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Murray State University Honors College

HONORS THESIS

Certificate of Approval

An Analysis of Pre-Service Agricultural Educators' Self-Efficacy
with Exceptional Learners

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May 2021

Approved to fulfill the
requirements of HON 437

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Approved to fulfill the
Honors Thesis requirement
of the Murray State Honors
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An Analysis of Pre-Service Agricultural Educators' Self-Efficacy with Exceptional Learners

Submitted in partial fulfillment
of the requirements
for the Murray State University Honors Diploma

Sara Edwards

April 2020

Abstract

The total program of agricultural education has established that the inclusion of all students is a priority, including students who fall under the Individuals with Disabilities Education Act (IDEA) and other similar legislation. However, upon reviewing the literature, a significant deficit has been identified in terms of training and preparation to work with students with disabilities within agricultural education. Literature and philosophy regarding the concepts of self-efficacy and experiential learning theories are explored. Additionally, works regarding special education in the agriculture classroom and primary challenges faced by agriculture educators are reviewed. A need to establish better preparatory training within preservice agriculture education programs was identified. The goals of this analysis were to describe the demographics of preservice agriculture education students, to establish self-efficacy competency scores regarding the implementation of the total program of agricultural education while working with exceptional learners, and to determine if self-efficacy scores increase following an intervention with an experiential learning theory basis. The methods for this study included the administration of a voluntary pre-assessment containing 85 competencies to measure self-efficacy levels of participants. An experiential intervention was developed and performed, followed by the administration of the post-assessment questionnaire. Pre-assessment results yielded initial competency scores, followed by an increase of these scores in the post-assessment. Conclusions and recommendations for teacher educators and further research are discussed based on these increased scores and other questionnaire results.

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An Analysis of Pre-Service Agricultural Educators'
Self-Efficacy with Exceptional Learners

Introduction

The development of agricultural education present in today's classrooms has seen a colorful history since its loose conception starting in the 1800s. Over the course of the mid-to late-nineteenth century, more and more proponents started to come together in support of agricultural education development in the public school setting. By the time the 1900s hit, many schools had already made the move to implementing agricultural education in classrooms. As a result of the passing of the Smith-Hughes Act in 1917, federal funding and support was officially granted toward this endeavor (Croom, 2008; Moore, 2019). While an exact time for the development of the Three-Component Model of Agricultural Education does not seem to exist, these three components are recognized as integral parts of the agricultural education process, which includes classroom and laboratory instruction, leadership development (FFA), and experiential learning opportunities (Supervised Agricultural Experience, or SAE). With the development of the Future Farmers of America in 1928, this model was in full-motion and began its march to provide opportunities, knowledge, and leadership developments for those involved all across the nation (Croom, 2008). However, this student organization was not fully inclusive at this time, as many classes of students outside of the Caucasian male were denied access to experiencing all three components as designed, and several decades passed before this ideal of inclusivity started turning into reality.

In the United States, the 1960s were historically known for the amount of civil change that was occurring. Agricultural education and FFA were no different. Due to segregation that existed prior to *Brown v. Board of Education*, African American students were provided a

separate, but equal, organization to the FFA called the New Farmers of America (NFA). After the verdict of this court case, as well as the enactment of the Civil Rights Act of 1964, there was immense pressure across the nation to desegregate all educational institutions, and the Future Farmers of America followed suit. In 1965, after several years of deliberation, the NFA and FFA merged and became one unified agricultural student organization (Moore, 2019). Just four short years later, the Future Farmers of America continued to roll with this tide of change. After a failed attempt at the previous National FFA Convention, female students were finally granted membership into the Future Farmers of America at the 1969 National FFA Convention (Moore, 2019).

During a time of tumultuous change and politics, agricultural education and its associated components were at the forefront of educational inclusion during this time and continued to be for its student membership. While change did not happen overnight, great leaps and bounds were made toward the inclusion of any student interested in agriculture to be a part of public agricultural education. However, one group of students still seemed to be missing, but the federal government addressed this group just a few short years later. In 1975, the Education of Handicapped Children Act was passed in order to allow children with disabilities better access to public educational opportunities and alleviate financial litigations that were beginning to become prevalent. This act was amended and renamed the Individuals with Disabilities Education Act (IDEA) in 1990 to fully provide students with disabilities access to FAPE (free, appropriate public education) and allow these students the same opportunities given to other students enrolled in the public education system (Mastropieri & Scruggs, 2018). Ultimately, this placed these students in agricultural education classrooms and laboratories across the nation as well, in

addition to being expected to be involved in FFA and SAE programs to complete the Agricultural Education Model.

The National FFA Organization celebrated fifty years of young women being allowed into FFA membership in 2019, celebrating its inclusiveness and the opening of opportunities to all students. However, inclusivity of all students has still not been fully achieved despite its efforts. Students housed under the IDEA are still under-represented in all three components of the Agricultural Education Model, despite the absence of legal barriers. However, it is not because these educators or the National FFA Organization have denied them access or do not support this coming to fruition. In fact, the following was stated in a social media post from the National FFA Organization in February of 2019 from a state officer with one of FFA's exceptional students:

We couldn't have said it better, #enablednotdisabled

Repost |

“To label these students as disabled and discount their abilities entirely would be a grave injustice. These students are ENABLED. Enabled to try things in new ways, to work harder for what they want and to believe the best in the intentions of others. Today, take a moment to think about those we've left behind or ignored because we questioned their abilities. Give them a chance and I bet they will amaze you! #experienceweek” (National FFA).

Inclusion remains at the forefront of agricultural education and the National FFA Organization's agendas today. However, it still has fallen short - not because it has not been pursued - but simply the organization's educational professionals have lacked the training on a pre-service level to properly include and foster the learning of these exceptional learners. In this day and age,

it is time that training is implemented, in the context of agricultural education, for the inclusion of exceptional learners within pre-service programs across the United States.

Literature Review

The Importance of Self-Efficacy

Self-efficacy is an idea that gained popularity through Bandura's work decades ago, and has continued to be the driving force of many pieces of educational literature since then (Aschenbrener, Garton, & Ross, 2010; Pajares, 1996; Stair, Moore, Wilson, Croom, & Jayaratne, 2010). Self-efficacy is simply defined as an individual's sense of confidence and competency in a specific domain that ultimately allows he or she to achieve a desired task or end result (Aschenbrener et al., 2010; Stair et al., 2010). However, self-efficacy is much more complex. According to Pajares (1996), thoughts about one's teaching abilities can drastically affect a teacher's behavior and motivation toward a certain task, which can potentially be negative if the individual has low levels of self-confidence in this content area. The amount of self-efficacy that a teacher has can alter his or her actions and decisions made during instruction, thus causing them to engage heavily in areas where he or she feels high levels of self-efficacy and shy away from areas of perceived low self-efficacy (Aschenbrener et al., 2010; Giffing, Warnick, Tarpley, & Williams, 2010; Pajares, 1996; Stair et al., 2010).

With these main tenets in mind, a plethora of research exists regarding levels of competency and self-efficacy of educators from all around the United States, as these levels have been found to greatly influence the learning and achievement abilities of students (Aschenbrener et al., 2010; Stripling, Ricketts, Roberts, & Harlin, 2008). After analyzing the findings of these multitudinous yet specific self-efficacy studies, many researchers have concluded that more needs to be done in order to prepare teachers to take on the challenges that teachers face in the

modern classroom. Most have implied that more pre-service preparation needs more attention, focusing on the areas of low competency found in these studies (Andreasen, Seevers, Dormody, & VanLeeuwen, 2007; Aschenbrenner et al., 2010; Baker, Robinson, & Kolb, 2012; Clark, Threton, & Ewing, 2010; Dormody, Seevers, Andreasen, & VanLeeuwen, 2006; Elbert & Baggett, 2003; Giffing et al., 2010; Hughes & Barrick, 1993; Johnson, Wilson, Flowers, & Croom, 2012; Kessell, Wingenbach, & Lawver, 2009; Mallilo, Baggett, & Curtis, 1983; McLean & Camp, 2000; Myers, Dyer, & Washburn, 2005; Stair et al., 2010; Stripling et al., 2008). Implementation of better teaching practices and practical skills within early field experiences and student teaching could serve as the answer to the low self-efficacy problem in many of these areas. When analyzing these studies within the field of agricultural education, one area has consistently made an appearance in a substantial amount of self-efficacy and personal competency research.

Special education in the context of agricultural education

The Individuals with Disabilities Education Act (IDEA) established that all students are required to have access to a free, appropriate public education, regardless of the individual's disability (Mastropieri & Scruggs, 2018). More than 13% of the entire school population is housed under the thirteen IDEA disability categories, attesting to the fact that increasing numbers of students with special needs find themselves in agricultural education classrooms (Andreasen et al., 2007; Boone & Boone, 2007; Darling-Hammond & Bransford, 2005; DiBenedetto, Willis, & Barrick, 2018; Faulkner & Baggett, 2010; Hainline, Burris, Ulmer, & Ritz, 2019; Hughes & Barrick, 1993; Johnson et al., 2012; Kessell et al., 2009; Mastropieri & Scruggs, 2018; National Center for Education Statistics, 2018; Stair et al., 2010). Additionally, The No Child Left Behind act (NCLB) asserted that teachers are responsible for the academic success of all students in their

classrooms, including any students classified under the IDEA or Section 504 (Andreasen et al., 2007; Mastropieri & Scruggs, 2018). However, working with exceptional students in the agriculture classroom or laboratory is a serious challenge for many agricultural educators, regardless of being recognized as a necessary skill in the profession (Andreasen et al., 2007; Aschenbrener et al., 2010; Boone & Boone, 2007; DiBenedetto, Willis, & Barrick, 2018; Dormody et al., 2006; Elbert & Baggett, 2003; Faulkner & Baggett, 2010; Giffing et al., 2010; Hainline, Burris, Ulmer, & Ritz, 2019; Hughes & Barrick, 1993; Johnson et al., 2012; Kessell et al., 2009; Mallilo et al., 1983; McLean & Camp, 2000; Mundt & Connors, 1999; Myers et al., 2005; Stair et al., 2010). This should be viewed as a problematic situation by pre-service agricultural teacher education programs (Faulkner & Baggett, 2010).

Agricultural educators are consistent in their beliefs that inclusion is an important and necessary aspect of their professions, and that special education students are welcome in their classrooms (Andreasen et al., 2007; Giffing et al., 2010; Hainline, Burris, Ulmer, & Ritz, 2019; Johnson et al., 2012; Stair et al., 2010). The inclusion of diverse and non-traditional students are noted priorities by the American Association of Agricultural Education since 2011, and is reflected in the student numbers reported above (Doerfert, 2011; Roberts, Harder, & Brashears, 2016). However, based on numerous self-efficacy and competency studies, agricultural teachers doubt their abilities to teach students with special needs. In a study regarding problems facing beginning agricultural teachers, results indicated that working with students with special needs and adjusting curriculum accordingly were some of the top barriers identified for beginning educators (Myers et al., 2005). Mundt and Connors (1999) reported nearly identical problems in their similar report of the challenges faced in the first years of teaching agricultural education.

While working with these students has posed itself as a barrier, more specific skills have been identified as low competency areas. In a study performed by Giffing et al. (2010), 89.7% of respondents understood the concept of inclusion, but only 52.6% of respondents stated a belief they had adequate skills to work with students with special needs in their classrooms. Since only half of these individuals felt comfortable in their ability to work with exceptional students, this correlated with a low sense of self-efficacy, potentially having a negative impact on the academic achievement of these students (Giffing et al., 2010). Specifically, several key competency areas were identified consistently as problem areas for both pre-service and in-service agricultural teachers among multiple research projects. These included: keeping special needs students on task, helping students with disabilities learn, working with moderately to severely disabled students, understanding educational law associated with special needs students, working with multiple special needs students in the same classroom, being familiar with the laws regarding special education, and adapting facilities and curriculum based on the needs of exceptional students (Andreasen et al., 2007; Aschenbrener et al., 2010; Dormody et al., 2006; Elbert & Baggett, 2003; Hainline, Burris, Ulmer, & Ritz, 2019; Mallilo et al., 1983; Mundt & Connors, 1999; Myers et al., 2005).

With the discovery of this vast opportunity for improvement regarding today's agricultural educators, each of these studies called for courses of action to be taken, with one recommendation being nearly identical across the board. The primary recommendation was restructuring agricultural teacher preparation programs to better prepare pre-service educators for working with students with special needs in their classrooms and laboratories (Andreasen et al., 2007; Boone & Boone, 2007; DiBenedetto, Willis, & Barrick, 2018; Dormody et al., 2006; Elbert & Baggett, 2003; Faulkner & Baggett, 2010; Hainline, Burris, Ulmer, & Ritz, 2019;

Hughes & Barrick, 1993; Johnson et al., 2012; Kessell et al., 2009; Mallilo et al., 1983; McLean & Camp, 2000; Myers et al., 2005). According to McLean and Camp (2000), nine out of ten pre-service agricultural education programs contained topics of special education among their degree tracks. Talbert and Edwin (2008) found that three-fourths of agricultural teacher preparation programs required special education coursework. However, many lacked entire courses revolving around them, nor were they agricultural education-specific (Faulkner & Baggett, 2010; McLean & Camp, 2000; Talbert & Edwin, 2008). Regardless, in another study, 65% of agricultural teachers in the state of Pennsylvania reported no hands-on training with special needs students, which was reflected by their low scores of confidence when working with these students (Mallilo et al., 1983). How do pre-service agricultural education programs provide more quality training with these students? To accomplish this, teacher preparation programs need to provide students with more hands-on early field experience opportunities to work with special education students before the student teaching experience (Andreasen et al., 2007; Faulkner & Baggett, 2010; Kessell et al., 2009).

Experiential learning theory and other supportive educational theories

Hands-on learning, or “learning by doing,” has shown to be effective in education for a long while. In a study performed by Richardson (1994), 70% of respondents stated that doing a task themselves helped them learn, retain, and process the required information better. However, simply doing the task is not enough to fully learn from an experience, though all learning is experiential (Clark et al., 2010; Joplin, 1981; Roberts, 2006). Experiential learning has been analyzed for decades by many theorists, all characterized by very similar tenets of what is now coined as experiential learning theory. Kolb spent a majority of his life developing a more in-depth definition of his Experiential Learning Theory, as well as developing his Learning Style

Inventory that goes hand-in-hand with his ideals (Kolb, 1984; Kolb, Boyatzis, & Mainemelis, 2000; Kolb & Fry 1975; Kolb & Kolb, 2005). Much of his work originated from the ideas of John Dewey, considered the father of experiential learning. He used ideals from a handful of other educational theorists as well (Kolb et al., 2000). Kolb's theory is characterized by a continuous cyclical process that entails four major components a learner must progress through to fully benefit from the experiential learning process: Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualization (AC), and Active Experimentation (AE) (Kolb, 1984; Kolb et al., 2000; Kolb & Fry, 1975).

Kolb and other education professionals conducted a significant amount of work in applying his Experiential Learning Theory specifically to agricultural education and other CTE areas (Baker et al., 2012; Clark et al., 2010; Kolb & Fry, 1975; Roberts, 2006). After reviewing experiential learning principles from several other theorists, including John Dewey, Laura Joplin, David and Alice Kolb, and Edgar Dale, a conclusive model of Experiential Learning Theory in the context of agricultural education was created. This cyclical model included the initial focus, initial and secondary experiences, and generalized reflection with feedback each of these theorists recognized in their original thinking, and applied it in a way that fit the needs of agricultural educators. It was also noted in the same work that post-secondary agricultural education programs were great outlets for testing and utilizing experiential learning in the context of the curriculum (Roberts, 2006).

Experiential learning theories have also been analyzed by other educational researchers who focus more on other learning strategies. Results consistently indicate experiential learning serves as an outlet for many other strategies, or simply complements them very well. Kuh (2008) stated students should participate in at least one high-impact experience in their first year of post-

secondary education. Experiential learning, especially when applied to a community-based learning project, can serve as this important high-impact experience for students (Kuh, 2008). Experiential learning has also proven to be a source of authentic learning, a theory that suggests a student must go through a five-step process for learning to be a truly authentic experience (Clark et al., 2010; Knobloch, 2003). Tenets of this theory are also heavily present in constructivist philosophy, problem-based learning, and inquiry-based learning methods (Clark et al., 2010). The value of non-formal education may also be implemented through experiences, as this mode of instruction cannot be as structured as formal education situations; however, non-formal educational experiences can be just as influential as regular classroom experiences, if not more so, especially if the experiential learning process is adequately implemented (Etling, 1993). After reviewing the literature discussed, an answer is provided to the question asked previously: how do pre-service agricultural education programs allow students to gain more hands-on training with exceptional students? This may be achieved through the implementation of experiential learning pieces within the teacher preparation program to allow students to work with special education students in a more hands-on fashion.

Purpose and Objectives

Based on the literature reviewed, the purpose of this study was to determine if an experiential learning intervention served as an effective preparation method to increase the self-efficacy of pre-service agricultural education students with regard to working with exceptional students.

To carry out the purpose, three specific objectives were outlined for this descriptive study:

1. Describe the demographic characteristics of the preservice population of agricultural education students enrolled at Murray State University during the Spring 2019 semester.
2. Describe pre-intervention levels of self-efficacy that preservice educators have related to working with students with disabilities within the three-component model of agricultural education, which includes classroom instruction, leadership development (FFA), and experiential learning opportunities (SAE).
3. Describe and analyze preservice educators' reported self-efficacy after completing an intervention grounded in Experiential Learning Theory, designed to give preservice students early field experience opportunities with individuals with disabilities in the context of agricultural education.

Methods

The primary focus of this study was to determine self-efficacy levels of agricultural education students enrolled in teacher education with regard to working with exceptional students in the context of the Three-Component Model of Agricultural Education. A survey instrument was developed through an analysis of previous works regarding self-efficacy when working with special needs students (Bobbitt, 2011; Elbert & Baggett, 2003; Giffing, Warnick, Tarpley, & Williams, 2010; Kienast & Lovelace, 1981; Ross, 2006). The questionnaire included a total of 91 questions, with categories pertaining to working with exceptional students within Classroom and Laboratory Instruction, Experiential Learning Opportunities (SAE), and Leadership Development (FFA), as well as basic demographic questions. Questions pertaining to exceptional learners were listed in a six-point Likert scale format, from 1-Not Confident at All to 6-Completely Confident. Following IRB approval, the instrument was sent via email to each student enrolled in the agricultural education program in the spring of 2019 at Murray State

University ($N=43$), including pre-service students enrolled in regular coursework as well as current student teachers. Documentation of the IRB Approval, Participant Consent Form, and the pre- and post-assessment survey instruments are found in Appendices A-C, immediately following the references of this analysis. This initial questionnaire served as a pre-assessment and was voluntary.

After publishing the pre-assessment, an intervention designed using Experiential Learning Theory as its basis was developed for the current agricultural education students at Murray State University. In partnership with a local primary-level special education program and the university's swine program, a three-week intervention began. Pre-service agricultural education students were given the opportunity to volunteer over the course of this three-week training program. These pre-service volunteers then focused on working with a total of six exceptional learners over the course of this intervention. During these meetings, pre-service educators focused on the basics of swine showmanship, caring for the animal, and preparing it for a show ring setting. On the final day of the intervention, the exceptional learners participated in a culminating swine showmanship contest. At the beginning of the intervention, neither the preservice participants in the study nor the exceptional learners had any prior swine experience. At the end, the students with exceptional needs were able to bathe and show their assigned show pig in a ring independently, while their pre-service agricultural education "buddies" cheered them on from the holding pens. After the conclusion of this intervention, a voluntary post-assessment was administered via email to the entire Murray State University pre-service agricultural education program in the spring of 2019 ($N=43$). This instrument was identical to the pre-assessment, with the exception of one question. A final question was added, asking the participant to describe their experiences in which they have worked with exceptional children in

the past. This allowed the students to differentiate themselves specifically in terms of their amount of experience with special needs students, and to allow those who participated in the intervention to describe this experience as well. Both the pre- and post-assessment instruments yielded six responses (13.9%).

Results

The first objective of this study was to describe the population of pre-service agricultural educators enrolled at Murray State University during the Spring 2019 semester. Respondents of the pre-assessment questionnaire were 66.7% male (n=4) and 33.3% female (n=2), while the post-assessment was equally split between both male and female respondents (see Table 1).

Table 1

Demographic Characteristics of Pre-Service Agricultural Educators (n=8)

Construct Items:	<i>f</i>	%	Mean
Age			19.75
Class Status			
Freshman	1	12.5%	
Sophomore	2	25.0%	
Junior	5	62.5%	
Sex			
Female	3	37.5%	
Male	5	62.5%	
Special Education Course			
Yes	6	80.0%	
No	2	20.0%	

All respondents from both surveys were between the ages of 19-21, with all declaring themselves as freshman, sophomore, and junior agricultural education majors at the university. Participants were also asked if they had ever worked closely with individuals with moderate to severe disabilities in both question instruments. In the pre-assessment, two-thirds of respondents said they had worked closely with individuals with disabilities, while one-third had not. On the other hand, 100% of respondents in the post-assessment worked with individuals with disabilities. The final descriptive question in both questionnaires asked if pre-service students had yet to take a

special education course in the agricultural education program. In both assessments, only 50% of respondents had taken one full or partial course with components regarding special education students.

The second objective of this study was to identify the perceived self-efficacy levels of the pre-service agricultural educators currently enrolled in the program, specifically with regard to their confidence in working with individuals with disabilities. As noted previously, the questionnaire focused on the implementation of the three-component model of agricultural education and how confident pre-service educators were in their ability to apply the full scope of this model to exceptional learners. This included sections pertaining to Classroom Instruction, Leadership Development (FFA), and Experiential Learning Opportunities (SAE).

In total, participants in the study were asked 42 questions relating to educating students with moderate to severe disabilities in the context of classroom and laboratory instruction. All questions began with the phrase, "I believe that I can" followed with the selected competency. Participants then reported their self-perceived efficacy level with this competency item. The overall mean score for this portion of the pre-assessment questionnaire was 4.78 (see Table 2).

Table 2
*Pre-Assessment Self-Efficacy Levels in Working with Exceptional Learners:
 Classroom Instruction (n=6)*

Construct Items:	Mean
Understand the concept of inclusion	5.33
Include special education students into my classroom	4.50
Provide methods of inclusion within daily activities	4.83
Influence attitudes of acceptance of special education students	5.17
Understand special education regulations	4.00
Understand different levels of disabilities	4.50
Modify lessons and strategies for students with disabilities	4.50
Individualize learning for students with disabilities	4.33
Adapt curriculum for students with disabilities	4.83
Adapt instruction for students with disabilities	4.67
Work with special education teachers to include students	5.17
Complete IEPs for exceptional learners	4.33
Collaborate with special education teachers for IEPs	4.83
Recommend changes in IEPs when necessary	4.50
Develop lessons according to IEPs	4.83
Monitor achievement as set by an IEP	4.50
Understand responsibilities in implementing IEP objectives	4.50
Communicate appropriately with students with disabilities	4.67
Interact positively and naturally with exceptional learners	5.17
Assist exceptional learners in establishing academic goals	5.00
Foster qualities of initiative, self-reliance, and independence	4.83
Assist in developing and maintaining a positive self-concept	5.00
Help students with disabilities learn in the agriculture classroom	5.00
Manage disruptive behavior appropriately and effectively	5.17
Keep exceptional learners on task with classwork/assignments	4.67
Assist exceptional learners in developing good study habits	4.50
Use a variety of teaching methods and techniques	5.00
Use concrete, tangible demonstrations for exceptional learners	4.67
Use illustrations, audiovisual aids, field trips, etc. to teach	5.17
Challenge exceptional learner's skills and abilities positively	5.00
Define appropriate expectations for laboratory and groups	5.00
Determine appropriate methods for evaluating performance	4.83
Provide positive experiences in the regular classroom	4.83
Have the knowledge of the different needs of students	4.33
Identify the needs and interests of exceptional learners	4.67
Understand the physical needs of exceptional learners	5.00
Understand the academic needs of exceptional learners	4.33
Understand the emotional needs of exceptional learners	4.50
Understand social needs of exceptional learners	4.50
Ensure the accessibility and safety of a facility for students	5.00
Create a safe environment in my classroom/laboratory for all	5.33
Modify or adapt the tools, equipment, facilities, or conditions	5.17
Self-Perceived Efficacy Score	4.78

Note. Scale: 1 = Not Confident at All, 6 = Completely Confident

The lowest reported self-efficacy score of this section was “Understand special education regulations,” (M=4.00). Two competencies ranked as the highest area of self-efficacy, with a score of 5.33. One was “Understand the concept of inclusion,” while the other was “Create a safe environment in my classroom/laboratory for all.” In the post-assessment, respondents were asked identical questions. An increase was seen in the overall mean, with a score of 5.27.

The lowest reported efficacy scores of the post-assessment were reported equally in three different competency areas (M=4.50). These competencies were: “Understand special education regulations”; “Understand different levels of disabilities”; and “Monitor achievement as set by an IEP.” Two competencies were reported at M=6.00 in the post-assessment, which were “Influence attitudes of acceptance of special education students” and “Understand the concept of inclusion” (see Table 3).

Table 3
*Post-Assessment Self-Efficacy Levels in Working with Exceptional Learners:
 Classroom Instruction (n=2)*

Construct Items:	Mean
Understand the concept of inclusion	6.00
Include special education students into my classroom	5.50
Provide methods of inclusion within daily activities	5.00
Influence attitudes of acceptance of special education students	6.00
Understand special education regulations	4.50
Understand different levels of disabilities	4.50
Modify lessons and strategies for students with disabilities	5.00
Individualize learning for students with disabilities	5.50
Adapt curriculum for students with disabilities	5.50
Adapt instruction for students with disabilities	5.00
Work with special education teachers to include students	5.50
Complete IEPs for exceptional learners	5.50
Collaborate with special education teachers for IEPs	5.00
Recommend changes in IEPs when necessary	5.00
Develop lessons according to IEPs	5.50
Monitor achievement as set by an IEP	4.50
Understand responsibilities in implementing IEP objectives	5.00
Communicate appropriately with students with disabilities	5.50
Interact positively and naturally with exceptional learners	5.00
Assist exceptional learners in establishing academic goals	5.00
Foster qualities of initiative, self-reliance, and independence	5.50
Assist in developing and maintaining a positive self-concept	5.00
Help students with disabilities learn in the agriculture classroom	5.50
Manage disruptive behavior appropriately and effectively	5.00
Keep exceptional learners on task with classwork/assignments	5.50
Assist exceptional learners in developing good study habits	5.00
Use a variety of teaching methods and techniques	5.50
Use concrete, tangible demonstrations for exceptional learners	5.00
Use illustrations, audiovisual aids, field trips, etc. to teach	5.50
Challenge exceptional learner's skills and abilities positively	5.50
Define appropriate expectations for laboratory and groups	5.00
Determine appropriate methods for evaluating performance	5.50
Provide positive experiences in the regular classroom	5.50
Have the knowledge of the different needs of students	5.50
Identify the needs and interests of exceptional learners	5.50
Understand the physical needs of exceptional learners	5.50
Understand the academic needs of exceptional learners	5.50
Understand the emotional needs of exceptional learners	5.50
Understand social needs of exceptional learners	5.00
Ensure the accessibility and safety of a facility for students	5.50
Create a safe environment in my classroom/laboratory for all	5.00
Modify or adapt the tools, equipment, facilities, or conditions	5.50
Self-Perceived Efficacy Score	5.27

Note. Scale: 1 = Not Confident at All, 6 = Completely Confident

The next section of the assessment was 21 questions in length, with focus placed on Leadership Development and FFA for exceptional learners. It was identical in style and format.

The pre-assessment yielded an overall mean of 4.97 (see Table 4).

Table 4

Pre-Assessment Self-Efficacy Levels in Working with Exceptional Learners: Leadership Development / FFA (n=6)

Construct Items:	Mean
Include students with disabilities into leadership development	4.83
Provide methods of inclusion with other students in FFA	5.00
Influence attitudes of acceptance of special education students in FFA	5.17
Provide positive experiences in FFA and other leadership development	5.17
Integrate and actively involve exceptional learners in FFA	5.17
Provide leadership roles and opportunities for exceptional learners	5.17
Identify needs and interests of exceptional learners in terms of FFA	5.17
Communicate appropriately with students with disabilities about FFA	4.83
Interact positively and naturally with exceptional learners within FFA	5.00
Assist exceptional learners in establishing goals in terms of FFA	5.17
Foster qualities of initiative, self-reliance, and independence in FFA	5.00
Assist in developing and maintaining a positive self-concept in FFA	5.17
Assist exceptional learners in viewing assets and limitations realistically	5.17
Advise exceptional learners relative to personal and professional goals	5.00
Have the knowledge of the different needs of students within FFA	4.33
Understand the physical needs of exceptional learners in FFA	4.83
Understand the emotional needs of exceptional learners in FFA	4.67
Understand the social needs of exceptional learners in FFA	4.50
Ensure the accessibility and safety of a facility for students in FFA	4.50
Create a safe environment for all students when including all students	5.33
Modify or adapt the tools, equipment, facilities, or conditions within FFA	5.17
Self-Perceived Efficacy Score	4.97

Note. Scale: 1 = Not Confident at All, 6 = Completely Confident

The lowest competency in this section was “Have the knowledge of the different needs of students within FFA” (M=4.33). The highest competency reported was “Create a safe environment for all students when including all students” (M=5.33). As for the post-assessment, a high overall mean of 5.48 was reported (see Table 5).

Table 5
*Post-Assessment Self-Efficacy Levels in Working with Exceptional Learners:
 Leadership Development / FFA (n=2)*

Construct Items:	Mean
Include students with disabilities into leadership development	5.50
Provide methods of inclusion with other students in FFA	5.50
Influence attitudes of acceptance of special education students in FFA	5.50
Provide positive experiences in FFA and other leadership development	5.50
Integrate and actively involve exceptional learners in FFA	5.50
Provide leadership roles and opportunities for exceptional learners	5.00
Identify needs and interests of exceptional learners in terms of FFA	5.50
Communicate appropriately with students with disabilities about FFA	5.50
Interact positively and naturally with exceptional learners within FFA	5.50
Assist exceptional learners in establishing goals in terms of FFA	5.50
Foster qualities of initiative, self-reliance, and independence in FFA	5.50
Assist in developing and maintaining a positive self-concept in FFA	5.50
Assist exceptional learners in viewing assets and limitations realistically	5.50
Advise exceptional learners relative to personal and professional goals	5.50
Have the knowledge of the different needs of students within FFA	5.50
Understand the physical needs of exceptional learners in FFA	5.50
Understand the emotional needs of exceptional learners in FFA	5.50
Understand the social needs of exceptional learners in FFA	5.50
Ensure the accessibility and safety of a facility for students in FFA	5.50
Create a safe environment for all students when including all students	5.50
Modify or adapt the tools, equipment, facilities, or conditions within FFA	5.50
Self-Perceived Efficacy Score	5.48

Note. Scale: 1 = Not Confident at All, 6 = Completely Confident

All competency areas were similar in range of scores, leaving no obvious low or high scores.

The final section was 22 questions in length and pertained directly to Experiential Learning and SAE opportunities for individuals with disabilities. The overall mean for this section of the pre-assessment was 4.83 (see Table 6).

Table 6

Pre-Assessment Self-Efficacy Levels in Working with Exceptional Learners:

Experiential Learning Opportunities / Supervised Agricultural Experience (SAE) (n=6)

Construct Items:	Mean
Include and manage students with disabilities in SAE projects	4.83
Help exceptional learners learn by using SAE projects	5.00
Conduct a purposeful SAE visit for exceptional learners	5.33
Provide positive experiences in SAE projects for exceptional learners	5.17
Identify needs and interests of exceptional learners in SAE projects	4.83
Communicate appropriately with students with disabilities about SAEs	4.50
Interact positively and naturally with exceptional learners about SAEs	5.00
Assist exceptional learners in establishing goals in the context of SAEs	5.17
Foster qualities of initiative, self-reliance, and independence with SAEs	5.00
Assist in developing and maintaining a positive self-concept in SAEs	4.67
Assist exceptional learners in viewing assets and limitations realistically	4.83
Advise exceptional learners relative to personal goals within SAE projects	4.67
Assist in developing suitable job placements for exceptional learners	5.00
Cooperate with appropriate agencies and groups in identifying careers	4.83
Influence attitudes of acceptance of special education students in SAEs	4.67
Have the knowledge of the different needs of students within SAE projects	4.17
Understand the physical needs of exceptional learners in SAEs	5.00
Understand the emotional needs of exceptional learners in SAEs	4.67
Understand the social needs of exceptional learners in SAEs	4.50
Ensure the accessibility and safety of a facility for students in SAEs	4.83
Create a safe environment for all students when including all students	4.83
Modify or adapt the tools, equipment, facilities, or conditions within SAEs	4.83
Self-Perceived Efficacy Score	4.83

Note. Scale: 1 = Not Confident at All, 6 = Completely Confident

A low of 4.50 was reported in competencies “Communicate appropriately with students with disabilities about SAEs” and “Understand the social needs of exceptional learners in SAEs.” A high efficacy score of 5.33 was reported in the “Conduct a purposeful SAE visit for exceptional learners” competency area. As for the post-assessment, an overall mean of 5.45 was found (see Table 7).

Table 7
*Post-Assessment Self-Efficacy Levels in Working with Exceptional Learners:
 Experiential Learning Opportunities / Supervised Agricultural Experience (SAE) (n=2)*

Construct Items:	Mean
Include and manage students with disabilities in SAE projects	5.00
Help exceptional learners learn by using SAE projects	5.50
Conduct a purposeful SAE visit for exceptional learners	5.00
Provide positive experiences in SAE projects for exceptional learners	5.50
Identify needs and interests of exceptional learners in SAE projects	5.50
Communicate appropriately with students with disabilities about SAEs	5.50
Interact positively and naturally with exceptional learners about SAEs	5.50
Assist exceptional learners in establishing goals in the context of SAEs	5.50
Foster qualities of initiative, self-reliance, and independence with SAEs	5.50
Assist in developing and maintaining a positive self-concept in SAEs	5.50
Assist exceptional learners in viewing assets and limitations realistically	5.50
Advise exceptional learners relative to personal goals within SAE projects	5.50
Assist in developing suitable job placements for exceptional learners	5.50
Cooperate with appropriate agencies and groups in identifying careers	5.50
Influence attitudes of acceptance of special education students in SAEs	5.50
Have the knowledge of the different needs of students within SAE projects	5.50
Understand the physical needs of exceptional learners in SAEs	5.50
Understand the emotional needs of exceptional learners in SAEs	5.50
Understand the social needs of exceptional learners in SAEs	5.50
Ensure the accessibility and safety of a facility for students in SAEs	5.50
Create a safe environment for all students when including all students	5.50
Modify or adapt the tools, equipment, facilities, or conditions within SAEs	5.50
Self-Perceived Efficacy Score	5.45

Note. Scale: 1 = Not Confident at All, 6 = Completely Confident

Similar scores were reported for all competencies.

The third and final objective of this study was to determine whether or not an early field experience opportunity, grounded by Experiential Learning Theory, would have an effect on pre-service agriculture educators' self-efficacy in working with exceptional learners. Overall means from each category are listed below with the calculated difference between the pre- and post-assessments (see Table 8).

Table 8
Total Reported Self-Efficacy Levels from Pre- and Post-Assessments

Construct Items:	Mean ^{Pre-}	Mean ^{Post-}	Difference
Three-Component Model			
Classroom Instruction	4.78	5.27	+0.49
Leadership Development / FFA	4.97	5.48	+0.51
Experiential Learning / SAE	4.83	5.45	+0.62
Total Model Self-Efficacy	4.86	5.40	+0.54

Note. Scale: 1 = Not Confident at All, 6 = Completely Confident

An overall efficacy score was calculated and assigned for both assessments.

Summary

In the introduction of this analysis, we explored the development of agricultural education in the public school setting. Historically, agricultural education and the FFA program have been early adopters of some of the most noteworthy movements in the United States, all moving toward the acceptance of all students in its program, regardless of race, gender, and the many other labels that are attached to students. However, with regard to students who fall under the IDEA categories, there is a shortfall in training and preparation for including these students.

The second section of this paper analyzed the published literature surrounding the topics of the importance of self-efficacy and how these levels can correlate to the success of the special education students within agricultural education classrooms. Within this research, we established that agricultural educators identified working with students with special needs as a primary challenge in their classrooms, and that more preservice training warrants dedication toward developing efficacy and confidence levels in this specific area. Finally, experiential learning theories designed and discussed by many educational philosophers were explored and deemed as

a sufficient tool in achieving better preparation for preservice agricultural educators in working with individuals with disabilities.

Next, the methodology of this study was explained, and the purposes and objectives of this study were established. Additionally, the questionnaire development and instrument were outlined, and the participant audience and data collection process were identified. Finally, the intervention piece of this study was described, which served as the experiential learning piece between the pre- and post-assessments of this study to identify positive increases in self-efficacy following an authentic ELT-based opportunity.

In the previous section, the results discovered during the data collection portion of this study were calculated and displayed. This quantitative data provided means and frequencies based on participant demographics and reported self-efficacy scores within the three-component model of agricultural education. These graphics were displayed in accordance to the purpose and objective that they were associated with for this study.

In this final section, a summary of the analysis and study is provided, and will seek to draw conclusions from the information previously discussed. Implications and recommendations from these conclusions and results will be identified and discussed to offer ideas and solutions to better prepare future agriculture educators for working with individuals with disabilities in their classrooms and programs.

Summary of the Study and Results

This study sought to address the deficit of training that agricultural educators have experienced with regard to working with students with disabilities in their classrooms and other intracurricular programs. To accomplish this purpose, three research objectives were identified relating to demographics as well as self-efficacy and confidence levels while working with

students with special needs. A questionnaire designed to measure levels of preservice educators' self-efficacy in working with these students was created and administered in a pre- and post-assessment fashion. Between the administration of the two data collection instruments, an ELT-based intervention was implemented to allow preservice students to have an opportunity to work firsthand with individuals with disabilities, all within a realistic and authentic agricultural education setting.

In the demographic portion of the findings, participating preservice agricultural education students at Murray State University reported a mean age of 19.75 years, with over half identifying as a junior in terms of class status. More males chose to participate in the study compared to females, as 5 of the 8 respondents were male. Most students who participated in this study had already taken the special education course that is required for their degree track, which means that of 6 of 8 respondents should have had some coursework experience in this area.

The second objective of this study was to identify the levels of self-efficacy in preservice agricultural education students, prior to this study's intervention piece. The questionnaire was broken into three categories, one for each of the three components of the widely-accepted agricultural education model. The total mean score for the Classroom Instruction portion of the pre-assessment was a 4.78, which included some of the lowest reported efficacy scores. For the other sections of the pre-assessment, a total mean score of 4.97 was reported for Leadership Development / FFA and 4.83 for Experiential Learning Opportunities / SAE. Students were more confident overall in their abilities within Leadership Development / FFA, and least confident in their abilities within the classroom and laboratory.

The final objective of this study was to determine if self-efficacy scores could be positively affected by an experiential learning intervention like the one in this study. The total

efficacy scores for the three sections of the post-assessment were as follows: 5.27 for Classroom Instruction, 5.48 for Leadership Development / FFA, and 5.45 for Experiential Learning Opportunities / SAE. The post-assessment followed the trend of reported self-efficacy score ranks from the pre-assessment, as Leadership Development / FFA was ranked highest, while Classroom Instruction scored the lowest. Self-efficacy scores did see a positive increase from the pre- to post-assessment scores. These differences were as follows: +0.49 in Classroom Instruction, +0.51 in Leadership Development / FFA, and +0.62 for Experiential Learning Opportunities / SAE. The largest increase in reported self-efficacy was in the Experiential Learning Opportunities category, while the smallest increase was in Classroom Instruction once again. As an additional note for the post-assessment, all respondents reported hands-on experiences with special education students.

Conclusions

While the participant group for this study was small, important conclusions can still be drawn from this analysis and the study's results. However, it is important to note that the small sample size is a limiting factor to this study overall. The conclusions from this study are as follows:

- The demographic characteristics of this respondent group are relatively accurate in comparison to the total population of preservice agricultural education students at Murray State University.
- Most preservice students suggested that the current required special education coursework provided inadequate strategies and was largely ineffective in their preparation for working with students with special needs.

- Pre-assessment self-efficacy scores were moderately high; it can be assumed that respondents may have over-reported these scores based on the small volunteer turnout for the intervention opportunity.
- Special education coursework may need to be evaluated on its effectiveness based on low scores reported in the pre-assessment that aligned with this course's teaching objectives.
- The post-assessment revealed increased self-efficacy scores following the intervention piece of this study, primarily in Experiential Learning Opportunities.
- Self-efficacy can be improved through hands-on experience in working with students in disabilities, both within and outside of agricultural education.

Discussion

Objective 1 – Describe the demographic characteristics of the preservice population of agricultural education students enrolled at Murray State University during the Spring 2019 semester.

Conclusions

- *The demographic characteristics of this respondent group are relatively accurate in comparison to the total population of preservice agricultural education students at Murray State University.*
- *Most preservice students suggested that the current required special education coursework provided inadequate strategies and was largely ineffective to their preparation in working with special education students.*

A portion of the questionnaire was dedicated to gathering demographic information on the respondents. While not perfectly descriptive of the entire population of preservice agricultural education students that were enrolled at Murray State University in the Spring 2019 semester, it does so relatively well. The male population of preservice educators in the program is

significantly smaller than the female population, and this study suggested the opposite. It did, however, describe the population of active, volunteering students well. Typically, the program's male students are very active in participating and volunteering for various events, which would serve to explain this demographic data.

Another significant discussion piece presented itself in the question that asked whether or not the student has taken special education coursework. Most students in this study reported that they had already taken this course as a part of their degree track. However, a noteworthy aspect of this demographic question was discovered when analyzing responses. Most students who reported "Yes" to this answer also followed up with comments remarking on the inadequacy of strategies provided or the ineffectiveness of the special education course as a whole. So, with these responses in mind, it can be gathered that students do not believe that they received adequate or helpful preparation for working with special education students in the agricultural education classroom from this existing preparatory course. This should be concerning to teacher educators, as a course that should be lending to preservice preparation does not seem to be doing this, based on student responses in this questionnaire.

Objective 2 – Describe pre-intervention levels of self-efficacy that preservice educators have related to working with student with disabilities within the three-component model of agricultural education, which includes classroom instruction, leadership development or FFA, and experiential learning opportunities or SAE.

Conclusions

- *Pre-assessment self-efficacy scores were moderately high; it can be assumed that respondents may have over-reported these scores based on the small volunteer turnout for the intervention opportunity.*
- *Special education coursework may need to be evaluated on its effectiveness based on low scores reported in the pre-assessment that aligned with this course's teaching objectives.*

As can be seen in previous sections discussing the data and results of this study, the overall efficacy scores in the pre-assessment were moderately high. All overall scores for each competency question ranked at 4.00 or higher. This suggests that students believe themselves to be fairly confident in a most competencies. However, a conclusion can be drawn that students may have overreported this value, as only a handful of students volunteered to be a part of the intervention piece of this study. Students seemed to have been intimidated by this opportunity and shied away from it when given the chance to volunteer.

As discussed with the previous objective, it may be necessary to review and evaluate the effectiveness of the current special education course for preservice agricultural educators. An additional piece of evidence to support this suggestion came from the pre-assessment. Classroom Instruction ranked lowest overall in terms of self-efficacy score in this assessment, with the lowest reported competency being “Understand special education regulations.” This score was particularly noteworthy, as it was the lowest reported score out of any question on the pre-assessment (M=4.00). Additionally, as discussed previously, 80% of respondents had stated that they had already taken a course with emphasis in special education. A majority of this course is supposed to address special education regulations. This suggests that students either did not receive or retain the information as should be expected. Course objectives may need to be re-evaluated to increase the course’s effectiveness and applicability.

Objective 3 - Describe and analyze preservice educators’ reported self-efficacy after completing an intervention grounded in Experiential Learning Theory, designed to give preservice students early field experience opportunities with individuals with disabilities in the context of agricultural education.

Conclusions

- *The post-assessment revealed increased self-efficacy scores following the intervention piece of this study, primarily in Experiential Learning Opportunities.*

- *Self-efficacy can be improved through hands-on experience in working with students in disabilities, both within and outside of agricultural education.*

Upon reviewing the data, it can be seen that positive increases were found in all three categories of the post-assessment when compared to the initial self-efficacy scores recorded in the pre-assessment. However, the biggest positive difference was reported in the Experiential Learning Opportunities / SAE category. It can be concluded that this may be a result of the of the intervention piece of the study. In design, the intervention opportunity is very experiential in nature and most closely resembles what would be found in a Supervised Agricultural Experience project with a student when applied to real-world application. Based on the results, this category seemed to be the one with the most positive influence, and this could potentially be the reason why.

The final conclusion of this study would be that all experience with individuals with disabilities seemed to be a positive factor in increasing efficacy, regardless of whether or not it was in direct relation to agricultural education. When students were asked to describe their past experiences with individuals with disabilities, a wide array of experiences were listed, all of which seemed to have a positive impact on their efficacy and confidence in working with these individuals. It can be gathered that students would benefit from the implementation of more of these experiences throughout their educational core coursework as a whole.

Recommendations

Based on the findings and conclusions of this analysis, several recommendations were established for practitioner usage and further research.

Recommendations for Practitioners

According to the data and qualitative comments made by preservice respondents of this study, a program re-evaluation should be performed with an emphasis placed on special education coursework. Students found value in having to take a course regarding special education but did not feel that the current course was effective. Special education courses should provide a basic understanding of special education regulations and legislation within schools, as well as equip students with basic strategies and early field experiences in working with students with disabilities in a variety of contexts.

Additionally, agricultural education coursework should implement components of special education within its own context. Agricultural education and its other outside-of-the-classroom components are quite different than the general education classroom; thus, preservice students will need different tools and strategies in agricultural education classrooms in comparison to other education tracks. Early field experience opportunities, grounded in a hands-on approach, should be implemented within the agricultural education coursework to allow students to gain more confidence and skills in working with this demographic. It is no secret that exceptional learners will be found in the agricultural education classroom. Preservice educators need to be better prepared to handle all students who could potentially end up in their classrooms, and this experience in their preservice programs could provide this necessary skill development.

Recommendations for Further Research

Due to the small sample size, replication of this study is highly recommended. A higher volume of participation in both the intervention and assessment portions of this study would lead to more accurate results and correlative data. It is also recommended that replicated studies require student participation in this early field experience intervention as well as the assessment portions. This will serve to create more accurate results to potentially allow for more effective

and specific program improvement. Finally, replication of this study at other pre-service institutions is recommended to further gauge the benefit of early field experiences with exceptional learners related to self-efficacy and teacher preparation in all three components of agricultural education. These experiences can be sought out through partnerships with schools and 4-H clubs, as done in this study, to allow pre-service educators more authentic and impactful early field experiences throughout their pre-service program tracks.

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APPENDIX A
IRB Approval Letter



Institutional Review Board

328 Wells Hall
Murray, KY 42071-3318
270-809-2916 • msu.irb@murraystate.edu

TO: Kimberly Bellah, Agricultural Sciences
FROM: Jonathan Baskin, IRB Coordinator *JB*
DATE: 2/20/2019
RE: Human Subjects Protocol I.D. – IRB # 19-098

The IRB has completed its review of your student's Level 1 protocol entitled *An Analysis of Pre-Service Agricultural Educators' Self-Efficacy with Exceptional Learners*. After review and consideration, the IRB has determined that the research, as described in the protocol form, will be conducted in compliance with Murray State University guidelines for the protection of human participants.

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

Your stated data collection period is from 2/20/2019 to 2/19/2020.

If data collection extends beyond this period, please submit an Amendment to an Approved Protocol form detailing the new data collection period and the reason for the change.

This Level 1 approval is valid until 2/19/2020.

If data collection and analysis extends beyond this date, the research project must be reviewed as a continuation project by the IRB prior to the end of the approval period, 2/19/2020. You must reapply for IRB approval by submitting a Project Update and Closure form (available at murraystate.edu/irb). You must allow ample time for IRB processing and decision prior to your expiration date, or your research must stop until such time that IRB approval is received. If the research project is completed by the end of the approval period, then a Project Update and Closure form must be submitted for IRB review so that your protocol may be closed. It is your responsibility to submit the appropriate paperwork in a timely manner.

The protocol is approved. You may begin data collection now.

**Opportunity
afforded**

murraystate.edu

APPENDIX B



Hutson School of Agriculture

Online Research Participation Consent

Study Title: Analysis of Pre-Service Agricultural Educators' Self-Efficacy with Exceptional Learners

Primary Investigator: Sara Edwards, undergraduate honors student and Dr. Kimberly A. Bellah, Hutson School of Agriculture, Murray State University

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

1. **Nature and Purpose of Project:** The purpose of this study is to describe current Murray State University agricultural education preservice teachers' levels of efficacy regarding working with exceptional learners. This research is necessary as research shows there is a need for agricultural teacher preparation programs to better assist students in inclusion efforts related to working with exceptional learners. The results of this study may assist agricultural education programs in better framing experiences to assist future agricultural teachers to be better equipped to include exceptional learners in all aspects of the agricultural education program.
2. **Participant Selection:** You are being asked to participate because you are currently an undergraduate Murray State University student enrolled in the agricultural education program.
3. **Explanation of Procedures:** Should you decide to participate, you will be asked to complete the electronic questionnaire addressing your beliefs about your ability to work with exceptional learners in the classroom and laboratory, leadership development, and experiential learning opportunities. You will be asked to complete this questionnaire twice during the duration of this study. The study activities include an electronic survey with 87-items and six additional demographic items. All data from the electronic survey will be reported in the aggregate using means, frequencies, percentages, and correlations without reporting individual respondent answers.
Study duration: the survey should take no more than 20-25 minutes to complete each time.
4. **Discomforts and Risks:** The possible risks and/or discomforts associated with the being in the study include: There are no anticipated risks and/or discomforts for participants.
5. **Benefits:** This study is not designed to benefit you directly. However, your participation may help to increase our understanding of the needs of preservice teachers to be more confident in working with and teaching exceptional learners.
6. **Confidentiality:** It is possible that other people may learn that you participated in this study but the information you provide to the researcher(s) will be kept confidential to the extent permitted by law.
7. **Refusal/Withdrawal:** Your participation is strictly voluntary and you are free to withdraw/stop participating at any time with absolutely no penalty. Your participation in either part of the study means that you are free to skip any questions that you would prefer not to answer.
8. **Contact Information:** Any questions about the procedures or conduct of this research should be brought to the attention of Dr. Kimberly A. Bellah at 270-809-6924 or kbellah@murraystate.edu.

Clicking the link below indicates that this study has been explained to you, that your questions have been answered, and that you agree to take part in this study.

{Study Link} – TBD

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

APPENDIX C

Pre- and Post-Assessment Items

Questions Relating to Classroom and Laboratory Instruction

1. I understand the concept of inclusion.
2. I believe I can successfully include special education students into my classroom.
3. I believe I can provide methods of inclusion with other students for daily activities.
4. I believe I can influence attitudes of regular school personnel and other students toward the acceptance of special education students in agricultural education.
5. I understand special education regulations.
6. I believe I understand different levels of disabilities.
7. I believe that I can modify lessons and strategies for students with disabilities.
8. I believe I can individualize learning for students with moderate to severe disabilities.
9. I believe I have the ability to adapt curriculum for students with moderate to severe disabilities.
10. I believe I have the ability to adapt instruction for students with moderate to severe disabilities.
11. I believe I can successfully work with special education teachers to include special education students in my classroom.
12. I believe I can complete Individualized Education Plans (IEP) for special needs students.
13. I believe that I can collaborate with special education teachers for IEP implementation.
14. I believe I can recommend changes in IEPs when necessary.
15. I believe I can develop lessons according to IEPs.
16. I believe I can monitor achievement as set by an IEP.
17. I believe I understand responsibilities in implementing objectives set in an IEP.
18. I believe I can appropriately communicate with moderately to severely disabled students.
19. I believe I can interact positively and naturally with special education students.
20. I believe I can assist special education students in establishing goals.
21. I believe I can foster qualities of initiative, self-reliance, and independence with special education students.
22. I believe I can assist each special education student in developing and maintaining a positive self-concept.
23. I believe I can help special education students learn in the agriculture classroom and laboratory.
24. I believe I can manage disruptive behavior appropriately and effectively.
25. I believe I can keep special education students on task with classwork and assignments.
26. I believe I can assist special education students in developing good study habits related to agricultural education.
27. I believe I can use a variety of teaching methods and techniques to provide instruction for moderately to severely disabled students.
28. I believe I can use concrete, tangible demonstrations rather than verbal and abstract demonstrations for special education students.
29. I believe I can use illustrations, audiovisual aids, field trips, and direct experiences whenever possible with moderately to severely disabled students.
30. I believe I can challenge the special education learner's skills and abilities in a positive way.

31. I believe I can define appropriate expectations for laboratory and cooperative work for special education students.
32. I believe I can determine appropriate methods for evaluating the performance of moderately to severely disabled students.
33. I believe I can provide positive experiences in the regular classroom for special needs students.
34. I believe I have the knowledge of the different needs of students with moderate to severe disabilities.
35. I believe I can identify needs and interests of special education students.
36. I believe I understand the physical needs of special needs students.
37. I believe I understand the academic needs of special education students.
38. I believe I understand the emotional needs of special needs students.
39. I believe I understand social needs of special education students.
40. I believe I can ensure the accessibility and safety of a facility for moderately to severely disabled students.
41. I believe I can create a safe environment in my classroom/laboratory for all students when including students with disabilities.
42. I believe I can modify or adapt the tools, equipment, facilities, or conditions in the learning environment to meet the needs of special education students.

Questions Relating to Leadership Development

1. I believe I have the skills to successfully include students with disabilities into leadership development opportunities.
2. I believe I can provide methods of inclusion with other students for leadership development activities.
3. I believe I can influence attitudes of regular school personnel and other students toward the acceptance of special education students involved with leadership development.
4. I believe I can provide positive experiences in the leadership development organization for special needs students.
5. I believe I can integrate and actively involve special needs students in leadership organizations.
6. I believe I can provide leadership roles and opportunities for special education students.
7. I believe I can identify needs and interests of special education students.
8. I believe I can appropriately communicate with moderately to severely disabled students.
9. I believe I can interact positively and naturally with special education students.
10. I believe I can assist special education students in establishing goals.
11. I believe I can foster qualities of initiative, self-reliance, and independence with special education students.
12. I believe I can assist each special education student in developing and maintaining a positive self-concept.
13. I believe I can assist special education students in viewing his/her assets and limitations realistically.
14. I believe I can advise and counsel special education students relative to personal and professional goals.
15. I believe I have the knowledge of the different needs of students with moderate to severe disabilities.

16. I believe I understand the physical needs of special needs students.
17. I believe I understand the academic needs of special education students.
18. I believe I understand the emotional needs of special needs students.
19. I believe I understand social needs of special education students.
20. I believe I can ensure the accessibility and safety of a facility for moderately to severely disabled students.
21. I believe I can create a safe environment for all students when including students with disabilities in leadership development.
22. I believe I can modify or adapt the tools, equipment, facilities, or conditions in the learning environment to meet the needs of special education students.

Questions Relating to Experiential Learning Opportunities

1. I believe I have the skills to successfully include and manage students with disabilities with experiential learning opportunities.
2. I believe I can help special education students learn by using experiential learning opportunities.
3. I believe I can conduct a purposeful Supervised Agricultural Experience (SAE) visit for each special education student.
4. I believe I can provide positive experiences in experiential learning opportunities for special needs students.
5. I believe I can identify needs and interests of special education students.
6. I believe I can appropriately communicate with moderately to severely disabled students.
7. I believe I can interact positively and naturally with special education students.
8. I believe I can assist special education students in establishing goals.
9. I believe I can foster qualities of initiative, self-reliance, and independence with special education students.
10. I believe I can assist each special education student in developing and maintaining a positive self-concept.
11. I believe I can assist special education students in viewing his/her assets and limitations realistically.
12. I believe I can advise and counsel special education students relative to personal goals.
13. I believe I can assist in developing suitable job placement for special needs students.
14. I believe I can cooperate with appropriate agencies and groups in identifying career opportunities for special needs students.
15. I believe I can influence attitudes of regular school personnel and other students toward the acceptance of special education students involved with experiential learning opportunities.
16. I believe I have the knowledge of the different needs of students with moderate to severe disabilities.
17. I believe I understand the physical needs of special needs students.
18. I believe I understand the academic needs of special education students.
19. I believe I understand the emotional needs of special needs students.
20. I believe I understand social needs of special education students.
21. I believe I can ensure the accessibility and safety of a facility for moderately to severely disabled students.

22. I believe I can create a safe environment for all individuals when including students with disabilities in experiential learning opportunities.
23. I believe I can modify or adapt the tools, equipment, facilities, or conditions in the learning environment to meet the needs of special education students.

Demographic Questions

1. What is your gender?
2. What is your age?
3. What is your student classification?
4. What is your ethnicity?
5. Have you worked closely with moderately to severely disabled individuals previously?
6. Have you taken special education coursework as a part of your preservice preparation?