Identifying Self-Efficacy Factors of Agriscience Teachers When Working with Supervised Agricultural Experiences for Students with Disabilities

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IDENTIFYING SELF-EFFICACY FACTORS OF AGRISCIENCE TEACHERS WHEN WORKING WITH SUPERVISED AGRICULTURAL EXPERIENCES FOR STUDENTS WITH DISABILITIES

A Thesis

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Master of Science in

The Department of Agricultural and Extension Education and Evaluation

by

Saralyn Lloyd Smith
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# TABLE OF CONTENTS

ACKNOWLEDGEMENTS ........................................................................................................ ii

ABSTRACT .......................................................................................................................... iv

CHAPTER I. INTRODUCTION TO RESEARCH ................................................................ 1

CHAPTER II. LITERATURE REVIEW ............................................................................ 7

CHAPTER III. METHODS ............................................................................................... 22

CHAPTER IV. FINDINGS .................................................................................................. 32

CHAPTER V. CONCLUSIONS ......................................................................................... 43

APPENDIX A ..................................................................................................................... 49

APPENDIX B ..................................................................................................................... 50

APPENDIX C ..................................................................................................................... 51

REFERENCES .................................................................................................................... 52

VITA .................................................................................................................................... 56
ABSTRACT

The number of students receiving disability services annually in the U.S. has increased in the last decade. Even with this growing population of students with disabilities, research continues to show a lack of confidence of School Based Agricultural Education (SBAE) teachers in their ability and skills to include these students. The purpose of this qualitative study was to describe the factors that influence how SBAE teachers support students with disabilities in Supervised Agricultural Experience Programs and identify perceived obstacles SBAE teachers have regarding working with students with disabilities. Semi-structured interviews were conducted with twelve SBAE teachers to understand their lived experiences. To triangulate the findings, photographs and classroom materials, such as rubrics and syllabi, were also collected. Following data collection, data was transcribed and analyzed. Four themes emerged with ten subthemes. Themes included Growth, Struggle, Resources, and Motivation. The study participants showed growth through their careers and experienced a pivotal moment in which they gained self-efficacy in their ability to work with students with disabilities in SAEs. Even with gained confidence, accessibility, parents, and personal struggles were identified. A wide variety of resources were used by participants, including human resources and classroom materials. Each of the participants identified motivators in the areas of educator motivation, inclusion motivation, and SAE motivation.
CHAPTER I. INTRODUCTION TO RESEARCH

Background

Secondary agricultural education was formally established in the United States with the passing of the Smith-Hughes Act in 1917 (Moore, 2019a). Since 1917, secondary agricultural education has grown to serve students through three interconnected components: classroom instruction, leadership development education, and experiential/work-based learning (Croom, 2008). Over 1 million students are enrolled in agricultural education programs annually in all 50 states and three territories (Agricultural education, 2023). The mission of agricultural education is to prepare students for successful careers and equip them to make informed choices in global agricultural, food, fiber, and natural resources systems (The National Council for Agricultural Education, 2023).

Agricultural education programs can be academically beneficial for students. In particular, research has indicated that students enrolled in Career and Technical Education (CTE) courses like agricultural education have higher academic achievement and postsecondary engagement as compared to students who are not enrolled (Eisenman, 2000). However, CTE enrollment may provide additional avenues of support and academic success for the almost 180,000 students with exceptional learning needs enrolled in agricultural education programs each year (Teixera & Edwards, 2020). For example, experiential/work-based learning prepares students with disabilities for career and college readiness through awareness, exploration of careers, career preparation, and career training (Center on Transition Innovations, 2015), and when students with disabilities participate in experiential/work-based learning, their likelihood for employment and community integration increase during adulthood (Center on Transition
Innovations, 2015). Unfortunately, Rosenzweig (2009) found that 90% of preservice teachers did not feel prepared to teach students with some specific disabilities listed under IDEA such as autism, deafness, and multiple disabilities. Similarly, Griffing et al. (2010) found that the majority of school-based agricultural education (SBAE) teachers had the willingness to include students with disabilities in their classrooms but did not have the confidence in their abilities and skills.

Agricultural education can be particularly challenging due to the total program model. SBAE comprises three interconnected components that make up the total program: (1) classroom instruction, (2) FFA, and (3) Supervised Agricultural Experience (SAE) (Croom, 2008). The first component, classroom instruction, includes both traditional classroom learning and laboratory instruction that can take place in agricultural mechanics laboratories, greenhouses, land plots, and aquaculture laboratories (Croom, 2008). The second component, FFA, is an intracurricular organization for students interested in developing agricultural career skills and leadership (Croom, 2008; National FFA Organization, n.d.). The third component, SAE, consists of a student-led, work-based learning opportunity that aligns with students’ chosen career path (Croom, 2008). When each of these components are integrated into an SBAE program, it results in the development of well-rounded students that are prepared to be leaders (Croom, 2008).

**Theoretical Framework**

Self-efficacy theory (SET) has been used in research and practice to understand behaviors ranging from exercise choices to alcohol use (Carey & Forsyth, 2009). Self-efficacy is a person’s belief in their own “capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p 3). A person’s self-efficacy affects their daily life through what they choose to pursue, how they pursue endeavors, how they face obstacles and failures,
stress and depression levels during challenging endeavors, resilience, thought patterns, and accomplishment recognition (Bandrura, 1997).

SET is based on four sources of information or influence: (1) performance accomplishments, (2) vicarious experience, (3) verbal persuasion, and (4) physiological states. Performance accomplishments as a source of information/influence are very influential in one's self-efficacy because it is rooted in their own personal mastery of experiences. Continued success raises expectations, while continued failure does the opposite. Expectations can also be derived from others' experiences, or vicarious experiences. Verbal persuasion, which is widely used, is less influential than performance accomplishments and vicarious experience. Physiological states, or emotional arousal, is influential in judging one's anxiety and vulnerability to stress. SET was used in this study to describe how each of the four sources of information or influence affect the way SBAE teachers work with students with disabilities in SAEs. The semi-structured interview protocol utilized guided discussion to share each of these sources from their lived experiences.

Statement of the Problem

In the 2020-2021 academic year, approximately 7.3 million students from the ages of three to 21 years old received special education services (NCES, 2022). This is roughly 15% of all students attending public schools in the United States. This is an increase of almost one million students from 10 years prior (NCES, 2022). Despite this growing trend, preservice teachers do not often feel prepared to teach all students within their programs and report additional challenges when faced with working with certain disabilities (Rosenzweig, 2009). Even though preservice teachers do not feel equipped to teach these students, the majority of
SBAE teachers have a willingness to include students with disabilities in their classrooms (Griffing et al., 2010).

**Purpose of the Study**

The purpose of this qualitative study was to describe the factors that influence how SBAE teachers support students with disabilities in SAE programs and identify perceived obstacles SBAE teachers have regarding working with students with disabilities. Qualitative research methods were utilized to better understand how successful teachers were implementing SAE in their classrooms and how students with disabilities were engaged in SAE activities.

**Research Objectives**

1. Examine agriculture teachers’ perceptions toward accommodating students with disabilities when implementing Supervised Agricultural Experiences.
2. Identify perceived barriers that agriculture teachers may have regarding accommodating students with disabilities when implementing Supervised Agricultural Experiences.
3. Identify resources agriculture teachers are using to support students with disabilities in their Supervised Agricultural Experiences.
4. Describe how agriculture teachers are supporting students with disabilities in their Supervised Agricultural Experiences.

**Definition of Terms**

**Accessibility** – The ability to enter a facility or building to move about freely and the ability to participate and function effectively in the work environment (Sarkees-Wircenski & Scott, 2003).
**Accommodations** – Classroom modifications and adjustments developed by educational personnel that provides free appropriate public education with students who receive disability services (Sarkees-Wircenski & Scott, 2003).

**Disability** – An impairment, either mental or physical, that substantially limits at least one of an individual’s major life activities (Sarkees-Wircenski & Scott, 2003).

**Individualized Education Plan** – A document developed by classroom educators, parents, and other school representatives that includes student’s current educational level, annual goals, short-term instructional goals, the specific services that will be provided to students, and expectations of the learner in regular education programs. Transition service statements for learners must be added by the age of 16 (Sarkees-Wircenski & Scott, 2003).

**Modification** – Alterations or changes made to educational processes or objects to increase functionalities for all students; includes changes to facilities, equipment, and furniture to eliminate barriers for students with disabilities (Sarkees-Wircenski & Scott, 2003).

**Limitations of the Study**

The follow are considered limitations of this study:

1. Due to the nature of the qualitative research design, my opinions and biases may influence data analysis.
2. The limited number of participants in this qualitative study do not allow these findings to be generalizable to large populations.
Assumptions

For the purpose of this subject of this study, the following assumptions were made:

1. All participants were truthful in their interview responses.

Need for this Study

From a cultural and socioeconomic standpoint, learners are more diverse than they have ever been (AAAE, 2011), and these elements have an impact on career choice (Mitchell & Krumboltz, 1990). Roughly 15% of students in the United States received special education services in the 2021-2022 school year (NCES, 2023), and research suggest that these students are more likely to have higher academic achievement and engagement after high school if they are enrolled in Career and Technical Education (CTE) courses (Eisenman, 2000). SBAE, a segment of CTE, equips diverse learners for career success through its three circle model, which includes formal classroom instruction, FFA, and supervised experience (National Association of Agricultural Education, n.d.).
CHAPTER II. LITERATURE REVIEW

Purpose of the Study

The purpose of this qualitative study was to describe how SBAE teachers support students with disabilities in SAE programs and identify perceived barriers SBAE teachers have regarding working with students with disabilities. Qualitative research methods were utilized to better understand how successful teachers were implementing SAE in their classroom and how students with disabilities were engaged in SAE activities. For the purpose of this study, Students with disabilities were identified as students participating in SBAE coursework, who received special education services through an Individual Education Plan (IEP) or a Section 504 plan.

Research Objectives

1. Examine agriculture teachers’ perceptions toward accommodating students with disabilities when implementing Supervised Agricultural Experiences.
2. Identify perceived barriers that agriculture teachers may have regarding accommodating students with disabilities when implementing Supervised Agricultural Experiences.
3. Identify resources agriculture teachers are using to support students with disabilities in their Supervised Agricultural Experiences.
4. Describe how agriculture teachers are supporting students with disabilities in their Supervised Agricultural Experiences.

Agricultural Education

For decades in the United States, education and agriculture were intertwined (National Agriculture in the Classroom, n.d.). The school year was scheduled based on planting and
harvesting seasons, and students would work and be responsible for farm chores before and after school (National Agriculture in the Classroom, n.d.). During the early years of America, there was little scientific knowledge relating to agriculture (Stimson & Lathrop, 1942; Moore, 2019b). Because the early universities in America focused on liberal arts, the only knowledge being taught about agriculture was from one generation to the next and poor production practices were often passed down (Moore, 2019b). In 1862, the Morrill Act was passed which created public universities specifically for agriculture and mechanical arts in each state, called Land Grant Universities with the mission to promote the liberal and practical education of military tactics, agriculture, and mechanical arts (Moore, 2019b).

However, there was a lack of trust from farmers in these new universities because there was no direct impact for the farm application and research. At the time, there was a lack of scientific knowledge in agriculture and the Morrill Act only mandated the teaching of agriculture, not research. To better support the diffusion of scientific research, the Hatch Act was passed in 1887 to establish agricultural experiment stations at the Land-grant Universities which would then focus on conducting research and diffusing their research findings to the public (Moore, 2019b). This was the start of practical agricultural sciences knowledge and education in the United States.

As part of the Hatch Act’s purpose to diffuse agricultural knowledge to people, agricultural education programs began to be established in public schools throughout the U.S. at agricultural experiment stations (Moore, 2019a). By 1916, agriculture was being taught in over 4,300 secondary schools to over 85,000 students. Additionally, the Smith-Hughes Act was passed in 1917, providing funding for education in vocational agriculture, home economics, trade, and industry (Moore, 2019a).
Along with the increase in agricultural education coursework availability, a need was identified to work more closely with youth and provide additional opportunities for agricultural engagements. In 1925, the Future Farmers of Virginia (FFV) organization was established by Henry Groseclose, Harry Sanders, Walter S. Newman, and Edmund C. Magill at Virginia Polytechnic Institute. (Hillison, 1993; National FFA Organization, 2023). Upon its development, the FFV was a statewide organization for boys enrolled in high school vocational education programs (The Historical Marker Database, 2016). One year later, the first National Congress for students in vocational agriculture courses was held in Kansas City, Missouri at the American Royal Livestock and Horse Show (National FFA Organization, 2023). During the first National Congress, students competed in a livestock judging contest and after gaining popularity, in 1928 the Future Farmers of America (FFA) was established by 33 boys representing 18 states (Indiana University-Purdue University Indianapolis, n.d.) through amendments to the Smith-Hughes Act. (National FFA Organization, 2023; Croom, 2008).

During the 1920s through 1940s, farm populations began to decrease, resulting in the connection between agriculture and education fading and agriculture becoming more of a vocation for students rather than a part of all their daily lives (National Agriculture in the Classroom, n.d.). Today, SBAE is “delivered through three interconnected components:” formal instruction, supervised agricultural experiences, and FFA (National Association of Agricultural Educators, n.d.) (see figure 1). This model is used in SBAE programs in all 50 states and three United States territories with over 800,000 students participating in these programs from seventh grade to adulthood.
Figure 1. The FFA Total Program Model

Prior to the development of formal agricultural education, students' hands-on experiences became a cornerstone of agricultural education. The Civilization Fund Act of 1819 established a small relationship between formal instruction of agriculture and supervised agriculture field projects (Croom, 2008). It is likely that supervised experience was the first of these three components to be implemented formally in education, and with the passing of the Smith-Hughes Act, Supervised experiences became a formal part of agricultural education in 1917 (Croom, 2008).

**Supervised Agricultural Experience (SAE)**

The first official SAE project implementation was developed by Rufus Stimson in 1907 (Moore, 1988), but it was then known as a “home project” (The Council for Agricultural Education, n.d.). Stimson was a philosopher, English professor, and the president of Connecticut State College of Agriculture (The Movement for School-Based Agricultural Education, 2020). After resigning from his position at Connecticut’s Land Grant University, he became a high school agricultural educator. He created agriculture departments in rural high schools and used home projects as a practical component of the program and a way to diffuse agricultural research.
to family farms (The Movement for School-Based Agricultural Education, 2020). The core purpose of the home project was to give students hands-on learning opportunities connected to agriculture, and that has remained true of the modern SAE today (The AET, n.d.). At the time, educators could not have imagined having multiple class periods full of students each day, most of which do not have access to farms for these home projects (The National Council for Agricultural Education, 2024). To better serve the diversity of 21st Century classrooms, a new definition and approach to SAE was developed in 2017 (Texas FFA, n.d.). This new approach focuses more on learning outcomes than the amount of money earned, or the number of hours worked. As a result of this envisioning of SAE programs, SAE is currently defined as “a student-led, instructor supervised, work-based learning experience that results in measurable outcomes within a predefined, agreed upon set of Agriculture, Food and Natural Resources (AFNR) Technical Standards and Career Ready Practices aligned to a career plan or study” (The National Council for Agricultural Education, n.d., p 2).

According to the National Council for Agricultural Education (n.d.), all students enrolled in an AFNR program should begin a Foundational SAE within their first semester. Ideally, Foundational SAE programs should focus on career planning, career readiness skills, financial planning, workplace safety skills, and agricultural literacy. Students grow their SAE over time to eventually move into an Immersion SAE, which is designed to grow the student’s agricultural literacy in a more defined area. There are five types of Immersion SAE: (1) placement/internship, (2) ownership/entrepreneurship, (3) research, (4) school-based enterprise, and (5) service learning. Immersion SAE projects should align with the students desired career goals, meaning that it may not result in FFA awards or recognition programs (The Council for Agricultural Education, n.d.).
Retallick (2010) conducted a study with the purpose of examining how agricultural educators are implementing SAE within their programs. Of the study participants, 88% of the participants stated that they did implement SAE in their programs. For those who did choose to implement, their reasons for doing so fell into three categories: (1) to teach life skills, (2) to earn FFA awards, and (3) because SAE is part of the three-circle agricultural education model. This study identified five categories as limiting factors for implementing SAE: (1) demographics and attitudes, (2) the structure of school, (3) available resources, (4) the agricultural education system, and (5) the production agriculture stereotype. Retallick (2010) concluded that the educators did not implement SAE as it was originally conceptualized, meaning the theory of SAE and practice were not connected. Because of the study, it was recommended that the definition of SAE be further refined by asking a series of questions related to the purpose of SAE to encourage greater teacher buy in and implementation (Retallick, 2010).

Due to changes in agricultural education since the original conception of SAE, teachers have indicated a lack of confidence in their abilities to advise SAE programs. Rubenstein et al. (2014) sought to understand the self-efficacy of preservice agricultural educators on SAE competencies developed by the American Association of Agricultural Education (AAAE) since there has been a decline in the use of SAE overtime. Of the 92 participants, nine received no instruction in their teacher preparation program specifically on SAE, however, the majority believed SAE to be an important component of agricultural education programs. Participants reported moderately high self-efficacy on SAE competencies. Little difference was found between the self-efficacy of participants with previous SAE experience in high school and those without previous SAE experience. Because of this, it was concluded that a change in content
delivery method by teacher educators is not needed for preservice SBAE teachers based on previous SAE experience (Rubenstein et al, 2014).

**Special Education**

Evidence of seclusion and marginalization for individuals with disabilities has occurred throughout history (Teixeria & Edwards, 2020). Differentiated treatment has been apparent for centuries, ranging from the limitation of job opportunities to the euthanization of individuals with disabilities in Nazi Germany. However, this began to change during World War II, when individuals with disabilities began to fill vacant jobs from the ongoing war (Teixeria & Edwards, 2020) and many companies hired individuals with disabilities for the first time (National Park Service, 2024). Because of this integration, support for the inclusion of individuals with disabilities in workforce training increased (Teixeria & Edwards, 2020). To better meet this growing need, Vocational Rehabilitation (VR) programs played a role in the training and placement of these individuals (National Park Service, 2024). The War Department of the U.S. Government promoted the hiring of these individuals through films and printed ads featuring individuals with physical disabilities working in factories (National Park Service, 2024). Additionally, the Civil Rights Movement increased the support and advocacy of the inclusion of individuals with disabilities in education (Teixeria & Edwards, 2020) as the progress made by African American activists during protest and sit-ins inspired disability rights activists to take further action (Wright, 2023).

Section 504 of the Rehabilitation Act of 1973 was one of the first pieces of legislation passed to protect the rights of individuals with disabilities from discrimination in federally funded programs (Ploss et al, 1996). Since the passing of Section 504, many laws have been put
into place to prevent discrimination and assist individuals with disabilities. In public schools, Section 504 of the Rehabilitation Act of 1973 specifically protects students with disabilities in schools that receive federal financial assistance (U.S. Department of Education, 2023). Closely following Section 504 of the Rehabilitation Act, the Education for All Handicapped Children Act (EHA) was passed in 1975, establishing free and appropriate education (FAPE) for students with disabilities in the least restrictive environment possible (LRE) (Ploss et al, 1996; IDEA, n.d.) to meet the needs of students more adequately both with and without disabilities (Rosenfeld, 1996). Additionally, the EHA put an emphasis on communication and teamwork between the parents of students with disabilities and educators (Ploss et al, 1996).

In 1990, the EHA was amended and renamed as the Individuals with Disabilities Education Act (IDEA) and was reauthorized in 2004 and then amended in 2015 through Every Student Succeeds Act (Ploss et al, 1996). In 1975, services were provided to 1.8 million students, which has now grown to 7.5 million students in the 2020-2021 school year (IDEA, n.d.). With 66% of students spending at least 80% of their school day in a general education classroom. This act not only allowed access to FAPE for these students but also protected their rights and the rights of their parents while supporting grants for services and research. Part B of IDEA covers students three to 21 years old; Part C covers birth through two years old (IDEA, n.d.).

Students who receive services under IDEA must have an Individualized Education Program (IEP) that includes the following information: current performance, annual goals, how progress will be measured, special education and related services, participation and accommodations for state/district test, interaction with nondisabled students, timeline for services, transition services, age of majority (U. S. Department of Education, 2017a). A team of individuals, known as the IEP team, is required for developing the IEP, reviewed annually. An
The IEP team must include the students’ parents, at least one regular education teacher, at least one special education teacher, public agency representative, an individual that is able to interpret the instructional implication of evaluation results, other knowledge individuals requested by the parent or agency, and if appropriate the student (U.S. Department of Education, 2017b). Section 504 defined disabilities more broadly than IDEA (Rosenfeld, 1996). IDEA only guarantees services to students with specific disabilities listed within the bill, while section 504 guarantees services to any students with a disability limiting more or more major life activities which may not be related to academic performance (Rosenfeld, 1996).

The Carol Perkins Vocational Education Act passed in 1984 which provided funding to aid in the inclusion of students with disabilities in vocational education (Ploss et al., 1996). This Act was reauthorized in 2018 with the goal of strengthening career and technical education (CTE) (NAPE, n.d.). One of the primary purposes of the reauthorization was to increase employment opportunities for special population students, including students with disabilities (NAPE, n.d.).

In 1990, the Americans with Disabilities Act (ADA) was passed to stop the discrimination of individuals with disabilities in employment, public services, public accommodations, communications, transportation, and state and local government (Ploss et al., 1996). ADA has a direct impact on FFA programs because all agricultural education and FFA programs are federally funded. Related events and communication must be made accessible to individuals with disabilities (Ploss et al., 1996).

While legislation has helped to ensure that students with special needs are given protected rights to education, challenges often exist as teachers work to implement special
education inclusion, along with managing and implementing curriculum within their classrooms. Specifically, teachers have often described inadequate training, time, and support as challenges to successful inclusion within their programs.

**School Based Agricultural Education Teacher Needs**

In agricultural education, the emphasis on hands-on, career-based instruction often provides unique opportunities for students with special needs. Agricultural education as well as other CTE areas, often work extensively with students with special needs through their coursework. However, teachers may not always have the background or education needed to successfully integrate students with special needs in the total program model.

Touchstone (2015) conducted a study identifying the perceived needs of Idaho agricultural education teachers within their first five years of teaching. This study identified 21 professional development needs in three categories: (1) teacher skills and knowledge, (2) personal skills and professional development, and (3) program area concerns. To identify these needs, a modified Delphi technique was used to establish consensus from 36 beginning agricultural education teachers, 88 veteran agricultural education teachers, and 57 school building administrators in Idaho. The highest items identified as concerns from each of the three categories include volume of work, identifying alternative funding sources, and program funding. Also, 75.82% of respondents also agreed that working with at risk or students with IEPs was a professional development need. Touchstone (2015) recommended that this consensus be used to create professional development and other activities that are appropriate to address these needs.
However, challenges for SBAE teachers are not just limited to the classroom, Ramage et al. (2022) investigated the experiences and needs of female SBAE teachers in Louisiana when teaching students with disabilities. The participants in this study perceived the inclusion of students with disabilities as important, not just in the classroom, but also through participation in the FFA. Three of the participants in this study completed teacher certification through traditional coursework at a university and of the three, two indicated they did not receive adequate preparation through required coursework related to teaching students with disabilities, while the third was able to gain experience from tutoring students with disabilities as part of her required coursework at the university. None of the participants in the study attended professional development focused on special education in SBAE previously, instead, they had attended professional development training through their local school districts on special education targeted towards general education teachers (Ramage et al., 2022).

To better address teacher needs, it is important to understand how educators currently perceive FFA, SAE, and students with disabilities. Johnson et al. (2012) conducted a study with the purpose of examining the perceptions of agricultural educators in North Carolina related to the inclusion of students with disabilities in SAE and FFA. Teachers in this study generally agreed that students with disabilities get similar benefits from SAE and FFA as other students and that SAE and FFA are beneficial to these students. They also agreed that students with disabilities should conduct an SAE and participate in FFA activities. However, study participants also perceived that conducting an SAE is more difficult for students with disabilities and that FFA activities are more limited. These educators identified opportunities to conduct SAEs, student ability, and inadequate facilities as the top three barriers to working with students with disabilities.
disabilities on SAE, while student ability and time were identified as the top barriers to working with students with disabilities in FFA (Johnson et al., 2012).

Lainer et al. (2023) conducted a study seeking to identify challenges and improvements for the inclusion of students with diverse needs in FFA. Three themes emerged through this study: the value of relationship building, the need for training, and challenges with competition. Each teacher identified one on one relationship building between themselves and students, parents, and special education departments as important to successful inclusion of students with diverse needs in FFA. The participants said they received little to no formal training for this need. The educators also perceived the competitiveness that comes along with Career and Leadership Development Events as a challenge for inclusion (Lanier et al., 2023).

Kessell et al. (2009) studied the relationships between confidence and knowledge in special education of agriculture education student teachers in the southern region of the AAAE. This study found that as age and spending time with special needs persons outside of academic settings increased, the participants' knowledge of disabilities and related laws also increased, with female student teachers being more likely to have knowledge on these topics. Only one significant relationship was found between total confidence and knowledge based on providing a least restrictive environment in the agricultural classroom and other learning settings for special needs students (Kessell et al., 2009).

Griffing et al. (2010) conducted a study that sought to assess the attitudes towards inclusion of students with disabilities in the classrooms of Utah SBAE teachers. They found that the teachers were in favor of and had positive experiences with inclusion of students with disabilities, however, their willingness to include students with disabilities did vary depending on
the type of disability. The teachers in this study agreed or were neutral when asked about their own skill level and ability to include students with disabilities in their classrooms. The confidence of those with more years of teaching experience was greater, while those with more years of teaching were also “more particular as to the type of disability they were willing to include and were less willing to accept assistance from others” (Griffing et al., 2010, p. 111).

Stair et al. (2016) conducted a study to describe the perceptions of Louisiana agriculture teachers of working with students with special needs and determine how they were working with these students in their program. This study found that the agriculture teachers were confident in their abilities to work with and include students with disabilities in their SBAE programs. Additionally, the teachers in this study frequently used strategies for working with students with disabilities including two that were perceived as highly effective, such as, including emphasizing hands-on skills or activities and working with Special Education teachers to provide an overview of each student (Stair et al., 2016)

In regard to teacher education programs, Ramage et al. (2021) conducted a case study which analyzed the experiences of student teachers at Louisiana State University (LSU) as they developed their classroom environments and provided accommodations to students with disabilities. Three types of variables were identified that influenced their experiences accommodating students: presage, context, and process. The first variable, presage, related to the students' teachers' previous experiences, including both formal and non-formal experiences during their teacher preparation programs which influenced how the student teachers viewed working with students with disabilities. Context, the second variable, explained how the different situational factors, like communication, policies, and practices of their host schools, influenced how they accommodate students with disabilities. Finally, within the process variable, the
student teachers indicated that they needed additional guidance and support in this area as they become SBAE teachers. This study found that student teachers from LSU have a deficiency in their preparation to create inclusive educational environments and they recommended that teacher educators put a greater emphasis on this area through pre-existing coursework (Ramage et al, 2021).

Wilkins-Brittain et al. (2022) identified three themes based on the experiences of SBAE teachers including students with disabilities in their SBAE programs: importance of communication, inclusiveness of a complete program, and the transferring of responsibilities for provided services. Each educator in this study mentioned communication between students, parents, administrators, and special education staff as a priority for successful outcomes when working with students with disabilities. These educators also each outlined the importance of making accommodations and modifications for students in each of the three parts of SBAE. Finally, they all shared their experiences with either supportive or unsupportive administrators and special education departments. Those without supportive special education departments felt like the inclusion of these students fell completely on them. They all lacked understanding of FAPE (Wilkins-Brittain et al., 2022).

Hainline et al. (2019) conducted a study to identify important laws impacting agricultural science teachers according to school superintendents and attorneys in Texas. Snowball sampling was used to identify participants who had extensive backgrounds in agricultural education and educational law. The participants agreed on 35 general and agricultural education specific law issues being important. Four of these reached 100% consensus in round two and three: (1) inappropriate communication with parents and students via text messaging, (2) inappropriate contact between educators and students (verbal, physical, & on social media), (3) discipline of
students at schools, and (4) Supervising students on an overnight stay (providing proper supervision when students are ‘out of view’) (Hainline et al., 2019, 197). Other important laws agreed upon include complying with IEPs, providing accommodations for students with disabilities, and safety in the classroom and agricultural mechanics shop. Hainline et al. (2019) recommend that these educators should familiarize themselves with local, state, and federal laws, along with the teacher and student handbook for their school. It is also important for teacher educators to inform teachers about these educational law issues (Hainline et al., 2019).

While there is a lack of specific resources for special education integration into agricultural education programs, in the 1990’s, greater effort was made to help teachers work with students with disabilities in agricultural education. The *Bridging Horizon's: An Advisors Guide to FFA Involvement for Members with Disabilities* (Ploss et al., 1996) highlighted the importance of students with disabilities selecting SAE projects that are worthwhile and appropriate for them with the help of their advisor and guardian. While some limitations exist for implementation, special equipment and modifications enable participation of students with disabilities to participate in a wide range of SAE activities. According to the early inclusion materials, there are a variety of important component to include when planning an SAE for a student with a disability: competencies and skills to be learned, task analysis, check list, responsibility and ownership of the student, and notation of any existing barriers there may be to the completion of required task (Ploss et al., 1996).
CHAPTER III. METHODS

Purpose of Study

The purpose of this qualitative study was to describe the factors that influence how SBAE teachers support students with disabilities in SAE programs and identify perceived obstacles SBAE teachers have regarding working with students with disabilities. Qualitative research methods were utilized to better understand how successful teachers were implementing SAE in their classroom and how students with disabilities were engaged in SAE activities. For the purpose of this study, Students with disabilities were identified as students participating in SBAE coursework, who received special education services through an Individual Education Plan (IEP) or a Section 504 plan.

Research Objectives

1. Examine agriculture teachers’ perceptions toward accommodating students with disabilities when implementing Supervised Agricultural Experiences.
2. Identify perceived barriers that agriculture teachers may have regarding accommodating students with disabilities when implementing Supervised Agricultural Experiences.
3. Identify resources agriculture teachers are using to support students with disabilities in their Supervised Agricultural Experiences.
4. Describe how agriculture teachers are supporting students with disabilities in their Supervised Agricultural Experiences.
Philosophical Perspective

Epistemology and Theoretical Perspective

For this qualitative research study, the data was viewed and interpreted using a constructionism epistemological perspective (Crotty, 1998). This perspective interprets the meaning of the data as being constructed from human experiences and practices, as opposed to being discovered (Crotty, 1998). Using a constructionism epistemological perspective, there is no meaning until humans interact with the world and constructionism shapes the way both the researcher and participants see and feel things (Crotty, 1998). Because of this, the data for this study were viewed from the participants’ construction of their realities regarding the inclusion of students with disabilities in their SAE programs. This study was guided through an interpretivist theoretical perspective and the lead researcher interpreted the meaning each of the study participants made through the inclusion of students with disabilities in their agricultural education program.

Reflexivity

It is important to practice self-reflexivity and transparency (Tracy, 2010) to position the lead researcher and how her background informs this study (Creswell & Poth, 2018). I have a passion for inclusion of all individuals with disabilities and my childhood neighbor and friend has a cognitive disability. My sister is also a special education elementary teacher. After high school, I worked closely with students with disabilities and special education teachers as a middle school English tutor. Relationships throughout her life have given her a passion for the inclusion and acceptance of individuals with disabilities.
I have a bachelor’s degree and am pursuing a master’s degree in agricultural and extension education. I was very active in her middle and high school agricultural education programs. I value the experiences that she gained through her own middle and high school SAE projects: beekeeping and a small flock of chickens. I completed one semester of student teaching in a middle school agricultural education program where I was able to advise over student SAE projects. As a result of her experiences, I interpret SAE projects as beneficial to all students including those with disabilities.

**Institutional Review Board**

This study was approved by the Louisiana State University Institutional Review Board (IRB). The IRB’s primary goal is responsible for ensuring that federal requirements regarding research with human subjects are in compliance. Safety, health, and privacy of all human research subjects is ensured through the IRB. CITI Program training in social and behavioral research was completed prior to IRB approval.

Verbal and written consent was obtained for each participant. The IRB approved consent form can be found in appendix A. All data and research files were kept confidential, including interview audio files, transcribed interviews, interview notes, consent forms, and any additional data that was collected. Data collected for this study will be destroyed five years after the completion of the project, per IRB standards for additional security.

**Transcendental Phenomenological Research Design**

Phenomenology is a qualitative research approach where a concept or phenomenon is described based on the lived experiences of numerous individuals (Creswell & Poth, 2017). This qualitative study was grounded in Moustakas’ (1994) transcendental phenomenological
approach. This approach focuses on the experiences of the participants, rather than the interpretation of the researcher (Creswell & Poth, 2017). Epoche, also known as bracketing, is a key factor of the transcendental phenomenological approach (Moustakas, 1994). While this is difficult to achieve perfectly, epoche is viewing the collected data from a fresh perspective and setting aside their own experiences (Creswell & Poth, 2017).

**Population Description**

This study’s population included school based agricultural education (SBAE) teachers who had the highest percentage SAE participation in their state. Two states were randomly selected from each NAAE area and a criterion-based sampling procedure was used to recruit participants by contacting state agricultural education leaders in 12 states (Creswell & Plano Clark, 2018). State agricultural education leaders were contacted to identify the top SAE programs in their states based on AET entries. In total, twelve SBAE teachers agreed to participate. Semi-structured interviews were conducted via Zoom and audio calls. Written and verbal consent was obtained from the participants and participants’ characteristics were identified (see Table 1).

**Table 1. Demographic Characteristics of Participants**

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>State</th>
<th>NAAE Region</th>
<th>Gender Identity</th>
<th>Years Teaching</th>
<th>Licensure</th>
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<tr>
<td>Thomas</td>
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<tr>
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<td>Benjamin</td>
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</table>

(Table cont'd.)
<table>
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<tr>
<th>Pseudonym</th>
<th>State</th>
<th>NAAE Region</th>
<th>Gender Identity</th>
<th>Years Teaching</th>
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<td>Lauren</td>
<td>Delaware</td>
<td>6</td>
<td>Female</td>
<td>21</td>
<td>Traditional</td>
</tr>
</tbody>
</table>

**Data Collection**

Face-to-face individual interviews were conducted via Zoom video conferencing software for eleven of the twelve participants. For the purpose of this study, a definition of students with disabilities was given to the participants at the beginning of each interview; students who received special education services through IEP or 504 documentations. Consent forms and additional data was collected using electronic mail correspondence. Before collecting data, I reviewed consent and the purpose of the study with the participants. Verbal consent was received from each participant before I conducted semi-structured interviews. Interviews ranged from 25 to 60 minutes. Interviews were recorded on a separate password protected device. Interviews were transcribed verbatim using the Otter.ai software. During the interviews, participants were asked questions such as, “What does the support you give students with disabilities look like when working on SAE projects?” “What are your experiences including students with special needs in SAE projects?” and “How does it make you feel when students with special needs succeed in SAE projects?” The full interview protocol can be found in Appendix B.
To allow for data triangulation, additional data was collected from participants in the form of classroom materials and images. Participants sent materials that they use in their classrooms via electronic mail, such as, grading rubrics, websites, and syllabi. Participants also sent non-identifiable images of students with disabilities working on their SAE projects.

Data Analysis

To analyze the transcribed interview data, three rounds of coding were implemented: (a) in vivo, (b) descriptive, and (c) holistic (Saldana, 2014).

First Cycle Coding Round 1: Holistic

The holistic coding method “applies a single code to a large unit of data” (Saldana, 2021, 365). In this study, one holistic code was given to each question response of the participants. Saldana (2021) describes holistic codes as a “grand tour” of the data (Saladana, 2021, p 96). Example holistic codes included: “paraprofessional,” “capable,” “opportunity,” and “explain.” Holistic coding was used as a foundational coding method before deeper coding was conducted. First round coding resulted in 121 unique codes.

First Cycle Coding Round 2: Descriptive

Descriptive coding inventories the basic topics of data (Saldana, 2021). This coding method is useful for documents and artifacts of data (Saldana, 2021). In this study, descriptive coding methods were used for coding all pieces of data; including, the transcribed interviews and classroom materials, such as, rubrics that the teachers provided. Example descriptive codes included: “career exploration,” “weekly check ins,” “program not project,” and “areas of interest.” Second round coding resulted in 193 unique codes.
First Cycle Coding Round 3: In Vivo

The in vivo coding method is used to get the researcher more receptive to the study participants’ perspectives (Saldana, 2021). This method uses the participants’ own words and language (Saldana, 2021). In vivo codes are most often only short phrases or less, rather than whole sentences (Saldana, 2021.) Examples of In Vivo codes included: “the negative experience was just the kids’ refusal,” “learning more skills that are going to help them later on in life,” “encourage them to get jobs,” and “very diverse population.” In this investigation, 445 unique codes emerged in round three coding.

Second Cycle Coding:

Axial coding was used as a second cycle coding approach after the first cycle of coding. Axial coding was used to reorganize or categorize the codes to determine which codes were linked and their relation to each other (Saldana, 2021).

Thematic Analysis

A thematic analysis was conducted after the first and second cycle coding processes. This was done to identify themes from the axial codes in the second cycle of the coding process.

Building Qualitative Quality

To build quality into this study, Tracy’s (2010) eight criteria for excellent qualitative research was used. According to Tracy (2010), the following criteria mark quality qualitative research methodology: (a) worthy topic, (b) rich rigor, (c) sincerity, (d) credibility, (e) resonance,
(f) significant contribution, (g) ethical, and (h) meaningful coherence. This study achieved its objectives with quality through Tracy’s (2010) criteria (see table 2).

**Worthy Topic**

The number of students who receive disability related services in the United States has grown from 1.8 million students in 1975 to 7.5 million students in the 2020-2021 school year (IDEA, n.d.). Work-based learning prepares these students for future careers (Center on Transition Innovation). Even with the growing number of students who receive disability services and evidence of the benefit of work-based learning, research has shown that SBAE teachers have a need for professional development in working with students with IEPs (Touchstone, 2015). Ramage et al. (2022) identified that this need goes beyond the classroom and through other parts of the three-circle agricultural education model. The research topic was chosen to address this significant need of SBAE teachers.

**Rich Rigor**

Twelve semi-structured interviews were conducted with educators from each of the NAAE regions. In addition to data collected through interviews, data was collected in the form of student pictures, rubrics, class websites, and other teaching materials. Data was collected via electronic mail and Zoom and audio calls in order to reach participants across the United States. The data was transcribed using the Otter.ai software, then reviewed for accuracy. Rich rigor was achieved through the methodology of the study.
Sincerity

Sincerity was achieved through the practice of self-reflexivity throughout the research process. The researcher is passionate about agricultural education and individuals with disabilities due to her past experiences. These experiences affected not only the way she interpreted data, but the whole research process.

Credibility

Thick descriptions were given in chapter four to illustrate the data and given voice to the study participants. In addition to thick descriptions, multiple forms of data were collected; including, interview transcripts, photographs, and classroom materials. This was done to achieve triangulation and credibility in the study.

Resonance

According to Tracy (2010), resonance revolves around the generalizability and transferability of a study. Tracy (2010) stated that it is about “a study’s potential to be valuable across a variety of contexts or situations” (p 9). The purpose of this study is to be transferable to SBAE teachers interested in including students with disabilities in SAE. This research is to be transferred into the actions of SBAE programs across the U.S.

Significant Contribution

The research conducted a thorough literature review prior to beginning the study to gain an understanding of the current knowledge on the study’s topic. This study was designed to extend knowledge of SAE inclusion for students with disabilities and improve practice.
Ethics

IRB approval was received to ensure procedural ethics were achieved. The confidentiality of participants was protected by the use of pseudonyms and securing the participant’s personal data on a password protected device. When collecting data, participants were asked to only share non-identifiable data to also protect their students.

Meaningful Coherence

A clear purpose statement and objectives were stated at the beginning of each chapter of this study. The research purpose and objectives guided this study to ensure the state purpose was met.
CHAPTER IV. FINDINGS

Chapter Overview

In this chapter, the findings are outlined. The study’s research objectives were used to organize the findings.

Research Objectives

1. Examine agriculture teachers’ perceptions toward accommodating students with disabilities when implementing Supervised Agricultural Experiences.
2. Identify perceived barriers that agriculture teachers may have regarding accommodating students with disabilities when implementing Supervised Agricultural Experiences.
3. Identify resources agriculture teachers are using to support students with disabilities in their Supervised Agricultural Experiences.
4. Describe how agriculture teachers are supporting students with disabilities in their Supervised Agricultural Experiences.

Findings Related to Research Objective #1

Research Objective #1: Examine agriculture teachers’ confidence toward working with students with disabilities when implementing Supervised Agricultural Experiences.

For research objective #1, the theme “Growth” emerged with the subthemes: (1) Beginning Career and (2) Pivotal Moment. The participants all started with preconceptions of the difficulties of inclusion of students with disabilities in SAE, then had a pivotal moment with students to grow their confidence.
Subtheme #1: Beginning Career

Study participants lacked confidence related to the implementation of SAE in the early stages of their careers. Rodney shared that as a first-year teacher sometimes, he was “just trying to keep my head above water.” The participants shared their lack of self-efficacy in the beginning was a result of the complexity in which they viewed SAE. William shared that it was “definitely a struggle at the beginning,” and Emily said she “really didn’t understand how simplistic it could be.” However, participants did not mention a lack of confidence in their ability to include students with disabilities within their SBAE programs. Many of the participants shared that they just did their best to follow the students’ IEP plans and that they treated students with disabilities just like any other student. Tiffany shared that even her students did not treat their peers with disabilities differently. She emphasized that “we are different, and that we’re all unique, and we all have individual talents.” Alice shared that she did not do anything different or special for her students with disabilities, even saying “we all just kind of learn as a class.”

Subtheme #2: Pivotal Moment

Participants ranged from first year teachers to teachers in their thirty-fifth year. All of the study participants, even the two first year teachers, could identify a situation in which they realized how simplistic SAE could be and gained confidence in working with students with disabilities on projects, for example, after gaining experience, Emily realized that she “didn’t understand how simplistic [SAE] could be.” Many of the participants shared stories of specific students that were pivotal moments within their careers in developing their self-efficacy in including students with disabilities. The teachers shared that hard working and successful students with disabilities helped them to see not only the students’ abilities, but the abilities of
their peers as well. When sharing a story about a student with a disability that went on to earn his State FFA Degree, Lauren said that he “sticks out because he put in so much effort.” Jacob shared a story of a student who was in a wheelchair. This student also earned his State FFA Degree with a research-based SAE comparing crop yields. The student modified his skid loader to operate using a joystick so he was able to get into the fields with his dad. Jacob described this student as “wonderful.” These successful students aided the growth of confidence in the study participant to include future students with disabilities in SAE.

On the other hand, William, a first-year teacher, shared how his students not grasping concepts was pivotal for him. He started the school year focused on agriscience and research-based SAE emphasis. His students, especially those with disabilities, were not able to fully grasp the concept of what an SAE is or how to be successful at it. This realization of his teaching method not clicking was pivotal in him rethinking what SAE is and how it can be simplified for all students, including those with disabilities. He is now confident in including students with disabilities, especially with placement and livestock-based SAE.

**Findings Related to Research Objective #2**

**Research Objective #2:** Identify perceived barriers that agriculture teachers may have regarding working with students with disabilities when implementing Supervised Agricultural Experiences.

For research objective #2, the theme “Struggle” emerged with the three subthemes: (1) accessibility, (2) parents, (3) personal.

**Subtheme #1: Accessibility**

The three biggest accessibility challenges for students with disabilities in SAE were identified as transportation, placements, and internet access. One teacher shared that she has seen
a shift in the number of her students who get their driver's license, resulting in less transportation options and hindered ability for students to get to and from placement SAE. Benjamin also shared that there are “fewer farm families,” resulting in less traditional SAE placement accessibility. In addition to these struggles, our rural participants shared that the lack of internet access at home for their students meant they were not able to complete research SAE or SAE journal entries at home, resulting in more class time being taken up by SAE.

Because of these challenges, the study participants had to be more creative when working on effective ways to include their students with disabilities in SAE. To combat these accessibility issues, many of the teachers shared how they have shifted in recent years to more school-based SAE opportunities for all students, but especially for their students with disabilities. This shift included managerial positions within greenhouses and laboratories at school, but also school-based enterprise businesses. Emily’s school has multiple different school-based enterprises that fit into the different career pathways. She said, “we actually started a school-based business there to give students more hands-on opportunity, we were open after school and on the weekends.” In addition to school-based placements, Rodney explained how his school hosts a farmer’s market every semester for students with entrepreneurial SAEs to sell their goods. His students with disabilities can use the opportunity to get involved by creating products and learning how to market those items. He shared that his students really enjoy the school farmer’s market because it “gives them an opportunity to make some money.” Rodney’s school also created a class specifically for students with disabilities to take during the school day to assist them in SAE and Agriscience Fair projects.
Subtheme #2: Parents

The participants overwhelmingly shared the lack of parental support as a challenge in including their students with disabilities in SAE. William shared that often, the only times he can get into contact with parents is at sporting events. He even shared difficulties in accessing accurate contact information for parents and, without accurate contact information, the teachers are unable to communicate student needs and identify support systems or strategies. The participants identified challenges such as: “you do have situations where some parents don’t believe in their students,” “maybe mom and dad aren’t that involved academically,” “almost non-existent parents,” and “not having the educational support they’re used to at home.”

However, Rebecca shared that “some students have very involved parents, and honestly that can almost be a bad thing.” She went on to explain that for some of her students with disabilities, their parents do their work for them, not allowing them to learn. Rebecca added that these parents often underestimate the abilities of their child, so they are unable to try hard things. She explained that it is good for these students to fail sometimes, as she believed that it teaches them to try again.

Subtheme #3: Personal

One of the biggest challenges in SAE inclusion that the participants addressed was how much of their personal time and energy it took to implement successfully. Lauren told a story of a former student from a farming family with a very strong poultry SAE. This student was very passionate and driven to earn his State and American FFA degrees, but he was only at a fourth-grade reading level his senior year due to his disability. She went on to say that one Saturday during degree application season, he called her upset because he could not type out what he
needed to for the application. She invited him into her home that same day for six hours, so she could type his application. She shared that “his ability to communicate verbally what he couldn’t write on paper was tremendous.” Like Lauren, many of the participants shared stories of them working specifically with their students with disabilities on the weekends and outside of contract hours. Many of them also described that they carry the burdens of their students, by saying things like “we understand what kids are going through,” “FFA and SAE aren’t everything,” and “they get knocked down so much.”

Findings Related to Research Objective #3

Research Objective #3: Identify resources agriculture teachers are using to support students with disabilities in their Supervised Agricultural Experiences. For research objective #3, the theme “Resources” emerged with two subthemes: (1) People and (2) Classroom Materials. The study participants identified a variety of different resources they utilize within their agricultural education program to support their students with disabilities in SAE.

Subtheme #1: People

The participants of this study listed various types of people that they use as resources to support students with disabilities in their SAE. The first people that these teachers utilize are the other school staff members that work in their building. Each of the participants said they communicate with the other school staff that are connected to their students with disabilities about their SAE projects. This varied from IEP case managers and paraprofessionals to the other agriculture teachers at their schools and even other core subject teachers. Jenna said that she has been working with some of the same teachers for her whole career. Because of this, they know and understand her program and share the same goals for their students. Many of the study
participants mentioned how they have some sort of open-door policy for teachers and staff to come watch and observe what they are doing in their classrooms, especially the special education teachers. They welcomed these people into their programs and classroom, so they can be involved and serve as resources to their students. Amber told a story about a student who was very passionate about her poultry SAE but was struggling with reading and writing due to her disability. Amber was able to work closely with the student’s English teacher to use her SAE journal to grow both her SAE and her writing skills.

The next group of people that the teachers utilize as resources are others within agricultural education, including State FFA Staff, National FFA Staff, retired SBAE teachers, and other SBAE teachers. Alice shared how she liked to talk with other SBAE teachers from her state and around the country about what their students do as SAE projects. This not only gave her ideas for types of SAEs for all of her students, but also people to gain advice from about modifications and/or accommodations regarding specific SAE. The participants also used this group of people to identify other materialistic resources and even accessibility information for their students with physical disabilities. Tiffany shared, “there’s people that have paved the road before and they’re out there, sometimes it may take a bit longer to find that resource you need but they’re out there and you don’t have to go the road alone.”

The final group of resource people identified by the participants were their local SBAE stakeholders. This group included advisory committees, alumni chapters/booster clubs, local businesses, and community members. The teachers identified this group of people as a resource for support in SAE placements, funding, and proficiency applications. Rebecca said that her stakeholders “supply them with whatever they need to be successful.” Jenna shared that this group of resource people is helpful because “they understand what SAE programs are and are
super involved.” One participant said that she created a list of local businesses and community members that have placement opportunities for her students. She referred to this list of supporters when she had students with new interest to guide them to mentorships. The teachers voiced that their local stakeholders were willing to support students with disabilities if it was safe for the student and others involved. One teacher even expressed that “finding stakeholders that are willing to take them has actually opened our doors up.” Alice shared that her students enjoy these placements because “they like to get out in the community.” Rodney stated that his program lacked community support and an alumni chapter and believed the cause was that his school is not a traditional public high school and is in an urban area.

Subtheme #2: Classroom Materials

The participants shared a wide variety of classroom materials they used as resources to support students with disabilities in SAE projects. The most abundantly agreed upon resource was the Agricultural Experience Tracker (AET), an online software used by SBAE programs across the United States for students to keep records of supervised educational experiences. While the AET did present challenges for both the teachers and their students, it was used by each participant as the primary record keeping technology. However, the teachers used the AET for more than just record keeping when it came to their students with disabilities. The teachers utilized the checklist and rubric features of the software to guide their students with disabilities on their projects and more clearly communicate their SAE expectations. As a supplement to the AET, one of the teachers used Google Docs because of its spelling/grammar check and predictive text technologies. She shared that using both tools were especially useful for her students, especially those with disabilities that affect their reading and writing skills.
The National FFA Organization also had several resources that the teachers utilized. These resources included informational SAE videos, SAE Idea Cards, lesson plans, and a career exploration quiz. All of these resources were mainly used to introduce SAE to students. Resources from the National FFA Organization were utilized to engage students with disabilities and different learning styles. Rebecca mentioned that her state FFA association had similar state specific resources that she utilizes in her program. Participants also lacked knowledge on resources available to them through the National FFA Organization. When asked about the SAE For All model and resources, William said “I have no clue what that model is.” Lauren said she was aware of what it was, but that she felt teachers had not been trained on it enough to implement and use the resources. Lauren went on to explain that she wanted to learn more about it but did not have the time to teach herself.

Lastly, participants also relied on resources that they created for their students. When asked about resources, Rodney said “a lot of it comes from the brainstorming.” Some of these self-created resources that the teachers mentioned include rubrics, journal templates, checklists, and parent letters. Many of the participants also mentioned that they have shared these resources with other teachers or have had resources shared with them. Emily even created her own website to share with students. While discussing SAE resources for her students with disabilities, she shared, “I know there’s other resources out there, but I have not been pleased with what is currently out there.” Alice even said that she would love to see a comprehensive guide on how to use the AET that is accessible for all students, especially those with disabilities.

**Findings Related to Research Objective #4**

**Research Objective #4:** Describe what influences how agriculture teachers are supporting students with disabilities in their Supervised Agricultural Experiences. For research Objective
Subtheme #1: Educator Motivation

The participants shared why they became a SBAE teacher and why they continue to be a SBAE. Most commonly, the participants cited that they had very influential agriculture teachers who inspired them to become SBAE teachers. Their motivation to stay in their careers focused on how they could support their students. The participants described how: “it’s the kids that make you want to keep doing it, “kids [are] what it’s all about,” and “every kid, every day, every time.” One teacher said, “being honest, you get knocked down so much,” but went on to share that it is the “tiny wins” that keep him going. Additionally, the study participants shared their passion and love for all of their students, not just their students with disabilities. For example, one teacher shared that anytime any of her students succeed, that “it’s like Christmas morning.” These educators are working hard to include each one of their students regardless of the student’s challenges. Tiffany stated that “if you put your best foot forward every day to do what’s best for students, then teaching can be a very fulfilling, lifelong profession.”

Subtheme #2: Motivation to Include

Our study participants shared a variety of reasons for being motivated to include students with disabilities within their SBAE programs. Numerous teachers shared personal experiences such as: “I have ADHD,” “I am dyslexic,” and “my brother is actually autistic.” Some of the participants had close personal connections to disabilities that motivated them to include and support their students with similar disabilities. Although not all of the participants shared
personal connections to disabilities, all shared having a passion for working with students with special needs. They described these students as hard working, capable, positive, and diverse. Participants shared that sometimes their SBAE class was the only time these students were able to leave their special education department classroom and therefore the teachers emphasized the importance of including them into every aspect of their program, because “we are all better for it.”

**Subtheme #3: SAE Motivation**

The participants were not only passionate about their students, but also about the SAE and three-circle model of SBAE. The teachers in this study believed that in order to have a well-rounded SBAE program and best serve their students, SAE was an essential component. Participants made statements such as; “I believe in the three circle model,” “The FFA Motto, I am a real believer in that,” and “the whole Venn diagram.” Each participant agreed that the overall goal of SAE was to build connections to learning standards, future careers, and the agriculture industry. When asked about why SAE’s were important, one participant said “everybody sees the benefit of them having an extension of what they’re learning that’s hands-on.” The hands-on component of SAE was emphasized throughout data collection.

The teachers also emphasized how SAE’s were cross curricular and supported student growth academically beyond just the SBAE classroom. One participant said “math, science, and reading, all of that is heavily incorporated into the SAE.” Therefore, students were able to grasp both core subjects and agricultural learning standards quicker through SAE integration. The SAE provides opportunities for students to practice skills in real world settings that are applicable to their futures. In addition to curriculum connections, they also listed life skill connections like finances, goal setting, budgeting, advocacy, record keeping, and conservation.
CHAPTER V. CONCLUSIONS

Chapter Overview

In this chapter, the conclusions are outlined. The conclusions are organized using the study’s research objectives.

Research Objectives

1. Examine agriculture teachers’ perceptions toward accommodating students with disabilities when implementing Supervised Agricultural Experiences.
2. Identify perceived barriers that agriculture teachers may have regarding accommodating students with disabilities when implementing Supervised Agricultural Experiences.
3. Identify resources agriculture teachers are using to support students with disabilities in their Supervised Agricultural Experiences.
4. Describe how agriculture teachers are supporting students with disabilities in their Supervised Agricultural Experiences.

Conclusions Related to Research Objective #1

Research Objective #1: Examine agriculture teachers’ confidence toward working with students with disabilities when implementing Supervised Agricultural Experiences. The need for professional development on SAE has been evident since the 1980’s, but working with students with special needs is a professional development need that more recently emerged in the 21st century (Dibenedetto et al., 2018). Many of the study participants indicated that they did not understand SAE until later in their career and had an unclear view of what SAE could look like in their program. However, their self-efficacy increased in SAE inclusion after a major
breakthrough with students in their program. Further research should be done to evaluate what SBAE teachers' current view on SAE inclusion is to create professional development to fit the current needs of SBAE teachers, especially for early career teachers.

In addition to this research, preservice and inservice training should be further developed to explain the simplicity of SAE and increase self-efficacy in preservice teachers. This recommendation aligns with Toombs et al. (2022) study which showed the increase of self-efficacy of preservice teachers after a semester of a project-based learning experience. Preservice education and training are an influential time for the development of self-efficacy through teaching strategies and other important skills (Savolanien et al., 2020). The participants in this study increased their self-efficacy later in their career through experiences within their own SBAE programs. However, the addition of targeted experiences in SBAE teacher preparation programs should be made available to provide these experiences earlier, such as early field-based experiences, student teaching, and targeted inservice programs (Andreasen et al., 2007).

**Conclusions Related to Research Objective #2**

**Research Objective #2:** Identify perceived barriers that agriculture teachers may have regarding working with students with disabilities when implementing Supervised Agricultural Experiences. The study participants emphasized that they understand and see what their students with disabilities go through daily. SBAE teachers are spending an extended amount of time with their students (Schmit et al., 2020), especially students with disabilities when working within the total program model. Houtepen et al. (2020) found that this awareness can take a mental toll on teachers. Because of this, it is recommended that further research is done to evaluate educator mental health in regards to carrying the burdens of their students with disabilities.
Many of our participants shared that school-based SAE enterprises and placements were very impactful in overcoming perceived barriers for the inclusion of students with disabilities. There are few resources currently available to teachers on school-based enterprises and placements. These resources are either part of the SAE For All resources from the National Council of Agricultural Education, or state specific resources such as SAE idea cards, introductory videos, and career exploration quizzes. Additional resources should be developed for SBAE teachers interested in implementing school-based enterprises and placements, and further research should be done to evaluate school-based SAE enterprises and placements for the inclusion of students with disabilities.

Participants overwhelmingly indicated parent involvement as a barrier to the successful inclusion of students with disabilities in SAE. Further research should be done to identify effective ways to increase parent involvement for students with disabilities within agricultural education programs.

Conclusions Related to Research Objective #3

Research Objective #3: Identify resources agriculture teachers are using to support students with disabilities in their Supervised Agricultural Experiences.

Participants identified a lack of readily available resources and stated that they often must make their own. One of the major areas indicated as a need for teacher resources was guides for record books, specifically the AET. This is in alignment with previous studies that indicated a need for professional development in these areas (Miller & Scheid, 1982; Sorensen et al., 2014). Professional development improves teacher self-efficacy in SAE (Toombs et al., 2022). Professional developments do need to be intentionally planned for specific SAE skills and/or student disabilities, rather than broad (Rubenstein et al., 2014; Ramage et al., 2022) and focused
on the participants’ career stage and certification type (DiBenedetto et al., 2018). In addition to professional development, further research to be done to identify what format is most accessible for SBAE teachers. Study participants mentioned wanting resources such as how to guides rather than professional development opportunities. This may be a more accessible option for SBAE teachers looking for resources on topics related to record keeping and SAE implementation.

Although participants did mention a lack of resources, many were not familiar with resources currently available to them from resources like the National Council of Agricultural Education and the National FFA Organization. For example, many were unaware of the SAE For All guides introduced in 2017. Study participants that were aware of this resource mentioned that they had not been trained on it. Further training should be done on the SAE For All guides.

In addition to creating more resources and training, resources should be made more user friendly and accessible. Participants shared that they used more than one resource to accomplish a task. For example, using Google Docs along with the AET for record keeping. Based on this need, it is recommended that the AET should begin to explore and incorporate features like predictive text and grammar check to be more inclusive for students with disabilities.

**Conclusions Related to Research Objective #4**

**Research Objective #4:** Describe what influences how agriculture teachers are supporting students with disabilities in their Supervised Agricultural Experiences.

CTE courses often have a disproportionately large number of students with disabilities enrolled (Wagner et al., 2015) and often, students with disabilities largely underperform as compared to their non-disabled peers in STEM related assignments (Boaler, 1998; Kieran, 1992; Woodward & Montague 2002). However, students with disabilities benefit in understanding STEM concepts through concrete experiences gained in CTE courses (Smith & Rayfield, 2019).
Study participants recognized this and the importance of working with STEM and other core subject teachers to aid student growth through their coursework and SAE. Resources should be developed, possibly in the form of curriculum resources, to aid in the collaboration of SBAE teachers and core subjects.

Each component of the three-circle model was valued by study participants. This is in alignment with Robinson and Haynes (2011) study, which indicated that teachers see the importance in SAE participation of students. Rubenstein et al. (2014) found that preservice teachers enter the profession with high self-efficacy in SAE but have low self-efficacy after they have entered the classroom. Professional development should be developed for beginning career teachers on the importance of SAE to the three-circle model to address this shift in self efficacy.

**Recommendations, Implications, and Discussion**

The participants identified by their state SBAE leaders as highly effective at creating inclusive SAE programs reported that they did not perceive students with disabilities as different from the other students in their SBAE program. This may indicate that some students’ needs may remain unmet because they have not been accommodated appropriately in their SAEs. Further research should be conducted to describe the level of understanding that SBAE teachers have of students with disabilities, IEPs, and 504 plans and the unique learning needs these students may have. The participants said their students were successful in their SBAE programs for students with disabilities; however, they did not share an in-depth understanding of the implications of IEPs or 504s on SAE projects.

Regarding future practice, I recommend that preservice and in-service professional development opportunities be developed to better assist teachers in not only understanding students’ diverse needs, but how to implement programs in the classroom to increase SAE
experiences for students with special needs. Teachers who have successfully integrated SAE projects for all students, could share a wealth of knowledge and ideas to make SAE programs more inclusive.

Successful SAE stories of students with disabilities were shared by each of the participants. Lack of parental involvement was also identified as one of the leading challenges for including students with disabilities in SAEs. Parental involvement can improve students’ educational outcomes (Huscroft-D’Angelo, 2022). For SAE teachers to successfully include students with disabilities in SAE, parental involvement is recommended. Further research should be done to identify effective methods of increasing parental involvement in SBAE programs and resources should be developed to aid SBAE teachers in involving parental figures in SAEs.

It is further recommended that additional research be conducted to explore how teachers are using the resources provided to them for SAE projects and how those resources may need to be modified to be more inclusive. Further, it is recommended that already existing tools be further developed to be more accessible. For example, the AET was used by participants, but there was concern about the lack of accessibility features such as predictive text and internal grammar and spell check features that could make the program more usable for students with disabilities.
APPENDIX A

Participant Consent and Information Sheet

Protocol Title: Inclusion of Students with Disabilities in Supervised Agricultural Experience Programs

Investigator(s): Saralyn Smith – M.S. Student

The purpose of this qualitative study was to describe the factors that influence how SBAE teachers support students with disabilities in SAE programs and identify perceived obstacles SBAE teachers have regarding working with students with disabilities. These interview questions are designed to provide direction to the flow of the conversation and to address key points on the inclusion of students with disabilities in SAE programs.

Your participation in this study is strictly voluntary and greatly appreciated. The information you provide will assist us in understanding the self-efficacy of school based agricultural education teachers on the inclusion of students with disabilities in supervised agricultural experience programs. You are not required to participate in this study. It is strictly voluntary. Should you decide to participate in this study, an interview will be scheduled at your convenience, either in-person or through Microsoft Teams. By participating in the interview, you are providing your consent to participate in this research. There is no more than minimal risk associated with this research study. There is no penalty for not participating, and there will be no compensation for your participation. You may choose to stop participation at any time without penalty.

The point of contact for this study is Saralyn Smith, AEEE M.S. Student. For any additional information or questions, please reach out via email at ssmi565@lsu.edu or phone at (804)704-5014.

The study has been discussed with me and all my questions have been answered. I may direct any additional questions regarding study specifics to the investigators. If I have questions about subject’s rights or other concerns, I can contact Michael Keenan, PhD, AgCenter IRB Chair, 209 Knapp Hall, Baton Rouge, LA 70809, (225) 578-1708 or MKeenan@agcenter.lsu.edu. I agree to participate in the study described above and acknowledge the researcher’s obligation to provide me with a copy of this consent form if signed by me.

Subject Signature: ____________________________ Date: __________________
APPENDIX B

Interview Protocol

Demographics
Age
Years of teaching experience
Years of teaching experience in agriculture (if different)
Gender
Education Level
Grade level you are teaching (select all that apply)
Courses Taught
Traditional Coursework or Alternatively Certified

Questions
1. How many students do you currently have working on a supervised agricultural experience? How many of these students have an IEP and/or 504 plan?
2. What types of SAE projects are students with IEPs and/or 504 plans completing for your program?
   a. Can you give me some examples?
3. How comfortable are you working with students with disabilities on SAE projects?
4. What challenges have you faced when working with students with disabilities on SAE projects?
5. What does the support you give students with disabilities look like when working on SAE projects?
6. What resources are you using to support students with disabilities in their SAE?
7. How have SAEs in your program changed since the new model of SAE for All was rolled out? (if applicable)
8. How have SAEs in your program changed for students with disabilities since the new model of SAE for All was rolled out? (if applicable)
9. What are your experiences including students with special needs in SAE projects?
10. What positive experiences have you had that influenced your work with SAEs?
11. What negative experiences have you had that influences your work with SAEs?
12. What feedback or support have you been given from others about including students with special needs in SAE projects?
13. How have other teachers’ involvement with students with special needs in their SAE program helped shape your SAE model?
14. How does it make you feel when students with special needs succeed in SAE projects?
15. What other factors have helped to build SAE for students with special needs in your program?
16. Is there anything else that I should have asked you regarding SAEs for students with disabilities?
APPENDIX C

IRB APPROVAL

TO: Krisin Stair
LSU AgCenter | Dept | Agricultural and Extension Education and Evaluation | CC00946

FROM: Michael Keenan
Chair, Institutional Review Board

DATE: 16-Nov-2023

RE: IRBAG-23-0106

TITLE: Identifying Self-efficacy Factors of Agriscience Teachers when working with Supervised Agricultural Experiences for Students with Disabilities

SUBMISSION TYPE: Initial Application

Review Type: Exempt
Risk Factor: Minimal
Review Date: 16-Nov-2023
Status: Approved

Approval Date: 16-Nov-2023
Approval Expiration Date: 15-Nov-2026
Re-review frequency: (three years unless otherwise stated)
Number of subjects approved: 15
LSU Proposal Number:

By: Michael Keenan, Chair

Continuing approval is CONDITIONAL on:

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU’s Assurance of Compliance with DHHS regulations for the protection of human subjects*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
8. SPECIAL NOTE: When emailing more than one recipient, make sure you use bcc. Approvals will automatically be closed by the IRB on the expiration date unless the PI requests a continuation.

* All investigators and support staff have access to copies of the Belmont Report, LSU’s Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents.

Mike Keenan O 225-578-1708 O 225-578-1708
REFERENCES


The Council for Agricultural Education. (n.d.). *SAE for all teacher’s guide*. https://ffa.app.box.com/s/exollg1x7q2lntun3su2mdufw07wiklf


VITA

Saralyn L. Smith was born in Dinwiddie, Virginia, to Thomas and Sherry Smith. Saralyn was actively involved in FFA through her high school and middle school years. This involvement sparked a deep interest in agricultural education. Saralyn pursued her undergraduate degree in Agricultural and Extension Education from West Virginia University. During her time at West Virginia University, Saralyn participated in the undergraduate research program. Eager to further her education and research interest, Saralyn continued her educational journey at Louisiana State University in Agricultural and Extension Education and Evaluation. After graduating with her Master’s degree from Louisiana State University, Saralyn plans to enter the workforce.