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# Administrator Perceptions of Factors Distinguishing School-Based Agricultural Education Programs as Successful

McKinley Hunter

# ADMINISTRATOR PERCEPTIONS OF FACTORS DISTINGUISHING SCHOOL-BASED AGRICULTURAL EDUCATION PROGRAMS AS SUCCESSFUL

by

McKinley Blassingame Hunter

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## DEDICATION

This dissertation is dedicated to my students that I may better serve you. For all the ones who called me Ms. Blassingame and Mrs. Hunter, and to the ones who will call me Dr. Hunter- you can do anything you put your mind to!

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## ABSTRACT

Agricultural education is a vital component of the Career, Technical, and Agricultural Education (CTAE) framework that encompasses classroom instruction, supervised agricultural experience (SAE), and involvement in the National FFA Organization. This study gathered Georgia high school administrators' perceptions of factors distinguishing school-based agricultural education (SBAE) programs as successful. Administrators identified various components important to program success for each are of the agricultural three-component model. Administrators in this study, prioritized involvement in the National FFA Organization over the other constructs, indicating that the traditional view of the three-component model can be dependent upon local needs and priorities. This research can be used to better understand the factors of success in an SBAE program.

*Keywords: school-based agricultural education, success, administrator perceptions*

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# CHAPTER I:

# INTRODUCTION

Agricultural education, a part of the Career, Technical, and Agricultural Education (CTAE) framework, is available in all fifty states across the United States. The agricultural education curriculum encompasses classroom and laboratory instruction, experiential learning, student leadership, and personal development opportunities. This curriculum is better illustrated using a triple Venn diagram titled the Three-Component Model. Within this area, students enrolled in school-based agricultural education (SBAE) programs receive classroom/laboratory instruction, conduct supervised agricultural experience programs, and participate in a student organization, the National FFA.

Over the past decade, there has been an increase in research conducted about the agricultural education profession concerning content expertise, self-efficacy, pre-service qualifications, barriers to student involvement in SBAE programs, and teacher attrition. Add in the addition of elementary agricultural education in Georgia, and a new wealth of knowledge must be considered and evaluated. What about the agriculture teachers whose programs have yet to get it "right" and who are still striving for success as determined by *who?* While agriculture teachers collaborate through online platforms, the programs' similarities vary significantly from one state to another, considering differences in grade levels, cities, states, and geographical regions. Are there also pre-established notions, dependent on local leadership, as to how SBAE programs should look to be considered successful?

## Purpose of Study

This study investigates high school administrators' perceptions of the key factors contributing to the success of SBAE programs. The study sought to gain insights into what administrators perceive as successful agriculture programs, classify program implementation

ideas based on the three-component model's standards, and identify the significance administrators place on classroom/laboratory instruction, supervised agricultural experience (SAE) programs, and participation in FFA.

**Research Questions and Hypothesis**

RQ1: What defines school-based agricultural education programs, as defined by administrators, as successful?

RQ2: Do administrators value local, state, or national participation more?

$H_o1$: Complete implementation of the three-component model defines school-based agricultural education programs as successful.

$H_o2$: Administrators value local participation over state or national participation.

**Significance of the Study**

This study aims to determine what factors high school administrators use to distinguish SBAE programs as successful. There are over 800,000 students enrolled in agricultural education programs throughout 50 states and three U.S. territories (National FFA Organization, 2023c). School systems have diverse expectations for their agricultural educators and program implementation throughout these programs. The number of students participating in SBAE programs increases each year, as does the number of pre-service teachers entering the field of agricultural education; yet, there is not common ground as to what successful SBAE programs look like. This study provided agricultural educators with a basis for how to run a successful SBAE program to meet the unspecified requirement of being “successful.” Additionally, this study opened a topic of discussion to streamline how agricultural education programs should be structured to meet students' needs and administrator perceptions better.

**Definitions**

1. **Agricultural Education-** systematic instruction that prepares students for successful careers in the global agriculture, food, fiber, and natural resources systems using the Three-Component Model (National FFA Organization, 2023c)
2. **Authentic-** describes something as true, genuine, trustworthy, or reliable (Radde-Antweiler, 2013)
3. **CTE-** intracurricular organizations with leadership programs and competitive events helping students see the real-world value of their academic studies (Georgia CTSO, 2023)
4. **Morrill Land Grant Act of 1862-** allowed states to establish public colleges for agricultural and mechanical arts funded by the development or sale of federal land grants (National Archives, 2023)
5. **National FFA Organization-** A Career Technical Student Organization, formerly referred to as Future Farmers of America, that changes lives and develops members' potential through premier leadership, personal growth, and career success through agricultural education (National FFA Organization, 2023d)
6. **Perkins Act-** also called Perkins, Perkins V, or Perkins Vocational Act; authorizes federal funds to support vocational education programs (National Association of Special Education Teachers, 2023)
7. **School-Based Agricultural Education-** a system of delivering agricultural innovations, guided by an experiential learning model, in non-dormitory, post-primary schools**;** follows the Three-Component Model (School-Based Agricultural Education, 2023)

8. **Smith Hughes Act-** also referred to as National Vocational Education Act; act that provides federal aid to states to promote collegiate vocational education in agriculture and related trades and industry; adopted by U.S. legislation in 1917 (Steffes, 2020; Arrington, 2022)
9. **Supervised Agricultural Experience (SAE)-** an after-school project that encompasses "learning by doing" that gives students hands-on training through goal setting, planning, and record-keeping (Kennedy, 2009; Pollard, 2020)
10. **Three-Component Model- a** visual model that displays the correlation of and interrelationships between classroom/laboratory instruction, SAE, and FFA (Phipps et al., 2008; Atkinson, 2020; Pollard, 2020)
11. **Vocational Education-** sometimes referred to as Career Technical Education (CTE); educational programs designed to prepare students for occupations in agriculture, automotive, healthcare, business, construction, culinary arts, technology, and many others
12. **Vocational Education Act of 1963-** enacted by Congress in 1963 to enhance vocational education by bringing on-the-job training into the classroom **(**Kliever, 1965)

**Summary**

Agricultural education is vital to the Career, Technical, and Agricultural Education (CTAE) framework. It is accessible across all 50 states in the U.S., offering diverse opportunities for students to learn about the industry. This study focused on the perspectives of high school administrators regarding the key factors that define a school-based agricultural education program's success. The research explored various research questions stemming from the Three-Component Model (classroom/laboratory instruction, SAE, and FFA) to identify the criteria for the success of agricultural education program components. With nearly 1 million students

participating in agricultural education nationwide, program expectations and implementation variations are evident. This study's significance lies in the potential to guide agricultural educators in creating successful programs and opening discussions on standardizing SBAE programs to better meet the needs of students.

# CHAPTER II:

# LITERATURE REVIEW

## The History of Agricultural Education

The Smith Hughes Act of 1917, sometimes called the National Vocational Education Act, is credited with starting agricultural education in public schools when federal aid was provided to states to promote vocational education and industrial trade (True, 1929). However, according to Herren and Hillison (1996), the relationship between agricultural education and land-grant universities associated with the Morrill Land Grant Act of 1862 far preceded the well-known act in 1917. Most agricultural education teacher training still takes place at land-grant universities, which offer a great content source for agricultural education teachers (Herren & Hillison, 1996). Unfortunately, it took many attempts from multiple people to establish land-grant universities, and there were struggles along the way (Duemer, 2007; Herren & Hillison, 1996).

The creation of the Morrill Act and the United States Department of Agriculture (USDA) in 1862 was crucial to the Republicans' state-building agenda (Sorber, 2018). Representative Justin S. Morrill of Vermont created the Morrill Act in 1862 based on his belief that public lands could be better utilized, inefficient farming methods, and insufficient educational facilities for mechanical arts (Duemer, 2007). The Morrill Land Grant Act of 1862 issued 30,000 acres of federal land to states to establish colleges to teach agriculture and mechanical arts (Sorber, 2018). Land grant colleges later expanded access to higher education for students from disadvantaged backgrounds (Sorber, 2018). Through this westward expansion, the Morrill Act began grants for educational advancement (Duemer, 2007), placing the United States as a leader among nations in agricultural production (Lee et al., 2022).

While Georgia's Senator Hoke Smith and Representative Dudley Hughes were undoubtedly instrumental in the 1917 legislation act (Fristoe, 2017), they are not the only parties

responsible for the six years of effort it took for the bill to become law (Lee et al., 2022). Senator Carroll Page and his chief advisor, Charles Prosser, were passionate about vocational education and worked alongside legislators to block the passage of poorly written, underfunded bills and gather support for federal legislation for appropriate vocational education support (Lee et al., 2022). Prosser believed that "the purpose of vocational education is to help a person secure a job, train him so that he can hold it after he gets it, and assist him in advancing to a better job" (Lee et al., 2022, p. 48). His support for vocational education showed in his position as president of the Indiana Teachers Association and deputy superintendent and secretary of the National Society for the Promotion of Industrial Education (Lee et al., 2022). On December 7, 1915, Hoke Smith introduced his vocational education bill with the support of Charles Prosser. Georgia Representative Dudley Hughes introduced the Smith Hughes bill to legislation two days later, and in February 1917, the bill became law (Lee et al., 2022).

Career and technical education (CTE), formerly vocational education, has always been highly dependent on federal legislation and funding (Friedel, 2011). The passing of the Smith Hughes Act in 1917 granted public funding for vocational education, allotting $1.7 million for fiscal year 1918 (Friedel, 2011). States were required to create a State Board of Vocational Education to demonstrate their compliance with the federal government's funding, school equipment and courses, teacher training, and the advancement of vocational education (Friedel, 2011). The Smith Hughes Act was later amended to the Vocational Education Act of 1963 and further amended in 1968 and 1976 (Friedel, 2011).

The partnership established by the Smith Hughes Act between local, state, and federal governments has evolved over the last century and is now known as the Perkins Act (Manley, 2011). Acting as the primary funding source for vocational education in the United States, the

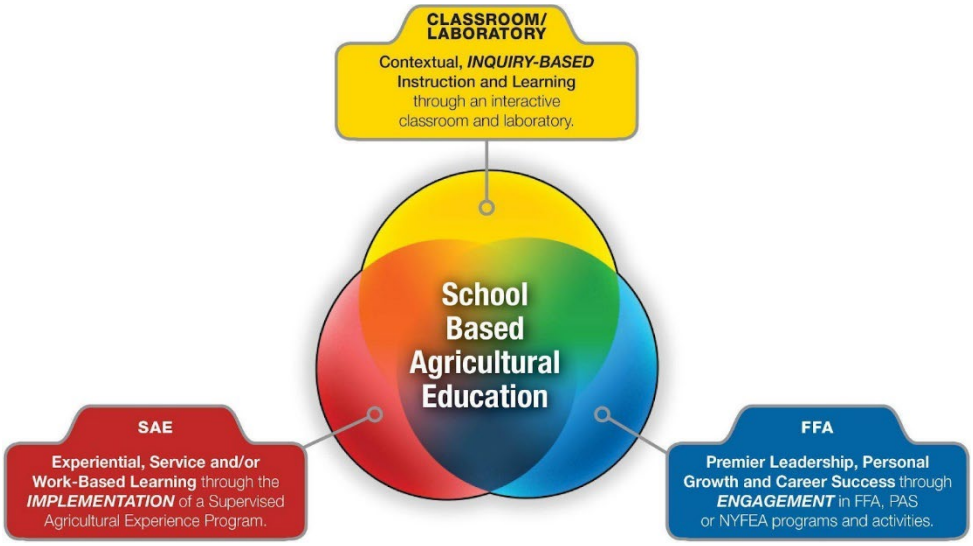
Carl D. Perkins legislation traces its origins back to the Smith Hughes Act of 1917. Still, it underwent significant changes between 1963 and 1984, broadening its scope (LaFollette, 2011). In 1984, the Carl D. Perkins Vocational Education Act introduced financial support for underrepresented student groups labeled as "special populations," it later encompassed students pursuing nontraditional occupations according to gender (LaFollette, 2011). The Perkins Act fosters academic and career skills in students enrolled in career and technical education (CTE) programs at both secondary and postsecondary levels (Dortch, 2012). Over the years, it was updated in 1998, 2006, and 2018, becoming the Strengthening Career and Technical Education for the 21st Century (Perkins V) Act, emphasizing the integration of academic and technical subjects to prepare students for successful careers in their local and regional economies (Arrington, 2022). CTE is vital in equipping students with technical, academic, and employability skills essential for thriving in the workforce. This role further solidifies its place as a crucial component of the American education system (Arrington, 2022).

**School-Based Agricultural Education**

School-based agricultural education (SBAE) is provided in United States schools as a state-approved service-learning program that teaches students about plant and animal production and environmental and natural resource systems (Lee et al., 2022). Even though agricultural education programs vary from school to school and should vary to meet the needs of the local community, all SBAE programs include three integral core components known as the Three-Component Model (Lee et al., 2022), see Figure 1. The Three-Component Model includes the following concepts: classroom/laboratory instruction, SAE programs, and FFA (National Association of Agricultural Educators, 2023). This integrated program model requires school-

based agricultural education programs to integrate classroom instruction, SAE, and FFA into programs to allow students a complete agricultural education experience (Croom, 2008).

**Figure 1.** *Three-Component Model of School-Based Agricultural Education*




North Carolina FFA Association, n.d., (https://ncffa.org/about-us-north-carolina-ffa/)

***Classroom/Laboratory Instruction***

Agriculture teachers employ various instructional methods to engage students in agricultural concepts. School-based agricultural education (SBAE) teachers use formal instruction methods, such as lectures, demonstrations, practices, reviews, and assessments, to facilitate learning experiences on topics in agriculture (Croom, 2008). Agricultural education programs foster critical thinking and applied learning problems- and project-based approaches. Students enrolled in a school-based agricultural education program can benefit from instructional strategies to create cross-curriculum concepts with math, reading, and science. In addition, through their courses, students expand their understanding of agriculture, are exposed to potential career paths, and learn responsibility and respect (Hadsock, 2009).

### *Supervised Agricultural Experience*

Rufus Stimson, former professor at Connecticut Agriculture College (Moore, 1988) and principal of the Smith Agricultural School in Massachusetts (Croom, 2008), revitalized the teaching of agriculture with his application of the project method (Croom, 2008; Moore, 1988). As Massachusetts' state supervisor of agricultural education, Stimson became interested in how agriculture was taught. Stimson believed students should receive practical instructional methods at school and apply their learning at home on their farms (Croom, 2008; Gunter, 2021; Moore, 1988). The project method, now referred to as supervised agricultural experience, allows students to practice hands-on learning that extends their knowledge from the classroom (Adams, 2010) under the supervision of their agricultural education teacher. Students apply what they learn in the classroom/laboratory setting to their SAE programs, and their teacher advises them as they "learn by doing" (National FFA Organization, 2023a). SAE programs allow students to plan a project that extends prior learning, observe their findings, and reflect on their experiences (Boston University, 2023). Supervised agricultural experiences are a required component of a school-based agricultural education program. They are implemented to stimulate educational inquiry and knowledge by promoting structured learning, community engagement, diverse awareness, and leadership skills (Boston University, 2023).

### *History of the FFA*

The National FFA Organization, previously known as the Future Farmers of America, was founded in 1928. Its establishment was a response to the need for educating and preparing young people for careers in agriculture. A group of young farmers, agricultural educators, and leaders came together in Kansas City, Missouri, to form the organization. They aimed to equip

future generations with the skills, knowledge, and leadership qualities required to address the challenges of feeding a growing population and sustaining agriculture in the United States.

The FFA's early years focused primarily on vocational agriculture education and preparing students for careers in farming. However, over time, its mission and scope evolved to encompass a broader range of agricultural and leadership opportunities.

**Mission and Goals.** The National FFA Organization's mission is to make a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success through agricultural education. FFA strives to achieve this mission by fostering a wide range of activities and experiences for its members, including leadership development, hands-on agricultural experiences, and community engagement.

The organization's goals include:

1. Leadership Development: FFA aims to cultivate leadership skills in its members. Through various activities and programs, students have the opportunity to develop as confident and capable leaders.
2. Personal Growth: FFA promotes personal growth by encouraging students to set and achieve goals, build self-confidence, and develop life skills that will serve them well beyond their agricultural careers.
3. Career Success: FFA helps students explore and prepare for careers in agriculture and related fields. It provides opportunities for career development and exposure to industry professionals.
4. Agricultural Education: FFA supports agricultural education in schools across the United States. It provides resources and experiences that enhance classroom learning.

### *Current and Future FFA*

Fast forward to today, the organization's membership has grown to include all students enrolled in agricultural education courses, boasting a remarkable 850,000 members nationwide, making it the world's largest student-led organization (National FFA Organization, 2023b). Operating at the local, state, and national levels, the National FFA Organization's primary objective is to prepare members for leadership and career opportunities within the agricultural industry (National FFA Organization, 2023b). Agricultural education teachers serve as students' FFA advisors and encourage students to further apply their knowledge from the classroom to experiences through the FFA.

For agricultural educators, FFA is an instructional tool that should complement classroom instruction and supervised agricultural experience programs (Atkinson, 2020; Croom, 1999; Gunter, 2021). Membership in the National FFA Organization provides students with opportunities to develop premier leadership, personal growth, and career success (National FFA Organization, 2023a; Lee et al., 2022; Shoulders & Toland, 2017). The National FFA Organization encourages students to participate in contests, awards, and events that align with the standards and curriculum, enabling students to learn outside the classroom (Croom, 1999; Gunter, 2021).

**Impact on Agricultural Education.** The National FFA Organization has had a profound impact on agricultural education in the United States. It has played a pivotal role in the following components:

- Expanding Agricultural Education: FFA's presence in schools has led to increased enrollment in agricultural education programs. It has encouraged more students to explore agricultural careers.

- Experiential Learning: FFA emphasizes experiential learning through Supervised Agricultural Experience (SAE) programs, where students gain hands-on experience in various aspects of agriculture. This practical approach enhances classroom learning.
- Leadership Development: FFA is renowned for its leadership development programs. Many agricultural leaders, both within and outside the farming industry, attribute their success to the leadership skills they developed through FFA participation.
- Career Opportunities: FFA provides students with exposure to a wide range of career opportunities in agriculture, including farming, agribusiness, research, and education.
- Impact on Communities: FFA encourages community engagement and service among its members. Many FFA chapters are involved in community projects and initiatives that benefit local areas and promote a sense of responsibility and citizenship.

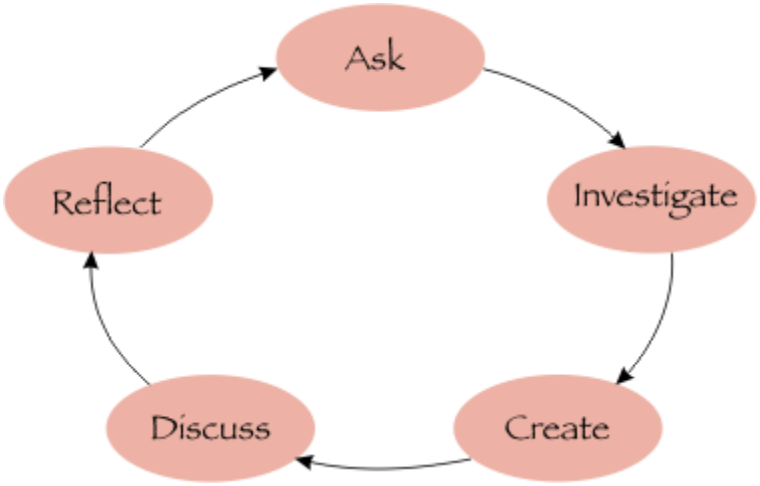
## Educational Theories

### *Inquiry-Based Learning*

The inquiry-based learning strategy involves students using methods and practices akin to professional scientists to construct knowledge (Keselman, 2003; Pedaste et al., 2015). Students explore new information and create hypotheses before verifying them with experimentation and observation (Pedaste et al., 2015). Educational philosopher John Dewey is often associated with inquiry-based learning as it aligns with his philosophy. Dewey believed in the importance of active learning, where students are engaged in the learning process and encouraged to explore, question, and investigate their hypotheses (Parr & Edwards, 2004; Pedaste et al., 2015). Figure 2 illustrates the inquiry-based learning cycle, where students meaningfully navigate the learning steps. Inquiry-based learning fosters student engagement through authentic scientific discovery,

where students participate in small, connected units that encompass scientific thinking (Pedaste et al., 2015).

**Figure 2.** *Inquiry-Based Learning Cycle*




*Note.* Bruce, 2008. (https://chipbruce.net/resources/inquiry-based-learning/the-inquiry-cycle/)

Credible evidence is that authentic pedagogy, assessments, and intellectual work lead to academic achievement (Friesen & Scott, 2013; Newmann et al., 1996; Newmann et al., 2001). Newmann et al. (1996) studied elementary, middle, and high schools that inserted authenticity into their pedagogy and academic performance approaches in math and social studies (Friesen & Scott, 2013). The purpose was to assess to what degree student achievement was positively affected by authentic pedagogy, higher-order thinking, and deep-knowledge approaches that were later connected to the real world (Friesen & Scott, 2013). After observing lessons, analyzing assessments, and reviewing student samples, Newmann et al. (1996) concluded that environments with high levels of authenticity led to higher academic achievement (Friesen & Scott, 2013).

Inquiry-based learning is a primary concept used in science education as both prioritize skill development (Parr & Edwards, 2004; Hairida, 2016; Pedaste et al., 2015). This learning

strategy develops curiosity and scientific thinking, which allow students to develop knowledge by asking questions, practicing critical thinking, and participating in guided inquiry-based learning, which enhances student learning outcomes (Abdi, 2014; Hairida, 2016; Kuhlthau & Todd, 2007). While in active inquiry-based learning, students' performance can be evaluated through each concept of the inquiry cycle (Hairida, 2016). Teachers can assess student achievement in cognitive, affective, and psychomotor, all three factors found in authentic assessment, and can provide effective feedback along their learning experience (Hairida, 2016).

Agricultural science teachers follow Glasgow's belief that problem-based and inquiry-based learning are significantly parallel in their goals, methodology, and project student achievement (Parr & Edwards, 2004) and are often used interchangeably. Problem-based instruction has long been a crucial component of agricultural education's pedagogical foundation and philosophy (Moore & Moore, 1984; Parr & Edwards, 2004) and is used by agriculture teachers today (Wells et al., 2015). However, according to Moore & Moore (1984), the adoption of problem-based instruction in agricultural education was a "historical accident" (p. 5; Parr & Edwaeds, 2004) due to its popularity at the time. Moore & Moore (1984) and other researchers like Lass and Moss (1987) support the claim that philosophers like Dewey and Kilpatrick had a significant impact on the implementation of problem-based learning (Parr & Edwards, 2004). Even though problem-based learning was not initially the instruction method of choice and is not widely accepted by all educators (Moore & Moore, 1984), it allows students to achieve their best through constructivist learning experiences, also known as hands-on (Parr & Edwards, 2004).

School-based agricultural education (SBAE) programs incorporate instructional strategies that develop students' critical thinking ability to comprehend complex concepts and apply learning outside classrooms (Edwards, 2004; Wells et al., 2015). Not only do SBAE programs

offer a variety of courses to appease student interests, but multiple learning styles are incorporated when developing students' potential through classroom and laboratory instruction, leadership opportunities and activities in FFA, and career-oriented experiences through SAE programs (Phipps et al., 2008; Wells et al., 2015). Problem-based or inquiry-based learning broadens students' cognitive abilities by designing instruction that requires students to think critically (Parr & Edwards, 2004; Phipps et al., 2008; Wells et al., 2015). To create these learning opportunities, agriculture teachers might select problems based on real issues that could appear in the industry (Parr, 2004; Wells et al., 2015). Students in SBAE programs build upon these learning opportunities through FFA leadership activities and their supervised agricultural experience program (Wells et al., 2015). Students face real-world problems and can reflect on their learning experiences to problem-solve.

### *Project-Based Learning*

Project-based learning (PBL) is a student-centered instructional approach and comprises three basic principles: learning is context-specific, learners actively participate in the learning experience, and learners achieve goals by sharing knowledge (Cocco, 2006; Kokotsaki et al., 2016). Similar to inquiry-based and problem-based learning, PBL creates opportunities for students to construct knowledge by solving realistic, applicable problems through the inquiry-based cycle (Blumenfield et al., 2000; Kokotsaki et al., 2016) and using collaboration to achieve a goal (Kokotsaki et al., 2016). J.W. Thomas (2000) distinguished five concepts that are required for projects in project-based learning: (1) centrality, (2) driving question, (3) constructive investigation, (4) autonomy, and (5) realism (Kokotsaki et al., 2016; Turgut, 2008). An "end product" is needed in project-based learning where students can share new knowledge from their investigation with their collaborative teams (Kokotsaki et al., 2016). When students engage in

PBL, they self-regulate their learning (Barak, 2012; Kokotsaki et al., 2016) and cultivate self-reliance by planning, setting goals, and organizing their thoughts before working collaboratively and learning at their own pace (Bell, 2010; Kokotsaki et al., 2016).

Kibett and Kathuri (2005) conducted a quasi-experimental study to evaluate the effect of PBL on students' higher cognitive skills in secondary agricultural education in three environments: home farm, school farm, and community farm. Students in this study worked in groups to identify problems related to growing beans, pursue new information to problem-solve, and apply their solutions at their respective farms (Kibett & Kathuri, 2005). Student skills were measured by a pre-and post-assessment designed to evaluate higher cognitive skills (Kibett & Kathuri, 2005). Kibett and Kathuri (2005) conclude from the evidence that project-based learning activities are highly effective in aiding students to develop cognitive skills. It is recommended that teachers incorporate PBL and activities into their instruction, and the educational system should provide opportunities for teachers to train, plan, and practice PBL (Kibett & Kathuri, 2005).

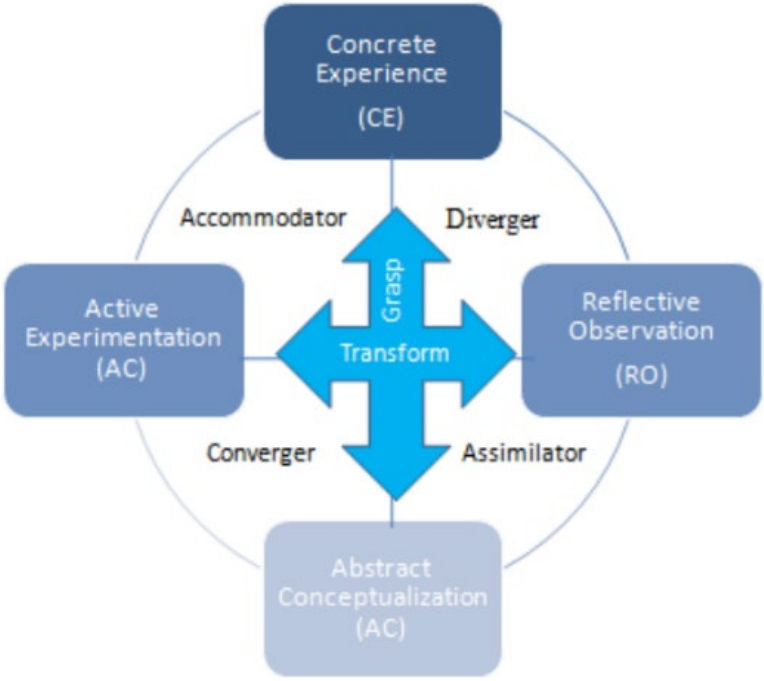
When Stimson began implementing the home project method, what is now considered a supervised agricultural experience was created without the title (Moore, 1988). Stimson evaluated how agriculture was taught and shifted learning to take place outside of class, at students' homes, under the supervision of the teacher (McKibben & Murphy, 2021; Moore, 1988; Roberts & Harlin, 2007; Stimson, 1915, 1919). Through the work of researchers like Phipps and Osborne (1988), Roberts and Harlin (2007), Croom (2008), and McKibben and Murphy (2021), connections between PBL and SAE have been cited and the importance of SAE has been incorporated into the three-component model of school-based agricultural education. Studies are recently shifting from observing PBL in the classroom to PBL outside of the

schoolhouse (McKibben & Murphy, 2021) and how this can affect the integration of science, technology, engineering, and math (STEM) concepts into agricultural education (McKibben & Murphy, 2021). Authenticity is recommended in inquiry-based learning. McKibben and Murphy's (2021) study highlighted the role authenticity played in the educational gains of students in highly engaging, hands-on activities versus paper and pencil activities. It was concluded that projects must stimulate student interest to affect their gains in achievement significantly (Johnson et al., 1997; McKibben & Murphy, 2021).

### *Experiential Learning*

Experiential Learning Theory (ELT), credited to educational theorist David Kolb in his publication of Kolb's Learning Cycle in 1984, is a widely recognized strategy (Adams, 2010). Building upon the foundations of John Dewey, Kurt Lewin, and Jean Piaget, this learning approach involves four key stages: do, observe, think, and plan, allowing students to engage in hands-on learning activities that build upon their classroom knowledge (Adams, 2010). ELT is intended to be a learning process that combines experience, perception, cognition, and behavior, and according to Kolb (1984), students must experience all four stages of the learning cycle for effective learning to occur (McCarthy, 2010). See Figure 3.

**Figure 2.** *The Experiential Learning Cycle and Four Learning Styles*




*Note.* McCarthy. 2010.

Kolb's learning model illustrates two opposite dimensions of understanding experiences – concrete experience (CE) and abstract conceptualization (AC), and two opposite dimensions of changing experiences – reflective observation (RO) and active experimentation (AE) (McCarthy, 2010). For effective learning to occur, the student experience should mirror the following example: "The student learner begins by having an experience (CE), s/he reflects on the experience from several perspectives (RO). Next, the student draws conclusions and relates them to theories and concepts (AC) that lead to experimentation and action (AE)" (Akella, 2010, p. 102).

Kolb (1984) created a learning styles inventory (LSI) as an instrument to determine learning style preferences as students navigate through ELT (McCarthy, 2010). Although students should experience all four stages of ELT, learners can favor one concept over another, and this is where developing instructional strategies to combat opposing learning styles is

essential for active learning (McCarthy, 2010). Kolb's LSI identifies four types of learners depending on how they prefer to gain knowledge: (1) diverger, (2) assimilator, (3) converger, and (4) accommodator (McCarthy, 2010). As shown in Figure 3, how students learn and process information dictates their learning style. Even though all learning styles have strengths and weaknesses, effective teachers can guide student learning through all stages (McCarthy, 2010).

As teachers prepare students for success after high school, students must learn to think critically, problem-solve, and communicate effectively (Thiel & Marx, 2019; Toombs et al., 2022). SAE programs are designed for students to participate in experiential learning under the supervision of their agricultural education teacher (McKibben & Murphy, 2021; Moore, 1988). These home projects enable students to apply their classroom learning to real-world SAE programs while the teacher provides valuable guidance as students learn by doing (McKibben & Murphy, 2021; Moore, 1988; Stimson, 1919). Throughout SAE program implementation, students plan and execute projects that extend their knowledge, observe outcomes, and reflect on their experiences (McKibben & Murphy, 2021; Moore, 1988).

**Successful Teachers**

The same can be said for successful teachers if there is such a thing as successful teaching. According to Barr (1958), teachers can be distinguished as successful by their qualities, behavior, knowledge, skills, and attitude toward effectiveness. Unfortunately, it is nearly impossible for each criterion to narrow down a single definition that fits the bill (Barr, 1958), and depending on who is asked, researchers have different beliefs on the possibility of defining successful teachers (Broudy, 1969; Cronbach, 1966; Goheen, 1966; Heitzmann & Starpoli, 1975; Jackson, 1968; Turner, 1964). However, Heitzmann and Starpoli (1975) agree that there is a pattern of two personality traits that successful teachers seem to possess: warmth and flexibility.

For instance, Flanders (1960) and Witty (1947) found teachers who were well-rounded, flexible, and able to transition between leadership styles to be successful. “Good” teachers are viewed as warm and kind, and this portrays a positive light on their subject and can lead to student success (Combs, 1965; Cogan, 1958; Heitzmann & Starpoli, 1975; Page, 1958; Reed, 1962).

Research indicates that a strong indicator of student success is a skilled teacher and his or her teacher effectiveness (Goldhaber, 2002; Goldhaber & Brewer, 2000; Hanushek et al., 2005; Strong et al., 2011; Wright et al., 1997). Aaronson et al. (2007) analyzed Chicago Public Schools' mathematics data. The study found that adjusting a teacher’s quality by one standard deviation increased student math scores by approximately one-fifth of the average yearly gain (Aaronson et al., 2007). Sanders (2000) claimed that the effects of successful teachers are so impactful that their effectiveness is measurable for at least four years after students leave the classroom. Although studies support that effective teaching positively impacts student outcomes, one of the most common ways to evaluate teacher success is through observation and evaluation (Strong et al., 2011). Unfortunately, teacher observation varies through human caution, and evaluating teachers is a platform that should be common practice (Strong et al., 2011).

As educational policies are implemented, like the No Child Left Behind Act (2022) or President Obama’s Race to the Top, the focus has shifted to quality teachers and teacher effectiveness (Strong et al., 2011). Although there is a multitude of evidence that high-quality teachers have a significant positive impact on student learning (Goldhaber, 2002; Goldhaber & Brewer, 2000; Hanushek et al., 2005; Strong et al., 2011; Wright et al., 1997), findings on how to identify an effective teacher remain to be seen (Strong et al., 2011). Classroom observational systems utilize tools like charts, scales, or rubrics to assess teacher practice through coding systems (Strong et al., 2011). This technique allows observers to be objective and record most of

what happens in a classroom during a given time frame (Stallings & Mohlman, 1988; Strong et al., 2011). Unfortunately, there is a lack of conceptual and theoretical framework surrounding this technique, which has led to concerns about the reliability and validity of observational measures when determining teacher success (Ornstein, 1995a, 1995b; Strong et al., 2011). For instance, teachers who received high scores on the Framework for Teaching (Danielson, 2007), a classroom observation tactic, were examined in studies to determine if there was a corresponding increase in student achievement scores (Gallagher, 2004; Kimball et al., 2004; Milanowski, 2004; Strong et al., 2011). These studies found that teachers with high evaluation scores only produced slightly larger gains in student performance (Strong et al., 2011). Identifying effective teachers is essential, but how they are identified is not as obvious (Strong et al., 2011).

## Organizational Leadership

### *Leadership Theories*

Leadership theories have been studied intending to determine workplace purpose, validity, and implementation (Horner, 1997); theories like transactional, transformational, and servant leadership guide effective organizational leadership. The Transactional Theory focuses on supervision and organization, and leaders concentrate on keeping the status quo (Odumer & Ogbonna, 2013). Leaders follow Maslow's hierarchy of needs to utilize a reward and consequence model to motivate followers to complete desired tasks (Odumer & Ogbonna, 2013). Extending beyond transactional leadership, the Transformation Leadership Theory introduces a four-stage model of organizational leadership, as outlined by Hay (2006): (1) make a compelling case, (2) inspire a shared vision, (3) lead change, and (4) embed change. These leaders instill their followers' desire for change and leadership potential to achieve excellent outcomes. The Servant Leadership concept is a more personal approach proposed by Robert K. Greenleaf in

1970. Unlike traditional leadership, this theory is commonly based on entitlement and authority; leaders must be “servant-first” and prioritize listening and understanding before decision-making (Greenleaf, 1970). This envisionment allows leaders to gain willing followers and promote positive change (Greenleaf, 1970).

### *Leadership Styles*

Influential leaders influence their followers to achieve desired goals, and depending on the leadership style, an organization’s effectiveness or performance can be affected differently (Chukwusa, 2018; Nanjundeswaraswamy & Swamy, 2014). Autocratic leadership comprises a leadership style where the leader retains sole decision-making authority (Ardichvili & Kuchenke, 2010; Chukwusa, 2018; Egwunyenga, 2010). Often, autocratic leaders are far removed from their followers, sometimes creating a coercive leadership environment (Baughman, 2008; Chukwusa, 2018). Autocratic leadership allows individuals full control over decisions without followers' input (Chukwusa, 2018). Typically, autocratic leaders make decisions based on their ideas and opinions without accepting advice from others (Chukwusa, 2018). Sometimes, single-minded decision-making can be beneficial, for example, when decisions need to be made quickly and there is no time to consult with others (Chukwusa, 2018). However, autocratic leadership allows leaders to abuse their power, and followers who cannot contribute their ideas may see this leadership style as dictatorial (Chukwusa, 2018).

On the opposite end of the spectrum from autocratic leadership sits the concept of participative leadership. Participative leadership involves joint decisions and sharing ideas between leaders and followers (Akpoviroro et al., 2018; Puni & Okoe, 2014). Although this leadership style allows followers' input to determine the what and how, the leader is still the decision-making authority (Akpoviroro et al., 2018; Fincham, 2005). Participative leadership

fosters relationships between employees, stakeholders, and the leader (Akpoviroro et al., 2018; Dhammika et al., 2013). This approach to valuing other inputs allows the participative leadership to emphasize an organization's "effectiveness, productivity, and innovativeness" (Akpovioror et al., 2018; Monzani, 2015).

## Perceptions

### *Perceptions of Agricultural Instruction*

Agricultural classroom instruction is the longest-standing concept of the Three-Component Model. Agricultural education started as a way to teach vocational instruction to male students entering the industry after high school. Now, there are more than 900,000 students, both male and female, receiving agricultural instruction (National FFA Organization, 2023e). Not only have student demographics changed, but so has that of agricultural educators. Respondents in Wilson's (2022) study comprised 58 males and 25 female agricultural education teachers. Compared to Gilman, Peake, and Parr's (2012) case study, the number of male agriculture teachers has decreased, and the number of female agriculture teachers has increased (Wilson, 2022). The factor causing this gender representation to change is classroom/laboratory instruction. Agricultural education has evolved over 50 years through policy changes and curriculum advancements (Wilson, 2022). The purpose of agricultural education is no longer production-focused, and females have more places to belong, such as agricultural leadership and business and competitive events through FFA involvement (Wilson, 2022).

Although diversity is changing in agricultural classrooms and curriculum advancements are being made, Georgia educators perceive classroom instruction as the least essential component of the Three-Component Model (Wilson, 2022). Classroom instruction is the first factor of a school-based agricultural education (SBAE) program to be established. In the

classroom, students learn essential knowledge and skills to be applied in SAE programs and FFA activities (Wilson, 2022). However, teachers feel that only a few classroom activities benefit them (Wilson, 2022). Georgia agriculture educators are evaluated using the Georgia FFA Organization's Program of Work standards to justify receiving extended day and year money (Wilson, 2022). To some teachers, these minimum requirements feel like they do not receive credit for the time and job they put into the classroom when, in fact, Georgia agriculture education teachers spend most of their time in classroom instruction (Wilson, 2022).

The Three-Component Model of SBAE programs is a triple Venn diagram with multiple overlaps between classroom/laboratory instruction, SAE, and FFA. Ideally, agriculture education teachers should spend approximately 33.3% of their time on each component if they are expected to fulfill 100% of the triple Venn diagram (Wilson, 2022). However, in 2022, 53.01% of Georgia agriculture teachers preferred to spend their time on classroom instruction (Wilson, 2022). Within the three-ring model, teachers spend time overlapping (Wilson, 2022). For example, Georgia educators must teach students a lesson about leadership and personal development, which ties into opportunities in FFA. Georgia agriculture teachers must teach students about record keeping and utilize the SAE program to fulfill this area. Additionally, classroom instruction provides a foundation of knowledge that students can later build upon through FFA involvement and SAE programs (Wilson, 2022).

### *Perceptions of SAE*

Supervised agricultural experience (SAE) is formally recognized as the first experiential learning strategy in career and technical education (CTE) (Rayfield & Wilson, 2009). For years, students enrolled in agricultural education courses participated in hands-on learning activities structured outside of class time. SAE is an integral part of the agricultural education model

(Croom, 2008; Lewis et al., 2012), yet student involvement in SAE programs continues to decline (Lewis et al., 2012) while Georgia agriculture teachers feel least competent carrying out this context of the three-ring model (Wilson, 2022). What is the reason for the decline in SAE programs and the lack of self-efficacy in supervising these programs? According to Rayfield and Wilson (2009), principals perceive SAE programs as crucial to an agriculture program. Dyer and Osborne (1995) synthesize that agriculture teachers believe in the foundation of experiential learning (Rayfield & Wilson, 2009) but are not ensuring that all students have an SAE in place. Principals believe agriculture teachers supervise SAEs that are better than average. However, there remains a gap in the implementation of SAE, FFA, and classroom instruction according to the three-component model (Rayfield & Wilson, 2009).

### *Perceptions of the National FFA Organization*

The National FFA Organization, formerly known as the Future Farmers of America, has long been an integral component of agricultural education in the United States. FFA's role in enhancing and supplementing classroom instruction has been a subject of interest for researchers (Croom & Flowers, 2000). According to Croom and Flowers (2000), FFA does not exist in isolation; it seamlessly integrates with classroom education. This integration is a testament to the organization's commitment to providing students with a holistic agricultural education experience that extends beyond the classroom.

Furthermore, the importance of FFA as a starting point for students' engagement with agricultural education is underscored by Wilson (2022). In his recent research, Wilson emphasizes that FFA activities are not isolated endeavors but begin within the classroom itself (Wilson, 2022). This integration is crucial in creating a seamless transition for students from

theoretical learning to practical application. It also reinforces the idea that FFA is not an extracurricular activity but an integral part of the educational journey of aspiring agriculturalists.

Agricultural education itself plays a pivotal role in preparing students for successful careers in the agriculture and related industries (Croom & Flowers, 2000; National FFA Organization, 2023d). It provides students with the knowledge, skills, and hands-on experiences necessary to excel in diverse agricultural career paths. The partnership between agricultural education and FFA is a symbiotic one, with each reinforcing the other's objectives.

The core purpose of FFA is to develop students' potential for premier leadership, personal growth, and career success (Croom & Flowers, 2000; National FFA Organization, 2023a). These objectives align closely with the broader goals of education, which aim not only to impart knowledge but also to nurture well-rounded individuals who can contribute effectively to society. FFA achieves this by providing students with opportunities to assume leadership roles, fostering personal growth, and preparing them for future careers in agriculture.

However, it is essential to recognize that balancing the three integral components of agricultural education – classroom/laboratory instruction, Supervised Agricultural Experience (SAE), and FFA – can be a complex endeavor for agricultural education teachers (Wilson, 2022). The challenge lies in seamlessly integrating these components to create a cohesive and enriching educational experience for students. While teachers understand the significance of each component, perceptions of their importance may differ among various stakeholders, including teachers themselves and school administrators (Doss & Rayfield, 2021).

Interestingly, Wilson's (2022) research highlights a noteworthy disparity in perceptions within the educational landscape. Georgia's agriculture teachers perceive FFA activities as the most essential component of the three-component model, emphasizing the pivotal role FFA plays

in students' agricultural education journeys. In contrast, principals do not share the same level of enthusiasm regarding the prominence of FFA within the agricultural education framework (Doss & Rayfield, 2021). This divergence in perspectives raises questions about the factors influencing these differing viewpoints and how they might impact the allocation of resources and support for FFA programs.

Agriculture teachers and administrators wield considerable influence over students' participation in agricultural classes and SAE programs (Croom & Flowers, 2000). They have the ability to create an educational environment that fosters a sense of belonging and encourages student engagement. However, it's essential to acknowledge that a student's decision to join FFA is often influenced by their perceptions of the FFA chapter at their school (Croom & Flowers, 2000). This underscores the significance of the FFA's image and reputation within the local school community.

As students enroll in agricultural education courses, they embark on a journey of growth and development, transitioning into an age where a sense of belonging becomes essential (Croom & Flowers, 2000; Maslow, 1970). FFA's role in providing students with a supportive community and opportunities for personal growth and leadership development is invaluable during this crucial phase of their lives. Research by Croom and Flowers (2000) suggests that, on average, students become involved in FFA because their agricultural education teacher encouraged them to do so.

The National FFA Organization holds a pivotal role within the realm of agricultural education, enhancing classroom instruction, and serving as a catalyst for students' engagement with agricultural studies (Croom & Flowers, 2000; Wilson, 2022). FFA's objectives align closely with the broader goals of education, emphasizing leadership, personal growth, and career success

(National FFA Organization, 2023a). However, perceptions of its importance can vary among stakeholders, including teachers and school administrators (Doss & Rayfield, 2021). Regardless of these differences in perspectives, it is clear that FFA plays a vital role in nurturing the next generation of agricultural leaders and professionals. To maintain FFA's integral status within the School-Based Agricultural Education (SBAE) program model, agricultural education teachers must work diligently to secure positive school and community support, encouraging students to participate actively in the organization (Croom & Flowers, 2000). In doing so, they ensure that FFA continues to thrive as an essential component of agricultural education in the United States, providing students with the skills and experiences they need for success in the agricultural industry and beyond.

**Summary**

School-based agricultural education programs encompass three fundamental principles that provide students with a holistic agricultural education experience. These programs emphasize practical learning, leadership development, and exposure to potential career paths within the agricultural industry. However, agriculture teachers, who are expected to balance personal and professional commitments while teaching, advising FFA members, and supervising SAE programs, face varying perceptions of the importance and success of these responsibilities. The absence of a one-size-fits-all rubric for evaluation highlights the complexity of their roles.

As educational policies evolve to underscore the significance of high-quality teachers and effective teaching, the role of the FFA in agricultural education remains indispensable. Agriculture teachers, often referred to as FFA advisors, play a pivotal role in guiding students through their FFA journey, facilitating SAE programs, and providing quality classroom instruction. Amid changing educational landscapes and evolving industry demands, the National

FFA Organization continues to adapt and innovate. Its unwavering commitment to excellence in agricultural education ensures that students are well-prepared to confront the multifaceted challenges of modern agriculture and contribute to the industry's sustainability and prosperity.

In essence, the National FFA Organization's legacy in agricultural education is one characterized by empowerment, education, and leadership. It has indelibly impacted the lives of students, educators, and the agricultural community at large. As it continues to push forward with its mission, it holds the promise of shaping the future of agriculture for generations to come.

# CHAPTER III:

# METHODOLOGY

High school administrators play a pivotal role in shaping the landscape of school-based agricultural education (SBAE) programs. Their perceptions and insights into what makes an SBAE program successful are invaluable for guiding improvements in agricultural education. However, many administrators do not understand the full role, requirements, and additional duties of an agriculture educator. This study intended to evaluate survey data to better understand high school administrators and their perceptions of a successful school-based agricultural education program through classroom/laboratory instruction, supervised agricultural experience programs, and participation in FFA. Within this chapter, the methodology is discussed, and the instrument is explained.

## Research Design

This study utilized a cross-sectional, correlational quantitative research design to examine high school administrators' perceptions of factors distinguishing successful school-based agricultural education (SBAE) programs. This design allowed for a one-time data collection point from a wide and diverse pool of participants, drawing correlations among variables without intervening or manipulating them.

In this study, correlational research allowed for the examination of how factors related to successful SBAE programs, as perceived by high school administrators, are interrelated. As Rosnow (2016) explains, "Correlational research helps to identify and quantify relationships between variables, providing valuable insights into how these variables move in tandem." By combining a cross-sectional approach with correlational analysis, this research aimed to uncover patterns and relationships between variables without manipulating them or observing them over

an extended period, providing valuable insights into the factors that shape the perceived success of SBAE programs by high school administrators.

The instrument was provided to all high school administrators with SBAE programs across the state. Just as the nature of production agriculture varies across the state due to climate, topography and economic reasons, agriculture education follows suit. The research was designed to discover if and why administrators across the state place more emphasis on various parts of SBAE programs.

**Purpose of the Study**

This study strived to understand the perceptions of high school administrators in regards to the factors that influence the success of school-based agricultural education programs. This study sought insight into correlations in program success and if administrators place a distinct emphasis on classroom/laboratory instruction, supervised agricultural experience programs, and leadership involvement in FFA. This research is based on a school's implementation of the Three-Component Model of agricultural education.

Administrators may have a variety of reasons that they have different personal opinions on what a successful SBAE program looks like. These opinions may be derived from their personal pedagogical beliefs, experience from working for another administrator, or the agriculture industry in their area. Communities across the state have various needs when it comes to preparing students for careers and opportunities in the community. Some agriculture programs focus on preparing students for college, some focus on the needs of local businesses while others place priority on a holistic style of student preparation for various paths each student may take during and after their secondary education career.

Despite agriculture teachers and SBAE program leaders organizing and running their programs a specific way oftentimes it is possible that the school administration may not envision the program successful. The purpose of this study was to determine what Georgia school administrators deem successful for their SBAE program. Do they believe showing livestock is a priority? If so, why? Does the county have a livestock industry? Does one administrator believe agriculture education should focus on trade careers while other administrators believe FFA prepares students for college? Is it better if four students win a state contest or 400 students attend a local FFA chapter meeting? These are small examples of potential opinions administrators may have across the state.

**Research Questions and Hypothesis**

RQ1: What defines school-based agricultural education programs, as defined by administrators, as successful?

RQ2: Do administrators value local, state, or national participation more?

$H_o1$: Complete implementation of the three-component model defines school-based agricultural education programs as successful.

$H_o2$: Administrators value local participation over state or national participation.

**Description of Population**

The target population for this study consisted of Georgia high school administrators with agricultural education programs in their schools. Potential participants were gathered through the Georgia Department of Education. The Georgia FFA Association confirmed schools with high school agricultural education programs. Participants varied in demographics, years of experience, and career and technical education exposure.

**Description of Instrument**

A survey was developed based on the three-component model of school-based agricultural education using statements regarding administrator perceptions of success. Survey statements were created by the researcher. The survey comprises four sections. The first section of the survey collects demographic data of the administrator. Following these demographic questions, the administrator will answer personal questions concerning their history and involvement with agricultural education programs. The research instrument consists of three constructs: classroom/laboratory instruction, supervised agricultural experience programs, and FFA. Sections two, three, and four consist of five statements each designed to gather the importance of classroom/laboratory instruction, supervised agricultural experience programs, and FFA towards SBAE program success using a 5-point Likert scale. Participants will complete this survey through Qualtrics.

**Data Security**

Data was collected by utilizing the online survey platform called Qualtrics. All participants were given an informed consent form to review before participating in the study, see Appendix A. Participants remained anonymous, and all information and data was kept on the researcher's computer.

**Variables in the Study**

The predictor in this study is the emphasis of each part of the three-component model (Classroom Instruction, SAE, & FFA); and participation of the program at the local, state, & national level. The criterion in this study is the success of the administrator's high school agricultural education program.

**Data Testing**

To evaluate predictive relationships between the criterion variables and predictor variables, data gathered was run through various statistical analysis. Descriptive statistics was used on all questions to determine the number of valid responses, mean, and standard deviation. This test allowed the researcher to ensure the number of responses matched, indicating complete surveys, and allowed for observations over response values, averages, and the deviation between responses. A frequency table for all responses was created to show the occurrence of each response on the Likert-scale. A Cronbach's alpha was run between all questions, excluding demographic questions. This determined internal reliability between these questions. Any instrument with a Cronbach's alpha over .80 is considered very strong (Gall et al., 2007). A multiple linear regression analysis was used to predict the success of the program and administrators' perceptions on Classroom/Lab, SAE, & FFA. A second multiple linear regression analysis was used to predict the success of the program and administrators' perceptions on participation at the local, state, and national level. Multiple linear regression is the most appropriate test due to the continuous scale of survey responses and the presences of two or more predictor variables (Gall et al., 2007). Finally, a scatterplot was used to examine the assumptions of bivariate normal distribution. A line of best fit was added to evaluate linearity of each data group. Tests were set at a confidence level of 95% and statistical significance at alpha= 0.05. These levels reduced the likelihood of errors in analysis of null hypothesis (Gall et al., 2007).

# CHAPTER IV:

# FINDINGS AND ANALYSIS

This cross-sectional, correlational quantitative design determined if a relationship existed between a high school administrators' perspective on a successful school-based agricultural program and the emphasis on the Three-Component Model for instruction and level of participation of the program.

Chapter IV includes the sample population, survey results, data analysis, and a summary of the study results. A linear regression was demonstrated between enrollment, years offered, and success of the program. A multiple regression analysis was conducted to analyze the predictive relationship between the criterion variables of the three-component model. This research sought to understand whether and why administrators across the state prioritize different aspects of SBAE programs.

## Procedures for Data Analysis

The survey was distributed and data was collected after the researcher obtained IRB approval, see Appendix B. Data was collected using the online platform called Qualtrics. The data collected was analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics was used to summarize demographic data. This demographic data assisted in conclusions. Cronbach’s Alpha test was run on questions 10-24 to evaluate internal reliability between the questions. This section has an alpha of .863. This is within the range of .80-.89 and suggests that there is good adequacy of internal reliability estimates. The researcher created a regression model using overall program success as the outcome variable and the various components of the three circle model as predictor variables.

**Description of Population**

During the survey period, 60 participants volunteered to participate in the survey; 41 completed the survey in its entirety. 41 participants selected public school settings, Private: 0, Charter: 0, & Other: 0, and were used for this data analysis. 20 (48.8%) of the participants were female, and 21 (51.2%) were male. The ethnicity of the participants is as follows: American Indian or Alaska Native: 0, Asian or Pacific Islander: 0, Black or African American: 3 (7.3%), Hispanic or Latino: 2 (4.9%), Native American or American Indian: 0, White or Caucasian: 35(85.4%), Two or more Races:1 (2.4%), and Withheld: 0.

**Demographics**

The sample population included administrators from the Georgia Department of Education contact list of principals for schools in Georgia. This list was confirmed by the Georgia FFA Association with a directory of schools with school-based agricultural education programs. Administrators were contacted via email input in Qualtrics. Forty-one participants responded to this survey. Table 1 shows the demographics of respondents.

**Table 1**

*Demographics of Respondents*

| | | n | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Gender | | | | | |
| | Male | 20 | 48.8 | 48.8 | 48.8 |
| | Female | 21 | 51.2 | 51.2 | 100.0 |
| | Total | 41 | 100.0 | 100.0 | |
| Race | | | | | |
| | White/Caucasian | 35 | 85.4 | 85.4 | 85.4 |
| | Black/African American | 3 | 7.3 | 7.3 | 92.7 |
| | Two or More Races | 1 | 2.4 | 2.4 | 95.1 |
| | Hispanic | 2 | 4.9 | 4.9 | 100.0 |
| | Total | 41 | 100.0 | 100.0 | |

Participants answered demographic questions in the Qualtrics survey. 20 males (48.8%) and 21 females (51.2%) participated in the research. 35 (85.4%) administrators were white, 3 (7.3%) were Black/African American, 1 (2.4%) were Two or More Races, and 2 (4.9%) were Hispanic.

**Descriptive Statistics**

The descriptive statistics to determine the mean and standard deviation for each variable of the study are shown in Table 2. The variables include gender, race, years of experience, previous agricultural involvement, enrollment, length in years an agricultural education program has been offered, success of the program, classroom/lab importance, SAE importance, and FFA importance.

**Table 2**

*Descriptive Statistics for Each Variable*

| | n | *M* | *SD* |
|---|---|---|---|
| Years of Experience | 41 | 7.66 | 6.901 |
| Previous Ag Involvement | 41 | 1.66 | .480 |
| Enrollment | 41 | 1279.56 | 516.544 |
| Years SBAE Offered | 41 | 38.61 | 22.989 |
| Success of Program | 41 | 85.61 | 16.104 |
| Classroom/Laboratory | 41 | 4.22 | .477 |
| SAE | 41 | 4.12 | .649 |
| FFA | 41 | 4.44 | .548 |

The descriptive statistics to determine the mean and standard deviation for individual sets of questions for the three-component model are evaluated in Table 2. The first component, Classroom/Lab, is composed of five questions identified as Guest Speakers, EOPA, Lab/Outside, Equal Importance of Standards, and Trade/Ag workforce. The second component, SAE, is composed of five questions identified as Proficiency Award, Livestock Team, Participation, Entrepreneurship, and Ag Industry. The third component, FFA, is composed of five questions

identified as Monthly Meetings, Officers Area/State, Win CDE, Conference Attend, & Community Service. These 15 questions are evaluated in Table 3.

**Table 3**

*Descriptive Statistics for Individual Questions in Classroom/Laboratory, SAE, and FFA*

| | n | *M* | *SD* |
|---|---|---|---|
| Guest Speakers | 41 | 4.44 | .594 |
| EOPA | 41 | 4.32 | .850 |
| Lab/Outside | 41 | 4.41 | .706 |
| Equal Importance of Standards | 41 | 4.00 | .894 |
| Trade/Ag Workforce | 41 | 3.95 | .865 |
| SAE Proficiency Award | 41 | 4.29 | .716 |
| SAE Livestock Team | 41 | 4.00 | 1.183 |
| SAE Participation | 41 | 3.95 | .947 |
| SAE Entrepreneurship | 41 | 3.93 | .905 |
| SAE Ag Industry | 41 | 4.44 | .634 |
| FFA Monthly Meetings | 41 | 4.61 | .628 |
| FFA Officers Area/State | 41 | 4.00 | 1.118 |
| FFA Win CDE | 41 | 4.17 | .738 |
| FFA Conference Attend | 41 | 4.63 | .536 |
| FFA Community Service | 41 | 4.80 | .401 |

Table 3 includes the number of respondents (n), mean scores, and standard deviations for each question. Overall, respondents reported generally positive perceptions across the three categories. FFA Community Service received the highest mean rating (4.80), indicating a strong perception of importance in a school-based agricultural education program. This was closely followed by FFA Conference Attendance (4.63) and FFA chapter officers leading Monthly Meetings (4.61), indicating a strong perception of importance in FFA involvement in agriculture programs. SAE Entrepreneurship received the lowest mean score (3.93) followed by SAE Participation (3.95) and students entering the Trade Ag Workforce (3.95).

The descriptive statistics for the variety of classroom and laboratory experiences evaluated by participants are outlined in Table 4. The number of respondents (n), the mean scores, and standard deviations are included. Participants rated the importance of five

components of a classroom or laboratory experiences using a 5-point Likert scale from “Not Important” to “Very Important.”

**Table 4**

*Descriptive Statistics for Classroom/Laboratory*

| | n | *M* | *SD* |
|---|---|---|---|
| Guest Speakers | 41 | **4.44** | .594 |
| EOPA | 41 | 4.32 | .850 |
| Lab/Outside | 41 | 4.41 | .706 |
| Equal Importance of Standards | 41 | 4.00 | .894 |
| Trade/Ag Workforce | 41 | 3.95 | .865 |

*Note.* Highest mean in **bold**

Guest speakers in the classroom had the highest mean rating (4.44) indicating its importance towards success for an SBAE program. Guest speakers had a relatively low standard deviation (.594) suggesting that respondents consistently found it to be important. EOPA pass rates received a slightly lower mean rating (4.32) and a higher standard deviation (.850) indicating that participant responses varied more compared to guest speakers. Participants rated spending 50% of class time outdoors or in a laboratory setting with a mean score of 4.41 and a standard deviation of .706 indicates consistent responses from participants. Spending equal amounts of time and importance on standards was rated with a mean score of 4.00; however, the high standard deviation (.894) indicates that not all participants deemed equalizing standards important towards success. Students entering the trade or agricultural workforce received the lowest mean score (3.95), indicating that participants perceived its importance to be less than the other components. The standard deviation for students entering trade or agricultural workforce (.865) is relatively high, and suggests that participants’ perceptions may vary.

After breaking down classroom/laboratory instruction perceived importance, participants repeated the motion with activities pertaining to supervised agricultural experience (SAE)

**Table 5**

*Descriptive Statistics for SAE*

| | n | *M* | *SD* |
|---|---|---|---|
| SAE Proficiency Award | 41 | 4.29 | .716 |
| SAE Livestock Team | 41 | 4.00 | 1.183 |
| SAE Participation | 41 | 3.95 | .947 |
| SAE Entrepreneurship | 41 | 3.93 | .905 |
| SAE Ag Industry | 41 | **4.44** | .634 |

*Note.* Highest mean in **bold**

Students submitting state-qualifying SAE Proficiency Awards had a mean score of 4.29, showing that participants had positive perceptions of its importance. The standard deviation (.716) indicates that responses were relatively consistent between participants. The mean score for the importance of having a Livestock Show Team was 4.00, indicating participants found this to be positive. However, 1.183 standard deviation was relatively high suggesting that respondents' opinions varied significantly. Students participating in an SAE program scored a slightly lower mean of 3.95 and the standard deviation of .947 suggests that responses varied. Students learning Entrepreneurship skills through SAE programs received the lowest mean score (3.93) suggesting neutral responses from participants. The standard deviation (.905) suggests variability in responses. SAE Ag Industry received the highest mean rating (4.44) in the SAE component suggesting that respondents found this to be very important. Additionally, the low standard deviation (.634) indicates that participants had a consistent input of importance for SAE Ag Industry.

In the final segment of the survey participants rated the importance of activities in the National FFA Organization. These descriptive results are dictated in Table 6.

**Table 6**

*Descriptive Statistics for FFA*

| | n | *M* | *SD* |
|---|---|---|---|
| FFA Monthly Meetings | 41 | 4.61 | .628 |
| FFA Officers Area/State | 41 | 4.00 | 1.118 |
| FFA Win CDE | 41 | 4.17 | .738 |
| FFA Conference Attend | 41 | 4.63 | .536 |
| FFA Community Service | 41 | **4.80** | .401 |

*Note.* Highest mean in **bold**

FFA Monthly Meetings led by chapter officers received a moderately high mean rating (4.61) and a low standard deviation (.628) indicating that participants rated it important towards success and this was consistent among participants. SBAE programs have area and state FFA Officers received the lowest mean (4.00) of the FFA components indicating that participants deemed this important. However, the high standard deviation of 1.118 indicates that the importance of having area and state FFA officers may vary among respondents. Winning FFA CDEs received a positive mean score (4.17) with a standard deviation of .738 suggesting that responses varied. Attend FFA leadership conferences received a mean score of 4.63 and a standard deviation of .536. FFA Community Service projects received the highest FFA mean score (4.80) indicating a high importance from respondents. The low standard deviation of .401 suggests that respondents did not vary in their responses.

Table 7 depicts the importance of factors distinguishing success in SBAE programs. Not Important was the least frequent response and Very Important was the most frequent response.

**Table 7**

*Administrator Perceptions of Factors Distinguishing SBAE Programs as Successful*

| Factors | | *f*(%) | | | | |
|---|---|---|---|---|---|---|
| | n | Not Important | Low Importance | Neutral Importance | Somewhat Important | Very Important |
| Classroom Guest Speakers | 41 | 0(0) | 0(0) | 2(4.9) | 19(46.3) | **20(48.8)** |
| Classroom EOPA Pass Rate | 41 | 1(2.4) | 0(0) | 4(9.8) | 16(39) | **20(48.8)** |
| Classroom Lab/Outside | 41 | 0(0) | 0(0) | 5(12.2) | 14(34.1) | **22(53.7)** |
| Classroom Equal Importance | 41 | 0(0) | 3(7.3) | 7(17.1) | **18(43.9)** | 13(31.7) |
| Classroom Trade/Ag Workforce | 41 | 1(2.4) | 0(0) | 10(24.4) | **19(46.3)** | 11(26.8) |
| SAE Proficiency Award | 41 | 0(0) | 0(0) | 6(14.6) | 17(41.5) | **18(43.9)** |
| SAE Livestock Team | 41 | 0(0) | 4(9.8) | 4(9.8) | 13(31.7) | **18(43.9)** |
| SAE Participation | 41 | 0(0) | 3(7.3) | 10(24.4) | 14(34.1) | 14(34.1) |
| SAE Entrepreneurship | 41 | 0(0) | 2(4.9) | 12(29.3) | **14(34.1)** | 13(31.7) |
| SAE Ag Industry | 41 | 0(0) | 0(0) | 3(7.3) | 17(41.5) | **21(51.2)** |
| FFA Monthly Meetings | 41 | 0(0) | 0(0) | 3(7.3) | 10(24.4) | **26(68.3)** |
| FFA Area/State Officers | 41 | 1(2.4) | 4(9.8) | 7(17.1) | 11(26.8) | **18(43.9)** |
| FFA Win CDE | 41 | 0(0) | 1(2.4) | 5(12.2) | **21(51.2)** | 14(34.1) |
| FFA Conference Attend | 41 | 0(0) | 0(0) | 1(2.4) | 13(31.7) | **27(65.9)** |
| FFA Community Service | 41 | 0(0) | 0(0) | 0(0) | 8(19.5) | **33(80.5)** |

*Note.* Item mode is in **boldface.** 1 = Not Important, 2 = Low Importance, 3 = Neutral Importance, 4 = Somewhat Important, 5= Very Important.

All questions had an above neutral mean score. This expresses that the participants felt positive about the overall survey. Although the majority of participants answered the majority of the questions Neutral Importance, Somewhat Important, or Very Important, the responses of Not Important and Low Importance are important in this analysis.

The first construct being classroom/laboratory has two total Not Important responses and three total Low Importance. The Not Important responses come from the EOPA Pass Rate, and if students are entering the Agriculture Workforce or Trade industry. The three total Low Importance responses are from placing Equal Importance on each Georgia Department of Education Standard. 28 total participants responded Neutral Importance in classroom/laboratory instruction, with students entering the Ag/Trade Industry having the most ratings. There were 86 total responses for both Somewhat Important and Very Important indicating that respondents perceive classroom/laboratory instruction to be important towards SBAE program success.

Supervised Agriculture Experience (SAE) was the second construct measured in the instrument. SAE had a total of zero Not Important and nine Low Importance responses. SAE had 23 total responses of Neutral Importance, with the highest being in SAE Entrepreneurship (12) skills and the lowest being in SAE Ag Industry (3). There were 75 Somewhat Important responses in SAE, with Ag Industry and Proficiency Awards both having the highest total of 17, and Livestock Show Team having the lowest (13). SAE had a total of 84 Very Important responses with SAE Ag Industry having the highest (21) and SAE Entrepreneurship having the lowest (13).

The final component of the instrument consisted of questions concerning participation in the National FFA Organization. One participant responded with Not Important and there were five Low Importance responses, four of which were for Area/State FFA officer candidates. Neutral Importance received 16 responses from participants with Area/State FFA officer candidates having the most (7) and FFA Community Service having the least (0). Somewhat Important responses totaled 63 with winning FFA CDEs having the most ratings (21) and FFA Community Service having the least (8). Respondents rate FFA High Importance with a total of

118. FFA Community Service received the highest frequency (33) followed by FFA Conference Attendance (27) and FFA Monthly Meetings (26). Winning FFA CDEs received the lowest number of responses (14).

## Results

Before the statistical analysis, data was visually screened for missing information and inaccurate entries. The data was analyzed using SPSS version 29. To test the null hypothesis, multiple regression analysis, and linear regression were computed at the 95% confidence level.

### *Research Questions and Hypothesis*

RQ1: What defines school-based agricultural education programs, as defined by administrators, as successful?

RQ2: Do administrators value local, state, or national participation more?

$H_o1$: Complete implementation of the three-component model defines school-based agricultural education programs as successful.

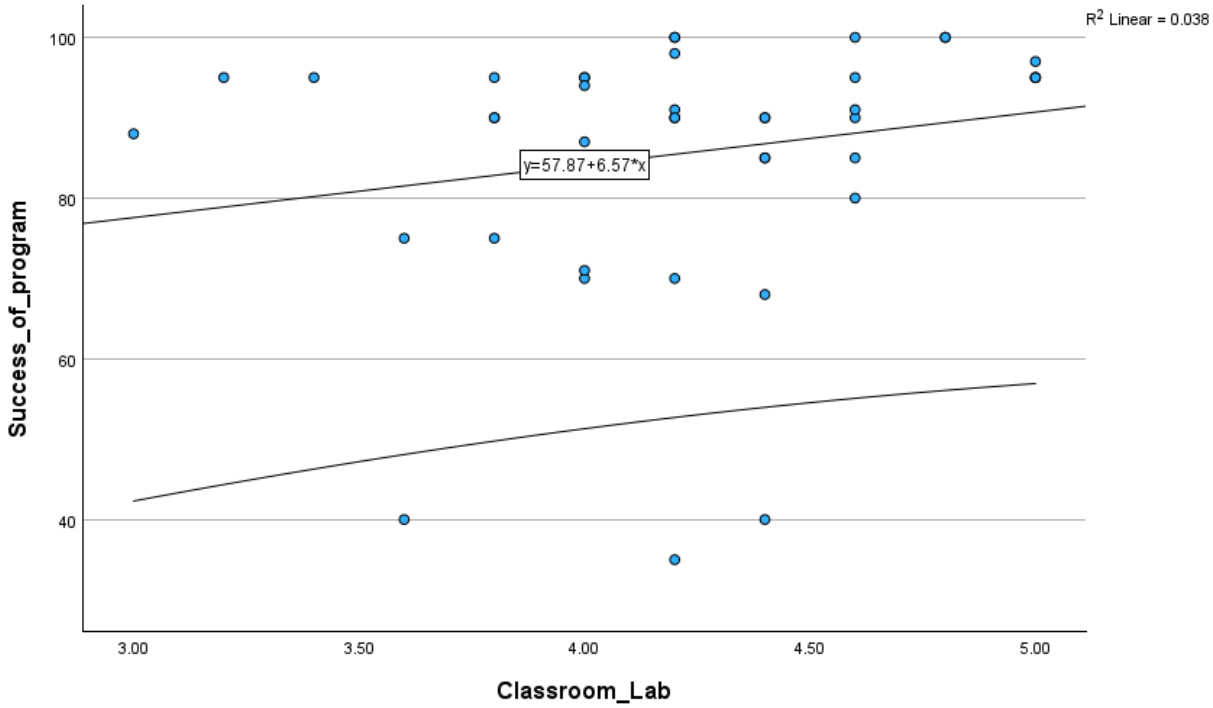
$H_o2$: Administrators value local participation over state or national participation.

**Null Hypothesis One.** The first null hypothesis stated that complete implementation of the three-component model defines school-based agricultural education programs as successful. An exploratory data analysis was conducted for each component of the three-component model to determine whether the null hypothesis was accepted or rejected. To test for multiple regression, an assumption must be met. This assumption is bivariate normal distribution and linearity.

A scatterplot was used to examine the assumption of bivariate normal distribution and linearity. The predictor variables (x), Classroom/Lab, and the criterion variable (y), success of

the program. This is displayed in Figure 4 and demonstrates that the assumption of bivariate outliers was met.

**Figure 4.** *Linear Scatterplot of Classroom/Lab and Success of Programs*




The linear scatterplot of the relationship between Classroom/Lab and Success of Program illustrates the emphasis respondents placed on Classroom/Lab (x-axis) towards the success of the participants' high school SBAE program (y-axis). In Figure 4, y=57.87 + 6.57*x while $R^2$ Linear = 0.038. The line of best fit shows a significantly higher ranking by principals than the $R^2$ indicated as normal.

To examine the assumption of bivariate normal distribution and linearity concerning SAE, a scatterplot was used. The predictor variable was (x), SAE, and the criterion variable was (y), success of the program. See Figure 5.

**Figure 5.** *Linear Scatterplot of SAE (x) and Success of Program (y)*

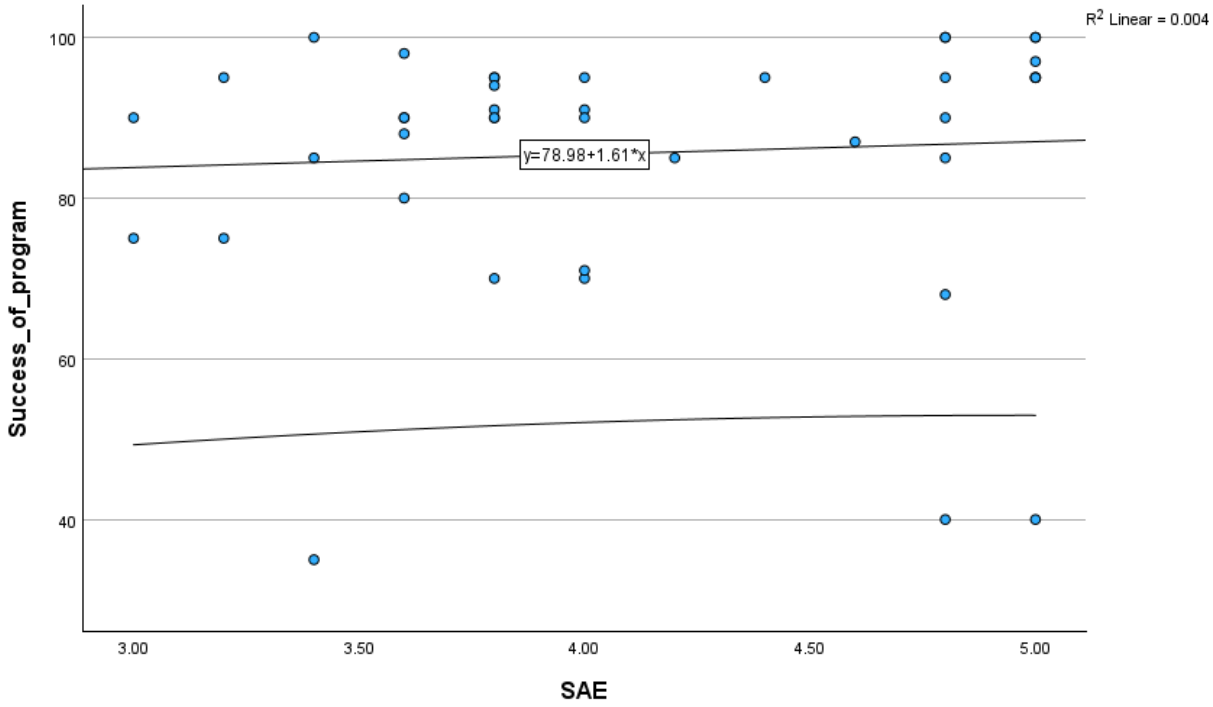
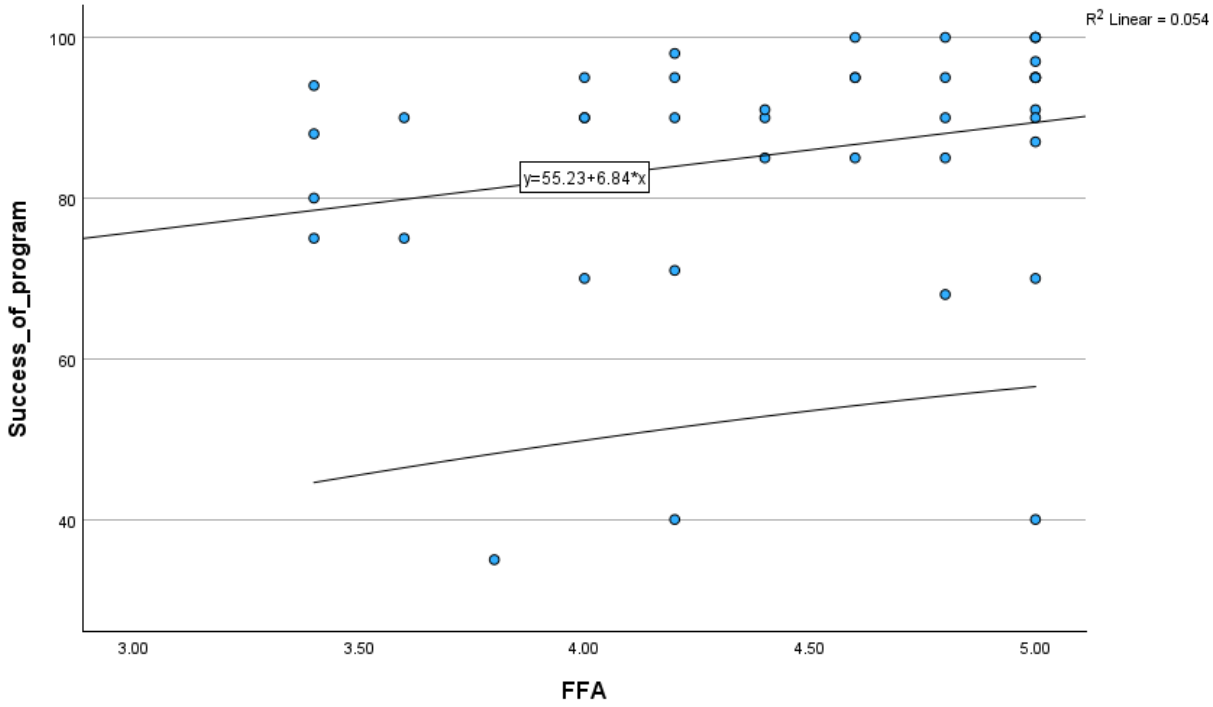



Figure 5 illustrates the relationship between SAE activities in an SBAE program and Success of Programs using a linear scatterplot. SAE activities are on the x-axis and the success of respondents' SBAE programs is on the y-axis. In this scatterplot, y=78.98 + 1.61*x and $R^2$ Linear = 0.004. This scatterplot indicates that the assumption of bivariate outliers was met.

To examine the relationship between SBAE activities in FFA and the success of a program, a scatterplot was used. The predictor variable was (x), FFA, and the criterion variable was (y), success of the program. This is displayed in Figure 6.

**Figure 6.** *Linear Scatterplot of FFA (x) and Success of Program (y)*




To examine the assumption of bivariate normal distribution and linearity between FFA activities and respondents' perception of success in SBAE programs, a scatterplot was utilized. FFA activities were portrayed on the x-axis while Program Success was reported on the y-axis. In Figure 6, y=55.23 + 6.84*x and $R^2$ Linear = 0.054 indicating that the assumption of bivariate outliers was met.

**Results for Null Hypothesis One.** A multiple linear regression analysis was conducted to predict the success of the program and administrator's perceptions on Classroom/Lab, SAE, & FFA. Table 8 displays the multiple linear regression analysis for Null Hypothesis One. Table 8 provides the *R, $R^2$, adjusted $R^2$s*, and the standard error of the estimate. A value of $R^2$=.279. p=.387, which is not below 0.05 at a 95% confidence level.

**Table 8**

*Multiple Regression Model Summary for $H_o1$*

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .279a | .078 | .003 | 16.081 |

a Predictors: (Constant) FFA, Classroom/Lab, SAE

**Null Hypothesis Two.** The second null hypothesis stated that administrators value local participation over state or national participation. An exploratory data analysis was conducted to determine whether the null hypothesis was accepted or rejected. To test for multiple regression, an assumption must be met. This assumption is bivariate normal distribution and linearity.

A scatterplot was used to examine the assumption of bivariate normal distribution and linearity. The predictor variables (x), Participation, and the criterion variable (y), success of the program. This is displayed in Figure 7 and demonstrates that the assumption of bivariate outliers was met.

**Figure 7.** *Linear Scatterplot of Participation (x) and Success of Program (y)*

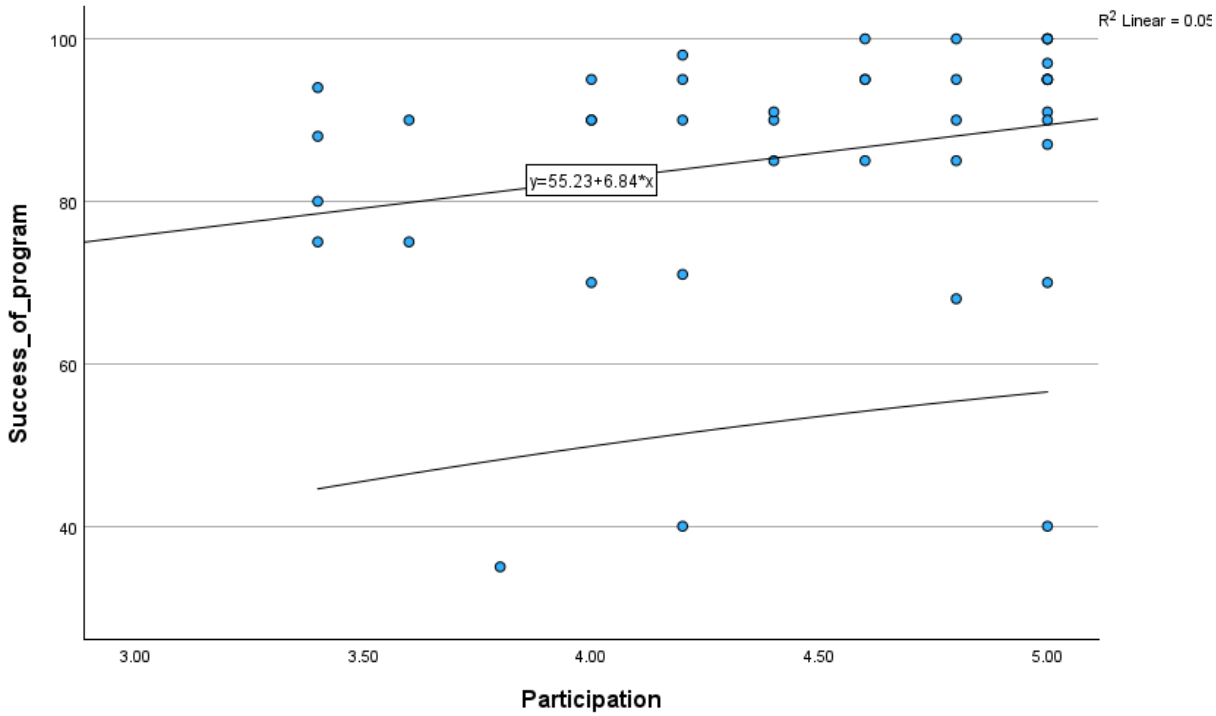



Figure 7 illustrates the relationship between participation and Success of Programs using a linear scatterplot. Participation is on the x-axis and the success of respondents' SBAE programs is on the y-axis. In this scatterplot, y=55.23 + 6.84*x and $R^2$ Linear = 0.054. This scatterplot indicates that the assumption of bivariate outliers was met.

**Results for Null Hypothesis Two.** A multiple linear regression analysis was conducted to predict the success of the program and administrator's perceptions on participation at the local, state, and national level. Table 9 displays the multiple linear regression analysis for Null Hypothesis Two. Table 9 provides the *R, $R^2$, adjusted $R^2$s*, and the standard error of the estimate. A value of $R^2$=.233.

**Table 9**

*Multiple Regression Model Summary for $H_o2$*

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .233a | .054 | .030 | 15.861 |

a Predictors: (Constant) FFA

**Summary**

Overall, descriptive statistics revealed a positive perception of importance across the three categories of SBAE programs: Classroom/Laboratory Instruction, Supervised Agricultural Experience (SAE) programs, and the National FFA Organization. FFA Community Service received the highest mean rating and SAE Entrepreneurship received the lowest mean score. Regression analysis tested research questions and hypothesis to define successful SBAE programs and how administrators prioritize local, state, or national participation. To test the first null hypothesis if full implementation of the three-component model results in a successful SBAE program, an exploratory data analysis was conducted to determine if the hypothesis could be accepted. An ANOVA analysis showed p=.387, and the null hypothesis was accepted. To test the second null hypothesis of administrators valuing local, state, or national participation more, the same data analysis was conducted. An ANOVA test resulted in a p-value of .143 indicating that researchers failed to reject the null hypothesis.

# CHAPTER V:

# DISCUSSION AND CONCLUSION

## Summary

School-Based Agricultural Education (SBAE) is a service-learning initiative offered in schools that imparts knowledge to students about the concepts of the agricultural industry. While agricultural education programs may differ among schools and are tailored to meet local community needs, all SBAE programs stem from the foundational framework of the Three-Component Model (Lee et al., 2022). The three essential elements in this model, classroom/laboratory instruction, SAE programs, and involvement in the National FFA Organization, provide students with a complete experience in agricultural education.

This study explored high school administrators' perspectives regarding the factors of success for school-based agricultural education programs. The research uncovered correlations between program success and the emphasis placed by administrators on the key components of SBAE programs: classroom/laboratory instruction, SAE programs, and involvement in FFA. Each administrators' perception of their schools' implementation of the Three-Component Model of agricultural education was the basis for investigation. Georgia high school administrators were asked to participate in a survey where they rated statements concerning success in each construct of the Three-Component Model.

## Discussion

This study was completed by high school administrators with a school-based agricultural education program in their school. Forty-one participants rated the importance of statements compiled by the three-component model using a 5-point Likert scale: 1 = Not Important, 2 = Low Importance, 3 = Neutral Importance, 4 = Somewhat Important, and 5 = Very Important.

Each component of the three-component model served as a construct in the survey: Classroom/Laboratory Instruction, Supervised Agricultural Experience, and the National FFA Organization.

***Classroom/Laboratory Instruction Discussion***

*Guest speakers visit the agricultural classroom and speak about content directly related to the current lesson.* 20 participants viewed Guest Speakers as Very Important, and 19 participants rated Guest Speakers as Somewhat Important. Only two participants responded Neutral Importance, indicating that Guest Speakers are important towards the success of SBAE programs. The researcher agreed with the responses from participants concerning Guest Speakers in the classroom.

*Agriculture classes have a high pass rate on End of Pathway Assessments (EOPA).* For EOPA Pass rate, 20 participants perceived this to be Very Important, 16 participants viewed it as Somewhat Important, and four respondents perceived Neutral Importance. Surprisingly, one participant perceived a high EOPA Pass rate to be Not Important. The data indicated that EOPA Pass rates are important toward SBAE program success. The researcher found the Neutral Importance and Not Important responses to be shocking. In Career, Technical, and Agricultural Education classes, End of Pathway Assessments are how the state of Georgia measures growth and learning in the classroom. Additionally, some schools use EOPA scores to assist their CCRPI, similar to Milestones in academic classes. For participants not to perceive EOPA Pass Rates as important, this led the researcher to wonder if their school systems implement EOPAs as a common practice.

*Agriculture classes spend at least 50% of their time outside or in a laboratory setting.* Incorporating laboratory activities and outdoors into agricultural instruction is a unique way

engage students. 22 participants viewed Labs/Outside class time as Very Important towards the success of SBAE programs, and 14 respondents perceived it to be Somewhat Important. There were five responses for Neutral Importance, while Low Importance and Not Important both had zero. The researcher felt these responses accurately depicted the distinctiveness of what agricultural education offers students. Students learn through hands-on activities, either in labs or outside, and participants agreed its importance towards SBAE program success.

*Teachers spend an equal amount of time on all standards and do not favor in specific standards.* There are multiple standards for agricultural education classes in Georgia. In this study, participants were asked their perceived importance of teaching the standards equally. 13 participants responded it was Very Important, 18 responded it was Somewhat Important, and seven responded with Neutral Importance. However, three participants perceived Equal Standards teaching to be of Low Importance. When analyzing the data, the researcher contemplated whether the Somewhat Important-Very Important responses were from participants who implemented EOPAs as a means of evaluating learning and growth. EOPA questions are compiled from all standards of the classes, which could indicate why participants feel that all standards are equally important. For the Low Importance responses (3), the researcher questioned if those participants implement EOPA pass rates, and if not, felt those administrators placed more importance on the local community, rather than state scores. For example, a city whose number one industry is forestry should teach about forestry because it is more applicable to students than agricultural mechanics.

*Agriculture programs have a high percentage of students entering the local trade and agriculture workforce after high school.* The final statement concerning classroom/laboratory instruction, was the number of students entering the Trade/Agricultural Workforce after high

school. 11 participants perceived this to be Very Important while 19 responses indicated that it was Somewhat Important. 10 administrators perceived students entering the Trade/Agricultural Workforce after high school as Neutral Importance towards SBAE program success. Zero respondents perceived it to be Low Importance, and one participant responded it was Not Important. The researcher found the Neutral Importance and Not Important responses to be shocking. Agricultural education is a career-technical program where students are taught employability and prepared for the workforce, although some administrators perceive this to not be important towards program success.

***Supervised Agricultural Experience Discussion***

*Students submit state-qualifying Agricultural Proficiency Award applications annually.* Supervised agricultural experience (SAE) programs are eligible for Proficiency Awards through the National FFA Organization. Participants were asked how important a state-qualifying Proficiency Application was towards an SBAE program's success. 18 administrators responded it was Very Important, 17 respondents said it was Somewhat Important, and there were six responses of Neutral Importance. Zero participants responded with Not Important or Low Importance. These responses indicate that administrators in this survey place high importance on Proficiency Awards towards their SBAE program's success.

*School-based agriculture education programs have a livestock show team.* School-based agricultural education programs can have a Livestock Show Team as students' supervised agricultural experience (SAE) programs. 18 respondents said that a Livestock Show Team was Very Important, and 13 administrators perceived a show team to be Somewhat Important. Neutral Importance and Low Importance both received four responses from participants. The researcher was surprised by these findings as not all schools have an animal science program or

facility to house livestock. This caused the researcher to question geographical locations of administrators who perceived a livestock show team to be important. More importantly, the researcher questioned if their school has a livestock show team in place or if the administrator only thinks it is important towards SBAE program success.

*Agriculture programs have 100% SAE participation.* Administrators responded the importance of having 100% SAE participation towards SBAE program success. Very Important and Somewhat Important both had 14 responses from participants. 12 respondents found 100% SAE participation to be of Neutral Importance while three administrators found this to be of Low Importance. The researcher found the Very Important and Somewhat Important responses to be interesting. In Georgia, high school agricultural educators are required to have a minimum of 60% of students with an agricultural supervised agricultural experience (SAE) program in place. If administrators are conducting reviews of agricultural educators, they should see that teachers are currently required to have 60% as opposed to their perception of 100% being more important.

*SAE programs mainly teach students entrepreneurship knowledge and skills.* Most participants in the study found this question to be of Somewhat Importance (14). Closely following this, 13 administrators found this to be Very Important while 12 participants perceived it to be of Neutral Importance. Two administrators rated entrepreneurship knowledge and skills to be of Low Importance and there were zero responses for Not Important. The researcher was surprised at the findings for this question as student SAE programs range from foundational, placement, research, to entrepreneurship. It would be interesting to see how administrators would evaluate placement SAEs, where students are involved in the industry or other businesses for their programs.

*SAE programs are tailored to the local agriculture industry and community needs.* 21 participants perceived supervised agricultural education programs tailored to the local industry and community to be Very Important. 17 administrators responded that it was Somewhat Important towards an SBAE program success. Neutral Importance had three responses while Not Important and Low Importance both had zero. The researcher agreed with these findings that student SAEs should be tailored and support the local agricultural industry and community needs.

***National FFA Organization Discussion***

*Chapter FFA officers plan and lead monthly FFA chapter meetings.* Participants in the research were asked how important it was towards an SBAE program success that chapter FFA officers held monthly FFA chapter meetings. 26 administrators responded it was Very Important, 10 participants responded it was Somewhat Important, and three participants responded with Neutral Importance. Not Important and Low Importance both has zero responses. The researcher was not surprised at the responses for this question as agricultural educators are required to have a minimum of 10 chapter FFA meetings per school year.

*FFA chapters have area and state officers every year.* 18 responses indicated that administrators perceived this to be Very Important and 11 administrators perceived this to be Somewhat Important. Neutral Importance received seven responses while Low Importance received four. However, one response of Not Important was indicated. Area and state FFA officer positions are usually limited to eight spots per level. 41 administrators took this survey and 29 of them indicated that area and state FFA officers was Somewhat-Very Important to the success of an SBAE program. The researcher was surprised at the results for this construct, as positions are limited and are only reflective of one student. Agricultural education programs are

comprised of many students who may not be interested in a personal leadership position, but the program could still be successful in other areas.

*FFA chapters win area and state Career Development Events.* Participants were asked their perceived importance of FFA chapters winning CDEs. Somewhat Important had the most responses (21) followed by 14 participants indicating it was Very Important. The minority of administrators perceived this to be of Neutral Importance (5) or Low Importance (1) toward the success of a school-based agricultural education program. The researcher was not surprised at the results for this statement.

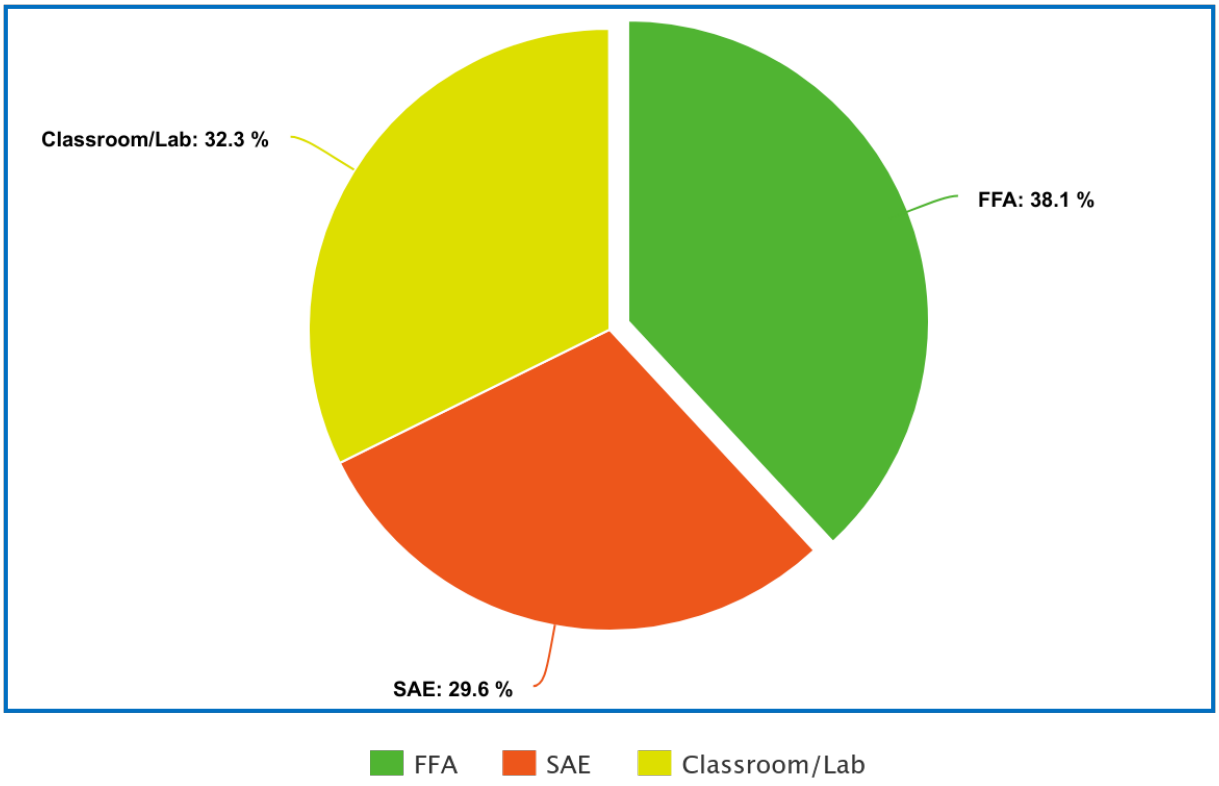
*FFA members attend area, state, and national leadership conferences.* 27 participants indicated through the survey that attending leadership conferences was Very Important, and 13 participants responded it was Somewhat Important. Only one response indicated that attending leadership conferences was of neural importance. The researcher was surprised at the mass amount of importance towards leadership conferences. In this survey, 97.5% of respondents indicated that leadership conferences were important towards the success of SBAE programs.

*FFA chapters impact their local community through community service.* The most interesting response bank was for the community service question in FFA. All respondents (41) indicated it was Somewhat Important-Very Important. 33 administrators indicated that local community service projects were Very Important towards the success of a school's SBAE program, and eight administrators responded with Somewhat Important. The researcher was surprised at the amount of support from administrators in FFA chapters conducting local community service projects.

## Conclusion

One of the primary objectives for this research was to determine if administrators believed the success of their program was about one of the components to the three-component model more than others. The three-component model typically consists of three rings that are evenly intertwined into one another to represent the equal importance of each component. The responses in this survey were used to create a more accurate depiction of the three-component model. See Figure 8.

**Figure 8.** *Administrator Perceptions of Which Component is Most Important Towards Success*




The pie graph depicts what the data says the administrators believe. Each question was used to calculate a total percentage for the three constructs; Classroom/Laboratory, SAE, and FFA. After calculating it was discovered that the FFA construct received the highest total mean scores across all questions. After converting to a percentage it is 38.1% Thus, leading to the

conclusion that administrators believe the FFA component is the most important for a successful school-based agricultural education program. Classroom/Laboratory Instruction received a percentage of 32.3% making it the second most important, and Supervised Agriculture Experience (SAE) programs had a percentage of 29.6% making it the lowest. This data depicts that administrators believe certain parts of each construct are more important than the others.

As we study the potential reasons for this data to be skewed towards FFA having 38.1% of the three-component model, we must examine the Georgia agricultural educator's program of work. The program of work is a list of standards that must be completed each year for the teacher to maintain a standard program in the eyes of the Georgia Department of Education. The standards that are required to be completed that fall under the FFA umbrella require much more energy and preparation than those of SAE and classroom/laboratory instruction. Teachers must have students complete five career development events, host 10 local FFA meetings, have an officer team, attend state convention and area banquet, and numerous other requirements. With that being said, FFA also tends to take the spotlight in terms of what agriculture programs achieve. A large emphasis is placed on winning area and state career development events. On the SAE side, one of the most prolific SAE projects is a student's livestock project. Often times, this is seen as more of a student/parent accomplishment than a total program accomplishment. FFA simply seems to have more avenues to exhibit success than the SAE and classroom instruction components which leads to the perceived notion that FFA is most important towards SBAE program success.

**Practical Significance**

Agricultural education in Georgia is growing tremendously as new elementary, middle, and high school programs are added annually. Agricultural educators are continuing to enter the

field from industry and pre-service programs; yet, there is nothing to constitute a successful SBAE program. High school agricultural education programs are evaluated by the state using the same standards regardless of a school's student enrollment, community support, funding, or administrator expectations. This study supplies agricultural educators with insights into effectively managing SBAE programs to achieve the nebulous goal of "success." Additionally, it can start conversations on refining the structure of agricultural education programs to better address the needs of students and provide this footwork

## P-20 Implications

P-20 education is a comprehensive educational framework that spans from early childhood (P) through higher education (20), integrating learning across all stages. Beyond facilitating ongoing education, P-20 fosters connections among early childhood education, K-12 schooling, and post-secondary education. This structure guarantees equal access to quality education for all students, regardless of their backgrounds, recognizing education as a lifelong journey and emphasizing its availability at every life stage. P-20 emphasizes collaborative efforts and recognizes the interdependence of the education system, ensuring that students are prepared for both professional opportunities and their contributions to society. Within the scope of P-20 education, four primary student learning objectives are emphasized: innovation, implementation, diversity, and leadership. These components are vital for guaranteeing the effectiveness and accomplishments of P-20 education.

### *Innovation*

In P-20 education, innovation is highlighted as a crucial student learning objective, emphasizing, creating, and implementing new ideas to enhance existing methods and practices. New ideas stem from noticing things and looking for a new perspective (Kouzes & Posner,

2016). As agricultural education advances and grows in communities, it is important that programs are continuing to enhance the methods and practices used to fulfill implementation of the Three-Component Model. This study provides the basis for agricultural educators to better understand the needs of administrators in high schools with SBAE programs. Data in this research can be used to showcase success in agricultural education. Teachers can look at programs deemed successful by administrators and incorporate these strategies into their own programs to further integrate the agricultural standards in the three-component model.

### *Implementation*

Implementation is the second concept of P-20 education. A systematic approach to implementation is vital for innovation, because ideas must be put in action in order to reach preferred outcomes. Effectively implementing innovation techniques is crucial for progress. In order for agricultural education programs to implement strategies leading to success, it is important that agricultural educators know the realistic expectations of their administrators. This study focused on ratable statements concerning each concept of the three-component model. For agricultural educators, each statement is a realistic possibility for their programs. When educators are aware of what their administrators desire, and clear on strategies used for accomplishing tasks, true success can happen.

### *Diversity*

Educators work in one of the most diverse industries as they interact with an array of people on a daily basis. Each interaction is affected by diversity in demographics, experience, and culture. Not only are agricultural educators responsible for students' learning, they are also responsible for advocating for their program. The needs of an SBAE program are dictated by administration, students, parents, coworkers, communities, and the agricultural industry. As

agricultural educators navigate leading their program, it is crucial that all stakeholders are considered. This research allows diversity to be considered when dictating which component is most important, and what activities prove SBAE programs to be successful. Agricultural stakeholders are diverse across the state requiring programs to be diverse in order to meet these needs.

### *Leadership*

Leadership has two places in education: the structure of education and the instructors. In order to accurately implement leadership practices, both areas must work simultaneously. The means of education plays a vital role in how learners learn, how educators teach, and the direction of education. Leaders think critically, problem-solve, and lead by example. Agricultural educators not only inhibit these skills, but they teach them to students. This study serves as a learning opportunity for veteran teachers, new teachers, pre-service teachers, and administrators. Veteran and new teachers can be introduced to current strategies administrators prioritize, and administrators can use this study as an opportunity to be educated on additional concepts in the three-component model. However, most importantly, pre-service teachers entering the agricultural education field can be prepared for what factors distinguish their SBAE program as successful. This way, pre-service teachers can implement these innovations to please a diverse pool of potential administrators in their career. This leadership aspect can give pre-service teachers the stability and motivation for a career in agricultural education.

## Limitations of Study

This study was limited to Georgia high school administrators with a school-based agricultural education program in their school. The results of this study are not generalized to administrators outside the state of Georgia, outside of the high school level, or outside of schools

with SBAE programs. This study required distributing the survey to administrators at high schools with SBAE programs. However, the Georgia FFA Association was not able to share contact information directly. Only a list of high schools with SBAE programs was available to the researcher. The distribution of the survey was sent from the researcher's school email address which was not a state-mandated contact or part of a list serv.

**Recommendations**

Strategies to increase survey participation should be considered. In this study, surveys were distributed through the Qualtrics database. Emails were not sent from the researcher's school email which could have prevented the email from being delivered. If the Georgia Department of Education has a list serv for school representatives, or administrators, one could request the survey be distributed with their assistance. The survey in this study remained open for two weeks. Extending the timeframe could allow more participants to complete the survey. Increasing the number of responses would offer more reliable insight to strategies to increase success in agricultural education.

Hypothesis two was that administrators would support more local activities from an agriculture program. As the survey was created it made it difficult for the participants to understand which question pertained to local, state and national level. As the research it reflected on it is recommended that moving forward either an addition to the survey should be added or the constructs should be edited to specifically describe if they represent more of a local, state or national preference.

After reviewing the data, it is recommended that another similar survey could be completed with few changes and continue to gather significant data. Although this research met

hypothesis one and discovered several meaningful chunks of data it would be interesting to see the survey redesigned to utilize a ranking or point system.

This research study should be expanded to gain a full picture of successful SBAE programs in Georgia. Future research of the following participants' perceptions of successful school-based agricultural education programs should be considered: agricultural educators, region and state agricultural education staff from the Georgia Department of Agricultural Education, stakeholders, and students. Agricultural education impacts many different people from industry to classroom. School-based agricultural education programs are offered to teach students about the food, fiber, and natural resources industry and to prepare students for potential careers. For this systematic approach to be effectual, it is imperative that all involved parties' perceptions are evaluated. When a full picture of perceived successful strategies is evaluated, techniques can be implemented to hold Georgia agricultural education accountable.

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# APPENDIX A: CITI Program Completion Certificate

CITI PROGRAM

Completion Date 04-Sep-2023
Expiration Date 04-Sep-2026
Record ID 57956435

This is to certify that:

**McKinley Hunter**

Not valid for renewal of certification through CME.

Has completed the following CITI Program course:

**IRB Members - Basic/Refresher**
(Curriculum Group)
**IRB Members - Basic/Refresher**
(Course Learner Group)
**1 - Basic Course**
(Stage)

Under requirements set by:

**Murray State University**

CITI
Collaborative Institutional Training Initiative

101 NE 3rd Avenue, Suite 320
Fort Lauderdale, FL 33301 US
www.citiprogram.org

Generated on 23-Feb-2024. Verify at www.citiprogram.org/verify/?w6792315d-2048-4338-9b77-3b8b65ba311b-57956435

## APPENDIX B: IRB Approval Form

Institutional Review Board
328 Wells Hall
Murray, KY 42071-3318
(270)809-2916
Msu.irb@murraystate.edu

Date: 03/01/2024

Principal Investigator: McKinley Hunter

Faculty Sponsor: Alyx Shultz

IRB Approver: Bunmi Dada

IRB Reference Number: 24-150

The IRB has completed its review of Exempt protocol Administrator Perceptions Of Factors Distinguishing School-Based Agricultural Education. After review and consideration, the IRB has determined that the research as described in the protocol form, will be conducted in compliance with Murray State University Guidelines for the Protection of human participants.

**The forms and materials approved for use in this research study are attached to the email containing this letter. These are the forms and materials that must be presented to the subjects. Use of any process or forms other than those approved by the IRB will be considered misconduct in research as stated in the MSU IRB procedures and Guidelines section 20.3.**

**Your stated data collection period is from 03/01/2024-03/01/2025**

If data collection extends beyond this period, please submit a continuation to an approved protocol form detailing the new data collection period and the reason for the change.

**This Exempt approval is valid until 03/01/2025.**

If data collection and analysis extends beyond this date, the research project must be reviewed as a continuation project by the IRB prior to the end of the approval period, 03/01/2024. You must reapply for IRB approval by submitting a Project Update and Closure form (available at murraystate.edu/IRB). You must allow ample time for IRB processing and decision before your expiration date, or your research must stop until IRB approval is received. If the research project is completed by the end of the approval period, a Project Update and Closure form must be submitted for the IRB review so your protocol may be closed. It is your responsibility to submit the appropriate paperwork promptly.

**This protocol is approved. You may begin data collection now.**

# APPENDIX C: IRB Consent Form

MURRAY STATE UNIVERSITY

We are Racers.

**Online Research Participation Consent**

**Study Title:** Administrator Perceptions Of Factors Distinguishing School-Based Agricultural Education Programs As Successful
**Primary Investigator:** MCKINLEY HUNTER and DR. ALYX SHULTZ, AGRICULTURE SCIENCE
**Faculty Sponsor Contact:** DR. ALYZ SHULTZ, 270.970.8142, ASHULTZ@MURRAYSTATE.EDU

You are being invited to participate in an online research study conducted through Murray State University. This document contains information you will need to help you decide whether to be in this research study or not. You must be at least 18 years old to participate. Please read the form carefully and ask the study team member(s) questions about anything that is not clear. You should print a copy of this document for your records.

**1. Nature and Purpose of Project:** The purpose of this study is to understand the perceptions of high school administrators in regards to the factors that influence the success of school-based agricultural education programs. This research is being done by a student for a dissertation.

**2. Participant Selection:** You are being asked to participate because you are an administrator at a high school in Georgia that has a school-based agricultural education program.

**3. Explanation of Procedures:** The study activities include an online survey. The survey will take approximately 10 minutes to complete.

**4. Discomforts and Risks:** All responses from online participants will be treated confidentially and stored on a secure computer. However, we are unable to guarantee the security of the computer on which you choose to enter your responses. Information (or data) you enter, and websites you visit online can be tracked, captured, corrupted, lost, or otherwise misused. There are no anticipated risks and/or discomforts for participants.

**5. Benefits:** This study is not designed to benefit you directly. However, your participation may help to increase our understanding of successful agricultural education programs.

**6. Confidentiality:** The researcher(s) will know that you participated in this study but the information you provide will be kept confidential.

**7. Refusal/Withdrawal:** Your participation is strictly voluntary and you are free to withdraw/stop participating at any time with absolutely no penalty.

**8. Contact Information:** Any questions about the procedures or conduct of this research should be brought to the attention of McKinley Hunter, mhunter7@murraystate.edu.

**Your continued participation indicates that this study has been explained to you, that your questions have been answered, and that you agree to take part in this study.**

{Study Link}

This project has been reviewed and approved by the Murray State University Institutional Review Board (IRB) for the Protection of Human Subjects. If you have any questions about your rights as a research participant, you should contact the MSU IRB Coordinator at (270) 809-2916 or msu.irb@murraystate.edu.

## APPENDIX D: Recruitment Email

Hello _____,

My name is McKinley Hunter and I am a Georgia agriculture teacher. I am also a graduate student at Murray State University under the direction of Dr. Alyx Shultz. ***I am conducting a dissertation study about administrator perceptions of factors distinguishing school-based agricultural education programs as successful.***

As an administrator at a school with an SBAE program, we are asking you to participate in a study that will explore possible correlations in activities that support a successful agriculture program. Your input on this 10-minute survey is valuable to help us understand perceptions of successful high school agriculture programs in Georgia.

Your participation is voluntary, and your response will remain anonymous for those who choose to participate. If you are willing to participate, please CLICK HERE to complete the survey via Qualtrics or copy and paste this URL to your browser: https://murraystate.co1.qualtrics.com/jfe/preview/previewId/0b2fc873-6a5b-4868-852f-0fd853df26ae/SV_3vZkEP8DoAmYEGa?Q_CHL=preview&Q_SurveyVersionID=current

If you have any questions, suggestions, or concerns about the study, please contact mhunter7@murraystate.edu.

Thank you for your consideration and your support of Georgia Agricultural Education!

Best,

**McKinley B. Hunter, Ed.S**
*Agriculture Teacher | FFA Advisor*
Ringgold High School

**Dr. Alyx Shultz**
*Chair, Agriculture Science*
Murray State University

# APPENDIX E: Survey Questions

# Administrator Perceptions of Successful School-Based Agricultural Education Programs

Start of Block: Informed Consent

Informed Consent Online Research Participation Consent Study
Title: Administrator Perceptions Of Factors Distinguishing School-Based Agricultural Education Programs As Successful
Primary Investigator: MCKINLEY HUNTER and DR. ALYX SHULTZ, AGRICULTURE SCIENCE
Faculty Sponsor Contact: DR. ALYZ SHULTZ, ASHULTZ@MURRAYSTATE.EDU

You are being invited to participate in an online research study conducted through Murray State University. This document contains information you will need to help you decide whether to be in this research study or not. You must be at least 18 years old to participate. Please read the form carefully and ask the study team member(s) questions about anything that is not clear. You should print a copy of this document for your records.
1. Nature and Purpose of Project: The purpose of this study is to understand the perceptions of high school administrators in regards to the factors that influence the success of school-based agricultural education programs. This research is being done by a student for a dissertation.
2. Participant Selection: You are being asked to participate because you are an administrator at a high school in Georgia that has a school-based agricultural education program.
3. Explanation of Procedures: The study activities include an online survey. The survey will take approximately 10 minutes to complete.
4. Discomforts and Risks: All responses from online participants will be treated confidentially and stored on a secure computer. However, we are unable to guarantee the security of the computer on which you choose to enter your responses. Information (or data) you enter, and websites you visit online can be tracked, captured, corrupted, lost, or otherwise misused. There are no anticipated risks and/or discomforts for participants.
5. Benefits: This study is not designed to benefit you directly. However, your participation may help to increase our understanding of successful agricultural education programs.
6. Confidentiality: The researcher(s) will know that you participated in this study but the information you provide will be kept confidential.
7. Refusal/Withdrawal: Your participation is strictly voluntary and you are free to withdraw/stop participating at any time with absolutely no penalty.
8. Contact Information: Any questions about the procedures or conduct of this research should be brought to the attention of McKinley Hunter, mhunter7@murraystate.edu.

Your continued participation indicates that this study has been explained to you, that your questions have been answered, and that you agree to take part in this study.

This project has been reviewed and approved by the Murray State University Institutional Review Board (IRB) for the Protection of Human Subjects. If you have any questions about your rights as a research participant, you should contact the MSU IRB Coordinator at (270) 809-2916 or msu.irb@murraystate.edu.

○ I agree to take part in this study.

○ I DO NOT agree to take part in this study.

End of Block: Informed Consent

Start of Block: Demographics

Q1 Gender

- Male
- Female
- Non-binary / third gender
- Prefer not to say

Q2 Race

- American Indian or Alaska Native
- Asian or Pacific Islander
- Black or African-American
- Hispanic or Latino
- Native American or American Indian
- White or Caucasian
- Two or more races
- Withheld

Q3 How many years of experience do you have as a high school administrator (Principal or Assistant Principal)?

0 10 20 30 40 50 60 70 80 90 100

Years of Experience

Q4 Before your current position, were you involved, in any way, with agricultural education?

- ○ Yes
- ○ No

Q5 Approximately, how many students are enrolled in your school?

0 250 500 750 1000 1251 1501 1751 2001 2251 2501

| | |
|---|---|
| Students Enrolled in School |  |

Q6 What type of school system is your school a part of?

- ○ Public
- ○ Private
- ○ Charter
- ○ Other - Please specify.. _____

Q7 To your knowledge, approximately how many years have agricultural education classes been offered at your school?

0 10 20 30 40 50 60 70 80 90 100

| | |
|---|---|
| Years SBAE classes are offered |  |

Q8 Using a scale of 1-100, how successful is your high school's agricultural education program? (1 being not successful, 100 being very successful)

0 10 20 30 40 50 60 70 80 90 100

| | |
|---|---|
| Your high school's agricultural education program success |  |

End of Block: Demographic

Start of Block: Perception of Importance

Q9 Classroom/Laboratory Instruction

Rate the following statements' importance toward school-based agricultural education program success.

| | Not Important | Low Importance | Neutral Importance | Somewhat Important | Very Important |
|---|---|---|---|---|---|
| Guest speakers visit the agricultural classroom and speak about content directly related to the current lesson. | ○ | ○ | ○ | ○ | ○ |
| Agriculture classes have a high pass rate on End of Pathway Assessments (EOPA) | ○ | ○ | ○ | ○ | ○ |
| Agriculture classes spend at least 50% of their time outside or in a laboratory setting. | ○ | ○ | ○ | ○ | ○ |
| Teachers spend an equal amount of time on all standards and do not favor any specific standards. | ○ | ○ | ○ | ○ | ○ |
| Agriculture programs have a high percentage of students entering the local trade and agriculture workforce after high school. | ○ | ○ | ○ | ○ | ○ |

Q10 Supervised Agricultural Experience (SAE) Program
Rate the following statements' importance toward school-based agricultural education program success.

| | Not Important | Low Importance | Neutral Importance | Somewhat Important | Very Important |
|---|---|---|---|---|---|
| Students submit state-qualifying Agricultural Proficiency Award applications annually. | ○ | ○ | ○ | ○ | ○ |
| School-based agriculture education programs have a livestock show team. | ○ | ○ | ○ | ○ | ○ |
| Agriculture programs have 100% SAE participation. | ○ | ○ | ○ | ○ | ○ |
| SAE programs mainly teach students entrepreneurship knowledge and skills. | ○ | ○ | ○ | ○ | ○ |
| SAE programs are tailored to the local agriculture industry and community needs. | ○ | ○ | ○ | ○ | ○ |

Q11 National FFA Organization

Rate the following statements' importance toward school-based agricultural education program success.

| | Not Important | Low Importance | Neutral Importance | Somewhat Important | Very Important |
|---|---|---|---|---|---|
| Chapter FFA officers plan and lead monthly FFA chapter meetings. | ○ | ○ | ○ | ○ | ○ |
| FFA chapters have area and state officers every year. | ○ | ○ | ○ | ○ | ○ |
| FFA chapters win area and state Career Development Events | ○ | ○ | ○ | ○ | ○ |
| FFA members attend area, state, and national leadership conferences | ○ | ○ | ○ | ○ | ○ |
| FFA chapters impact their local community through community service | ○ | ○ | ○ | ○ | ○ |

End of Block: Perception of Importance