service education programs have been implemented in many states in order to help teachers stay up-to-date in their field of study. Agriculture teachers, in particular, tend to have a continuing desire and need for in-service training to ensure their skills are current (Barrick, Ladewig, and Hedges, 1983).



Historically, agricultural education leaders have had the function of identifying and delivering relevant in-service workshops to agriculture teachers (Barrick, Ladewig and Hedges, 1983). In-service programs are needed to provide agriculture teachers with the technical information and skills necessary to successfully meet the demands of a changing educational environment and advances in technology (Washburn, et.al., 2001). Teacher educators, however, often have had difficulties in identifying appropriate topics to include in these in-service programs (Birkenholz and Harbstreet, 1987; Washburn, King, Garton, and Harbstreet, 2001). By identifying specific needs of certain teacher groups, appropriate and relevant in-service training programs can be developed.

In developing an in-service education program, assessing learner needs is an early step in the process (Newman and Johnson, 1994). Research has typically been used as a means to determine topics that meet teachers' needs for pertinent in-service training (Birkenholz and Harbstreet, 1987; Claycomb and Petty, 1983; Layfield and Dobbins, 2002; Washburn, King, Garton and Harbstreet, 2001). Unfortunately, many times, professional development activities are planned and conducted without teacher input. Sofranko and Khan (1988) recognized that the individuals likely to be involved in an in-service program should be the starting point from which programs emerge. Additionally, Birkenholz and Harbstreet (1986) reported that in-service coordinators should periodically monitor the needs of teachers since they change over time. This information should be used to provide in-service programs based upon current needs. This is supported by research completed by Birkenholz and Harbstreet in 1986 that found completely different needs of beginning agriculture teachers than research completed in 1996 by Garton and Chung in the same area.

Additionally, according to Washburn, et al (2001), in-service needs can also vary by geographic location. In the National Research Agenda, Doerfert (2011) stated that agriculture is as diverse as the climate and geographic features of the fifty states and in order for local programs to be effective, they must address the diversity of the local agriculture industry as well as the entire agriculture industry. Agriculture education programs are driven by the needs of the community.

According to the Agricultural Education Curriculum Framework developed by the Georgia Agricultural Education Curriculum Office (2000), a strength of the agricultural education program is that its curriculum has always been based on the needs of the local community. Therefore, it is safe to assume that many programs have needs that are specific to their community. The National FFA Organization (2012) stated that before starting an agricultural education program, one should recognize that every community is different and the first step is to assess the needs of the community before creating goals for the program. Roberts and Dyer (2004) reported that agriculture education programs are state driven and their needs vary from state to state. Other research has determined that in-service needs of teachers vary not only by geographic location but also upon individual program offerings (Joerger, 2002; Roberts & Dyer, 2004). This finding is logical since programs will vary based on the local agricultural emphasis as well as local and state program requirements.

### Professional Needs

Many challenges face teachers today that may warrant the need for in-service training in certain areas, simply to keep up with today's fast-paced changes. These challenges may include technological developments, changes in student demographics, educational changes or societal changes. Societal changes can impact any area of education. Just as education must adjust for

changing student demographics, it must also adjust to a society in which norms and values change. (Hughes and Barrick, 1993)

Research shows that the in-service needs of agriculture teachers vary with teaching experience (Birkenholz and Harbstreit, 1987; Claycomb and Petty, 1983; Layfield and Dobbins, 2002; Washburn, et al., 2001). Layfield and Dobbins (2002) noted that beginning teachers often have different needs than experienced teachers. They identified such basic tasks as utilizing a local advisory committee, conducting local adult education programs, organizing fund raising activities for the local FFA chapter, preparing agriculture/FFA contest teams, and developing Supervised Agricultural Experience (SAE) opportunities for students as being of greatest need for beginning teachers. In contrast, experienced teachers needed training in computer use in the classroom, preparing FFA degree applications, preparing proficiency award applications, using multimedia equipment, and teaching record keeping skills. Some of these needs were a result of reform legislation such as No Child Left Behind which placed an emphasis on higher standards of achievement, specifically in math and science (Canon, Kitchel, Duncan & Arnett, 2011).

If beginning teachers encounter problems because they lack adequate training, they may be likely to leave the teaching profession and seek alternative types of employment (Berns, 1990). Walker, Garton and Kitchel (2004) reported that the nation is facing a teacher shortage crisis and that agriculture education is not immune to the shortage. These researchers also suggested that job satisfaction and teacher effectiveness have been linked to teacher retention (Walker, Garton & Kitchel, 2004). Cole (1983) stated that generally, teachers left the profession because of concerns for time, money, and classroom control. He also reported that teachers stayed in the profession because of acquisition of technical skills, professional preparation, and enjoyment of work and student relationships. It can therefore be concluded that meeting these

personal and professional needs of teachers can help retain teachers in the field of agriculture education.

Particular focus should be placed on beginning agriculture teachers in order to help them adjust and remain in the profession. Joerger (2002) recommended that a beginning agricultural education teacher needs assessment be administered on a regular basis to help design professional development programs for beginning agriculture teachers. Joerger (2002) additionally suggested that the Moir Model of attitudinal phases through which first year teachers transition be utilized to identify when new teachers transition from the “survival stage” to the “disillusionment stage.” This model suggests that new teachers transition through several phases from anticipation, to survival, to disillusionment, to rejuvenation, to reflection, then back to anticipation (Moir, 1990). The survival stage typically begins soon after teaching begins when reality sinks in and teachers begin to feel overwhelmed, become bombarded with unanticipated problems and situations, and feel they are alone and have no time to reflect (Moir, 1990). The disillusionment period typically begins midway through the first year when the teacher realizes things are not going as smoothly as they envisioned, classroom management becomes a stress, time becomes an issue and they begin to express doubts concerning their choice of a profession (Moir, 1990). Use of this model could help address needs at critical times in a new teacher’s career. By identifying these critical phases and problems new teachers face as early as possible in their careers, university faculty and state agricultural education staff can modify pre-service and in-service professional development to address those concerns (Washburn & Dyer, 2006).

Curriculum and instructional needs are important to any teacher but with the ever changing advancements in agriculture, it is imperative that teachers are equipped with up to date curriculum. In the National Research Agenda published by the American Association for

Agricultural Education, Doerfert (2011) asserts that education and outreach activities must continually change to address the new challenges and opportunities brought about by rapidly advancing technologies as well as evolving consumer demands, needs, and behaviors. Doerfert (2011) also stated that effective programs require an up-to-date curriculum which is dependent on an instructor who is familiar with current research and the state-of-the-art practices in the profession. Agriculture teachers repeatedly want and need in-service education in technical subject matter in order to stay up-to-date with current agricultural trends (Barrick, Ladewig, and Hedges, 1983). Some teachers may even have little experience in a specific area that is emphasized in their program such as animal science or agricultural mechanics due to the type of teacher preparation they received or their own technical background. These teachers may feel as though they need additional training in specific areas or in implementing and developing new curriculum. If teachers have a low degree of knowledge in an area, they will be less likely to include this area in the curriculum (Rudd & Hillison, 1995). Technological developments also require agriculture programs to be continuously updated to meet the needs of the modern agricultural industry (Hughes & Barrick, 1993). Agriculture teachers must therefore stay up to date with these changes in order to present their students with the most current and accurate information in the industry.

Technology in the classroom is also constantly changing at a fast pace. Teachers need to be educated on the latest available technologies and the use of these technologies in the classroom. Doerfert (2011) recognized that it is a challenge to have a system in place that allows teachers to stay up-to-date with ever-changing advancements. Birkenholz and Harbstreit (1986) recommend that in-service programs should be provided which emphasize use of computers and new technologies. Newman and Johnson (1994) found two of the three most pressing needs for in-service education in agriscience teachers to be in the area of computers and

mechanical/physical technology. As today's society depends so heavily on technology and as students enter the classroom with more and more technological skills, it is likely that many teachers will need training to stay up-to-date in the ever changing technological world.

Hughes and Barrick (1993) stated that changes in student demographics dictate that agricultural education programs must evolve in order to meet the needs of all students and ensure that they have the opportunity to fully participate in the programs and receive meaningful instruction. One such change in demographics that they refer to is the decline in the number of students with farm backgrounds. The expanded mission of agricultural education has led to the need to reach a more diverse group of learners including females, minority populations, and urban residents (Doerfert, 2011). This shift in demographics may require teachers to need training in how to recruit nontraditional agriculture students into their programs. Teachers may also feel as though they need assistance updating their classroom activities or sharing activities with other teachers in order to keep their lessons fresh and interesting to the students. With an increase in agriscience and biotechnology concepts in agriculture, nontraditional agriculture students may be more interested in enrolling in agriculture courses if they are made aware of the current curriculum trends. Even as early as 1987, Pescatore and Harter-Dennis reported that there was an increase concern by the nonagricultural population with agricultural topics related to nutrition, animal welfare and environmental pollution. If nontraditional students are made aware of the vast array of agricultural topics covered, they may be more likely to give the program a chance.

Hughes and Barrick (1993) reported that the increase in the number of limited opportunity and special needs students enrolled in agriculture programs are another demographic concern teachers face. The need to prepare these students for a career after high school has led to an increase in students with disabilities being enrolled in career and technical education (CTE) courses, which allows students to gain a practical, hands-on experience that will help them to

become more successful upon entering the workforce (Stair & Moore, 2010). These students not only need to earn a general education, but usually require extra assistance with earning a high school diploma, learning job skills, learning life skills and preparing to become productive members of society (McLeskey and Weller, 2000).

Many teachers are not specially trained to work with students with disabilities which could result in a decrease in job satisfaction and increased stress for teachers who feel pressure to balance the needs of all of their students (Lobosco and Newman, 1992). Despite the fact that the number of students with disabilities in the regular education classroom is increasing, many teachers feel that they are unprepared to teach these students or meet their needs (Stair & Moore, 2010). Research by Roberts and Dyer (2003), as well as Elbert and Baggett (2003), indicated a need by teachers for additional training on working with special needs students and modifying lesson to meet their needs. Simply having special need students in the classroom may lead teachers to feel as if they need training in order to effectively teach these students. Teachers may also feel as though they need assistance in the classroom whether from an inclusion teacher or a paraprofessional.

Additional educational requirements have led to agriculture teachers feeling the need to incorporate more academics into their classes in order to help students transfer the information they learn in academics to real world practices. The National Research Agenda pointed out that schools across the country are facing an increased demand for instruction in basic academic concepts such as writing, mathematics, and science (Doerfert, 2011). This agenda noted that in many situations these demands have been met at the sacrifice of career and technical education programs such as agricultural education even though agriculture curriculum is based on scientific concepts that rely on math as well as basic reading and writing components. Doerfert (2011)

contended that agricultural education is obligated to show that its curriculum can be used to meet the academic challenges of today's school system while preparing students for a career in agriculture.

The National Research Agenda stated that many educators use their agriculture classrooms as a platform to teach students basic academic skills, such as math and science, within the context of agriculture (Doerfert, 2011). In 1988, the National Research Council recommended that agriculture courses increase the rigor of scientific and technical content to better prepare students for study and employment in the food and fiber industry (National Research Council, 1988). The American Association for the Advancement of Sciences recommended connecting what students learn in school through interdisciplinary studies and real-world connections (American Association for the Advancement of Science, 1993). In the 1990s, federal legislation authorizing funding for career, technical education programs began to mandate accountability requirements including improved academic achievement (Castellano and Stringfield, and Stone 2003). Additionally, changing college entrance requirements have further challenged agriculture teachers to expand their programs beyond traditional vocational programs (Thompson & Balschweid, 2000). Due to these constant changes in educational requirements which stress more rigor in agricultural education, many teachers may feel that they need additional training in areas that will enhance academic learning such as biotechnology or agriscience and even improve the image of their programs. Newman and Johnson (1994) found one of the three most pressing needs for in-service education in agriscience teachers to be in the area of biotechnology. Johnson (1995) also reported that Arkansas teachers believed that offering science credit for agriculture courses would increase enrollment, benefit students academically, and improve the overall program image.



Career development is an area that is highly emphasized in all middle school career and technical programs. Hughes and Barrick (1993) suggested that preparing students for productive employment and career development involves more than job training and begins before high school. Frick (1993) stated that middle grade agricultural education programs not only provide early exposure to the world of agriculture but also an increase self-understanding in preparation for career development. Doerfert (2011) recognized that the objectives of agricultural education programs have shifted from preparing students for careers in production agriculture to preparing students for careers requiring knowledge of agriculture. McEwin and Thomason (1989) suggested that middle school students participate in activities which help them begin the career selection and preparation process.

In the National Academy of Sciences report *Understanding Agriculture: New Directions for Education*, career exploration and applied science were two agricultural curriculum areas recommended for the middle school (National Research Council, 1988). With such an emphasis on career exploration, training courses that allow teachers themselves to explore agricultural careers may be necessary in order for teachers to be more familiar with careers available to students in the industry. Participation in industry tours or even short internships for teachers may be needs that middle school teachers believe will help them improve their program.

Classroom management has always been a concern for teachers no matter what grade level. Discipline and simple classroom housekeeping issues are often discussed among middle school teachers. Kahler (1974) conducted a study that found that both new and experienced teachers placed high priority on and expressed much difficulty with areas involving classroom management. Mundt and Connors (1999) reported that classroom management is a factor that consistently comes to the forefront as a problem for beginning teachers. Larsen (1992) and Miller et al. (1989) also identified classroom management as a factor that influences the

effectiveness of agriculture teachers. Both new and experienced teachers of any grade level would probably benefit from professional development regarding classroom management. However, with such a developmental difference between middle school students and other grade levels, it is obvious that middle school teachers would benefit from classroom management techniques specific to middle school age students.

Obviously many other professional issues arise that teachers must deal with. Scheid (1982) identified activities that beginning teachers had difficulty with and found that conducting adult programs and developing cooperative relationships with faculty, administrators and students as the two most difficult activities encountered by beginning agriculture teachers. Additionally, Hachmeister (1981) identified the largest needs of beginning vocational agriculture teachers in Kansas as being curriculum and lesson plan development, time management, building student rapport, handling discipline problems, and improving teacher-administrator relations. These issues may be of concern for any teacher, whether beginning or veteran. Regardless of the issue, if teachers need additional assistance in dealing with issues that arise in their program areas, administrators should be open to exploring the possibilities and need for professional development in any area of concern.

#### Personal Needs

Many personal issues may also be of concern to agriculture teachers. Bogges (1985) and Mfozi (1982) found that teachers of agriculture typically found that time spent conducting agricultural education activities conflicts with their personal and family life. Cooper and Nelson (1981), as well as, Mattox (1974) reported that spouse dissatisfaction and home and family distress caused by the job lead agriculture teachers to leave the profession. Teachers of agriculture should be made aware of problems and benefits they may encounter in order to help

improve professional and personal fulfillment (Coughlin, et al., 1987). Bruening and Hoover (1991) recommended that teacher educators, state supervisors, and secondary principals should recognize and emphasize personal life factors that appear to make teachers feel positive about the job they are doing in the classroom. They also recommend that agricultural education professionals should implement programs and activities that teachers perceive to positively impact teacher performance.

Time seems to be a recurring factor related to personal issues in agricultural education. Agriculture teachers are required to spend copious amounts of time working with their programs beyond the regular school day as well as on weekends, holidays and summers. Tasks such as preparing students for Career Development Events (CDEs), making home visits to assist with Supervised Agricultural Experience (SAE) projects, meeting with community organizations and attending livestock shows require huge time commitments from teachers within the agricultural education profession. Coughlin, et al., (1987) recommended that time management principles should be stressed in classes and workshops. Mundt and Connors (1999) suggested that time management strategies be incorporated in pre-service and in-service programs for beginning teachers to ensure the success of those entering the profession. Roberts and Dyer (2004) also reported that time management and stress are issues that agriculture teachers face. Coughlin, et al., (1987) even reported that spouses of agriculture teachers believe that agriculture teacher obligations and expectations require teachers to spend many hours away from home and family. They recommended that agriculture teachers should learn to delegate responsibilities to students, assistants and supporters to relieve excessive workloads. The need to address these issues and provide assistance in areas that may help teachers alleviate any unnecessary stress can only help improve the performance of the teacher.

## Need for Research

Several studies regarding agriculture teacher needs have been conducted. However, the problem exists that no research has been conducted specifically on middle school agriculture teacher needs. Most research is specific to secondary programs. Middle school agricultural education programs and FFA offer 6-8 grade students the opportunity to explore the industry of agriculture and stimulate interest in related careers. According to Flanders (1998), middle school teachers and administrators emphasize that when compared to high school students, middle school students need different activities and tasks. It can therefore be concluded that middle school teachers would also have different needs from high school teachers. Also, much of the existing research that is relevant to this study is dated. Research from other areas indicates that there are differences in needs between teachers, but a lack of research does not identify the specific needs of middle school agriculture teachers. Knowledge of this information could assist program managers and coordinators in providing relevant in-service needs that will help agriculture teachers become more successful in the classroom. Given the growth of middle school programs in agricultural education in the United States and the unique needs of middle school students and their teachers, it is important for the agricultural education profession to analyze middle school efforts to help improve the programs (Rudd & Hillison, 1995). Rudd and Hillison (1995) recommend that given the existence of a variety of middle school agricultural education teachers, more attention needs to be given to the characteristics of knowledge, attitude, expectations, and time spent in the position in order to understand differences possessed by middle school agriculture teachers. Middle school teachers have individualized, unique needs that must be addressed so that they are provided with opportunities

to grow professionally and personally in order to operate successful agricultural education programs.

### Summary

In summary, little research has been conducted on the middle school level regarding agricultural education as a whole. No research has been found that specifically addresses needs assessments of middle school agriculture teachers. Other research has established the fact that it is important to meet the needs of teachers in order to ensure their satisfaction and keep them on the job as well as to meet the growing demands currently imposed on teachers. Research indicates that teacher needs will vary based on a variety of factors including geographic location, years of service, program concentration and personal preferences. Once these needs have been identified, in-service programs can be developed to provide training and assistance in specific professional and personal growth areas.

## CHAPTER 3: METHODOLOGY

### Purpose

The purpose of this study was to determine Georgia middle school agriculture teachers' perceived levels of professional and personal development needs, and use that information to determine in-service needs of Georgia middle school agriculture teachers. More specifically:

1. Determine the demographic characteristics and educational background of Georgia middle school agriculture teachers
2. Identify Georgia middle school agriculture teachers' perceived level of need in specific professional and personal growth areas
3. Determine in-service needs of Georgia middle school agriculture teachers in specific professional and personal development areas.

### Research Questions

The research questions for this study were:

1. What are the demographic characteristics and educational background of Georgia middle school agriculture teachers?
2. What professional and personal needs should be addressed in order to help middle school agriculture teachers in Georgia become more successful?
3. What are specific professional and personal development in-service needs of Georgia middle school agriculture teachers?

## Research Design

A quantitative descriptive survey design was utilized to collect data. Creswell (2009) stated that a survey design provides descriptions of opinions of a population by studying a sample of that population. He further stated that this design type will provide results that could be generalized to a larger population. This study seeks to identify needs of middle school agriculture teachers in order to identify needs that can be generalized to middle school teachers throughout the state of Georgia and may also be of interest to teachers in other states. A researcher administered survey was chosen because of ease of use and feasibility of administering the survey during a mandatory statewide teacher conference. The research was cross-sectional as most data was collected at the conference and the remaining data collected within a matter of weeks. Strengths of this design include the ease of administering the survey and the availability of the sample population. Weaknesses of this design include the length of the survey items and the fact that some survey items were not necessarily applicable to certain members of the sample population.

## Subject Selection

The population for this study included all Georgia middle school agriculture teachers (N=66). A consensus study was utilized as all middle school agriculture teachers were identified utilizing the Georgia Agricultural Education Teacher Directory. For the purpose of this study, all teachers in Georgia who teach agriculture to grades 6, 7, and/or 8 were considered middle school agricultural educators.

IRB approval was granted after the researcher submitted appropriate applications and information to the IRB review board.

## Instrumentation

A questionnaire was developed by the researcher to be administered to all participants. The questionnaire was modeled after the *Pre-Service and In-Service Agricultural Education Teachers Needs Assessment for Georgia, North Carolina, South Carolina and Virginia* (Duncan, Ricketts, Peake and Uessler, 2005). This instrument was chosen as a model because it identified needs concepts of secondary agricultural education teachers and served as a guide for developing a needs assessment for middle school teachers. The instrument was divided into two sections: demographics and scaled statements concerning professional and personal needs. The instrument contained items that were divided into the following constructs: Classroom, FFA, SAE, Community, Technical Agriculture, Technology and Personal Management. Respondents were asked to rate their need for in-service education for each item using a 5-point Likert-type scale. The scale options included no need (1), some need (2), moderate need (3), strong need (4) and great need (5). An open ended question was included for the participants to identify any other topics or activities believed to be important to the success of middle school agriculture teachers.

**Table 1: Questionnaire Blueprint**

Variable/Construct	Definition	Sample Items and response options
Classroom Variables	Participants will indicate their perceived level of need for additional training in areas that affect classroom management.	Items will be presented using a rating scale. 1-No Need, 2-Some Need, 3-Moderate Need, 4-Strong Need, 5-Great Need Examples items: Motivating students to learn Managing student behavior problems
FFA Variables	Participants will indicate their perceived level of need for additional training in areas that affect FFA programs.	Items will be presented using a rating scale. 1-No Need, 2-Some Need, 3-Moderate Need, 4-Strong Need, 5-Great Need Example items: Recruiting FFA members Promoting involvement of FFA members
SAE Variables	Participants will indicate their perceived level of need for	Items will be presented using a rating scale. 1-No Need, 2-Some Need, 3-Moderate Need, 4-Strong Need, 5-Great Need



	additional training in areas that affect SAE programs.	Example items: Developing SAE opportunities for students Conducting SAE visits
Program Variables	Participants will indicate their perceived level of need for additional training in areas that affect specific program responsibilities.	Items will be presented using a rating scale. 1-No Need, 2-Some Need, 3-Moderate Need, 4-Strong Need, 5-Great Need Example items: Evaluating the local agriculture program Understanding state standards
Community Variables	Participants will indicate their perceived level of need for additional training in areas that involve community members or support groups.	Items will be presented using a rating scale. 1-No Need, 2-Some Need, 3-Moderate Need, 4-Strong Need, 5-Great Need Example items: Establishing an advisory committee Utilizing an advisory committee
Technical Agriculture Variables	Participants will indicate their perceived level of need for additional training in specific areas of agriculture.	Items will be presented using a rating scale. 1-No Need, 2-Some Need, 3-Moderate Need, 4-Strong Need, 5-Great Need Example items: Teaching animal science Teaching small animal care/veterinary technology
Technology Variables	Participants will indicate their perceived level of need for additional training in areas that affect use of technology in the ag ed program.	Items will be presented using a rating scale. 1-No Need, 2-Some Need, 3-Moderate Need, 4-Strong Need, 5-Great Need Example items: Using multimedia equipment Using computers in the classroom
Personal Management Variables	Participants will indicate their perceived level of need for additional training in areas that affect personal management.	Items will be presented using a rating scale. 1-No Need, 2-Some Need, 3-Moderate Need, 4-Strong Need, 5-Great Need Example items: Improving organizational skills Balancing priorities (FFA, school, family, self, etc.)
Demographic Variables	Participants will indicate their demographic information	Participants will be asked to answer the demographic questions as they relate to the teachers current teaching situation. They will be asked to check a response to each question including: gender, marital status, age, teaching experience, Agriculture Education Region & Area, highest degree earned, grades taught, type of community, student enrollment, FFA membership

The instrument was evaluated for face and content validity by a panel of three University of Georgia professors, one Auburn University professor, two Georgia Agricultural Education State

Staff members and two Georgia high school agricultural education teachers. As a result of this evaluation, some design suggestions were recommended and the content of the instrument was found to be valid and appropriate for the study.

Threats to validity are important to identify in order to minimize the occurrence of the threats which can lead to inaccurate findings and results. Internal validity threats are procedures or experiences of participants that threaten the researcher's ability to draw correct inferences from the data (Creswell, 2009). External validity threats arise when researchers draw incorrect inferences from the data collected (Creswell, 2009). As a result of this research, several validity threats may surface. First, construct validity occurs when inadequate definitions and measures of variables are used (Creswell, 2009). Inappropriate wording of the survey items will be an example of a threat to construct validity in this design. The researcher attempted to limit this threat by utilizing an expert panel of university professors, Georgia Agricultural Education State Staff members and agriculture teachers to evaluate the instrument before it was administered. Second, statistical conclusion validity is when researchers draw inaccurate inferences from the data collected (Creswell, 2009). Data collected in this study may have been misinterpreted due to poor statistical assumptions. The researcher attempted to limit this threat by only reporting statistical data and making no assumptions from the data that was collected. Third, the Hawthorne Effect occurs when a subject is influenced by his or her perception of the experiments and how he or she should respond (Creswell, 2009). Subjects in this study may possibly have felt the need to respond untruthfully because they were in an "experimental" rather than natural setting. The researcher attempted to limit this threat by ensuring participants that all data collections will be kept confidential. Finally, experimenter effects occurs when the subjects are influenced by the experimenter (Creswell, 2009). Some subjects may have felt as

though they should respond to survey questions in a certain way based on the way the research was presented by the researcher. The researcher attempted to limit this threat by clearly and simply stating the purpose of the study. In identifying these validity threats, the researcher hopes to have minimized the occurrence of these threats and increased validity to provide concrete results and data that can be generalized in other areas.

The reliability of the instrument was evaluated through an analysis of the collected data. Cronbach’s alpha was calculated for each construct to determine reliability. The following results indicate an instrument with a high degree of internal consistency.

Table 2. *Cronbach’s Alpha*

Construct	Cronbach’s alpha
Classroom	.958
Personal Management	.912
SAE	.967
Technology	.934
Community	.927
FFA	.950
Program	.922
Technical Agriculture	.953

#### Data Collection Procedures

The population for this study included all middle school agricultural education teachers in Georgia (N=66). The survey instrument was distributed and collected during the Georgia Vocational Agriculture Teacher Association’s Annual Summer Conference. All members of the sample population in attendance who completed a survey were recorded. A total of 48 surveys were returned by the completion of the conference. All middle school agriculture teachers who were either not in attendance or did not submit a survey were mailed a letter explaining the survey and research, a coded survey and a self-addressed, stamped envelope. This led to an additional 8 completed surveys being returned. A total of 56 participants completed the instrument, resulting in an overall response rate of 85%. Based on research conducted

concerning response rates, this is a high response rate. Baruch (2008) studied the response rates for surveys used in organizational research and found that within 490 studies published from 2000-2005 that utilized surveys, the average response rate that utilized data collected from individuals was 52.7 percent. Additionally, a similar needs assessment of middle and secondary agriculture teachers conducted by Duncan, Ricketts, Peake and Uessler in 2006 resulted in a 61% response rate.

## CHAPTER 4: FINDINGS

### Purpose

The purpose of this study was to determine Georgia middle school agriculture teachers' perceived levels of professional and personal development needs, and use that information to determine in-service needs of Georgia middle school agriculture teachers. More specifically:

1. Determine the demographic characteristics and educational background of Georgia middle school agriculture teachers
2. Identify Georgia middle school agriculture teachers' perceived level of need in specific professional and personal growth areas
3. Determine in-service needs of Georgia middle school agriculture teachers in specific professional and personal development areas.

### Research Questions

The research questions for this study were:

1. What are the demographic characteristics and educational background of Georgia middle school agriculture teachers?
2. What professional and personal needs should be addressed in order to help middle school agriculture teachers in Georgia become more successful?
3. What are specific professional and personal development in-service needs of Georgia middle school agriculture teachers?

## Data Analysis

Collected data were entered into SPSS for analysis. Cronbach's alpha was calculated for each construct to determine reliability. Frequency data (number of responses and percentages) were calculated for demographic areas and preferred forms of delivery. Actual ages, teaching experience as a middle school agriculture teacher and total years teaching were gathered. Then these data were sorted into categories created by the researcher in order to condense data for reporting purposes. Frequency data (number of responses, mean, and standard deviation) were used for analyzing each individual construct and competency area.

## Findings

*Objective 1. Determine the demographic characteristics and educational background of Georgia middle school agriculture teachers*

As indicated in Table 3, 52.6% of the respondents were female and 64.9% were married. The average age of respondents was 35.7 with 47.3% ages 25-34. The average number of years teaching experience as a middle school agriculture teacher was 4.5 with 67.8% of respondents having less than 5 years of experience. The average number of total years teaching was 7.8 with 41% of respondents having less than 5 years of experience. Approximately 39% had obtained a bachelor degree; 32% a master's degree; 25% a specialist degree and 4% a doctorate. Approximately 46% of respondents were located in the North Regions, 14% in the Central Region and 39% in the South Region of the Georgia Agricultural Education Regions. Each of these Regions are broken down into six areas: North Region – Area 1 & 2; Central Region – Area 3 & 4; South Region – Area 5 & 6. Approximately 14% of respondents were located in Area 1, 32% in Area 2, 7% in Area 3, 4% in Area 4, 18% in Area 5 and 21% in Area 6. The majority of respondents (60%) reported working in a rural community.

Table 3. *Demographic Characteristics of Georgia Middle School Agriculture Teachers*

Characteristic	n	%
Gender		
Male	26	45.6
Female	30	52.6
Marital Status		
Married	37	64.9
Single	18	31.6
Age (M = 35.7)		
Less than 25	5	9.5
25-34	25	47.3
35-44	12	22.8
45-54	6	11.4
More than 55	5	9.5
Teaching Experience as a Middle School Ag Teacher (M = 4.5)		
Less than 5 years	38	67.8
6-10 years	13	23.3
11-15 years	2	3.6
16-20 years	3	5.4
21-25 years	0	0
26-30 years	0	0
More than 30 years	0	0
Total Years Teaching (M = 7.8)		
Less than 5 years	23	41.0
6-10 years	19	33.8
11-15 years	10	18.0
16-20 years	2	3.6
21-25 years	1	1.8
26-30 years	1	1.8
More than 30 years	0	0
Highest Degree Earned		
Bachelor	22	38.6
Master	18	31.6
Specialist	14	24.6
Doctorate	2	3.5
Region		
North	26	45.6
Central	8	14
South	22	38.6

Characteristic	n	%
Area		
1	8	14.3
2	18	32.1
3	4	7.1
4	4	7.1
5	10	17.9
6	12	21.4
Type of Community		
Rural	34	59.6
Urban	15	26.3
Suburban	7	12.3

*2. Identify Georgia middle school agriculture teachers' perceived level of need in specific professional and personal growth areas*

Agriculture teachers were asked to rate various items based on their perceived level of need using the following scale: (1) No Need, (2) Some Need, (3) Moderate Need, (4) Strong Need, (5) Great Need. As reported in Table 4, teachers believed that they had the highest level of need in the specific areas of writing grant proposals (M=3.70), utilizing the Ag Career Network (M = 3.40), completing Secretary, Reporter and Treasurer books (M=3.28), motivating students to learn (M=3.26), recruiting business partners (M=3.25), promoting involvement of FFA members (M=3.25), coordinating activities with local agricultural organizations and agencies (M=3.23), balancing priorities (M=3.19), developing an effective public relations program (M=3.16) and managing and reducing work-related stress (M=3.16).

*Table 4. Middle Schools Agriculture Teachers' Perceived Level of Need*

Competency	n	M	SD
Writing grant proposals	57	3.70	1.13
Utilizing the Ag Career Network	57	3.40	1.25
Completing Secretary, Reporter and Treasurer books	57	3.28	1.35
Motivating students to learn	57	3.26	1.22
Recruiting business partners	57	3.25	1.21
Promoting involvement of FFA members	57	3.25	1.31
Coordinating activities with local agricultural organizations and agencies	57	3.23	1.10



Balancing priorities (FFA, school, family, self, etc.)	57	3.19	1.33
Developing an effective public relations program	57	3.16	1.18
Managing and reducing work-related stress	56	3.16	1.41

*Note. Scale: 1 = No Need; 5 = Great Need*

As reported in Table 5, respondents indicated the least amount of need in professional growth and development (M=2.51), understanding learning styles (M=2.46), planning banquets (M=2.44), developing relationships with fellow teachers and administrators (M=2.44), understanding insurance (M=2.39), understanding state standards (M=2.36), developing classroom procedures (M=2.34), conducting parent/teacher conferences (M=2.33), planning and conducting student field trips (M= 2.30), and preparing taxes (2.18).

*Table 5. Middle Schools Agriculture Teachers' Perceived Level of Need*

Competency	n	M	SD
Professional growth and development	57	2.51	1.04
Understanding learning styles	57	2.46	1.24
Planning banquets	57	2.44	1.20
Developing relationships with fellow teachers and administrators	57	2.44	1.18
Understanding insurance	57	2.39	1.28
Understanding state standards	57	2.36	1.22
Developing classroom procedures	56	2.34	1.15
Conducting parent/teacher conferences	57	2.33	1.11
Planning and conducting student field trips	57	2.30	1.27
Preparing taxes	57	2.18	1.21

*Note. Scale: 1 = No Need; 5 = Great Need*

*Objective 3. Determine in-service needs of Georgia middle school agriculture teachers in specific professional and personal development areas*

Items on the questionnaire were broken down into various competency areas. As indicated in Table 6, respondents perceived the greatest level of need in the Community competency area (M=3.01) followed closely by the FFA competency area (M=2.99). Respondents reported the least level of need in the personal management (M=2.74) and classroom competencies (M=2.7).

Table 6. *Perceived Level of Need by Competency Area*

Competency Area	n	M	SD
Community	57	3.01	1.21
FFA	57	2.99	1.26
Technical Agriculture	57	2.82	1.28
Program	57	2.79	1.20
SAE	57	2.77	1.17
Technology	57	2.77	1.27
Personal Management	57	2.74	1.28
Classroom	57	2.7	1.28

Participants were asked to indicate their preferred forms of in-service delivery for possible future in-service programs. As indicated in Table 7, the preferred form of in-service delivery is through Summer PLU courses (77%), followed closely by Midwinter and Summer Conference breakout sessions (75%). Two “other” write in responses were also proposed including “Wimba” online courses and “workshops during the school day.”

Table 7. *Preferred Forms of In-service Delivery*

Form of Delivery	n	%
Summer PLU Courses	57	77.2
Midwinter & Summer Conference breakout sessions	57	75.4
Online course throughout the year	57	36.8
Weekday workshops during the school year (after school)	57	19.3
Saturday workshops during the school year	57	17.5
Other	57	5.3

Participants were given the opportunity to identify other topics or activities they believe could be important to the success of middle school agriculture teachers. Tables 8 and 9 identify the open ended responses participants provided in these two areas. A wide range of response topics were received covering various competency areas.

Table 8. *Other Topics or Activities of Importance*

Responses
<ul style="list-style-type: none"> <li>- Mentoring</li> <li>- Paying a flat fee of \$250 for state convention. With CRCT testing, I am usually limited to taking only delegates and anyone in a state contest. It should be \$25 per student up to a total of \$250.</li> <li>- Need money to get students out of the classroom and into the world for our classes not just FFA as a way to recruit for FFA</li> <li>- Funding for supplies. The high school gets Perkins money, Middle school needs, money for materials.</li> <li>- Ag Ed students are certified 6-12. I believe all students should student teach in both middle and high school.</li> <li>- Integrating hands-on activities that are engaging and provide s opportunity for experiential learning to occur with limited funding.</li> <li>- Appropriate, timely, hands-on activities with middle school students.</li> <li>- Would be great to have a workshop on labs appropriate for middle school agriscience/animal science/plant science</li> <li>- Not just developing relationships, but working cross curriculum with other teachers.</li> <li>- General 1<sup>st</sup> Aid Course (specifically child with seizures), student conflict management, ag teacher extras (POW, POA, monthly reports, field trip forms)</li> <li>- Loving all students – How?</li> <li>- All programs should be directed by CTAE directors, who have CTAE degrees or teaching experience in the respective fields</li> <li>- The middle school stands need to be reevaluated to meet the needs of teaching CDE material.</li> <li>- Technology use</li> <li>- Experience!</li> </ul>

Table 9. *Additional Concerns*

Responses
<ul style="list-style-type: none"> <li>- Need to continually make sure m.s. curriculum is aligned to math and science ms curriculum, especially in light of common core standards. For example, look at physical science/ag science applications in 8<sup>th</sup> grade “electricity”</li> <li>- Georgia ag standards are not aligned with appropriate grade level score subjects. Plant science should be 7<sup>th</sup> grade; Ag mech should be 8<sup>th</sup> grade, soil science 6<sup>th</sup> grade. I am sure there are others.</li> <li>- Program of Work needs to be different for middle school. Different expectations and an individual middle school format.</li> <li>- Middle school FFA camping (so that middle school boys aren’t competing against “men” at summer camp.)</li> <li>- In middle school, “connection” class time (such as ag) are used to “pull” students for other activities such as remediation, speech, pictures, medical (eye/ear checks, etc.). When we have our own standards to meet, how do we handle these situations?</li> <li>- In order to better fulfill the duties necessary to have a great Ag program, a teacher must have a 12 month contract.</li> <li>- Experience!</li> </ul>

## CHAPTER 5: CONCLUSIONS

### Purpose

The purpose of this study was to determine Georgia middle school agriculture teachers' perceived levels of professional and personal development needs, and use that information to determine in-service needs of Georgia middle school agriculture teachers. More specifically:

1. Determine the demographic characteristics and educational background of Georgia middle school agriculture teachers
2. Identify Georgia middle school agriculture teachers' perceived level of need in specific professional and personal growth areas
3. Determine in-service needs of Georgia middle school agriculture teachers in specific professional and personal development areas.

### Research Questions

The research questions for this study were:

1. What are the demographic characteristics and educational background of Georgia middle school agriculture teachers?
2. What professional and personal needs should be addressed in order to help middle school agriculture teachers in Georgia become more successful?
3. What are specific professional and personal development in-service needs of Georgia middle school agriculture teachers?

## Conclusions

The purpose of this study was to identify needs of middle school agriculture teachers in Georgia. A list of items broken down into various competency areas of the total agricultural education program was created for participants to rate their level of need. Based on the responses, there is a wide range of needs for middle school agriculture teachers in Georgia.

The individual competency with the greatest need for in-service education as perceived by the teachers was writing grant proposals. Today's economy is a stress on everyone financially. Roberts and Dyer (2004) suggested that the recent trend of reducing educational budgets may be evidenced by teachers, as indicated by the greatest need in writing grant proposals for external funding since operating a successful agricultural education program often requires funding beyond school district budgets. They recommended that workshops be delivered to address this issue. Cannon, Kitchell and Duncan (2010) also found writing grant proposals as the highest rated program management need of secondary Career and Technical Education teachers in Idaho. With budget strains on school systems and little to no formal training offered by the state in the area of writing grant proposals, it is no surprise that teachers indicate a strong need for assistance in this area. The desire to supplement programs with grant monies is growing in an effort to provide additional funding to run successful middle school agricultural education programs.

The second and third highest competency of need as indicated by respondents is utilizing the Ag Career Network (ACN) and completing Secretary, Reporter and Treasurer Books. The ACN is a new reporting system available to teachers through the National FFA Organization. Little training on using the new system has been provided to Georgia agricultural education teachers. Therefore, it is anticipated that teachers would indicate a strong need to learn how to

utilize this recordkeeping system. Secretary, Reporter and Treasurer Books are also tools utilized by FFA chapters to maintain accurate records and teach recordkeeping to FFA members. Based on the high level of need for these two competencies, we can conclude that FFA recordkeeping skills are areas in which middle school agriculture teachers need additional in-service training. Again, no other research was found to specifically identify these competencies as a high need level. However, several studies indicate FFA award applications and recordkeeping tasks as strong need levels and each of these competencies are related to FFA award applications and recordkeeping tasks. Duncan, Ricketts, Peake and Uessler (2005) report that teachers, especially beginning teachers, indicated a need for more pre-service and in-service preparation opportunities related to preparing FFA proficiency award applications and FFA degree applications. Garton and Chung (1996), Layfield and Dobbins (2002), Joerger (2002), and Peiter et al. (2003) also reported studies that indicated teachers needed preparation related to preparing FFA awards and degree applications. Layfield and Dobbins (2002) even identified preparing FFA degree applications and proficiency award applications as well as teaching recordkeeping skills as the most important in-service needs. Garton and Chung (1996 and 1997) also found preparing FFA degree applications as a high need level.

The fourth highest competency of need was motivating students to learn. Previous research by Garton and Chung (1996), Edwards and Briers (1999), Joerger (2002), Peiter, et al (2003) and Roberts and Dyer (2002) supported the need for additional training in this competency area. Mundt and Connors (1999) found that consistently, classroom management and student discipline come to the forefront as problems for beginning teachers. In fact, the need for assistance in motivating students to learn is frequently found in all areas of education, not only the middle school agricultural education program. Veenman (1984) identifies two problems most often perceived by beginning elementary and secondary teachers as student

discipline and motivating students. Varah, Theune, Parker (1986) also identified motivating students as the highest ranking need of beginning teachers. Even as far back as 1969, Fuller cited one primary problem of education as motivating students.

In-service needs of least importance, as perceived by the respondents were those of preparing taxes, planning and conducting student field trips, conducting parent/teacher conferences and developing classroom procedures. Although many of these competencies are not specifically identified in other research as areas of low need, similar results were reported in other studies by Edwards and Briers (1999), Garton and Chung (1996), Joerger (2002) and Layfield and Dobbins (2002). Garton and Chung (1996) specifically indicated little need for planning and conducting student field trips, planning banquets, and conducting parent/teacher conferences. Edwards and Briers also (1999) listed several classroom procedure tasks such as utilizing seating charts and rotational plans for special grouping and maintaining progress charts as low need levels as perceived by teachers.

Based on the individual responses of this study, the highest level of perceived need by overall competency area is community concerns followed by FFA competencies. Research by Edwards and Briers (1999) supported this finding as they reported the highest ranked in-service needs to be assisting students in preparing for and succeeding in FFA degree and award programs and using support groups to publicize the program. Additionally, maintaining an advisory committee, and utilizing an advisory committee to promote the local agriculture and FFA programs, acquire resources to support the local program and utilizing advisory committee members as resources for classroom, laboratory, SAE, and FFA activities were identified by Joerger (2002) as the highest in-service needs of beginning agricultural education teachers.

The least level of need by competency area was in the capacities of classroom and personal management. Mundt and Connors (1999) contradicted these findings as they indicated

classroom management/student discipline, and time/organizational management to be areas in which beginning agricultural teachers identified as the most pressing challenges. Edwards and Briers (1999) also found the highest ranked in-service needs to be balancing quality time among different life roles such as teacher, spouse, or parent.

Participants were asked to indicate their preferred forms of in-service delivery for possible future in-service programs. Based on the responses, teachers strongly favor Summer PLU courses, followed closely by Midwinter and Summer Conference breakout sessions as their preferred form of in-service delivery. The least favorable forms of delivery are weekday and Saturday workshops during the school year. These responses are logical due to the fact that agriculture teachers' time during the school year is spent working with students in various capacities and they have little time to spare for in-service training.

Additionally, several conclusions can be made about the demographic makeup of middle school agriculture teachers in Georgia. Most of the teachers are females, under the age of 34 with less than 10 years of teaching experience. Therefore, most of the middle school agriculture teachers in Georgia are relatively new, "untraditional" teachers of agriculture.

The most surprising finding from this study regards teaching experience. Approximately 68% of middle school agriculture teachers in Georgia have less than 5 years experience teaching agriculture and 41% have less than 5 years total teaching experience. Most recent agricultural education literature focusing on beginning teacher professional development needs considers teachers with zero to five years of teaching experience as beginning teachers (Washburn and Dyer, 2006). Therefore, it can be concluded that most middle school agriculture teachers in Georgia are indeed beginning teachers.

According to the findings of this study, in-service programs offered to Georgia middle school agriculture teachers should focus on topics that will help teachers utilize and incorporate



community organizations in their agricultural programs. Topics relevant to FFA issues, especially in the area of recordkeeping should also be addressed to assist middle school teachers in improving their FFA chapters. These topics should also be addressed by university teacher education programs throughout Georgia to better prepare their students for possible teaching positions on the middle school level.

Considering the fact that the majority of respondents fall into the category of new or beginning teachers, much of this research can be compared to other studies related to needs of beginning teachers. Previous needs assessment research has actually primarily been conducted on beginning teachers in agricultural education (Duncan, Ricketts, Peake, and Uessler, 2006; Edwards and Briers, 1999; Garton and Chung, 1996, 1997; Heath, Dimock, Adams, and Zuhn, 1999; Joerger, 2002; Layfield and Dobbins, 2002; Mundt and Connors, 1999). Each assessment resulted in similar yet different needs among participants. Garton and Chung (1996 & 1997) found completing reports for local/state administrators, motivating students to learn, preparing FFA degree applications, and developing an effective public relations program to have the highest levels of need among beginning agriculture teachers. Mundt and Connors (1999) found classroom management/student discipline, time/organizational management, and managing the activities of the FFA chapter to be perceived needs of beginning agricultural teachers. Edwards and Briers (1999) found assisting students in preparing for and succeeding in FFA degree and award programs; using the Internet as a teaching tool; balancing time among personal and professional life; and using support groups to promote the program to be highly ranked in-service needs. Joerger (2002) found issues related to maintaining and utilizing an advisory council and its members to be the highest in-service needs in his study of beginning agricultural education teachers. Dormody and Torres (2002), who studied teachers with 10 years of teaching experience or less specifically, reported that the competency needing the most in-service preparation for both beginning and experienced teachers was using technology in

the classroom. Edwards and Briers (1999) and Peiter et al. (2003), who also specifically studied beginning teachers, found assistance was needed in the areas of computer-assisted instruction and implementing other new technologies.

Other studies have sought to determine the in-service needs of experienced as well as beginning teachers. Layfield and Dobbins (2002) and Washburn et al. (2001) identified using computers and technology in classroom teaching as high need areas. Layfield and Dobbins (2002) also reported preparing FFA degree applications; preparing FFA proficiency award applications; using multimedia equipment in teaching; and teaching recordkeeping skills as in-service areas with high need levels. They also identified the highest perceived level of needs for beginning agricultural education teachers to be utilizing a local advisory committee; developing local adult education programs; organizing fund-raising activities for the local FFA chapter; preparing agricultural/FFA contest teams; and developing supervised agricultural educational opportunities for students (Layfield and Dobbins, 2002). Duncan, Ricketts, Peake, and Uessler (2006) identified the need for assistance with advising students who have an interest in post-secondary education, preparing various FFA applications, and developing an effective public relations program as high need level constructs of agriculture teachers.

The results of this study yielded slightly different yet somewhat similar results from these previous studies related to beginning teacher's needs. Classroom management, public relations, balancing priorities and coordinating activities with local agricultural organizations and agencies seem to be recurring needs found among teachers, whether beginning or experienced, middle school or high school. Newer studies, like this, find less need for utilizing and implementing technology in the classroom which is not surprising with the rapid increase of technology use in today's society.

## Implications and Recommendations

The results of this study will assist Georgia State Staff and GVATA leadership in preparing in-service agricultural education programs, breakout sessions and professional development opportunities for middle school agriculture teachers. Results may also be used by agricultural education teacher education programs to supplement their curriculum to address some of the issues identified by the participants. Recommendations are specific to middle school agriculture teachers in Georgia, however, other states could benefit from the findings and suggestions as well. Or perhaps, other states could model a need assessment after this study to determine needs specific to their programs since Roberts and Dyer (2004) remind us that programs are state driven and therefore needs will vary from state to state. It is also important to realize that “perceived needs may be different from actual needs” (Cannon, Kitchell and Duncan (2010).

Layfield and Dobbins (2002) noted that beginning teachers often have different needs than experienced teachers. Based on the demographic data, it can be concluded that there is a potential need for mentoring programs due to the large number of young middle school agriculture teachers with few years of experience. It can also be concluded that this needs assessment would need to be administered again in a few years to reevaluate the needs of these teachers as their experience levels change.

Further research related to this study could be conducted in several areas. First, this study could be expanded to include middle school agriculture teachers from other states. Second, a study could be conducted to determine if there are any similarities or differences in the needs of middle school agriculture teachers and high school agriculture teachers. Third, a more in-depth study of Georgia middle school agriculture teachers could be conducted to determine if

need levels are affected by factors such as age, teaching experience, geographic location, or type of community. And finally, this study should be administered again in five to ten years to determine if any changes have occurred in teacher needs. Birkenholz and Harbstreit (1986) reported that in-service coordinators should periodically monitor the needs of teachers since they change over time and provide in-service programs based upon current needs.

Meeting all of the in-service needs of all teachers and programs is difficult, if not impossible, due to the wide range of middle school content and variety of programs across the state (Ewing et al, 2009). However, if middle school agriculture teachers are to be kept up to date with curriculum, technology and changing program requirements, it is imperative that an effort be made to identify current needs and trends related to middle school agriculture.

With the steady increase in middle school agricultural education programs across the state, identifying any trends in middle school agricultural education will be beneficial in determining the direction of these new programs. More specifically, determining the needs of this group of teachers will help provide adequate training to ensure that middle school teachers have ample opportunities to be successful both inside and outside of the classroom. Successful teachers will lead successful programs which will directly impact high school agricultural education programs that feed off of these middle school programs.

## References

- American Association for the Advancement of Science (1993). *Project 2061 – Science for all Americans*. Washington, D.C.: Author
- Anderman, E.M. & Maehr, M.L. (1994). Motivation and schooling in the middle grades. *Review of Educational Research*, 64 (2), 287-309.
- Anderson, T., Barrick, R., & Hughes, M. (1992). Responsibilities of teacher education for vocational teacher professional development programs. *Journal of Agricultural Education*, 43-50, <http://dx.doi.org/10.5032/jae.1992.02043>
- Barrick, K., Ladewig, H., & Hedges, L. (1983). Development of a systematic approach to identifying technical inservice needs of teachers. *The Journal of American Association of Education* , 21 (1), 13-19.
- Baruch, Y. (1999). Response rate in academic studies-A comparative analysis. *Human relations*, 52(4), 421-438, <http://dx.doi.org/10.1177/001872679905200401>
- Ball, D.L. (1996). *Teacher learning and the mathematics reforms: What we think we know and what we need to learn*. PhiDelta Kappan, 77(7), 500-508.
- Berns, R. G. (1990). *The relationship between Vocational Teacher job satisfaction and teacher retention using discriminant analysis*. Paper presented at the Annual Convention of the American Vocational Association, Cincinnati, OH.
- Birkenholz, R., & Harbstreet, S. (1987). Analysis of the inservice needs of beginning vocational agriculture teachers. *Journal of the American Association of Teacher Educators in Agriculture* , 28 (1), 41-49.
- Birman, B. F., Desimone, L., Porter, A. C., & Garet, M. S. (2000). Designing professional development that works. *Educational leadership*, 57(8), 28-33.
- Blum, R. W., & Libbey, H. P. (2004). School connectedness—Strengthening health and Education outcomes for teenagers. *Journal of School Health*, 74, 229–299.
- Bogges, J. (1985). *Major problems encountered in teaching vocational agriculture as perceived by women vocational agriculture teachers*. Morgantown: West Virginia University.

- Bruening, T. H., & Hoover, T. S. (1991). Personal life factors as related to effectiveness and satisfaction of secondary agricultural teachers. *Journal of Agricultural Education*, 32(4), 37-43, <http://dx.doi.org/10.5032/jae.1991.04037>
- Cannon, J.G, Kitchel, A, Duncan, D.W. (2010). Identifying perceived professional development needs of Idaho secondary CTE teachers: Program management needs of skilled and technical science teachers. *Journal of Industrial Teacher Education*, 47(1).
- Castellano, M., Stringfield, S., & Stone III, J. R. (2003). Secondary career and technical education and comprehensive school reform: Implications for research and practice. *Review of Educational Research*, 73(2), 231-272.
- Castillo, J.X. & Cano, J. (1999). A comparative analysis of Ohio agriculture teachers' level of job satisfaction. *Journal of Agricultural Education* , 40 (4), 67-79, <http://dx.doi.org/10.5032/jae.1999.04067>
- Claycomb, D., & Petty, G. (1983). A three year longitudinal study of the perceived needs for assistance as ranked by vocational agriculture instructors. *Journal of the American Association of Teacher Educators in Agriculture* , 24 (4), 29-33.
- Cole, L. (1983). Oregon Vocational Agriculture Teacher Placement and Retention Factors. Paper presented at the American Vocational Association Convention: Anaheim, CA.
- Cooper, E., & Nelson, C. (1981). Professionalism: spouse and house. *The Agricultural Education Magazine* , 54 (1), 17-18.
- Coughlin, M.T., Lawrence, L.D., Gartin, S.A., Templeton, M.E. (1987). Benefits and problems experienced by spouses of vocational agriculture teachers in West Virginia. *Journal of Agricultural Education* , 53-57.
- Creswell, J. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches, 3rd Ed.* Thousand Oaks, CA: Sage Publications.
- Doerfert, D. L. (Ed.) (2011). *National research agenda: American Association for Agricultural Education's research priority areas for 2011-2015.* Lubbock, TX: Texas Tech University, Department of Agricultural Education and Communications.
- Dormody, T. J., & Torres, R. M. (2002). A follow-up study of agricultural education program graduates on teaching competencies. *Journal of Agricultural Education*, 43(4), 33-45, <http://dx.doi.org/10.5032/jae.2002.04033>
- Duncan, D.W., Ricketts, J.C., Peake, J.B., Uessler, J. (2005). *Identifying Teaching and Learning In-Service Needs of Gerogia Agriculture Teachers.* National AAAE Research Conference.

- Duncan, D.W., Ricketts, J.C., Peake, J.B., Uessler, J. (2006). Teacher Preparation and Inservice Needs of Georgia Agriculture Teachers. *Journal of Agriculture Education*, 47(2).
- Durlak, J.A., et. al. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82 (1), 405-432
- Edwards, M.C. & Briers, G.E. (1999). Assessing the in-service needs of entry-phase agriculture teachers in Texas: A discrepancy model versus direct assessment. *Journal of Agricultural Education*, 40(3), 40-49.
- Eichhorn, D.H. (1966). *The middle school*. New York: The Center for Applied Research in Education.
- Elbert, C. D., & Baggett, C. D. (2003). Teacher competence for working with disabled students as perceived by secondary level agricultural instructors in Pennsylvania. *Journal of Agricultural Education*, 44(1), 105-115.
- Elias, M. J., Zins, J. E., Weissberg, R. P., Frey, K. S., Greenberg, M. T., Haynes, N. M., et al. (1997). Promoting social and emotional learning: Guidelines for educators. Alexandria, VA: Association for Supervision and Curriculum Development.
- Ewing, J.C., Gill, B., Radhakrishna, R., & Clark, R. (2009, November). *In-service needs of Pennsylvania agricultural education teachers*. Proceedings of the Association for Career and Technical Education Research and Professional Development Conference, Nashville, TN.
- Flanders, F. (1998). *Middle school biotechnology in agricultural education*. Atlanta, GA: Department of Education.
- Flowers, N., & Mertens, S. B. (2003). Professional development for middle-grades teachers: Does one size fit all? In P. G. Andrews & V. Anfara, Jr. (Eds.), *Leaders for a movement: Professional preparation and development of middle level teachers and administrators* (pp. 145-160). Greenwich, CT: Information Age Publishing.
- Forte, I. & Schurr, S. (1993). *The definitive middle school guide*. Tennessee: Incentive Publications, Inc.
- Frick, M. (1993). Developing a national framework for a middle school agricultural education curriculum. *Journal of Agricultural Education* , 77-84, <http://dx.doi.org/10.5032/jae.1993.02077>
- Fuller, F.F. (1969). Concerns of teachers: A developmental conceptualization. *American Educational Research Journal*, 6(2),207-226.

- Garton, B., & Chung, N. (1996). The inservice needs of beginning teachers of agriculture as perceived by beginning teachers, teacher educators and state supervisors. *Journal of Agricultural Education* , 37 (3), 52-58, <http://dx.doi.org/10.5032/jae.1996.03052>
- Georgia Agricultural Education Curriculum Office (2000). *Curriculum framework for agricultural education in Georgia*. Athens: Georgia Department of Education.
- Georgia Vocational Agriculture Teachers Association. (2010).  
Georgia Vocational Agriculture Teachers Association: <http://www.gvata.org/index.php>
- Goodland, J. (1983). *A place called school*. New York: McGraw-Hill.
- Grady, T. L., & Burnett, M. F. (1985). The relationship between job satisfaction and performance of vocational agriculture teachers. *Journal of Vocational Education Research*, 10(3), 53-69.
- Guskey, T.R. (2000). *Evaluating professional development*. California: Corwin Press.
- Hachmeister, M. (1981). *Meeting needs of first and second year teachers*. Chicago.
- Heath, M., Dimock, K. V., Adams, S., & Zuhn, J. (1999). *Restructuring teaching with technology and constructivism*. Paper presented at the Society for Information Technology and Teacher Education International Conference (SITE).
- Heller, H., Clay, R., & Perkins, C. (1992). Factors related to teacher job satisfaction and dissatisfaction. *Journal of School Research and Information* , 10 (1), 20-24.
- Hughes, M., & Barrick, R. (1993). A model for agricultural education in public schools. *Journal of Agricultural Education* , 59-67, <http://dx.doi.org/10.5032/jae.1993.03059>
- Jackson, A. W., & Davis, G. A. (2000). *Turning points 2000: Educating adolescents in the 21st century*. New York: Teachers College Press.
- Joerger, R. (2002). A Comparison of the in-service education needs of two cohorts of beginning Minnesota agricultural education teachers. *Journal of Agricultural Education* 43(3), 11-24.
- Johnston, J.H. & Markle, G.C. (1986). *What research says to the middle level practitioner*. Ohio: National Middle School Association.
- Kahler, A. (1974). *Organization and instructional problems of beginning teachers of vocational agriculture*. Ames: Iowa State University, Department of Agricultural Education.
- Killion, J. (1999). *What works in the middle: Results-based staff development*. Oxford, OH: National Staff Development Council.

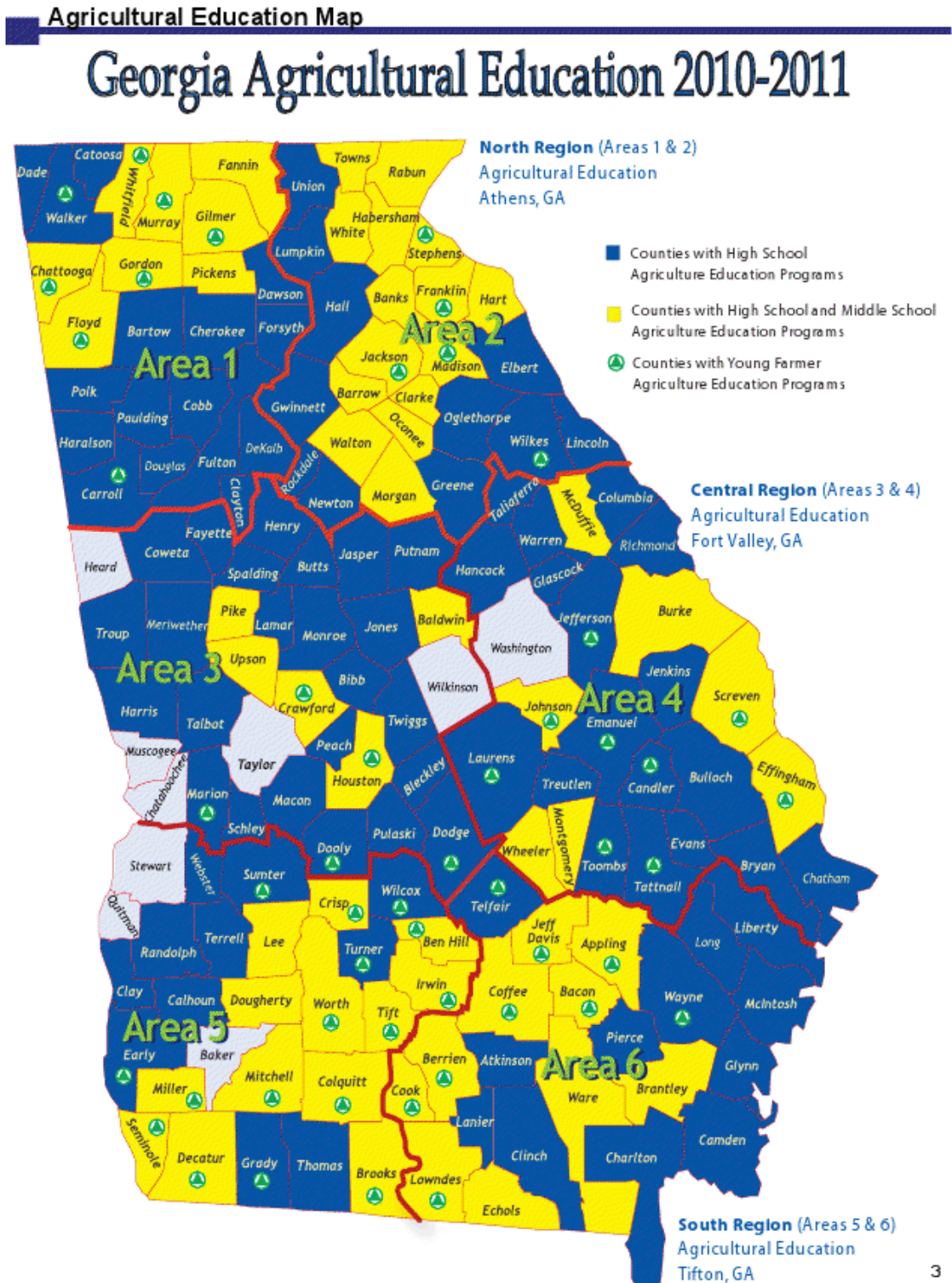


- Johnson, D. M. (1995). Arkansas agriculture teachers' opinions concerning science credit for agriculture. Proceedings of the 22<sup>nd</sup> Annual National Agriculture Education Research Meeting, Denver, CO.
- Larsen, C. (1992). Teaching effectiveness: A principal's view. *The Agricultural Education Magazine*, 65(3), 12-13.
- Layfield, K., & Dobbins, T. (2002). Inservice needs and perceived competencies of South Carolina agricultural educators. *Journal of Agricultural Education* , 43 (4), 46-55, <http://dx.doi.org/10.5032/jae.2002.04046>
- Lobosco, A. F., & Newman, D. L. (1992). Teaching special needs populations and teacher job satisfaction implications for teacher education and staff development. *Urban Education*, 27(1), 21-31.
- Locke, E. (1976). *The nature and causes of job satisfaction*. In M. D. Dunnett (ed.), *Handbook of Industrial and Organizational Psychology* New York: Wiley.
- Lounsbury, J (1984). *Perspectives*. Ohio: National Middle School Association.
- Mattox, K. (1974). Why teachers quit. *The Agricultural Education Magazine* , 47 (6), 140-142.
- McEwin, C., & Thomason, J. (1989). *Who they are - how we teach*. Columbus, OH: National Middle School Association.
- Merenbloom, E.Y. (1988) *Developing effective middle schools*. Ohio: National Middle School Association.
- Mertler, C. (1992). *Teacher motivation and job satisfaction of public school teachers*. The Ohio State University.
- Mfozi, M. (1982). *Factors influencing supervision and success of students' occupational experience programs as perceived by vocational agriculture teachers*. University of Morgantown.
- Miller, W. W., Kahler, A. A., & Rheault, K. (1989). Profile of the effective vocational agriculture teacher. *Journal of Agricultural Education*, 30(2), 33-40, <http://dx.doi.org/10.5032/jae.1989.02033>
- Moir, E. (1990). *Phases of first-year teaching*. Santa Cruz, CA: University of California, New Teacher Center.
- Moore, G. (1987). The status of agricultural education prior to the Smith-Hughes Act. *The Agricultural Education Magazine* , 59 (8).

- Mundt, J.P., & Connors, J. J. (1999). Problems and challenges associated with the first years of teaching agriculture: A framework for pre-service and in-service education. *Journal of Agricultural Education*, (40)1, 38-48, <http://dx.doi.org/10.5032/jae.1999.01038>
- National Association of Agricultural Educators. (2010). National Association of Agricultural Educators: <http://www.naae.org/about/memberservices/>
- National FFA Organization (2010). *Official FFA manual*. Indiana: National FFA Organization.
- National Middle School Association. (2003). *This we believe*. Westerville, Ohio: National Middle School Association.
- National Research Council. (1988). *Understanding agriculture: New directions for education*. Washington D.C.: National Academy Press.
- Nesbitt, D. L., & Mundt, J. P. (1993). An evaluation of the University of Idaho beginning agriculture teacher induction program. *Journal of Agricultural Education*. 34(2), 11-17, <http://dx.doi.org/10.5032/jae.1993.02011>
- Newman, M. E., & Johnson, D. (1994). Inservice education needs of teachers of pilot agriscience courses in Mississippi. *Journal of Agricultural Education* , 35 (1), 55-60, <http://dx.doi.org/10.5032/jae.1994.01054>
- Newmann, F.M., & Associates. (1996). *Authentic achievement: Restructuring schools for intellectual quality*. San Francisco: Jossey-Bass.
- Peiter, R. L., Terry, R., Jr., & Cartmell, D. D. II. (2003). Mentoring first year agricultural education teachers. *Journal of Southern Agricultural Education Research*, 53(1), 171-181, <http://dx.doi.org/10.5032/jae.2005.01011>
- Pescatore, A.J., Harter-Dennis, J.M (1987). A case study of a nontraditional way to teach a course to the nonagricultural public. *North American College and Teachers of Agriculture Journal*, 31(2).
- Richardson, V. (2003). The dilemmas of professional development. *Phi Delta Kappan*, 84(5), 401-407.
- Roberts, T., & Dyer, J. (2004). Inservice needs of traditionally and alternatively certified agriculture teachers. *Journal of Agricultural Education* , 44 (4), 57-70, <http://dx.doi.org/10.5032/jae.2004.04057>
- Rosetti, R., Padilla, D., & McCaslin, N.L. (1992). *A nationwide examination of middle School enrollment in agricultural education and membership in the National FFA Organization*. Columbus, OH: The Ohio State University, Department of Agricultural Education.

- Rudd, R., & Hillison, J. (1995). Teacher characteristics related to the adoption of agriscience curriculum in Virginia middle school agriculture education programs. *Journal of Agricultural Education*, 36 (2), 19-27, <http://dx.doi.org/10.5032/jae.1995.02019>
- Smith-Hughes Act. (1917). *The National Vocational Education Act*. Public Law No. 347. Sixty-fourth Congress. S 703.
- Sofranko, A.J., & Khan, A. (1988). It's not that simple. *Journal of Extension*, 26 (4), 1-5.
- Stair, K. S., & Moore, G. E. (2010). Including Special Needs Students in Ag Ed. *Techniques: Connecting Education and Careers*, 85(4), 52-55.
- Thompson, G. W., & Balschweid, M. M. (2000). Integrating science into agriculture programs: Implications for addressing state standards and teacher preparation programs. *Journal of Agricultural Education*, 41(2), 73-80, <http://dx.doi.org/10.5032/jae.2000.02073>
- Tyler, R. (1971). *Basic principles of curriculum and instruction*. Chicago, IL: University of Chicago Press.
- Varah, L.J., Theune, W.S., Parker, L. (1986) Beginning teachers: Sink or swim? *Journal of Teacher Education*, 37 (1), 30-34, <http://dx.doi.org/10.1177/002248718603700107>
- Veenman, S. (1984). *Perceived problems of beginning teachers*. *Review of Educational Research*, 54(2).
- Walker, W. D., Garton, B. L., & Kitchel, T. J. (2004). Job satisfaction and retention of secondary agriculture teachers. *Journal of Agricultural Education*, 45(2), 28-38, <http://dx.doi.org/10.5032/jae.2004.02028>
- Washburn, S. G., & Dyer, J. E. (2006). Inservice needs of beginning agriculture teachers. *Proceedings of the 33rd National Agricultural Education Research Conference*, 33, 577-589.
- Washburn, S., King, B., Garton, B., & Harbstreit, S. (2001). A comparison of the professional development needs of Kansas and Missouri teachers of agriculture. *Proceedings of the 28th National Agricultural Education Research Conference*, 28, pp. 396-408.
- Weller, D. R., & McLeskey, J. (2000). Block Scheduling and Inclusion in a High School Teacher Perceptions of the Benefits and Challenges. *Remedial and Special Education*, 21(4), 209-218.

Appendix 1. Georgia Agricultural Education Map



Appendix 2. IRB Approval

**AUBURN UNIVERSITY INSTITUTIONAL REVIEW BOARD for RESEARCH INVOLVING HUMAN SUBJECTS**  
**RESEARCH PROTOCOL REVIEW FORM**

For information or help contact THE OFFICE OF RESEARCH COMPLIANCE, 115 Ramsay Hall, Auburn University  
 Phone: 334-844-5966 e-mail: hsubject@auburn.edu Web Address: http://www.auburn.edu/research/vpr/ohsr/

Revised 03.26.11 - DO NOT STAPLE, CLIP TOGETHER ONLY.

Save a Copy

1. PROPOSED START DATE of STUDY: Jul 1, 2012

PROPOSED REVIEW CATEGORY (Check one): FULL BOARD EXPEDITED  EXEMPT

2. PROJECT TITLE: Assessing the Needs of Middle School Agriculture Teachers in Georgia

3. Mary E. Golden Student Career & Technical 229-873-2369 meg0022@tigermail.auburn.edu  
 PRINCIPAL INVESTIGATOR TITLE DEPT PHONE AU E-MAIL

1499 JP Perry Rd Norman Park, GA 31771 FAX bgolden@tiftschools.com  
 MAILING ADDRESS ALTERNATE E-MAIL

4. SOURCE OF FUNDING SUPPORT:  Not Applicable  Internal  External Agency:  Pending  Received

5. LIST ANY CONTRACTORS, SUB-CONTRACTORS, OTHER ENTITIES OR IRBs ASSOCIATED WITH THIS PROJECT:

6. GENERAL RESEARCH PROJECT CHARACTERISTICS

<p>6A. Mandatory CITI Training</p> <p>Names of key personnel who have completed CITI:                  Mary E. Golden                  Brian Parr ✓</p> <p>CITI group completed for this study:  <input checked="" type="checkbox"/> Social/Behavioral <input type="checkbox"/> Biomedical</p> <p><b>PLEASE ATTACH TO HARD COPY ALL CITI CERTIFICATES FOR EACH KEY PERSONNEL</b></p>	<p>6B. Research Methodology</p> <p>Please check all descriptors that best apply to the research methodology:                  Data Source(s): <input checked="" type="checkbox"/> New Data <input type="checkbox"/> Existing Data                  Will recorded data directly or indirectly identify participants?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                  Data collection will involve the use of:  <input type="checkbox"/> Educational Tests (cognitive diagnostic, aptitude, etc.)  <input type="checkbox"/> Interview / Observation  <input type="checkbox"/> Physical / Physiological Measures or Specimens (see Section 6C)  <input checked="" type="checkbox"/> Surveys / Questionnaires  <input type="checkbox"/> Internet / Electronic  <input type="checkbox"/> Audio / Video / Photos  <input type="checkbox"/> Private records or files</p>
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The Auburn University Institutional Review Board has approved this document for use from 2/1/12 to 1/17/13  
 Protocol # 12-014 EP 1202

<p>6C. Participant Information</p> <p>Please check all descriptors that apply to the participant population.  <input checked="" type="checkbox"/> Males <input checked="" type="checkbox"/> Females <input type="checkbox"/> AU students                  Vulnerable Populations  <input type="checkbox"/> Pregnant Women/Fetuses <input type="checkbox"/> Prisoners  <input type="checkbox"/> Children and/or Adolescents (under age 19 in AL)</p> <p>Persons with:  <input type="checkbox"/> Economic Disadvantages <input type="checkbox"/> Physical Disabilities  <input type="checkbox"/> Educational Disadvantages <input type="checkbox"/> Intellectual Disabilities</p> <p>Do you plan to compensate your participants? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>6D. Risks to Participants</p> <p>Please identify all risks that participants might encounter in this research.  <input checked="" type="checkbox"/> Breach of Confidentiality* <input type="checkbox"/> Coercion <input type="checkbox"/> Deception <input type="checkbox"/> Psychological <input type="checkbox"/> None                  FEB 07 2012                  Research Compliance</p> <p>*Note that if the Investigator is using or accessing confidential or identifiable data, breach of confidentiality is always a risk.</p>
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Do you need IBC Approval for this study?  No  Yes - BUA # \_\_\_\_\_ Expiration date \_\_\_\_\_

**FOR OHSR OFFICE USE ONLY**

DATE RECEIVED IN OHSR: 2-7-12 by GB	PROTOCOL # 12-014 EP 1202
DATE OF IRB REVIEW: 3-21-12 by kje	APPROVAL CATEGORY: 45CFR 46.110 (7)
DATE OF IRB APPROVAL: _____ by _____	INTERVAL FOR CONTINUING REVIEW: 1 year
COMMENTS: original in 1/11/12 revisions reviewed by SRA 2/7/12 + 2/17/12	