

STUDENTS ACQUISITION OF EMPLOYABILITY
ASSETS VIA LIVESTOCK ORIENTED SUPERVISED
AGRICULTURAL EXPERIENCES: A DELPHI STUDY

By

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Abstract:

Challenging budgets require school administrators to evaluate all services and programs provided by public schools. School-based agricultural education programs are not immune to an administrators review, to that end, it is important for agricultural education instructors to be viewed as complementary to the overall mission of the school. School-based agricultural education in Oklahoma places an emphasis on entrepreneurial livestock supervised agricultural experience (SAE) programs, this emphasis requires the investment of teacher time both in and out of the classroom. To help stakeholders better understand the benefits of these investments, this research sought to identify evidence of student acquisition of employability assets through student participation in entrepreneurial livestock SAEs. The acquisition of employability assets is important, twenty-one million people are employed in agricultural or agriculturally related careers, including production, retail, wholesale, and marketing (American Farm Bureau Federation, 2016; Rusk, Martin, Talbert, & Balshweid, 2002). The agriculture industry provides over 300 career opportunities in the areas of science, business and technology, with ten percent of U.S. workers employed in agriculture. Unfortunately, the skill gap reflecting employability assets is wider than ever, today's workforce is four generations removed from the agricultural sector decreasing the pool of workers possessing skills and knowledge in agricultural areas (Leising & Zilbert, 1994). Supervised agricultural experience programs provide students experiential learning opportunities that provide them with basic employability skills for entry-level positions (National FFA Organization, 2016). Therefore, it is essential for secondary school administrators, agriculture education instructors, students and potential employers to recognize the potential for technical and non-technical skills to be gained when students are involved in supervised agricultural experience programs. This research highlights the acquisition of employability skills via supervised agricultural experience programs as reported by agricultural education teachers in Oklahoma.

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CHAPTER I

INTRODUCTION

Challenging budgets require school administrators to evaluate all services and programs provided by public schools. School-based agricultural education (SBAE) programs are not immune to administrative review, to that end, it is important for agricultural education programs to be viewed as complementary to the overall mission of the school. In Oklahoma, public schools have faced a budget shortfall of \$46,779,299 between 2015 and 2016 (Oklahoma State Department of Education, 2016). This shortfall requires public school administrations to make difficult choices regarding programs and services. It is important for teachers to highlight the potential for career success through agricultural education when highlighting the impacts of the program. One potential for career success lies in entrepreneurial livestock SAEs. Oklahoma school-based agricultural education places an emphasis on entrepreneurial livestock SAE programs, this emphasis requires the investment of teacher time both in and out of the classroom. According to the Oklahoma Department of Career and Technology Education (2017) assistance and supervision of agricultural education students SAE programs are required for school-based agricultural education instructors. As a result, many school-based agricultural education instructors direct and develop student involvement in livestock entrepreneurial SAEs outside of the classroom (Talbert, Vaughn, Croom, & Lee, 2007).

On average, 21 days are spent away from school assisting students at major livestock expositions each school year (Oklahoma Department of Career and Technology Education, 2017). This time frame does not reflect the time spent assisting students with preparation for these events. In this budget climate, it has become increasingly important for agricultural education instructors to highlight and communicate the value of the school-based agricultural education program to secondary school administrators.

Statement of Problem

In Oklahoma, public schools have faced a budget shortfall of \$46,779,299 between 2015 and 2016 (Oklahoma State Department of Education, 2016). This shortfall has required public school administrators to make difficult choices regarding programs and services. Regarding agricultural education, it is important for teachers to highlight the potential for career success, one potential for career success lies in entrepreneurial livestock SAEs. Do entrepreneurial SAE programs have the potential to provide opportunities for students to acquire the skills needed to become a valuable asset for the agricultural industry?

Career Development and Employability

Students who enroll in agricultural education courses are exposed to potential career opportunities throughout their coursework (Lawver, 2009). In Oklahoma, there are seven career pathways available to students that reflect the agricultural industry (Oklahoma Department of Career Technology Education, 2016). The secondary agricultural education curriculum reflects the seven pathways (Slusher, Robinson, & Edwards, 2010).

The Institute for Employment Studies (2016) reported employability is about gaining and maintaining an occupation as well as being able to obtain a new profession as needed. Further, an individual's employment is dependent upon three assets. These employability assets include knowledge, skills and attitudes (Hillage & Pollard 1998; Institute for Employability Studies, 2016).

Involvement in SAE programs, has the potential to expose students to a variety of careers, learn proper workplace etiquette, develop skills within a specific area, and provide opportunities to apply learned knowledge in a simulated environment (National FFA Organization, 2016). Approaches such as these reinforce what is learned in the classroom and laboratory setting and reinforce the three-component model of Agricultural Education (National FFA Organization, 2016).

Purpose

The purpose and primary objective of this study was to achieve consensus of employability skills acquired by students who engaged in entrepreneurial livestock supervised agricultural experience (SAE) programs, as reported by a jury of school-based agricultural education instructors in Oklahoma.

Scope of the Study

The researcher utilized a single jury Delphi study; comprised of school-based agricultural education (SBAE) instructors who helped coach state proficiency award finalists in the areas of beef, swine, sheep, and goat entrepreneurship for the Oklahoma FFA Association.

Assumptions

Three main assumptions were made in conducting this study:

1. All school-based agricultural education instructors on the jury were familiar with the knowledge and skills required for students to have a productive supervised agricultural experience program.
2. All school-based agricultural education instructors on the jury inform students about career opportunities related to supervised agricultural experience programs.
3. Delphi jurors would provide accurate and appropriate answers to all questions, statements, and items in which they were asked to respond.

Limitations of the study

The following were the limitations of the study

1. The study was limited to agricultural education instructors from Oklahoma that had a state proficiency award finalist in the areas of beef, swine, sheep and goat production entrepreneurship for the Oklahoma FFA Association.
2. Instructors selected for the Delphi jury may not represent all agricultural education instructors' ideas about the significant role supervised agricultural experience programs play on students' employability skills.

Significance of the Study

The purpose of agricultural education is to prepare students for agricultural occupations and professions, job creation, entrepreneurship, and agricultural literacy (Phipps, Osborne, Dyer, & Ball, 2008). To that end, student involvement in animal

entrepreneurship supervised agricultural experience programs supports teaching the knowledge and skills needed to become successful in the animal agriculture sector (Slusher, Robinson, & Edwards, 2010; Smith, 2010). SAE programs provide real-life, hands-on activities necessary for providing these skills for students to learn (Dailey, Conroy, & Shelley-Tolbert, 2001). Therefore, secondary school administrators, agricultural education instructors, students, and potential employers could benefit from the knowledge learned when students engage in the SAE component of the agricultural education program.

Definition of Terms

Agriculture - A broad industry engaged in the production of plants and animals; or the provision of agricultural supplies and services, and the processing, marketing, and distribution of agricultural products (Frederico, 2005).

Agricultural Literacy - The understanding and possession of knowledge needed to synthesize, analyze, and communicate basic information about agriculture (Frick, 1990).

Agriculturally Related Occupation - An occupation that deals with the processing, marketing, and distribution of agricultural products, or an occupation providing supplies and services to agricultural producers (Herren & Donahue, 2000).

Agricultural Occupation - An occupation that requires agricultural knowledge and skills (Herren & Donahue, 2000).

Career - A period of time in which a person is in a job or profession (Herren & Donahue, 2000).

Classroom/ Laboratory Instruction - Component of the total agricultural education program; utilized in developing knowledge and understanding (Phipps, Osborne, Dyer, & Ball, 2008).

Delphi Technique - A structured communication technique to accomplish individual feedback contribution of information and knowledge (Linstone & Turoff, 1975).

Employability - The ability to work or be employed (Hillage & Pollard 1998).

FFA - An intracurricular student organization for those interested in agriculture and leadership (National FFA Organization, 2016).

School-based Agricultural Education - A systematic program of instruction in and about agriculture and related subjects commonly offered in secondary schools, through some elementary and middle schools and some postsecondary institutes/community colleges (Talbert & Balschweid, 2004).

School-based Agricultural Education Program - Formal agricultural education programs offered in public schools (as opposed to non-formal agricultural education programs offered by business or other non-school agencies) (Phipps, Osborne, Dyer, & Ball, 2008).

School-based Agricultural Education Teacher - A person teaching agriculture and natural resources and related topics to youth in formal settings (Phipps, Osborne, Dyer, & Ball, 2008).

Skills - The ability to use one's knowledge effectively and readily in execution or performance (Herren & Donahue, 2000).

Supervised Agricultural Experience (SAE) - Experiential, service or work-based learning through implementation by a student enrolled in agricultural education (National FFA Organization, 2016).

CHAPTER II

REVIEW OF LITERATURE

Introduction

The purpose of this chapter is to present a review of literature as related to this study. This review highlights the potential for employability skills to be learned through agricultural education student participation in an entrepreneurial supervised agricultural experience. The review is organized into the following sections: 1) Employability Skills; 2) School-based Agricultural Education; 3) Legislation and Funding for Vocational Education; 4) Supervised Agricultural Experiences; 5) School based Agricultural Education Instructors; 6) Summary.

Employability Skills

Robinson (2000) asserted the greatest challenges employers face are the identification of hard workers who are open-minded to training. Further, a person's career development and decision-making are founded on learned behaviors from prior experiences (Mitchell, 1990). These learned behaviors are known as employability skills, defined as the basic skills needed to obtain and retain a job and progress in it (Robinson, 2000). Boyatzis & Kolb (1995) reported skills are based upon learning styles and experiential learning theory, rather than occupation performance. These employability assets are grounded in three areas: knowledge, skills and attitude (Hillage & Pollard, 1998).

The knowledge, skill, and attitude that represent employability assets are further defined as basic academic skills, higher-order thinking skills, and personal qualities (see Table 1, Robinson, 2000). Although many careers and jobs require a variety of skill levels, almost every entry-level job requires basic academic skills, such as reading, writing, science, math, oral communication, and listening skills as being essential for job performance. To progress beyond their basic performance, employees should have the capacity to use higher order thinking skills. These skills allow the employee to think, reason and make decisions. These qualities are of great importance to, not only employers, but also for employees to advance as well. The final asset reflects personal qualities, such as responsibility, social skills flexibility, and self-motivation; these qualities are utilized for employees to work effectively with others (Robinson, 2000).

Table 1, Employability Assets and Related Skills

Basic Academic Skills	Higher-Order Thinking Skills	Personal Qualities	
Reading Writing Science Math Oral Communication Listening	Learning Reasoning Thinking Creatively Decision Making Problem Solving	Responsible Self Confidence Self-Control Social Skills Honest Integrity Flexibility	Team Spirit Punctual Self-Directed Good Work Attitude Well Groomed Cooperative Self-Motivated Self-Management

Today’s workplace reflects changes that have occurred over the past century. Because of the global economic shift and the development of the technological age, employers require employees with a different skill set (Ruffing, 2006). One opportunity to gain technical skills in the context of agriculture is through supervised agricultural experience programs (Ramsey & Edwards, 2012). However, unlike technical skills that are job specific, employability skills encompass different business types, sizes and job levels for an entry-level worker (Robinson, 2000).

Learning transferable skills and life skills from agricultural educational experiences allows students to focus on what was learned to obtain a career (Dailey et al., 2001). The demand for a variety of skills in the workplace has grown due to changes in business and industry and the growing gap of high school graduates’ capabilities and the knowledge and skills employers seek (Zirkle, 1998). Thus, career and technical initiatives, programs, and student organizations such as School to Work, Family and Consumer Science, Skills USA and FFA, provide youth opportunities to gain skills that

transition to the workplace (Ramsey & Edwards, 2012; Smith, 2010; Threeton & Pellock, 2010; Zirkle, 1998).

School-based Agricultural Education

The passage of the Smith-Hughes Vocational Act of 1917 allowed for systematic instruction of agriculture in secondary schools (P.L. # 64-347). Agricultural education programs were designed to educate students in the areas of science, business, plant systems, animal systems, and the environment (Phipps et al., 2008). Roberts and Ball (2009) offered a content based-model that acknowledges student instruction in agricultural education that results in a rich context based learning environment. Furthermore, these programs are designed around three main components: classroom/laboratory instruction, supervised agricultural experience programs, and FFA (Phipps et al., 2008)(see Figure 1). Meta-cognitive skill development should be the purpose of student participation in the SAE component as well as being supported by the Classroom/ laboratory and FFA components of the agricultural education model (Baker, Robinson, & Kolb, 2012).

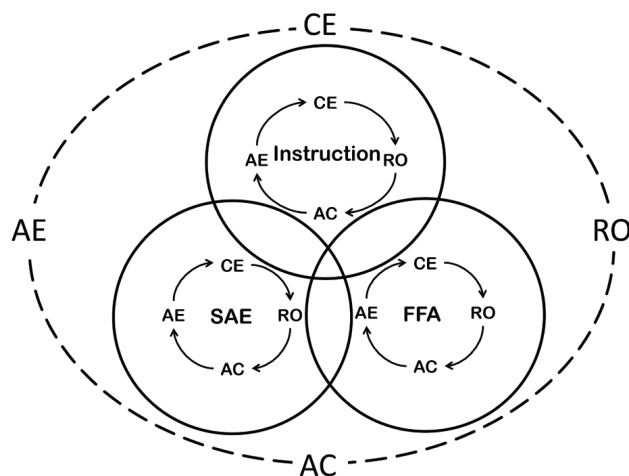


Figure 1, Comprehensive Model for School-Based Agricultural Education. Adapted from “Aligning Experiential Learning Theory with a Comprehensive Agricultural Education Model,” by M. A. Baker, J. S. Robinson, and D. A. Kolb, 2012, *Journal of Agricultural Education*, 53(4), p. 9. Copyright 2012 by the American Association for Agricultural Education. Reprinted with permission.

In 2006, agricultural education incorporated curriculum standards to teach students to become proficient in gaining and becoming successful in employment (Oklahoma Department of Career and Technology Education, 2016). Conceptually, Career and Technology Education (CTE) reflects Human Capital Theory, which is defined as an increase in the probability of an individual’s employment because of an investment in education, training and skill (Becker, 1964). The Agricultural, Food, and Natural Resource (AFNR) Career Cluster includes seven career pathways consisting of agribusiness, plant systems, animal systems, natural resources and environmental services, food products and processing, agricultural communications and power and technical systems (Oklahoma Department of Career and Technology Education, 2016).

Agricultural education programs utilize the three-circle model (see Figure 1) to represent the importance of a quality program (Yoest & Kane, 2015). Yet due to the ever-changing face of the agricultural industry and a need to adapt to student and occupational

needs, in 1993 the National Task Force on Supervised Agricultural Experience created a model (see Figure 2) for agricultural education programs (Hughes & Barrick, 1993).

Agricultural education does not come to a halt when students graduate; however, gaining and retaining a job or career are the ultimate goals of the agricultural education program (Hughes & Barrick, 1993).

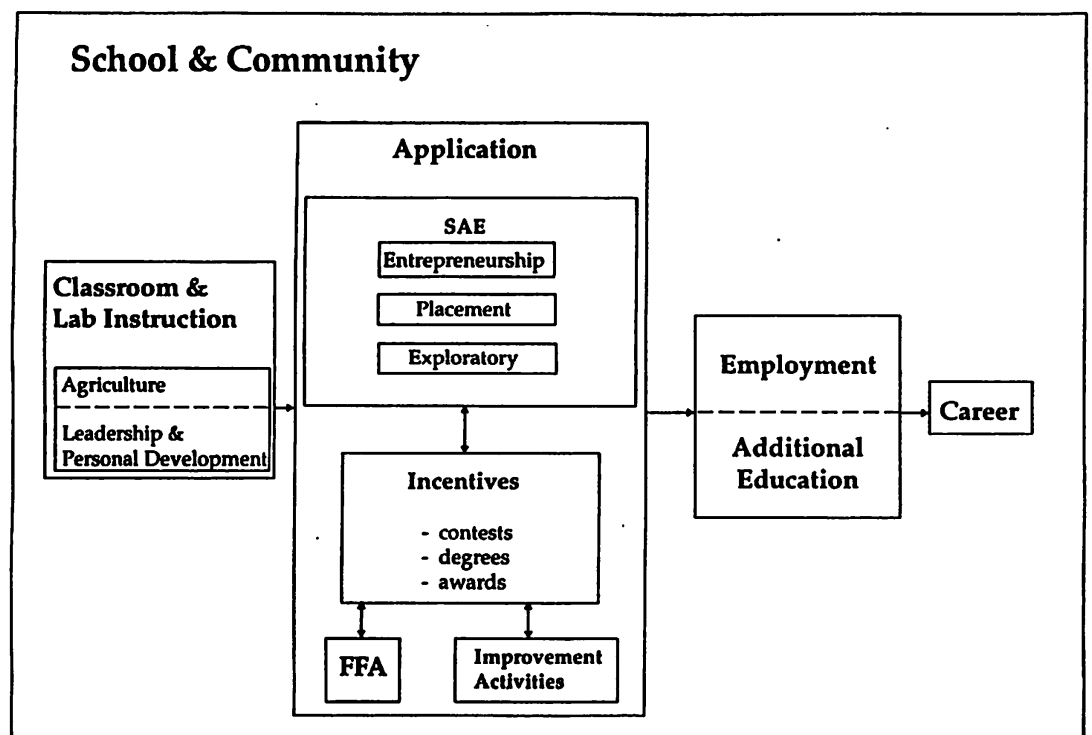


Figure 2, Conceptual Agricultural Education Model. Adapted from "A Model for Agricultural Education in Public Schools," by M. Hughes and R. K. Barrick, 1993, *Journal of Agricultural Education*, 34(3), 59-67. Copyright 1993 by the American Association for Agricultural Education. Reprinted with permission.

Legislation and Funding for Vocational Education

The formation of agricultural education in secondary public schools was introduced by the Smith-Hughes Act of 1917 (P.L. #64-347). The passage of this act provided federal legislation to allow subjects such as plant and animal science and

business (Moore, 1988). The Smith-Hughes Act provided funding for agricultural education programs that prepared students for future employment who were not yet in college but were older than 14 (P.L. #64-347). This initiative was the foundation for an investigative learning model known as supervised agricultural experience for agricultural education students (Talbert, Vaughn, Croom, & Lee, 2007).

Stimson (1914) purported that student involvement in work-related agricultural education programs provides for a stronger learning environment for students. During this same time, a discussion over the need for practical secondary agricultural education was the main focus of educational problems and school reform issues (Stimson, 1914). Further, the *Home-Project* was developed for student participation in productive farm work in connection with curriculum being taught (Stimson, 1914).

“The Vocational Education Act of 1963 was enacted by Congress to offer new and expanded vocational education programs to bring job training into harmony with the industrial, economic, and social realities of today and the needs for tomorrow” (Public Law 88-210, p. 1). Additionally, the (1994; 1998) School to Work Act and the Workforce Investment Act provided integrated education and curriculum designed to reinforce workforce skills (Gordon, 1999).

The Carl D. Perkins Career and Technical Education Improvement Act of 2006 developed educational programs that provided connectedness between academic and technical content (Lynch, 2000). Agricultural education is a unit of the CTE program, which is primarily focused on the development of knowledge and skills needed for successful entry into careers (Lynch, 2000). In Oklahoma, House Bill 3006 sets statutory

boundaries that impact agricultural education specifically, agricultural education is limited to students grades 8 through 12, students shall participate in a supervised agricultural experience program, Oklahoma Department of Career and Technology Education, as well as local school district, shall provide necessary services for the program (OK HB3006, 2014). The passage of Oklahoma House Bill 3006, allow agricultural education instructors the foundation in public school systems to provide an optimum educational environment.

Supervised Agricultural Experiences

Supervised Agricultural Experiences (SAEs) are one of three components reflected in a comprehensive school-based agricultural education program. Often times SAEs provide a direct link to what students learn in the classroom/laboratory component of the program, allowing them the opportunity to apply curriculum to real-life scenarios in which they can reinforce their knowledge. The National FFA Organization classifies SAEs into six main categories'. These six categories are labeled as entrepreneurship, placement, research, exploratory, school-based enterprise, and service learning (National FFA Organization, 2016).

Agricultural education instructors reported SAEs are an important piece to the total agricultural education program (Wilson & Moore, 2006). Wilson and Moore (2006) queried 135 agricultural instructors and found that 65.2% of their students were involved in the area of entrepreneurship. Entrepreneurial SAEs are experiential in nature, allowing students to plan, implement, and operate an agriculturally related activity or business (National FFA Organization, 2016).

Documentation stating the importance of SAEs has been widely observed throughout the years (Camp, Clarke, & Fallon, 2000; Cheek et al., 1994; Dyer & Williams, 1997; Ramsey, Edwards, Leising, Key, & Harris, 2009; Roberts, 2006; Stone, 1994). Experiential learning activities are and continue to be a main practice in school-based agricultural education programs, for the aid in preparing students for careers. Phipps et al. (2008) reported preparation for entry-level careers should be the main focus of secondary agricultural education programs. This preparation of student success in careers is founded on acquiring specific skills needed for these jobs through experiential learning activities (Camp et al., 2000; Cheek et al., 1994; Dyer & Williams, 1997; Ramsey et al., 2009; Roberts, 2006; Stone, 1994).

Since the early 1900's, student participation in agricultural education provides for college and career preparation through the experiential learning approach of the program (Baker, Robinson, & Kolb, 2012; Knoblock, 2003; Phipps et al., 2008; Roberts, 2006; Stimson, 1914). Further, evidence shows practical use of learned information is higher yielding when it is learned experientially (Baker, Robinson, & Kolb, 2012).

Once identification of a project occurs by a student, agricultural education instructors can provide instruction that will aid the transfer of experiential learning between classroom and SAE (Baker, Robinson, Kolb, 2012). Further, the process of experiential learning is built from the transformation of experience (Kolb, 1984). These types of learning experiences ultimately flow into meta-cognitive skill development (Kolb, 1984). Meta- cognitive skills represent higher order thinking, planning, goal setting and self-direction (Boyatzis & Kolb, 1992). Student preparation for career

advancement requires, not only work skills but also higher order thinking, problem solving and collaboration (Doolittle & Camp, 1999).

School-based Agricultural Education Instructors

School-based agricultural education instructors are uniquely positioned in the public education system. Because of formal interaction with students in the classroom setting and informal contact outside of the classroom, instructors have multiple opportunities to reinforce agricultural content and skills (Park & Rudd, 2005). Further, Oklahoma school-based agricultural education instructors are full-time 12-month employees who not only teach approved agricultural education courses but also provide students with FFA opportunities and supervise student SAEs (Oklahoma Department of Career and Technology Education, 2017). School-based agricultural educators not only utilize the classroom/laboratory component of the three-circle model to impact student learning, the other components of the model also lend themselves to extending the content beyond the classroom (Talbert & Camp, 1994). Identifying student success through SAEs reveal agricultural education instructors play an integral role in helping students achieve their goals (Harris & Newcomb, 1985), a reflection of the commitment to students outside of the classroom other secondary courses may not enjoy (Talbert & Camp, 1994).

When students are involved in various career preparation activities, they are more apt to inform themselves and select a more appropriate potential career (Talbert & Balschweid, 2006). School-based agricultural education instructors are in a position to guide students in career decision-making thus making student career success a vital role in agricultural education activities (Priest, 2008). School-based agricultural education

instructors aid students in learning career-related skills as well as developing career interests, gathering important information, and ultimately identifying a potential career (Priest, 2008). Students are able to do this because of the long hours spent with the agricultural education instructor developing SAE programs after school (Park & Rudd, 2005).

Although agricultural education instructors are not the only influencers of student career decisions, they do weigh heavily on influencing their career choices (Koltrlik & Harrison, 1987; Wright & Custer, 1998). Further, many students utilize agricultural educators in a counseling form regarding career decisions (Kotrlik & Harrison, 1987).

Summary of Review of Literature

Educational philosophers in both general and CTE programs envisioned a focus toward equipping students for various skills across multiple areas of the agricultural employment sector in the United States (Roberts & Ball, 2009). This practical idea of students being prepared for the workplace provided a modern type of education known as vocational education in the early 20th century (Roberts, 1971).

This vision was a reflection of a rapidly changing industry requiring a plethora of skills sought by employers (Ruffing, 2006). The diversity of skills that employers are in search of today correspond with the skills students may acquire from involvement in SAE programs. The employability skills students can acquire from these real-world programs are reflected in three different assets. These three employability assets are basic academic skills, higher order thinking skills and personal qualities (Robinson, 2000).

The integration of vocational and academic programs provides for the development of exchangeable life skills (Dewey, 1938; Knoll, 1997). Vocational programs such as these were a result of the Smith-Hughes Vocational Act of 1917. Phipps et al. (2008) posited that agricultural education is in position to contextually teach students science, business, plant systems, animal systems and production and environmental management. This approach is operationalized by the three-circle model (see Figure 1), and solidified as a foundation for all agricultural education programs.

The passage of The Carl D. Perkins Career and Technical Education Improvement Act created a linkage of academic and technical content for education (Friedel, 2011). In 1950, the passage of Public Law 81-740 signified the importance of agricultural education and FFA to be taught in secondary education. Further, Oklahoma House Bill 3006 highlighted the importance of SAE programs by implementing section B proclaiming all students enrolled in agricultural education courses shall create and implement an SAE program into their education experience (OK HB3006, 2014).

Conceptually, the foundation for an agricultural education program is based on the three-circle model (Yoest & Kane, 2015). Roberts and Ball (2009) reported SAE programs provide for a critical facet in this model. The utilization of SAE programs benefit students by developing responsibility, confidence, independent learning and teamwork (Pals, 1988). When students do not participate in SAE programs, the opportunity to apply key concepts learned in agricultural education classes is diminished (Team Ag Ed Annual Report, 2007).

The principles learned by these experiential programs provide students the opportunity to gain and retain the knowledge learned. Additionally, skills learned can be utilized when students start employment and provide a basis to become successful in their job or career. This preparation of student success in careers is founded on acquiring specific skills needed for these jobs through experiential learning activities (Ramsey et al., 2009).

Historically, the knowledge and skills students need to gain, retain, and become successful in careers has been the main focus of agricultural education (Dewey, 1938; Moore, 1988; Croom, 2008; Parr & Edwards, 2004; Ramsey et al., 2009; Roberts & Ball, 2009). SAE programs are designed to provide students with hands-on experiences to utilize and incorporate what they have learned in the classroom; this is then transferred to career opportunities (National FFA Organization, 2016).

CHAPTER III

METHODOLOGY

Purpose

The purpose of this study was to achieve consensus of employability skills acquired by students who engaged in entrepreneurial livestock Supervised Agricultural Experience Programs as reported by a panel of school-based agricultural education instructors in Oklahoma.

Institutional Review Board

Federal regulations and Oklahoma State University policy require review and approval of all research studies that involve human subjects before investigators can begin their research. The Office of University Research and the Institutional Review Board at Oklahoma State University conducted the aforementioned review to protect the rights and welfare of human subjects involved in biomedical and behavioral research. In compliance with this policy, this study received proper surveillance and was granted permission to be executed. The institutional review board code for this study was AG1627 and a copy of the approval form is presented in Appendix A.

Objective

1. Identify the employability skills students acquire as a result of their participation in Entrepreneurial Livestock SAE programs as perceived by a jury of school-based agricultural education teachers in Oklahoma.

Research Design

The desire to identify consensus surrounding the acquisition of employability skills led the researcher to utilize the Delphi technique (Dalkey & Helmer, 1963). Olaf Helmer and Norman Dalkey developed the Delphi technique, in the 1950's. These researchers established the Delphi technique as an instrument in forecasting future events using a series of intensive questionnaires combined with controlled-opinion feedback (Dalkey & Helmer, 1963). This technique initially was implemented on issues related to national defense.

In agricultural education research, the Delphi technique has proven to be a reliable form of investigation. A review of the *Journal of Agricultural Education* from 2015-2016 revealed five articles that utilized the Delphi technique when assessing important topics for agricultural education investigators. Warner, Stubbs, Murphey and Huynh (2016) utilized the Delphi technique to identify the competencies needed to apply social marketing to extension programming. Meals and Washburn (2015) researched achieving next generation science standards through agricultural contexts employing a Delphi study of outdoor education experts. The Delphi technique was used in a study of the professional needs of beginning agricultural education teachers in Idaho (Touchstone, 2015). Terry and Osborne (2015) conducted a study on the fundamental dimensions and

essential elements of exemplary local extension units using the technique. Finally, Lundry, Ramsey, Edwards and Robinson (2015) used the Delphi technique to examine the benefits of career development events as perceived by school-based, agricultural education teachers. This brief review of literature in agricultural education serves as a foundation for the use of the Delphi technique as a methodological approach when conducting research.

A three-round, modified Delphi was utilized by the researcher to seek consensus defining the employability skills learned through supervised agricultural experience programs. Modification included the use of an electronic survey instrument versus a conventional paper-pencil form of the Delphi as described by Linstone and Turoff (1975). Hsu and Sanford (2007) endorsed three rounds of questionnaires as satisfactory in the collection of information needed to reach consensus.

Population and Sample

The population for this research study consisted of the 433 school-based agricultural education instructors in Oklahoma. In an effort to investigate the potential for students to acquire employability assets through entrepreneurial SAE's, the researcher elected to purposefully identify a jury of school-based agricultural education instructors exhibiting expert traits related to the objective of the study. To that end, purposeful sampling was utilized in member selection for the jury of experts (Palinkas et al., 2013). The criterion utilized to determine the jury of experts included school-based agricultural education instructors who had students SAE projects selected as a state proficiency award finalist in the areas of beef, swine, sheep, and goat entrepreneurship by the Oklahoma

FFA Association. These agricultural education instructors were deemed knowledgeable because of their role in assisting students with supervised agricultural experience programs, their knowledge of the proficiency award application process, and their charge as Career and Technical Education instructors to introduce basic employability skills to students within the context of agricultural education and FFA.

Participants in the study were provided an invitation explaining the research project and how to proceed; to ensure a consistent description of the study was presented to the expert jury a script (Appendix E) was emailed to the jury pool. Stitt-Gohdes and Crews (2004) stated “it is important that participants understand the goal of the study and feel they are a part of a group” p. 61.

Questionnaires

Consensus is defined as general agreement about something, an idea, or opinion shared by all the people in the group (Hsu and Sanford, 2007). The application of a Delphi utilizes multiple rounds of questionnaires, usually two or three, to create a systematic way to present items to a jury of experts. The expert jury utilizes the questionnaires to reach consensus of agreement on the items presented for review (Dalkey, 1969; Helmer, 1966; Stufflebeam, McCormick, Binkerhoff, & Nelson, 1985). Custer, Scarcella, and Stewart (1999) conveyed that utilizing three rounds of questionnaires were appropriate in data collection to reach “consensus agreement”.

Expert members of the jury were invited to participate in this study via electronic notice outlining the purpose and goals of the study. The electronic notice also included a Uniform Resource Locator (URL), which allowed access to the questionnaire via an

online survey tool called Qualtrics, notifications for each round of the study were sent to each member of the jury using email with a link to the questionnaire. The timing of pre-notice, notice, and follow-up emails were developed based on Dillman, Smyth, and Christian's (2009) Tailored Design Method (see Appendix E).

Gay, Mills, and Airasian (2006), stated validity is the level to which a research instrument measures what it is intended to measure and authorizes appropriate reading of the scores. The first round of a Delphi relies on open-ended questions inviting experts to identify items appropriate to the study (Mullin, 2003). Subsequent rounds of the study rely on questionnaires developed by the researcher. To ensure face and content validity of the questionnaires, the investigator presented the round two and round three instruments to a panel of experts consisting of faculty members in the Department of Agricultural Education, Communications and Leadership at Oklahoma State University. Face validity is the degree in which a questionnaire measures what it is intended to measure with content validity being determined through expert judgment (Gay et al., 2006).

Gay et al (2006) outlined reliability as "the degree to which a test consistently measures whatever it is measuring" (p. 139). Dalkey, Rourke, Lewis, and Snyder (1972) concluded that the Delphi method is reliable when a panel is truly representative of the expert community and that an engaged group of 13 would provide process reliability within a 0.90 coefficient (as cited in Shinn, Briers, & Baker, 2008). Thus, a recommendation of 13 to 15 jurors was identified by the author. Sutphin and Camp (1990) purported that the sample of the study should be large enough to obtain the needed information to conduct quality research. Consequently, a population size too large could

be disadvantageous to the study. Thirteen jury members contributed to the reliability of the modified Delphi utilized in this study.

Data Collection

“The Delphi technique uses rounds of written questionnaires [or instruments] and guaranteed anonymity with summarized information and controlled feedback to produce a group consensus on an issue” (Beech, 1999, p.283). This research study sought to identify the employability skills acquired by students who engaged in entrepreneurial livestock Supervised Agricultural Experience Programs as reported by a panel of school-based agricultural education instructors in Oklahoma.

Consensus

According to Dalkey and Helmer (1963, p. 458) “Its [Delphi’s] object is to obtain the most reliable consensus of opinion of a group of experts”. Consensus of the expert jury was set *apriori* and defined when 75% of the jury rated a statement “agree” or “strongly agree” using a six-point scale (Boyd, 2003; Shin et al., 2008; Shinn et al., 2009).

Round One

School-based Agricultural Education Teachers Request and Prompt (see Appendix F)

Data collection for this study began in the fall of 2016. September 25, 2016, an electronic message was sent from the researcher to the 43 potential members of the expert jury (see Appendix E) with an explanation and invitation to participate and access round one of the study utilizing a hyperlink. Qualtrics[®] was used to develop the initial

instrument by the researcher. Round one included three open-ended statements used to obtain feedback from the expert panel.

- Identify the *basic academic skills* students acquire through a livestock oriented entrepreneurial supervised agricultural experience program
- Identify the *higher-order thinking skills* students acquire through a livestock oriented entrepreneurial supervised agricultural experience program
- Identify the *personal qualities* students acquire through a livestock oriented entrepreneurial supervised agricultural experience program

Electronic follow-up messages were sent to jurors two weeks after the initial invitation (see Appendix G). From round one, 55 total statements ($n=15$; 35% response rate) were provided by the Delphi jurors. Thirteen responses were listed for the first statement, “*Identify the basic academic skills students acquire through a livestock oriented entrepreneurial supervised agricultural experience program*” Eleven responses were provided for the second statement, “*Identify the higher-order thinking skills students acquire through a livestock oriented entrepreneurial supervised agricultural experience program*” Thirty-one responses were listed for the third statement, “*Identify the personal qualities students acquire through a livestock oriented entrepreneurial supervised agricultural experience program*”

After the researcher analyzed each statement similar or duplicate statements were combined or eliminated (Shinn, Wingenbach, Briers, Lindner, & Baker, 2009). From the original 55 original juror statements, the researcher retained 31 for presentation in round two. Accordingly, Qualtrics[®] was used to develop the round two instrument.

Round Two

The round two instrument (see Appendix I) was emailed to the 15 jurors who participated in round one on November 3, 2016. Jury members received an electronic follow-up message roughly two weeks after the initial round two invitation (see Appendix J). Two of the jury members did not participate in the second round. The round two instrument asked each panelist ($n=13$; 83% response rate) to rate their level of agreement on the three open-ended questions from round one where 31 statements were identified. The jury members were asked to use a six-point scale *i.e.*, 1= *Strongly Disagree*, 2= *Disagree*, 3= *Slightly Disagree*, 4= *Slightly Agree*, 5= *Agree*, 6= *Strongly Agree*; (Jenkins, 2009; Shinn et al., 2009) to rate their level of agreement with the skills identified from the three round one statements: “*Identify the basic academic skills students acquire through a livestock oriented entrepreneurial supervised agricultural experience program*”; “*Identify the higher-order thinking skills students acquire through a livestock oriented entrepreneurial supervised agricultural experience program*”; and “*Identify the personal qualities students acquire through a livestock oriented entrepreneurial supervised agricultural experience program*. Items where less than 51% of the respondents scored the item a 5 (Agree) or 6 (Strongly Agree) were removed from further investigation. Thus, in round two consensus began to form.

Round Three

The round three instrument was emailed to the 13 experts that participated in round two of the survey on December 4, 2016. Round three attempted to establish consensus with the jury of experts. The development of consensus in a Delphi is the role

of round three (Buriak & Shinn, 1989). The third-round instrument (see Appendix L) sought to develop consensus of the three remaining items that rated a level of agreement greater than 51% but less than 75% in round two. Follow-up email messages were sent to the expert jury approximately two weeks after the initial round three invitation (see Appendix M). The expert jury were asked to rate their level of agreement for two skills originated from the statement, “*Identify the basic academic skills students acquire through a livestock oriented entrepreneurial supervised agricultural experience program*” Further, jury experts were asked to rate their level of agreement for one skill originated from the statement, “*Identify the higher-order thinking skills students acquire through a livestock oriented entrepreneurial supervised agricultural experience program*”

Data Analysis

Qualtrics[®], a web-based research surveying software, was utilized for data analysis in this study. The usage of frequency distribution valid percentage in round two was employed to determine if items reached consensus or was unstable and should be removed from the study (Buriak & Shinn, 1989).

CHAPTER IV

FINDINGS

Purpose

The purpose of this study was to achieve consensus of employability skills acquired by students who engaged in entrepreneurial livestock Supervised Agricultural Experience Programs as reported by a panel of school-based agricultural education instructors in Oklahoma.

Objective

1. Identify the employability skills students acquire as a result of their participation in Entrepreneurial Livestock SAE programs as perceived by a jury of school-based agricultural education teachers in Oklahoma.

Sources of Data: Delphi Jurors

The jury charged with seeking consensus in this study was comprised of school-based agricultural education instructors who have had students represent their SAE projects as a state proficiency award finalist in the areas of beef, swine, sheep and goat entrepreneurship for the Oklahoma FFA Association. A total of forty-three jury members were initially invited to participate in the study. Thirteen members participated in all three rounds of the study to seek consensus.

Jury Findings: Round One

Round one of this modified Delphi study sought to identify the employability skills students acquire as a result of their participation in Entrepreneurial Livestock SAE programs as perceived by a panel of school-based agricultural education teachers in Oklahoma. Round one was built around three open-ended statements utilized to gain feedback from the expert jury. The following statements were generated by the researcher to gain more knowledge about the jurors' perceptions of the employability skills gained from participating in SAE programs.

- 1) Identify the basic academic skills students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Program*
- 2) Identify the higher-order thinking skills students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Program*
- 3) Identify the personal qualities students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Program*

Round one yielded a total of 55 statements provided by the Delphi jurors ($n=15$; 35% response rate). The first statement, "*Identify the basic academic skills students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Program,*" resulted in 13 responses. The second statement, "*Identify the higher-order thinking skills students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Program,*" resulted in 11 responses. Thirty-one responses were provided for the third statement, "*Identify the personal qualities students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Program.*"

The researcher analyzed each statement, and combined or eliminated similar or duplicate statements (Shinn et al., 2009). From the 55 original juror statements, 31 statements were retained for presentation in round two.

Employability Skill Assets:

Round one statement, *“Identify the employability skills students acquire as a result of their participation in Entrepreneurial Livestock SAE programs as perceived by a panel of school-based agricultural education teachers in Oklahoma.”* received 31 statements from the Delphi jury (see Table 2).

Table 2

Employability Skills Identified by School-Based Agricultural Education Instructors During Round One of the Delphi Study, in Response to the Statement, “Identify the Employability Skills Students Acquire as a Result of their Participation in Entrepreneurial Livestock SAE Programs” (N = 31)

Employability Skills, Round One	
<u>Basic Academic Skills</u>	
Oral Communication	
Basic Arithmetic	
Reading Comprehension	
Basic Science	
Written Communication	
Total Skill Items for Basic Academic Skills	5
<u>Higher Order Thinking Skills</u>	
Livestock evaluation	
Analyze future program needs	
Problem solving	
Decision making	
Evaluate animal health	
Data management	
Organizing records	
Recognizing nutritional needs of livestock	
Create marketing strategies	
Perform cost, benefit analysis	
Analyze commodity markets	
Total Skill Items for Higher Order Thinking Skills	11

(Continued)

Employability Skills, Round One	
	<u>Personal Qualities</u>
Organizational skills	
Responsibility	
Dedication	
Networking skills	
Initiative	
People skills	
Sense of ownership	
Consistency	
Work ethic	
Time management	
Adaptability	
Integrity	
Leadership	
Self-management	
Money management	
Total Skill Items for Personal Qualities	15
Total Number of Skill Items for all Assets	31

Jury Findings: Round Two

In round two, approximately one week after analyzing findings from round 1, a questionnaire was sent to the 15 jury members who participated in round one, however two jury members dropped out of the study leaving 13 members to provide analysis for round two ($n=13$; 83% response rate i.e., jury members committed to the research project after round one). The jury was asked to rate their level of agreement on 31 items representing all three statements related to the employability skills acquired as a result of student participation in Entrepreneurial Livestock SAE programs, i.e., Basic Academic Skills (BAS), Higher-Order Thinking Skills (HOTS) and Personal Qualities (PQ) identified in round one of the study.

Jury members utilized a six-point scale to rate the 31 skills acquired as a result of student participation in Entrepreneurial SAEs: 1= *Strongly Disagree*, 2= *Disagree*, 3=

Slightly Disagree, 4=*Slightly Agree*, 5= *Agree*, 6= *Strongly Agree* (Jenkins, 2008; Shinn et al., 2009). Twenty-six statements received a score of 5 (*Agree*) or 6 (*Strongly Agree*) by 75% or more of the panelists; thus, “consensus of agreement” was reached on those items as determined by the researcher (Jenkins, 2008; Shinn et al., 2009) (see Table 3).

Table 3

Employability Skills Identified by School-Based Agricultural Education Instructors During Round Two of the Delphi Study, in Response to the Statement, “Identify the Employability Skills Students Acquire as a Result of their Participation in Entrepreneurial Livestock SAE Programs” (N = 26)

Employability Skills, Round Two	Skill Asset	% Agreement
Livestock evaluation	HOTS	100%
Analyze future program needs	HOTS	100%
Problem solving	HOTS	100%
Decision making	HOTS	100%
Recognizing nutritional needs of livestock	HOTS	100%
Responsibility	PQ	100%
Dedication	PQ	100%
People skills	PQ	100%
Consistency	PQ	100%
Work ethic	PQ	100%
Time management	PQ	100%
Adaptability	PQ	100%
Money management	PQ	100%
Integrity	PQ	100%
Self-management	PQ	100%
Organizational skills	PQ	92%
Networking skills	PQ	92%
Sense of ownership	PQ	92%
Leadership	PQ	92%
Initiative	PQ	92%
Data management	HOTS	92%
Organizing records	HOTS	92%
Evaluate animal health	HOTS	91%
Oral Communication	BAS	83%
Basic Science	BAS	83%
Perform cost, benefit analysis	HOTS	75%

Note. “Consensus of Agreement” was reached if 75% or more of the jurors selected *Agree (5) or Strongly Agree (6)* for that item (Jenkins 2008; Shinn et al., 2009). HOTS = Higher-Order Thinking Skills, PQ = Personal Qualities, BAS = Basic Academic Skills.

Five statements did not receive a score of 5 (*Agree*) or 6 (*Strongly Agree*) by 75% or more of the panelists; thus, “consensus of agreement” was not reached on those items as determined by the researcher (Jenkins, 2008; Shinn et al., 2009) (see Tables 4 and 5).

Table 4.

Employability Skills that did not reach “Consensus of Agreement” During Round Two of the Study but did Achieve 51% Agreement or Higher (N = 3)

Employability Skills, Round Two	Skill Asset	% Agreement
Create marketing strategies	HOTS	67%
Basic Arithmetic	BAS	67%
Reading Comprehension	BAS	58%

Note. “Consensus of Agreement” was reached if 75% or more of the jurors selected 5 (*Agree*) or 6 (*Strongly Agree*) for that item (Jenkins 2008; Shinn et al., 2009). HOTS = Higher-Order Thinking Skills, PQ = Personal Qualities, BAS = Basic Academic Skills.

Table 5.

Employability Skills that did not reach “Consensus of Agreement” During Round Two of the Study (N = 2)

Employability Skills, Round Two	Skill Asset	% Agreement
Analyze commodity markets	HOTS	50%
Written communication	BAS	42%

Note. “Consensus of Agreement” was reached if 75% or more of the jurors selected 5 (*Agree*) or 6 (*Strongly Agree*) for that item (Jenkins 2008; Shinn et al., 2009). HOTS = Higher-Order Thinking Skills, PQ = Personal Qualities, BAS = Basic Academic Skills.

Jury Findings: Round Three

In round three, jurors were asked to rate their level of agreement on two items related to the employability skills, i.e., Basic Academic Skills, and Higher-Order Thinking Skills acquired as a result of their participation in Entrepreneurial Livestock SAE programs ($n= 13$, 83% response rate). Two jury members chose not to participate further in the study.

Table 6

Employability Skills that did not reach “Consensus of Agreement” after Three Rounds of the Delphi Study (N = 3)

Employability Skills, Round Two	Skill Asset	% Agreement
Create marketing strategies	HOTS	61.54%
Basic Arithmetic	BAS	61.54%
Reading Comprehension	BAS	61.53%

Note. “Consensus of Agreement” was reached if 75% or more of the jurors selected *Agree (5) or Strongly Agree (6)* for that item (Jenkins 2008; Shinn et al., 2009). HOTS = Higher-Order Thinking Skills, PQ = Personal Qualities, BAS = Basic Academic Skills.

Table 7

Employability Skills Identified by School-Based Agricultural Education Instructors After All Rounds of the Delphi Study, in Response to the Statement, “Identify the Employability Skills Students Acquire as a Result of their Participation in Entrepreneurial Livestock SAE Programs” (N = 26)

Employability Skills, Round Two	Skill Asset	% Agreement
Livestock evaluation	HOTS	100%
Analyze future program needs	HOTS	100%
Problem solving	HOTS	100%
Decision making	HOTS	100%
Recognizing nutritional needs of livestock	HOTS	100%
Responsibility	PQ	100%
Dedication	PQ	100%
People skills	PQ	100%
Consistency	PQ	100%
Work ethic	PQ	100%
Time management	PQ	100%
Adaptability	PQ	100%
Money management	PQ	100%
Integrity	PQ	100%
Self-management	PQ	100%
Organizational skills	PQ	92%
Networking skills	PQ	92%
Sense of ownership	PQ	92%
Leadership	PQ	92%
Initiative	PQ	92%
Data management	HOTS	92%
Organizing records	HOTS	92%
Evaluate animal health	HOTS	91%
Oral Communication	BAS	83%
Basic Science	BAS	83%
Perform cost, benefit analysis	HOTS	75%

Note. “Consensus of Agreement” was reached if 75% or more of the jurors selected *Agree (5) or Strongly Agree (6)* for that item (Jenkins 2008; Shinn et al., 2009). HOTS = Higher-Order Thinking Skills, PQ = Personal Qualities, BAS = Basic Academic Skills.

Results

Round one provided a total of 55 statements ($n=15$; 35% response rate) provided by the Delphi jurors. The first statement, *“Identify the basic academic skills students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Program”* resulted in 13 responses. The second statement, *“Identify the higher-order thinking skills students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Program”* resulted in 11 responses. Thirty-one statements were provided for the third statement, *“Identify the personal qualities students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Program”*

Employability skills are represented by three assets (Robinson, 2000), for the first asset, basic academic skills jurors provided 13 statements from the Delphi jury. The statements ranged from basic arithmetic to communication skills (see Table 1).

The second asset, higher-order thinking skills yielded eleven statements. The researcher examined the statements and determined to utilize all statements (see Table 1).

Thirty-one statements were provided by the jurors for the third asset, personal qualities. The researcher analyzed similar and duplicate statements, after combining or eliminating similar statements; fifteen items were yielded (see Table 1).

The researcher analyzed each statement and similar or duplicate statements were combined or eliminated (Shinn et al., 2009). From the 55 original juror statements, the researcher retained 31 statements for presentation in round two.

Round Two

Round two resulted in the “consensus of agreement” on 26 items on all three statements by the Delphi jury; i.e., 75% or more of the jurors selected 5 (*Agree*) or 6 (*Strongly Agree*). The asset, basic academic skills, resulted in two skills that reached “consensus of agreement” (see Table 2). The asset, higher-order thinking skills, resulted in nine skills that reached “consensus of agreement” (see Table 2). The third asset, identify the personal qualities, resulted in 15 items that reached “consensus of agreement” (see Table 2).

Round Three

Round three included 3 items, two from asset, basic academic skills and one from higher-order thinking skills, for which more than 51% but less than 75% of jurors had indicated 5 (*Agree*) or 6 (*Strongly Agree*) in round two. Resulted in the jury not reaching “consensus of agreement”. After consideration, the jury found no additional items that met consensus in round three.

After three rounds of the study, the total number of items that reached “consensus of agreement” was 26 (see Table 7). Each asset reflected the following distribution of items as follows:

- Basic Academic Skills- 2 items
- Higher-Order Thinking Skills- 9 items
- Identify the personal qualities- 15 items

Summary

Round one of this Delphi study sought to identify the skills related to employability assets (basic academic skills, higher order thinking skills and personal qualities) acquired by students who engaged in entrepreneurial livestock SAE programs. Round one utilized three open-ended statements used to gain feedback from the expert jury. The following statements were generated to advance more knowledge about the juror's perceptions of the employability skills gained from participating in entrepreneurial supervised agricultural experience programs.

1) Identify the basic academic skills students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Program

2) Identify the higher-order thinking skills students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Program

3) Identify the personal qualities students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Program

The Delphi jurors provided a total of 55 statements after the completion of round one. Statement one regarding the employability asset, *basic academic skills* yielded 13 responses. Statement two regarding the employability asset, *higher order thinking skills* resulted in 11 responses. Thirty-one statements were listed for the third employability asset featuring *personal qualities*. The researcher carefully examined the 55 items identified as a result of Round One to eliminate duplicate statements. The result of that analysis yielded 31 statements that were presented to jurors in Round Two. The total number of employability assets i.e., basic academic skills, higher-order thinking skills,

and personal qualities that reached *consensus agreement* after all three rounds of the study was 26 (see Table 7).

CHAPTER V

SUMMARY, CONCLUSION, RECOMMENDATIONS, IMPLICATIONS AND DISCUSSIONS

Purpose

The purpose of this study was to achieve consensus of employability skills acquired by students who engaged in entrepreneurial livestock Supervised Agricultural Experience Programs as reported by a panel of school-based agricultural education instructors in Oklahoma.

Objective

1. Identify the employability skills students acquire as a result of their participation in Entrepreneurial Livestock SAE programs as perceived by a jury of school-based agricultural education teachers in Oklahoma.

Significance of the Study

Phipps et al. (2008) reported the purpose of agricultural education is to prepare students for agricultural occupations and professions, job creation and entrepreneurship, and agricultural literacy. Concomitantly, student involvement in animal entrepreneurship supervised agricultural experience programs complement the acquisition of knowledge and skills needed to become successful in the agricultural sector.

SAE programs provide real world hands-on opportunities for learners (Phipps et al., 2008; Roberts, 2006; Talbert & Balschweid, 2004).

Summary

The population for this research study consisted of the 433 school-based agricultural education instructors in Oklahoma. In an effort to investigate the potential for students to acquire employability assets through entrepreneurial SAE's, the researcher elected to purposefully identify a jury of school-based agricultural education instructors exhibiting expert traits related to the objective of the study. To that end, purposeful sampling was utilized in member selection for the jury of experts (Morse, 1991; Palinkas et al., 2013).

The criterion utilized to determine the jury of experts in this study was school-based agricultural education instructors who have had students represent their SAE projects as a state proficiency award finalist in the areas of beef, swine, sheep and goat entrepreneurship for the Oklahoma FFA Association.

The researcher utilized a three-round, modified Delphi study to seek consensus defining the employability skills learned through supervised agricultural experience programs. Participants in the study were provided an invitation explaining information about the research and how to proceed; to ensure consistent description of the study the expert jury received an email script (Appendix E). Stitt-Gohdes and Crews (2004) stated "it is important that participants understand the goal of the study and feel they are a part of a group" (p. 61). Qualtrics, a web-based research surveying software, was utilized for

data analysis in this study; frequency distribution valid percentages were used to determine if items reached consensus (Buriak & Shinn, 1989).

Data representing the objective of this study formed the foundations for the following conclusion.

Concerning objective one, *Identify the employability skills students acquire as a result of their participation in Entrepreneurial Livestock SAE programs, as perceived by a panel of school-based agricultural education teachers in Oklahoma* school-based agricultural education instructors in Oklahoma who served as panelists for this Delphi study reached *consensus of agreement* on 26 employability skills students acquire from participation in entrepreneurial livestock supervised agricultural experience programs.

Therefore, findings from this study confirms research presented by Dailey, Conroy and Shelley-Tolbert (2001) which purports learning of transferable skills and life skills from agricultural educational experiences allows students to focus on what was learned in order to obtain a career. Further, this study complemented Hughes and Barrick (1993) model of agricultural education regarding the ultimate goal of agricultural education is to allow students the opportunity to gain and retain employment.

It can also be concluded that employability assets, i.e., basic academic skills, higher-order thinking skills and personal qualities, are available through supervised agricultural experience programs (Ramsey, 2009; Robinson, 2000). Learning transferable skills and life skills from agricultural educational experiences allows students to focus on what was learned in order to obtain a career (Dailey, Conroy & Shelley-Tolbert, 2001). Dyer and Williams (1997) advanced that SAEs provide beneficial occupational,

educational and work skills for students. The demand for a variety of skills in the workplace has grown due to changes in business and industry and the growing gap of high school graduates' capabilities and the knowledge and skills employers seek (O'Neill, 1992; Zirkle, 1998). Based on the perceived employability assets students acquire as a result of their involvement in entrepreneurial supervised agricultural experience programs, students acquire valuable employability skills needed to secure employment in the 300 plus careers available in the agricultural industry.

Implications

Phipps et al. (2008) identified a primary purpose of agricultural education as preparing people for entry or advancement in agricultural occupations and professions, job creation, and agricultural literacy. Experiential learning opportunities are provided to students enrolled in secondary agricultural education courses, through the usage of the comprehensive program model consisting of laboratory instruction, FFA and SAE (Baker, Robinson, & Kolb, 2012; Dyers & Osborne, 1995; Roberts & Ball, 2009; Talbert et al., 2007).

This study highlights the potential of the SAE component of the school-based agricultural education model as a foundation for students to acquire, learn, and demonstrate employability skills. Further, Delphi jurors listed 26 employability skills that according to Robinson (2000) represent basic academic skills, higher-order thinking skills, and personal qualities that can potentially be gained through entrepreneurial SAE programs. Identifying and qualifying these skills as employability assets has the potential to elevate the utility of the SAE component of the agricultural education program.

Making the connection between the acquisition of employability assets and the potential to reinforce basic academic skills i.e., oral communication, basic science; higher-order thinking skills i.e., decision making, problem solving; and personal qualities i.e., responsibility, dedication, and work ethic with stakeholders, school administrators, and parents complements the school-based agricultural education programs efforts to contribute to student achievement.

Ramsey (2009) reported technical skills could be gained through SAE programs. For this study, the researcher was able to identify 26 employability assets that reached consensus of agreement by the Delphi jurors in response to the statement, employability skills students acquire as a result of their participation in Entrepreneurial Livestock SAE program, resulting in a strong connectedness between student participation in entrepreneurial SAEs and employability. Fifteen of which can be considered personal qualities i.e., soft skills. Soft skills can be classified as clusters of personality traits, social graces facility with language, personal habits, friendliness and optimism (Bancino & Zelvalkink, 2007).

The National FFA Mission states, “FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.” (National FFA Organization, 2016, p. 6). The principle of this mission is highlighted by this study; the majority of the skills that met consensus were personal qualities while basic academic and higher-order thing skills represented the remaining skills needed for entry-level employment in the agricultural industry.

Both technical and non-technical career skills should be the focus of agricultural education programs (Lundry, 2015; Ramsey & Edwards, 2012; Slusher, Robinson & Edwards, 2010). When maximized, the comprehensive model of agricultural education provides a framework for learning vital content and life skills that prepare students for post-secondary education and careers (Dailey et al., 2001).

The National FFA Organizations approach to providing students the opportunity to learn technical and non-technical agricultural skills through involvement in entrepreneurial supervised agricultural experience programs was confirmed by the school-based, agricultural education teachers who made up the expert jury for this study.

Recommendations

Expert jurors identified 26 employability skills representing three employability assets identified by Robinson (2000) i.e., basic academic skills, higher-order thinking skills and personal qualities, this study supports the notion students gain valuable employability skills that have potential to assist with securing employment in the agricultural industry; however, *consensus of agreement* was only identified for two (.07%) basic academic skill assets and nine (.35%) higher-order thinking assets. Why did the expert jury reach greater consensus on soft skills i.e., personal qualities especially when compared to two other areas of employability assets? Future investigation should occur to gain a stronger understanding of how agricultural education instructors reinforce, highlight, and integrate both basic academic and higher-order thinking skills (Parr & Edwards, 2004). Thus, further research should be conducted to determine the long-term employability skills acquired through participation in entrepreneurial SAEs.

Additionally, studies should be conducted to determine further skills required to postulate an SAE model for school-based agricultural education instructors that would better prepare students entering employment in Oklahoma supported by, (Ramsey & Edwards, 2012; Slusher, Robinson & Edwards, 2010). Students who participate in entrepreneurial supervised agricultural experience programs are given the opportunity to learn employability skills for career preparation, therefore, invested interests i.e., school-based agricultural educators, principals and employers should see entrepreneurial supervised agricultural experience programs as a benefit for student learning. Based on findings of this study, career preparedness should play a more integral role in the development and implementation of entrepreneurial supervised agricultural experience programs.

Further research should be performed regarding employability assets, more specifically, their connectedness to SAEs. Pals (1988) conveyed employers recognize the benefits of SAEs as they relate to students. This research would better allow school-based agricultural education instructors to plan, implement, and facilitate student SAEs in a manner that would gain tangible experience applying employability skills.

Similar research should be conducted in states surrounding Oklahoma i.e., Arkansas, Missouri, Kansas, Colorado, New Mexico and Texas. Utilizing similar significant agricultural enterprises, thus, providing insight on possible employability skills for school-based agricultural education graduates, as well as individuals who are seeking employment, supports the need for additional systematic inquiry in other states. Further, a deeper look should be taken to identify the perceptions of employers in the agricultural sector.

Recommendations for Future Practice

State staff, professional teacher organizations i.e., Oklahoma Agricultural Education Teachers Association (OAETA); National Association of Agricultural Educators (NAAE), teacher educators, high school principals and local community stakeholders should join forces to advise agricultural education instructors in planning and implementing entrepreneurial livestock SAEs utilizing the agricultural education model. Additionally, state leaders, teacher professional organizations and teacher educators could provide research and assets through in-service, to inform agricultural education instructors concerning the proper use in facilitating supervised agricultural experience programs.

It was concluded entrepreneurial supervised agricultural experience programs play an integral role in the acquisition of employability skills for school-based agricultural education students, for this reason it is recommended that school-based agricultural education instructors aid in planning and initiating student involvement in SAEs. Further, school-based agricultural education instructors should communicate the importance and connectedness of SAEs to their students' future career decisions.

The results of this research should be disseminated to pre-service agricultural education students, agricultural education student teachers and agricultural education instructors at cooperating student teaching center.

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APPENDICES

Appendix A

Institutional Review Board Approval Form

Oklahoma State University Institutional Review Board

Date: Thursday, August 25, 2016
IRB Application No AG1627
Proposal Title: Association of employability skills and supervised agricultural experience programs as reported by agricultural education teachers in Oklahoma
Reviewed and Processed as: Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 8/24/2019

Principal Investigator(s):

Cody Nieman	Jon Ramsey
	455 Ag Hall
Stillwater, OK 74078	Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

- The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms
2. Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of the research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Scott Hall (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,



Hugh Crethar, Chair
Institutional Review Board

Appendix B

Informed Consent

ADULT CONSENT FORM
OKLAHOMA STATE UNIVERSITY

PROJECT TITLE:

Association of employability skills and supervised agricultural experience programs as reported by agricultural education teachers in Oklahoma.

INVESTIGATORS:

Jon Ramsey, Assistant Professor Agricultural Education, Oklahoma State University and
Cody Nieman, Agricultural Education Graduate Student, Oklahoma State University

PURPOSE:

This study will examine the consensus of employability skills acquired by students who engaged in entrepreneurial livestock Supervised Agricultural Experience Programs as reported by a panel of school-based agricultural education instructors in Oklahoma.

PROCEDURES

The panel of experts will be asked 3 questions via an online questionnaire using Qualtrics: (Round #1 of the Delphi process) 1) Identify the basic academic skills students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Programs? 2) Identify the higher-order thinking skills students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Programs? 3) Identify the personal qualities students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Programs? The second round questionnaire will ask the panelists to rate their level of agreement on the priorities generated in round one. The third round questionnaire will focus on developing consensus by asking panelists to rate their level of agreement on those items for which at least 51% but less than 75% of panelists selected agree or strongly agree on in round two.

RISKS OF PARTICIPATION:

There are no known risks associated with this project, which are greater than those ordinarily encountered in daily life.

BENEFITS OF PARTICIPATION:

There are no expected personal benefits from you participating in this research study.

CONFIDENTIALITY:

All information about you will be kept confidential and will not be released. Questionnaires and record forms will have identification numbers, rather than names. Research records will be stored securely in Room 448 Agricultural Hall and only

researchers and individuals responsible for research oversight will have access to the records. This information will be saved as long as it is scientifically useful; typically, such information is kept for three years after publication of the results. Results from this study may be presented at professional meetings or in publications. You will not be identified individually.

COMPENSATION:

No compensation will be received for participating in this research study.

CONTACTS :

You may contact any of the researchers at the following addresses and phone numbers, should you desire to discuss your participation in the study and/or request information about the results of the study: Jon Ramsey, Ph.D., 466 Hall, Dept. of Agricultural Education, Communications and Leadership Oklahoma State University, Stillwater, OK 74078, (405) 744-4260. If you have questions about your rights as a research volunteer, you may contact the IRB Office at 223 Scott Hall, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu

PARTICIPANT RIGHTS:

I understand that my participation is voluntary; that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time, without penalty.

By clicking the **ACCEPT** button you have been fully informed about the procedures listed here. You are aware of what you will be asked to do and the benefits of your participation.

If you choose not to participate in this study, please click the **DECLINE** button.

APPENDIX E

EMAILSCRIPT, ROUND ONE

My name is Cody Nieman; I am the agricultural education instructor at Skiatook Public Schools and a graduate from Oklahoma State University. I am conducting a study focused on achieving consensus of employability skills acquired by students who engaged in entrepreneurial livestock Supervised Agricultural Experience Programs. You have been identified as a potential panelist based on your involvement with Supervised Agricultural Experience programs.

Your participation in this study will require the completion of a minimum of three questionnaires over the course of the next three months. The questionnaires should take no longer than 10 to 15 minutes to complete.

Participation in this study will aid in research designed to better understand the impact of supervised agricultural experience as well as provide information to agricultural education leaders in Oklahoma. Thank you for considering my request. If you choose to participate in the study please click the link below to begin. Thank you in advance for your investment in agricultural education.

Survey ID #

https://okstatecasnr.az1.qualtrics.com/SE/?SID=SV_6updQuyyC2eCaqh

APPENDIX F

ROUND ONE INSTRUMENT

PROJECT TITLE:

Association of employability skills and supervised agricultural experience programs as reported by agricultural education teachers in Oklahoma.

INVESTIGATORS:

Jon Ramsey, Assistant Professor Agricultural Education, Oklahoma State University and Cody Nieman, Agricultural Education Graduate Student, Oklahoma State University

PURPOSE:

This study will examine the consensus of employability skills acquired by students who engaged in entrepreneurial livestock Supervised Agricultural Experience Programs as reported by a panel of school-based agricultural education instructors in Oklahoma.

PROCEDURES

The panel of experts will be asked 3 questions via an online questionnaire using Qualtrics: (Round #1 of the Delphi process) 1) Identify the basic academic skills students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Programs? 2) Identify the higher-order thinking skills students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Programs? 3) Identify the personal qualities students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Programs? The second round questionnaire will ask the panelists to rate their level of agreement on the priorities generated in round one. The third round questionnaire will focus on developing consensus by asking panelists to rate their level of agreement on those items for which at least 51% but less than 75% of panelists selected agree or strongly agree on in round two.

RISKS OF PARTICIPATION:

There are no known risks associated with this project, which are greater than those ordinarily encountered in daily life.

BENEFITS OF PARTICIPATION:

There are no expected personal benefits from you participating in this research study.

CONFIDENTIALITY:

All information about you will be kept confidential and will not be released. Questionnaires and record forms will have identification numbers, rather than names. Research records will be stored securely in Room 448 Agricultural Hall and only researchers and individuals responsible for research oversight will have access to the records. This information will be saved as long as it is scientifically useful; typically, such information is kept for three years after publication of the results. Results from this

study may be presented at professional meetings or in publications. You will not be identified individually.

COMPENSATION:

No compensation will be received for participating in this research study.

CONTACTS :

You may contact any of the researchers at the following addresses and phone numbers, should you desire to discuss your participation in the study and/or request information about the results of the study: Jon Ramsey, Ph.D., 466 Hall, Dept. of Agricultural Education, Communications and Leadership Oklahoma State University, Stillwater, OK 74078, (405) 744-4260. If you have questions about your rights as a research volunteer, you may contact the IRB Office at 223 Scott Hall, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu

PARTICIPANT RIGHTS:

I understand that my participation is voluntary; that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time, without penalty.

By clicking the **ACCEPT** button you have been fully informed about the procedures listed here. You are aware of what you will be asked to do and the benefits of your participation.

If you choose not to participate in this study, please click the **DECLINE** button.

- Accept
- Decline

Please enter the ID code provided via email

Q1 Identify the basic academic skills students acquire through a **livestock oriented entrepreneurial** Supervised Agricultural Experience Programs?

Q2 Identify the higher-order thinking skills students acquire through a **livestock oriented entrepreneurial** Supervised Agricultural Experience Programs?

Q3 Identify the personal qualities students acquire through a **livestock oriented entrepreneurial** Supervised Agricultural Experience Programs?

APPENDIX G

FOLLOW-UP REMINDER, ROUND ONE

Dear Teacher Panelist:

If you have had the opportunity to complete the survey I would like to thank you very much. However, if you have not or have not completed both pages please do so at your earliest convenience. Your input will provide a foundation for the importance and benefits of supervised agricultural experience programs.

Thank you,

Cody Nieman

APPENDIX H

EMAIL SCRIPT, ROUND TWO

Dear Teacher Panelists:

Your participation in round #1 of the study was greatly appreciated. The second round questionnaire will be asking your level of agreement from the answers in round #1.

Thank you once again for your support of this study and to be apart of a better understanding of student link to employability skills as learned from supervised agricultural experience programs. Please continue to the link below for the survey and input your ID number as well. Thank you for your continued support of research in agricultural education.

https://okstatecasnr.az1.qualtrics.com/SE/?SID=SV_54kLmGnm6p25Kmx

Thank you,

Cody Nieman

APPENDIX I

ROUND TWO INSTRUMENT

Directions: In round one, you were asked three questions pertaining to Supervised Agricultural Experience programs. 1) Identify the basic academic skills students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Programs 2) Identify the higher-order thinking skills students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Programs 3) Identify the personal qualities students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Programs.

Below are the statements representing the answers from the three questions from round one. Please read each statement and determine your level of agreement using a summated scale.

A summated rating scale is available for you to indicate your level of agreement with each answer provided in round one . Please rate each response from 1 to 6 as follows: 1= Strongly Disagree, 2= Disagree, 3= Slightly Disagree, 4= Slightly Agree, 5= Agree, 6= Strongly Agree. Space is also provided for you to offer additional **comments** if you believe more information, detail, or clarification is needed regarding a particular answer. In addition, at the end of the instrument, space is provided for you to share additional answers you believe may have been overlooked in round one. Please, share any thoughts you have for including or excluding additional answers.

In the invitation to participate in the study you were provided an identification number, please provide that number here. This number will be used to identify the panelists participating in the study. The use of multiple rounds is designed to determine consensus so it is important to ensure each round of the survey is completed by active participants in the study. Thank you in advance for your commitment to this process. This information is required before you can complete the survey, if you have misplaced your identification number contact Cody Nieman.

After you have responded to all the statements, please, **click the submit button** located at the bottom of your screen. Please contact me cnieman@skiatoolschools.org , if you have any questions or problems with the study.

Thank you for you participation.

The following represent the **basic academic skills** students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Programs. Please read each statement and determine you level of agreement.

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Oral Communication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Basic Arithmetic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading Comprehension	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Basic Science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Written Communication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The following represent the **higher-order thinking skills** students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Programs. Please read each statement and determine your level of agreement.

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Livestock evaluation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analyze future program needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem solving	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decision making	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluate animal health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizing records	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognize nutritional needs of livestock	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Create marketing strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Perform cost, benefit analysis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analyze commodity markets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The following represent the **personal qualities** students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Programs. Please read each statement and determine your level of agreement.

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Responsibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dedication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sense of ownership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consistency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work ethic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adaptability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Money management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizational skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Networking skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Initiative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX J

FOLLOW-UP REMINDER, ROUND TWO

Dear Agricultural Education Instructors:

If you have completed the Round Two questionnaire, I would like to extend to you my thanks and gratitude. If you have not had the opportunity to please do so at your earliest convenience. Your support and input will provide a stronger foundation of the importance of supervised agricultural experiences to be utilized in the agricultural classroom.

https://okstatecasnr.az1.qualtrics.com/SE/?SID=SV_54kLmGnm6p25Kmx

Thank You,

Cody Nieman

APPENDIX K

EMAIL SCRIPT, ROUND THREE

Thank you for your participation in round #1 and # 2 of the study concerning the employability skills learned through Supervised Agricultural Experience Programs. This final questionnaire focuses on developing consensus by asking you to rate your level of agreement on those items for which at least 51% but less than 75% of panelists selected agree or strongly agree in round #2. This study includes three questions that will require only a minute of your time. Your participation in this study will allow a better understanding of the importance of Supervised Agricultural Experience Programs in Oklahoma. Thank you for considering my request. If you choose to participate in this study please click on the link provided and follow the instructions for the questionnaire, it is highly important that if you receive this email that you please complete the study in order to find consensus in this study.

https://okstatecasnr.az1.qualtrics.com/SE/?SID=SV_exHCMtsvMxsMFWR

Thanks again,

Cody Nieman

APPENDIX L

ROUND THREE INSTRUMENT

This final questionnaire focuses on developing consensus by asking you to rate your level of agreement on those items for which at least 51% but less than 75% of panelists selected agree or strongly agree in round #2. A summated rating scale from 1 to 6 is available to indicate your level of agreement with each item. Please rate each item from 1 to 6 as follows: 1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Agree, 6 = Strongly Agree.

After you have responded to all statements please click the submit button located at the bottom of your screen. If you have any questions regarding this study, please email me at cody.nieman@okstate.edu.

If you choose not to participate then close your web browser at this time. Thank you for your time throughout this study.

The following represent the **basic academic skills** students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Programs. Please read each statement and determine you level of agreement.

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Basic Arithmetic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading Comprehension	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The following represent the **higher-order thinking skills** students acquire through a livestock oriented entrepreneurial Supervised Agricultural Experience Programs. Please read each statement and determine your level of agreement.

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Creating marketing strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX M

FOLLOW-UP, ROUND THREE

Agricultural Education Instructors,

If you have already completed the third and final round questionnaire sent on December 4, 2016, please accept my many thanks. However, if you have not had the opportunity to complete the final round, please do so at your earliest convenience. Your input will provide a strong foundation for future agriculturalists and the importance of SAEs for agricultural education students.

https://okstatecasnr.az1.qualtrics.com/SE/?SID=SV_exHCMtsvMxsMFWR

Thank You,

Cody Nieman

VITA

Cody Lynn Nieman

Candidate for the Degree of

Master of Science

Thesis: STUDENTS ACQUISITION OF EMPLOYABILITY ASSETS VIA
LIVESTOCK ORIENTED SUPERVISED AGRICULTURAL
EXPERIENCES: A DELPHI STUDY

Major Field: Agricultural Education

Biographical:

Personal Data: Born in Pawnee, OK on June 12, 1989, son of Jeff and Sherri Nieman,
Married December 30, 2011 to Charlie Dawn Nieman.

Education:

Completed the requirements for the Master of Science in Agricultural Education
at Oklahoma State University, Stillwater, Oklahoma in May, 2017.

Completed the requirements for the Bachelor of Science in Agricultural
Education at Oklahoma State University, Stillwater, Oklahoma in 2011.

Experience:

Agricultural Education Instructor at Skiatook Public Schools

Professional Memberships:

National Association of Agricultural Educators, Association of Career and
Technical Education, Oklahoma Association of Career and Technical
Education, Oklahoma Agricultural Education Teachers Association.