

AN EXAMINATION OF CAREER DEVELOPMENT  
EVENTS: BENEFITS PERCEIVED BY  
AGRICULTURAL EDUCATION TEACHERS IN  
OKLAHOMA: A DELPHI STUDY

By

JERROD S. LUNDRY

Bachelor of Science in Agricultural Education

Oklahoma State University

Stillwater, OK

2007

Submitted to the Faculty of the  
Graduate College of the  
Oklahoma State University  
in partial fulfillment of  
the requirements for  
the Degree of  
MASTER OF SCIENCE  
May, 2013

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Thesis Approved:

Dr. Jon Ramsey

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Thesis Adviser

Dr. Shane Robinson

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Dr. M. Craig Edwards

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## ACKNOWLEDGEMENTS

*I can do all things through Christ which strengtheneth me – Philippians 4:13*

As I reflect on the journey to further my education, I must first thank God for the love, guidance, and salvation provided through His son Jesus Christ.

I would also like to express my sincere thanks to my graduate committee. Dr. Jon Ramsey, you have believed in me from the beginning of this endeavor. Your commitment to this study has helped shape my scholarly writing and research abilities. Thank you for working around my schedule to make my distance educational opportunities as valuable as those who are on campus full-time. I am proud to say that I have accomplished my goal of completing a Master's of Science entirely via distance education.

Dr. Shane Robinson, thank you for your priceless input from start to finish. Your dedication to the theory of this study was invaluable. Dr. Edwards, thank you for helping me see the value of scholarly work. I hope that this study can continue to be polished enough to one day become a diamond.

Finally, thank you to my wife, Jaime, for your never-ending love and support. Your encouragement to pursue my master's degree was a huge part in this venture. Not only have you assisted with several classes and projects, but more importantly, you bore greater responsibility in taking care of our precious daughter Jalyn. Your sacrifices have not gone unnoticed and I am forever grateful.

Thanks, and God bless you all.

Name: JERROD S. LUNDRY

Date of Degree: MAY, 2013

Title of Study: AN EXAMINATION OF CAREER DEVELOPMENT EVENTS:  
BENEFITS PERCEIVED BY AGRICULTURAL EDUCATION  
TEACHERS IN OKLAHOMA: A DELPHI STUDY

Major Field: AGRICULTURAL EDUCATION

Abstract:

Agriculture is the nation's largest employer, with more than 24 million people working in some phase of the agricultural industry; however, the knowledge and skills needed in today's agricultural industry are lacking. Insuring that future generations are agriculturally literate and are taught about the significance of agriculture is crucial. Agricultural education classroom activities include math and science as well as hands-on work experience and the development of life skills helping students to discover their career path and realize success. Through CDEs, agricultural education programs have the potential to prepare students for more than 300 careers in the science, business and technology of agriculture. Career development events prepare students for these future careers by instilling the primary skills that employers want. School-based agricultural education teachers and students, however, do not fully understand the technical and non-technical skills learned through CDEs. Therefore, a modified Delphi approach was utilized in this study to identify the benefits of career development events as perceived by school-based, agricultural education teachers in Oklahoma. Findings revealed that CDEs support the mission of career and technical education in that students attain valuable career and life skills that are beneficial for employment in the agricultural industry.

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## CHAPTER I

### INTRODUCTION

#### Introduction

*“ . . . there is something we can be certain of: exceptional education has the power to unlock students’ potential and prepare them for the future.” Dr. Larry Case (2006)*

According to Federico (2005), agriculture is a technical industry upon which the whole world is dependent. Agriculture has always been necessary for the survival of mankind. For thousands of years, it has provided people with food, clothing, heating, and shelter, and has even employed most of the population (Federico, 2005).

Agriculture is a lasting discipline that will remain relevant for future generations well beyond the current perception of time and history (Ramsey, 2009). Agriculture is a success story that has been mostly neglected by the general public (Federico, 2005). Numerous outstanding feats have been achieved by agriculturists. The agricultural industry has succeeded in feeding a growing population safe, nutritious products at reasonable prices (Federico, 2005). This has been accomplished despite a significant

loss of available farmland and rising input costs. Many of these considerable agricultural achievements are not recognized by most citizens (Federico, 2005).

Although various opportunities for employment in agriculture exist, Americans, in general, do not have an idea of the vast number of careers related to the agricultural industry (National Research Council [NRC] Board on Agriculture, 1988). According to the U. S. Environmental Protection Agency (n.d.), less than two percent of the U. S. population is involved directly in production agriculture.

Insuring that future generations are agriculturally literate and are taught about the significance of agriculture was a decisive finding of the National Research Council's report, "*Understanding Agriculture: New Directions for Education.*" The report found that striving to achieve the goal of agricultural literacy will create informed citizens who are able to establish policies that support a competitive agricultural industry in the United States and abroad (NRC, 1988). Citizens who are educated about agriculture have an understanding of their food and fiber system that consists of the history of agriculture and its importance to the economic, social, and environmental aspects of society (NRC, 1988).

The quality and type of education a person receives is a determining factor in understanding how human capital is acquired (Wößmann, 2003). Human capital includes the knowledge, skills, experiences, education, competencies, and attitudes that individuals need for employability (Becker, 1964; Bernston, Sverke, & Marklund, 2006; Garavan, Morley, Bunnigle, & Collins, 2001; Little, 2003; Smith, 2010). One way to create an agriculturally literate citizenry that ultimately has career success is through agricultural education.

Formalized education in agriculture on the secondary level can be traced back to the early twentieth century. The passage of the Smith-Hughes Vocational Education Act in 1917 (P.L. #64-347) supplied federal funds to states for high school vocational agriculture (Phipps, Osborne, Dyer, & Ball, 2008). The main goal of the curriculum for vocational agriculture was focused primarily on skill acquisition so that students could be successful farmers (Ramsey, 2009). This model of vocational agriculture was embraced for more than 70 years. However, the National Research Council's report determined that a shift in the purpose of agricultural education was necessary (NRC, 1988). The NRC (1988) found this new focus would embrace a much broader agricultural industry, including career opportunities in sophisticated biological, chemical, mechanical, and electronic technologies, as well as preparing students for higher education. The current model of agricultural education offers students opportunities in classroom and laboratory instruction, leadership development through FFA, and experiential learning through supervised agricultural experience programs (Talbert, Vaughn, & Croom, 2005; Jenkins & Kitchel, 2009).

Agricultural education classroom activities include math and science as well as hands-on work experience and the development of life skills helping students to discover their career path and realize success (Roberts & Ball, 2009). Students must be able to see the relevance and potential transfer between the curriculum and the situation or context. To do this, educators must create experiences with consideration of the knowledge and skills at hand and help students make connections between their experiences and their education (Arnold, Warner, & Osborne, 2006).

John Dewey's belief that developing habits of mind should be the primary focus of education has served as a foundation for school-based agricultural education. Dewey (1938) was a strong advocate of education moving beyond content and believed that an individual should cultivate a sense of lifelong learning so that he or she could become an educated contributor to society. Dewey (1938) stated that,

[t]he main purpose or objective [of education] is to prepare the young for future responsibilities and for success in life, by means of acquisition of the organized bodies of information and prepared forms of skill, which comprehend the material of instruction. (p. 3)

The National FFA Organization declares that through 24 national career development events (CDEs), FFA members are challenged to real-life, hands-on tests of skills used to prepare them for more than 300 careers in the science, business and technology of agriculture (Croom, Moore, & Armbruster, 2009). Career development events are a positive learning opportunity in agricultural education programs (Connors & Mundt, 2001). Career development events are a direct extension of the classroom and laboratory and allow students to apply knowledge in a competitive environment (Croom et al., 2009). Students also gain valuable career and life skills as a result of their participation in CDE's (Connors & Mundt, 2001).

Agricultural education students who choose to participate in CDEs are offered the opportunity to learn outside the classroom by gaining technical content and non-technical skills (Russell, Robinson, & Kelsey, 2010). Career development events prepare students for their future careers by instilling the primary skills that employers want (Phipps et al.,

2008). Oklahoma FFA members have enjoyed success in CDEs at both the state and national level.

### Statement of the Problem

Agriculture is the nation's largest employer, with more than 24 million people working in some phase of the agricultural industry (Bureau of Labor Statistics, 2012). However, the knowledge and skills needed in today's agricultural industry are lacking (Federico, 2005). Through CDEs, agricultural education programs have the potential to prepare students for successful careers in agriculture (Phipps et al., 2008). School-based agricultural education teachers and students, however, do not fully understand the technical and non-technical skills learned through CDEs. Therefore, a systematic description of teachers' views on this phenomenon was warranted.

### Career Development Theory

Agriculture and agribusinesses continue to be a major strength in national employment and productivity; however, the total number of individuals involved directly in production agriculture has declined significantly (Conroy, Scanlon, & Kelsey, 1998). Conroy et al. (1998) also found that,

[t]oday's young adults are strongly influenced by expected economic rewards associated with career alternatives. Society's macro issues, changing lifestyles, and occupational images projected by the mass media have a major impact on career decisions of adolescents. Therefore, food and agriculture information and recruitment issues must deal with these mega forces. (p. 31)

Those students who do make the choice to enroll in an agricultural education course need to be taught about potential careers in the agricultural industry. In Oklahoma, the



Agriculture, Food, and Natural Resources(AFNR) Career Cluster is operationalized by seven career pathways designed to introduce students to careers in the agricultural industry (ODCTE, 2012). The seven career pathways are embedded within the agricultural curriculum (Slusher et al., 2010). Super (1957) described schools as the place that allow for formal exploration of careers through courses, clubs, and organizations.

Talbert and Balschweid (2006) posited that “from an occupational perspective, student involvement in career preparation activities is theorized to lead to more informed, more appropriate career selections” (p. 68). The authors stated further that “participation and involvement in agricultural education, especially the career development aspects of FFA and SAE, may have a positive impact on members’ career development processes” (p. 68).

Park and Rudd (2005) asserted that secondary agriculture teachers can influence students’ career decisions through their actions, comments, and instruction. This relationship between teacher and student influences students’ choices of careers (Lawver, 2009). Career development is also shaped by personal and environmental factors which refer to dynamics that affect individuals but are generally outside of their control (Bandura, 1986). A variety of factors influence what career path students will choose. The choices made during the influential periods of development will determine the path of students’ lives and help determine which aspects of their talents they choose to develop (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001).

## Purpose

The primary purpose of this study was to identify the benefits of career development events as perceived by school-based, agricultural education teachers in Oklahoma.

## Objectives

Four objectives guided this study:

1. Identify the personal and professional characteristics of school-based, agricultural education teachers in Oklahoma who have trained a first place team at the 2011 or 2012 Oklahoma State FFA Interscholastic event.
2. Determine the skills students acquire as a result of their participation in career development events, as perceived by school-based agricultural education teachers in Oklahoma.
3. Discover how CDEs prepare students for potential agricultural careers, as perceived by school-based agricultural education teachers in Oklahoma.
4. Establish how CDEs improve students' knowledge about potential agricultural careers, as perceived by school-based agricultural education teachers in Oklahoma.

## Scope of the Study

This study included a jury of experts drawn from a population of Oklahoma school-based agricultural education teachers. The criteria used to determine the qualified members of this Delphi jury included school-based agricultural education teachers who have trained a first place career development event team at the 2011 or 2012 State FFA Interscholastic event held at Oklahoma State University. These school-based agricultural education teachers were deemed knowledgeable of career development events and

therefore appropriate Delphi jurors, due to the success of their students at the State FFA Interscholastic event.

### Assumptions

Three assumptions were made in conducting this study:

1. All school-based agricultural education teachers on the jury were familiar with the knowledge and skills needed for students to participate in CDEs.
2. All school-based agricultural education teachers on the jury were familiar with the particular agricultural careers associated with CDEs.
3. The Delphi jurors would provide what they perceived to be appropriate and accurate responses to all items, questions, statements, or other objects to which they were asked to respond.

### Limitations of the Study

The following were limitations of the study:

1. The study was limited to the selected school-based agricultural education experts as Delphi jury members and they may not have been representative of all school-based agricultural education programs in the state of Oklahoma.
2. The teachers selected for the jury were chosen based on the success of their students at the State FFA Interscholastic Career Development Event. However, significant variability may have existed in how much of a role selected teachers had in the success of their students in the various CDEs.

### Significance of the study

According to Terry (2004), “the purpose of agricultural education is to promote agricultural literacy, with the goal of preparing students for specific careers related to agriculture (p. 6).” Phipps et al. (2008) declared that secondary agricultural education’s

purpose has focused on preparing students for agricultural occupations and professions, job creation and entrepreneurship, and agricultural literacy. One way to promote these purposes is through student participation in career development events. Career development events are a direct extension of the school-based agricultural education classroom (Russell et al., 2010). CDEs provide FFA members the opportunity to apply skills and knowledge learned in the classroom. Participation in CDEs allows students to learn while they are experiencing a lifelike situation (Russell et al., 2010).

#### Definition of Terms

**Agricultural Career** - An occupation undertaken for a significant period of a person's life that involves the broad industry engaged in the production of plants and animals for food and fiber, the provision of agricultural supplies and services, and the processing, marketing, and distribution of agricultural products (Herren & Donahue, 2000)

**Agricultural Industry** - “the broad industry engaged in the production of plants and animals for food and fiber, the provision of agricultural supplies and services, and the processing, marketing, and distribution of agricultural products” (Herren & Donahue, 2000).

**Agricultural Literacy** - an understanding of the food and fiber system that includes the history and current economic, social, and environmental significance agriculture has to all Americans (National Research Council, 1988)

**Career** - An occupation undertaken for a significant period of a person's life and with opportunities for progress.

**Career Development Events (CDEs)** - According to the National FFA Organization’s Career Development Event Handbook, “career development events stimulate instruction

in emerging areas that reflect both current and future community, national and global work force needs” (p. 4).

Classroom and Laboratory Instruction - one of three components of a complete school-based agricultural education program; it is designed to develop conceptual knowledge and understanding (Phipps et al., 2008)

Competition - the act or process of competing; a contest between rivals (Merriam-Webster Dictionary, 2012)

Delphi Technique - a communication process that is structured to produce a detailed examination of a topic/problem and discussion from the participating group (i.e., expert panel), but not one that forces a quick compromise (Linstone & Turoff, 1975)

FFA - a dynamic youth organization that is a part of agricultural education programs at middle and high schools (Official FFA Manual, 2012).

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 et al., 2005)

School-based Agricultural Education Program - formal agricultural education programs offered in the public schools (as opposed to non-formal agricultural education programs offered by business or other nonschool agencies) (Phipps et al., 2008)

School-based Agricultural Education Teacher - a person teaching agriculture and natural resources and related topics to youth in formal settings (Phipps et al., 2008)

Skills - the ability to do something well; a particular ability (Merriam-Webster Dictionary, 2012)

## CHAPTER II

### REVIEW OF LITERATURE

#### A Review of Legislation and Funding for Vocational Education

By the end of the 19th century, the problem with secondary public education became apparent. Schools were not equipped to train workers for the industrial, technological advances of the nation (Woodward, 1887). During this time period, the education system at the secondary level continued its practice of training students to conjugate Greek and Latin verbs for six or seven years. This was a time when private and public secondary schools served only seven percent of potential high school students (Woodward, 1887).

When the United States entered World War I, there was a greater need for employees who were skilled in more specialized industrial trades (Crafts, 1995). An enormous need also existed for increased agricultural production due to the war. The educational system of the day was not meeting the demand for new, skilled laborers (Crafts, 1995). The average person during this time had a sixth grade education with little or no formalized training (Crafts, 1995).

In 1914, a commission was established to study national aid to vocational education (Bennett, 1926). The commission discovered that more than 12,000,000

people in the United States were involved in agriculture (Smith, 1999). Another 14,000,000 people were engaged in manufacturing or allied industries (Smith, 1999). The startling data for this report were that less than one percent of these people had adequate preparation to perform their jobs at a high level (House Report No. 181, 1916). The report concluded that a great social and educational need existed for vocational education (House Report No. 181, 1916). This need was addressed by the passage of the Smith-Hughes Vocational Education Act of 1917 (20 U.S.C. 1115, 1628), which supplied federal funds to states for secondary vocational education courses including agriculture, family and consumer sciences, and trades and industries (Congressional Record Vol. LIV, 1916-1917). This innovative legislation resulted in a paradigm shift that affected the way secondary education was provided in the United States. Education with a purpose of career preparation and federal involvement in less than college-age education that had previously been primarily a state function was provided (Roberts, 1957).

The curriculum for agriculture courses focused primarily on skill acquisition for students regarding valuable, production-oriented innovations beneficial for the family farm. Although the need for vocational education was widely acknowledged, this vocational approach was debated heavily among educational philosophers such as John Dewey, Charles Prosser, David Snedden, and Rufus Stimson (Roberts & Ball, 2009).

“Snedden supported content-centered curricula focused on specific skill acquisition, based on established industry standards, and delivered separate from general academic content” (Roberts & Ball, 2009, p. 89). Dewey opposed much of Snedden’s proposals claiming that they were too expensive and unsound economically (Drost, 1977). Dewey also pushed for an integrated approach that combined vocational skills

and academic content that would be delivered in a context-rich environment (Roberts & Ball, 2009). Ultimately, Snedden's philosophy resonated with lawmakers (Drost, 1977). Snedden and Prosser, were influential in creating the Smith-Hughes Act, therefore, laying the foundation for *vocational education*, which is now referred to as career and technical education (CTE), which encompasses school-based agricultural education (Roberts & Ball, 2009).

In 1950, the United States Congress recognized the importance of agricultural education and FFA by passing Public Law 81-740 (Phipps et al., 2008). This legislation granted the FFA a Federal Charter and mandated that the U.S. Department of Education employ a staff member to serve as the National FFA Advisor (Hogg, 1999). According to Public Law 88-210, "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" (p. 1).

The 1984 passage of The Carl D. Perkins Vocational Education Act, PL 98-524 amended the Vocational Education Act of 1963 but continued the use of the term vocational education. The act emphasized federal funding to improve instruction for mostly at-risk populations (Friedel, 2011). Two additional Perkins Acts in 1990 and 1998 expanded the target population past those at-risk, while integrating academic and general education into the curriculum. Throughout the 1990s, workforce skills were the focus of the School to Work Act of 1994 and the Workforce Investment Act of 1998 (Gordon, 1999).



In 2006, a new Perkins Act, The Carl D. Perkins Career and Technical Education Improvement Act, was passed (Friedel, 2011). It created programs of study that linked academic and technical content across secondary education, post-secondary education, and adult learning (Friedel, 2011). The Act officially replaced *vocational education* with the term *career and technical education* (Gordon, 1999).

Pratzner (1985) alleged that career and technical education should focus on content designed to meet the needs of the labor market. He suggested further that CTE should focus on entry-level skill improvement for specialized jobs. Because agricultural education is a part of CTE, one of its primary purposes should be to develop the knowledge and skills necessary for successful employment in the agricultural industry including career entry and career advancement (Roberts & Ball, 2009).

#### Career Decision-Making

Krumboltz, Mitchell, and Jones (1976) developed the social learning theory of career decision-making. The social learning approach is based on psychological research on the human learning process. Mitchell (1990) posited that an individual's career development and career decisions are based on learned behaviors shaped by unique learning experiences. According to Krumboltz et al.'s (1976) social learning theory of career decision-making, career choice, and career development are based on the following determinants:

1. Genetic endowment and special abilities – Refers to the inherited or innate aspect of the person including physical appearance and characteristics such as race, sex, or physical disability.

2. Environmental conditions and events - Refers to factors that affect individuals but are generally outside of their control, such as physical events, technological developments, family resources, community influences, social, political, or economic forces, or natural disasters.

3. Learning experiences - Refers to the unique history of events that result in a chosen career path. *Instrumental learning experiences* occur from the consequences of behavior, or from the consequences of one's own performance. *Associative learning experiences* occur from observing others.

4. Task approach skills - Refers to performance standards, work habits, and cognitive processes developed as a result of learning experiences, genetic characteristics, and environmental influences. They are factors that both influence outcomes, and are outcomes themselves. (p. 148-155)

Lent, Brown, and Hackett (2000) developed the social cognitive career theory (SCCT) which explains the interplay among constructs that are described by other career development theories. SCCT suggests that learning activities, along with personal characteristics and environmental factors, influence an individual's self-efficacy beliefs, outcome expectations, and personal goals related to career interest, choice, and performance processes (Priest, 2008). According to Priest (2008), "the application of Bandura's (1986) self-efficacy theory to career behavior, specifically career decision-making, provides a practical framework for measuring students' confidence in performing career choice tasks, as well as offers clues to career interventions that may build self-efficacy beliefs" (p. 11).

Priest (2008) expanded on prior research and devised a conceptual model to direct research related to career decisions among those in agricultural education (see Figure 1). Priest (2008) advocates that participation in CDEs leads to choice actions (also described as behaviors) which include problem solving skills, ethical decision making and choosing a career based on passions, abilities and aptitudes. The ultimate outcome of Priest's conceptual model is career success. This study focuses on the career benefits of CDEs for students enrolled in agricultural education.

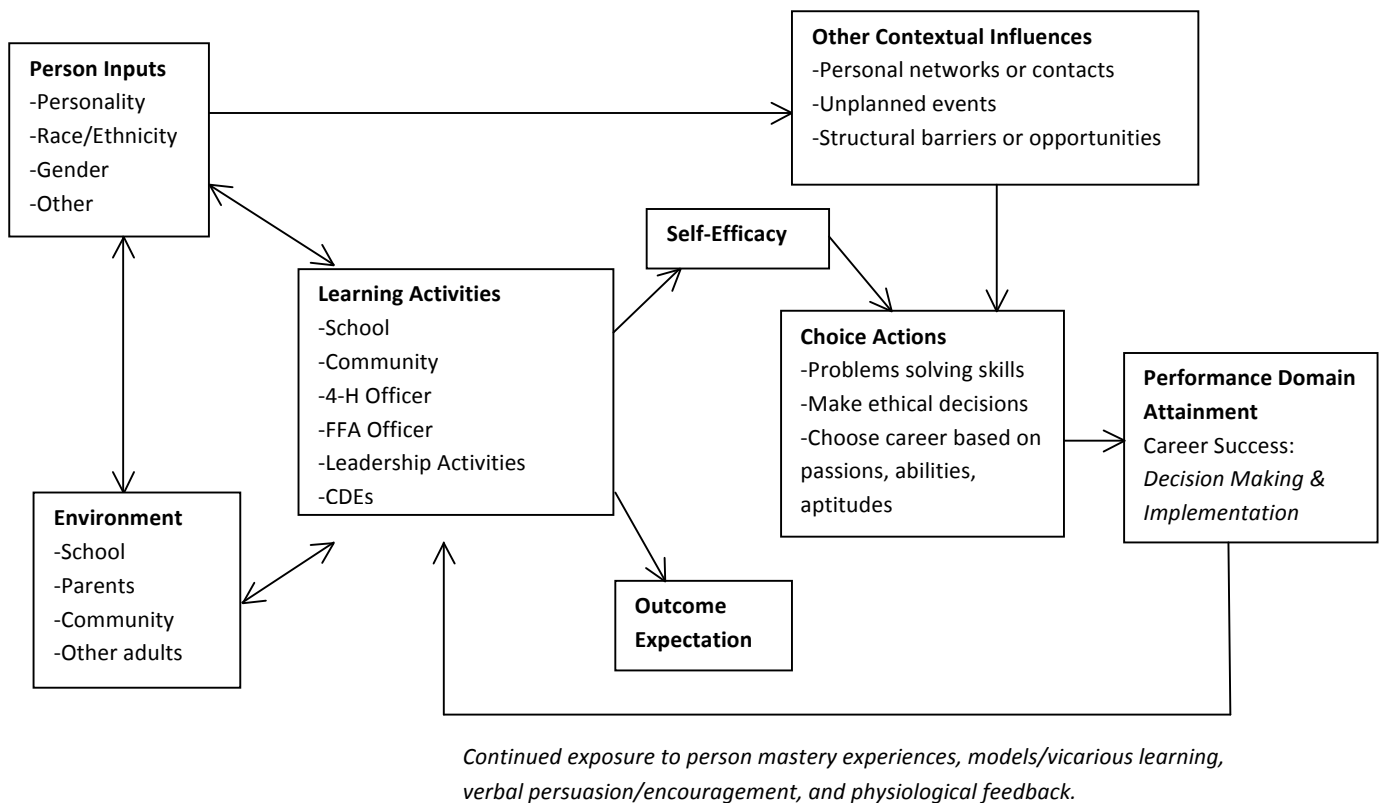


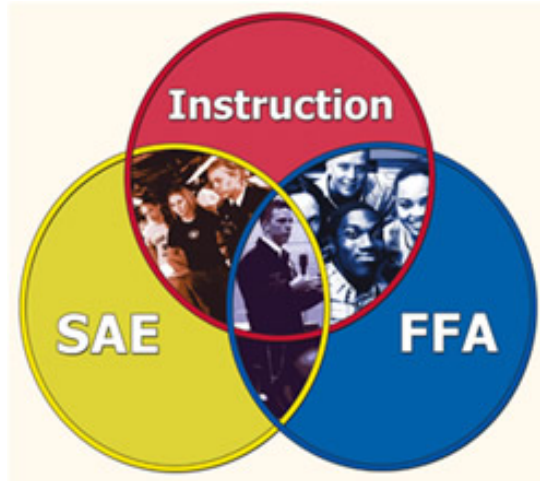
Figure 1. Priest's conceptual model of career decision-making for students in agricultural education. Taken from Priest (2008).

## School-based Agricultural Education

An agricultural education program is made up of three essential components (see Figure 2): classroom/laboratory instruction, supervised agricultural experiences, and the youth development organization, FFA (Phipps et al., 2008). Therefore, the agricultural education instructor serves as the classroom teacher, FFA advisor, and supervisor of student SAEs (Russell, 2010). According to the National FFA Organization (n.d.),

[a]gricultural education is a systematic program of instruction available to students desiring to learn about the science, business, technology of plant and animal production and/or about the environmental and natural resources systems. Agricultural education first became a part of the public education system in 1917 when the U.S. Congress passed the Smith-Hughes Act. Today, over 800,000 students participate in formal agricultural education instructional programs offered in grades seven-adult throughout the 50 states and three U.S. territories.

(p. 2)



*Figure 2, Comprehensive Model of Agricultural Education. Taken from the National FFA Handbook (2012).*

For many years, the agricultural education program has been represented by the three circle model (see Figure 2). Due to changes in the agricultural industry, educational system, student population and career occupational needs, a new model for agricultural education in public schools (see Figure 3) was developed by a seven-member writing team appointed by the National Task Force on Supervised Agricultural Experience (Hughes & Barrick, 1993). This new model for agricultural education shows the influence of the school and community on the local agricultural education program. Hughes' and Barrick's model (see Figure 3) is placed within the context of the school and community and consists of four major components: 1) classroom and laboratory instruction, 2) application, 3) employment and/or additional education, and 4) career.

The model (see Figure 3) illustrates that agricultural education does not end with the completion of secondary education. Rather, employment, additional education, and eventually a career are the intended outcomes of an agricultural education program (Hughes & Barrick, 1993). The model also points out that the agricultural education

program is part of the school and community (Hughes & Barrick, 1993). Hughes and Barrick (1993) stated that,

[w]hile not all activities, especially in the employment/additional activities and career components, may occur in a local setting, programs of agricultural education should be designed to meet the needs of the community and be an integral part of the school program. (p. 61)

This model reflects the significant role that the school and community have in the agricultural education program. It also reveals the need for preparing students to be productive citizens and workers within their local community (Hughes & Barrick, 1993). The term “contests” used in the model describes the CDEs that students have the opportunity to participate in while applying the knowledge and skills learned in the classroom (Hughes & Barrick, 1993).

Agricultural education provides students numerous opportunities to advance their knowledge of agriculturally related careers including agribusiness, mechanical engineering, research, banking and numerous additional occupational areas (NRC, 1988). Agricultural education remains important because 20% of the workforce is employed in an agriculturally-related field (Bureau of Labor Statistics, 2012). The NRC Board on Agriculture (1988) concluded that “Americans do not grasp the immense number of careers related to the agricultural industry” (p. 23). Career development events are excellent opportunities for students to learn about agricultural careers.

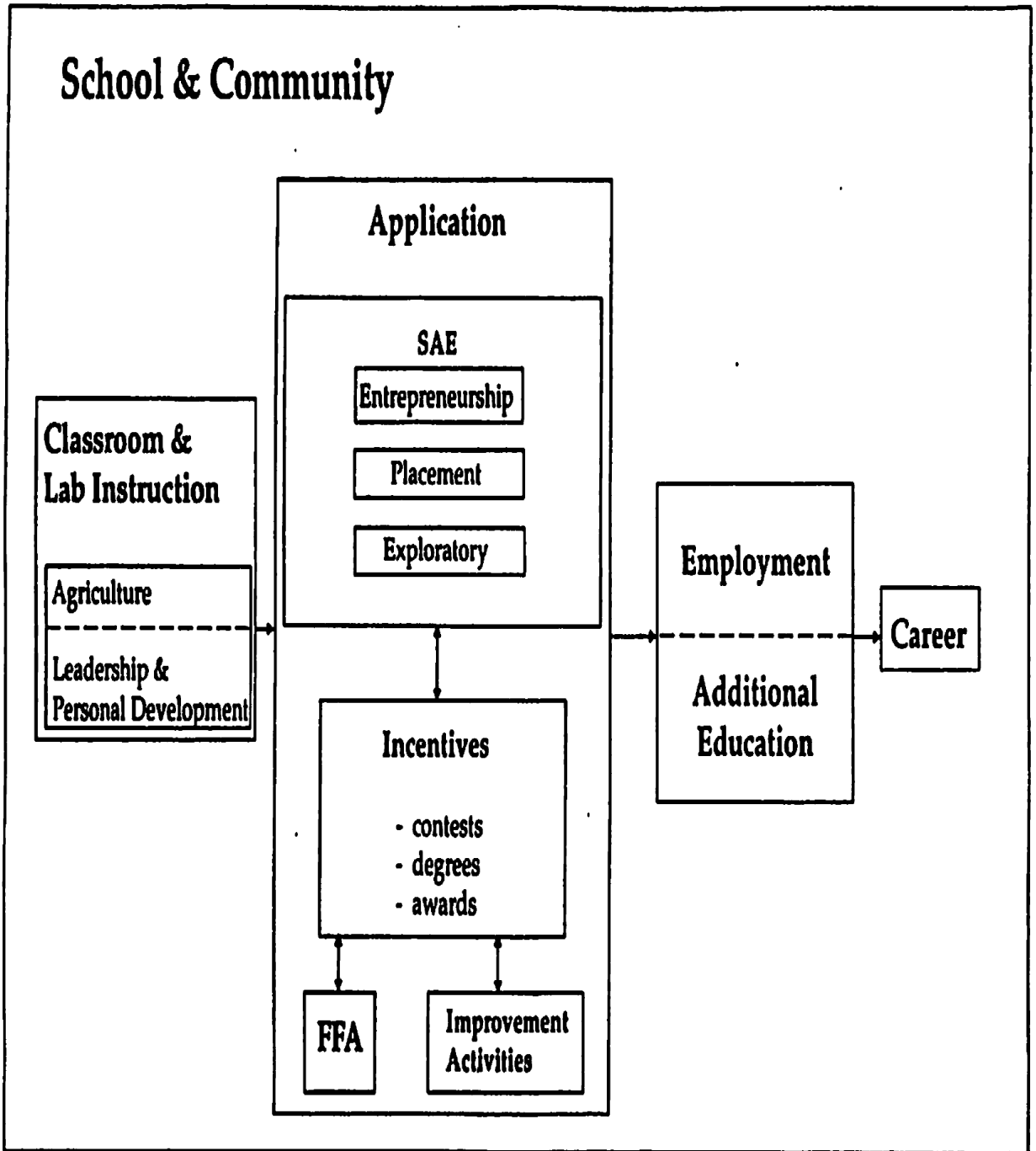


Figure 3 – Agricultural Education Model developed by Hughes & Barrick. Taken from Hughes and Barrick (1993).

## The National FFA Organization

FFA is an important component of the agricultural education model (Phipps et al., 2008). In 1926, a Virginia vocational agriculture teacher formed a Future Farmers of Virginia club for males enrolled in agriculture classes. Other states followed Virginia's lead and quickly created their own Future Farmers organizations (Hillison, 1993). It was soon determined that a national organization needed to be formed that would combine all of the state associations.

In 1928, a group of 33 vocational agriculture students from 18 states met at the Baltimore Hotel in Kansas City, MO and formed the Future Farmers of America otherwise known as FFA (Official FFA Manual, 2012). These farm boys were attending the third annual National Congress of Vocational Agriculture Students, which was held in conjunction with the American Royal Livestock and Horse Show (Hogg, 1999).

According to the National FFA Organization's historical records, "FFA was for young men who were studying vocational agriculture in public secondary schools, and the new organization was designed to develop agricultural leadership, character, thrift, scholarship, cooperation, citizenship and patriotism" (p. 1).

In 1950, the U.S. Congress recognized the importance of agricultural education and FFA by passing Public Law 81-740 (Phipps et al., 2008). This legislation granted the FFA a Federal Charter and mandated that the U.S. Department of Education employ a staff member to serve as the National FFA Advisor (Hogg, 1999). During the 1960s fundamental changes took place within the organization. The New Farmers of America, the African-American agricultural youth organization, merged with the Future Farmers of America (FFA) in 1965 (Phipps et al., 2008). This merger added 58,000 members to the



FFA (Official FFA Manual, 2011). Four years later, delegates at the 1969 National FFA Convention voted to allow girls to be members of the FFA (Official FFA Manual, 2012).

By the 1980s, the Future Farmers of America had become more than just an organization for farm boys (Brief History, 2012). In 1988, the Future Farmers of America Organization changed its name to the National FFA Organization to reflect accurately the diversity in the industry of agriculture (Official FFA Manual, 2012). This change was made to recognize the growing interests in the agricultural industry, encompassing science and technology while still including production farming (Croom, 2008).

The organization was structured on three levels – local, state, and national – with students starting their FFA experience by joining a local chapter at their school, where the agriculture teacher served as the chapter advisor (National FFA Organization, n.d.). The agricultural education program consists of three intra-curricular components: 1) classroom instruction, 2) experiential learning through supervised agricultural experiences, and 3) leadership activities through FFA (Dailey, Conroy, & Shelby-Tolbert, 2001) (see Figure 2). When these three components are utilized correctly, they provide a context for learning essential content and life skills that prepare students for post-secondary education and career paths (Dailey et al., 2001).

According to Croom, Moore, and Armbruster (2009),

[t]he National FFA Organization provides leadership and personal development opportunities for students enrolled in career and technical education. Students learn skills related to specific occupations and, in a broader sense, develop their technical literacy through exposure to the general concepts of business and

industry. The finished product is a student's knowledge of the agriculture industry. The FFA proposes to add value to this product by improving a student's leadership ability, personal communication skills and personal work habits. The personal and professional development provided by the FFA is intended to assist them [i.e., the students] once they enter the workforce. (p. 110)

The 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, n.d., p. 6). This mission supports the career preparation focus of school-based agricultural education.

### Career Development Events

Career development events are a direct extension of the agricultural education classroom. Career development events provide FFA members the opportunity to apply skills and knowledge learned in the classroom (Career Development Event handbook [CDE handbook], 2012). Participation in CDEs allows students to learn while they are experiencing a lifelike situation (Russell, 2010). According to the CDE handbook (2012), "[t]he primary goal of career development events is to develop individual responsibilities, foster teamwork and promote communication while recognizing the value of ethical competition and individual achievement" (p. 3).

The National FFA Organization offers a wide variety of CDEs in which members can participate. Examples of these events include agricultural mechanics, farm business management, food science and technology, livestock evaluation, and public speaking (The National FFA Organization, n.d.). Students are able to participate on the local, district, state, and national levels. Table 1 illustrates the 24 different CDEs offered by the

National FFA Organization. Individual, as well as team competitions are available in which FFA members may choose to participate (The National FFA Organization, n.d.).

Table 1

*Career Development Events Offered by the National FFA Organization and Related Details. Taken from the National FFA CDE Handbook (2012). .*

Event	Number of Participants per team	Number of Scores Counted
Agricultural Communications	3	3
Agricultural Issues Forum	3-7	Team Score Event
Agricultural Technology and Mechanical Systems	4	4
Agricultural Sales	4	4
Agronomy	4	4
Creed Speaking	1	N/A
Dairy Cattle Management and Evaluation	4	4
Dairy Cattle Handlers	1	N/A
Environmental Sciences and Natural Resources	4	4
Extemporaneous Public Speaking	1	N/A
Farm Business Management	4	Top 3 Scores
Floriculture	4	4
Food Science and Technology	4	4
Forestry	4	4
Horse Evaluation	4	Top 3 Scores
Job Interview	1	N/A

(continued)

Table 1 (continued)

*Career Development Events Offered by the National FFA Organization and Related Details. Taken from the National FFA CDE Handbook (2012).*

Event	Number of Participants per team	Number of Scores Counted
Livestock Evaluation	4	4
Marketing Plan	3	Team Score Event
Meats Evaluation and Technology	4	Top 3 Scores
Milk Quality and Products	4	4
Nursery/Landscape	4	Top 3 Scores
Parliamentary Procedure	6	Team Score Event
Poultry Evaluation	4	Top 3 Scores
Prepared Public Speaking	1	N/A

The Oklahoma FFA Association offers additional CDEs for FFA members. At the State FFA Interscholastic, the Oklahoma FFA Association provides several CDEs that are directly related to the curriculum (i.e., Soil and Water Management, Animal Science Quiz Bowl, and Electricity). Other CDEs offered throughout the school year include Sporting Clays, Greenhand Quiz and Commercial Cattle Grading (Oklahoma FFA Association).

Croom et al. (2009) discovered that the most important reason for student participation in CDEs was to learn skills that would translate into a career option for them once they graduated from high school. Croom et al. (2009) also found that students' most important reason for participation in CDEs was that the events related to their career choice. Students are becoming more concerned about developing skills through CDEs

that will help them find, acquire, and build a career in a chosen occupational area (Croom et al., 2009).

Agriculture is a technical industry on which the entire world is dependent. Agriscience, food safety, and marketing are all critical components of the agricultural industry that must be understood to maintain the nation's agricultural advantage (CDE handbook, 2012). The National Agriculture, Food, and Natural Resources (AFNR) Career Cluster Content Standards were developed by the National FFA Organization to offer agricultural education leaders and teachers a guide for what students should know and be able to do through the study of agriculture (CDE Handbook, 2012).

The National FFA Organization has adopted the AFNR Career Cluster Content Standards and integrated them into career development events and other award programs for the benefit of FFA members, school administration, and the entire agricultural industry (CDE Handbook, 2012). The National AFNR Career Cluster Content Standards have raised the bar for agricultural education and FFA. They should be used as a guide to develop well-organized curriculum in agriscience education so that students will be more aware of the complexities of the agricultural industry (Connors & Mundt, 2001).

Career development events are an exceptional way to bridge the three components of an agricultural education program (Connors & Mundt, 2001). Students can apply knowledge learned in the classroom or laboratory as well as the skills gained as part of their SAE program (Talbert & Balschweid, 2004). Further, CDEs can be used as a motivational tool for agricultural students (Connors & Mundt, 2001). FFA members have the opportunity to compete and be recognized for their efforts through the leadership opportunities offered in FFA, which can lead to career success after high

school (Russell, 2010). Competition encourages learning and develops skills that are beneficial to the students (Radhakrishna, 2006). However, not all agricultural education students take advantage of CDEs. Talbert and Balschweid (2004) found that “two-fifths of FFA members have never participated in a CDE” (p. 29).

FFA members who participate in CDEs have the opportunity to learn outside of the classroom by engaging in technical content and learning non-technical skills (The National FFA Organization, n.d.). Career development events also prepare students for future occupations that are both agriculturally and non-agriculturally related. Through CDEs students learn employability skills that will greatly benefit them in future careers (Phipps et al., 2008).

### Competition

Competition can be defined as “an event or contest in which people compete” (Merriam-Webster, 2012). Competition such as CDEs can offer several benefits to both youth and families of youth who are participating (Talbert & Balschweid, 2004). Conversely, competition can also become a negative experience for youth. Croom and Flowers (2001) discovered that agricultural education teachers use competitive events to recruit students into the FFA. However, if students do not excel, the structure of these competitive events can be discouraging and could prevent them from joining.

### School-based Agricultural Educators

School-based agricultural education teachers are unique in a variety of ways compared to other secondary educators. School-based agricultural education instructors have a plethora of responsibilities (Talbert & Camp, 1994). Along with the usual classroom obligations, agricultural education teachers devote countless hours to the FFA

component of the school-based agricultural education program (Talbert & Camp, 1994). According to Krysher, Haynes, Robinson, and Edwards (2009), pre-service agricultural educators devote numerous hours outside of the classroom before and after school and on weekends and holidays preparing career development event teams or taking students to leadership conferences. This personal devotion and out-of-class interaction with students is not available in most other subjects (Talbert & Camp, 1994).

The school-based, agricultural education instructor is often the most visible educator in the local community. He or she must interact with the community and publicize the positives of their programs (Russell, 2010). Agricultural education teachers should promote the benefits of agricultural education not only to those involved in agriculture, but also to those who know little about the industry (Brannon, Holley, & Key, 1989)

The factors that determine career success are a vital topic for agricultural educators, as career guidance is often considered part of their job (Priest, 2008). Kotrlik and Harrison (1987) found that for agricultural education students, the agricultural instructor was almost equally as influential as the school counselor regarding career decisions. Agricultural educators not only help students learn career-related skills, but they can also assist students in identifying career interests, collect career-related information, and sort through the countless variables of career decision-making (Priest, 2008). Encouraging and facilitating students' participation in CDEs augments their learning and career decision-making in the future (Priest, 2008).

## Use of the Delphi Technique in Agricultural Education Research

The Delphi technique is a widely accepted form of research in agricultural education (Martin & Frick, 1998; Ramsey, 2009; Smith, 2010). Martin and Frick (1998) performed a literature review to determine the use of the Delphi technique in agricultural education research throughout a 10 year period. The literature review featured 19 studies that described researchers use of the Delphi technique as the research method. These studies focused on a wide variety of topics including curriculum development, perceptions of agricultural education, identification of research needs in agricultural education, identification of technical competencies, the need for critical resources, barriers to effective programming, and how to accomplish technical forecasting (Martin & Frick, 1998).

The Delphi technique has continued to be a reliable methodology for researchers in agricultural education. A review of the *Journal of Agricultural Education* from 2010 to 2012 revealed six articles that utilized the Delphi technique to study a wide-range of topics relating to agricultural education. In 2012, Saucier, McKim, and Tummons used the Delphi technique to evaluate the preparation of early-career, agricultural educators in the curriculum area of agricultural mechanics. Ramsey and Edwards (2012) explored the entry-level technical skills that teachers expected students to learn through supervised agricultural experiences by employing a modified Delphi technique. Identification of competencies and teaching methods to agricultural education instructors was the focus of a Delphi study conducted by Franklin (2011). Smalley and Retallick (2011) conducted a national Delphi study that investigated the purposes, activities, and documentation of early field experiences in agricultural teacher education. Slusher et al. (2010) used a



modified Delphi technique to assess animal science technical skills needed by secondary agricultural education graduates for employment in the animal industries. Finally, Rayfield and Croom (2010) used the Delphi technique to examine program needs of middle school agricultural education teachers. This brief review of the Delphi technique in agricultural education revealed some of the relevant literature available.

#### Summary of Review of Literature

Agriculture is a technical industry on which the whole world is dependent (Federico, 2005). Formalized agricultural education on the secondary and post-secondary level was the vision of numerous education philosophers (Roberts & Ball, 2009). The Smith-Hughes Act of 1917 was a revolutionary piece of federal legislation that provided funding for vocational programs. One of the primary purposes of vocational programs was to train students how to be successful at a certain trade. The need for specific job training in agriculture has been strong for decades (Roberts, 1957).

The Carl D. Perkins Vocational Education Act, PL 98-524, was passed in 1984 and emphasized federal funding to improve vocational education instruction. In 2006, a new Perkins Act, The Carl D. Perkins Career and Technical Education Improvement Act, was passed (Friedel, 2011). It created programs of study to link academic and technical content across secondary education, post-secondary education, and adult learning (Friedel, 2011). The Act officially replaced *vocational education* with the term *career and technical education* (Gordon, 1999).

Mitchell (1990) developed the social learning theory of career decision-making. The social learning approach is based on psychological research on the human learning process. Krumboltz et al. (1976) posited that an individual's career development and

career decisions are based on learned behaviors shaped by unique learning experiences. Lent et al. (2000) developed the social cognitive career theory (SCCT), which explains the interplay among various constructs that are described by other existing career development theories. SCCT suggests that learning activities, along with personal characteristics and environmental factors, influence an individual's self-efficacy beliefs, outcome expectations, and personal goals related to career interest, choice, and performance processes (Priest, 2008). Priest (2008) expanded on prior research and devised a conceptual model to direct research related to career decisions among those in agricultural education (see Figure 1).

Although numerous opportunities exist for employment in agriculture, Americans, in general, do not have an idea of the vast number of careers related to the agricultural industry. Many people have become disconnected from the agricultural industry and have little knowledge about agriculture (NRC, 1988). Insuring that future generations are agriculturally literate and are taught about the significance of agriculture was a decisive finding of the NRC's Report, "Understanding Agriculture: New Directions for Education" (NRC, 1988).

The National FFA Organization recognized agricultural education as a systematic program of instruction available to students desiring to learn about the science, business, technology of plant and animal production and/or about the environmental and natural resources systems. The National FFA Organization offers 24 individual and team based CDEs in which students can participate (CDE Handbook, 2012).

Career development events are a direct extension of the agricultural education classroom. CDE's provide FFA members the opportunity to apply skills and knowledge

learned in the classroom. Participation in CDEs allows students to learn while they are experiencing a lifelike situation (Russell et al., 2010).

FFA members who participate in CDEs have the opportunity to learn outside of the classroom by engaging in technical content and learning non-technical skills (The National FFA Organization, n.d.). CDEs also prepare students for future occupations that are both agriculturally and non-agriculturally-related. Through CDEs, students learn employability skills that will greatly benefit them in future careers (Phipps et al., 2008).

This study sought to identify the benefits of CDEs as perceived by school-based agricultural education teachers in Oklahoma. The Delphi technique was used as the methodology for the study. The Delphi technique has continued to be a reliable methodology for researchers in agricultural education (Martin & Frick, 1998; Ramsey, 2009; Smith, 2010).

Historically, school-based, agricultural education programs have provided a systematic approach in which students acquire knowledge and skills necessary for the agricultural industry (Croom et al., 2009; Ramsey, 2009). Because CDEs are designed to expose students to potential agricultural careers, this study sought to describe the perceptions of a select group of agricultural education teachers regarding the benefits of CDEs for students who choose to participate in these learning experiences.

## CHAPTER III

### METHODOLOGY

#### Purpose

The primary purpose of this study was to identify the benefits of career development events as perceived by school-based, agricultural education teachers 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, the study received the proper surveillance and was granted permission to be executed. The institutional review board code for this study was AG1243 and a copy of the approval form is presented in Appendix A.

The Office of University Research and the Institutional Review Board at Oklahoma State University required the researcher to obtain informed consent prior to each round of the Delphi study (see Appendix B). In accordance with the Office of

University Research and the Institutional Review Board, the researcher also requested and received approval for round two (see Appendix C) and round three (see Appendix D) of the study prior to delivery of research instruments to the subjects involved in the study.

### Objectives

Four objectives guided this study:

1. Identify the personal and professional characteristics of school-based, agricultural education teachers in Oklahoma who have trained a first place team at the 2011 or 2012 Oklahoma State FFA Interscholastic event.
2. Determine the skills students acquire as a result of their participation in career development events, as perceived by school-based agricultural education teachers in Oklahoma.
3. Discover how CDEs prepare students for potential agricultural careers, as perceived by school-based agricultural education teachers in Oklahoma.
4. Establish how CDEs improve students' knowledge about potential agricultural careers, as perceived by school-based agricultural education teachers in Oklahoma.

### Research Design

Consensus methods, such as the Delphi survey technique, traditionally have been used to help improve decision-making in a variety of social fields, and, when used correctly, it can contribute considerably to expanding knowledge within chosen professions (Hasson, Keeney, & McKenna, 2000). According to Hasson et al. (2000), “[t]he Delphi survey is a group facilitation technique, which is an iterative multistage process, designed to transform opinion into group consensus” (p. 1).

The Delphi technique was developed in the 1950s by Olaf Helmer and Norman Dalkey. These two research scientists developed the Delphi technique as a way to forecast future events using a series of intensive questionnaires combined with controlled-opinion feedback (Dalkey & Helmer, 1963). This technique was utilized originally by the U.S. Government for national defense measures.

The Delphi technique is a widely accepted form of research in agricultural education and in other disciplines (Martin & Frick, 1998; Ramsey, 2009; Smith, 2010). The researcher utilized a three-round Delphi model to bring the jury of experts to consensus regarding the benefits of career development events. In theory, the Delphi process can be continued until consensus is determined to have been achieved (Cutright, 2011). In most cases, researchers have found that three rounds are satisfactory to collect the needed information necessary to reach consensus (Hsu & Sanford, 2007).

#### Population and Sample

The population for this study consisted of all Oklahoma school-based secondary agricultural education teachers. Purposeful sampling was used to select members for the jury of experts. Morse (1991) stated that “when obtaining a purposeful sample, the selective and theoretical sampling researcher selects a participant according to the needs of the study” (p. 129). Stitt-Gohdes and Crews (2002) determined that “careful selection of the panel of experts is the keystone to a successful Delphi study” (p. 60).

The criterion used to determine the qualified members of the expert jury for this study were school-based agricultural education teachers who had trained a first place career development event team in the past two years at the Oklahoma State FFA Interscholastic event held at Oklahoma State University. These school-based,

agricultural education teachers were deemed knowledgeable of career development events due to the success their students had achieved at the 2011 or 2012 Oklahoma State FFA Interscholastic event. Selection of the Delphi jury resulted in a sample of recognized experts that consisted of a statewide representation of school-based agricultural education teachers.

The researcher informed participants of the study by providing a thorough explanation via the initial email invitation. A consistent email script (see Appendix E) was used for each potential participant to ensure a reliable description of the study. This was done to encourage jurors to remain involved in each round of the study. According to Stitt-Gohdes and Crews (2004), “it is important that participants understand the goal of the study and feel they are a part of a group” (p. 61).

#### Instrument

According to Linstone and Turoff (1975), the Delphi technique can be utilized in two forms: conventional paper-pencil and Delphi Conference. The conventional paper-pencil approach involves sending a round of questions or statements to the expert panel and collecting the responses via mail. The responses are compiled, and a second questionnaire is sent to the same panel of experts (Dillman, 2000). This process is continued until group consensus is reached. The Delphi Conference approach collects the experts’ responses via electronic means and shortens the overall response time (Linstone & Turoff, 1975). Dillman (2000) reported that open-ended questions tend to receive more complete answers with the use of electronic questionnaires versus using paper-pencil forms. Therefore, the Delphi conference approach was employed for this study.

In recent years, researchers have used a modified Delphi technique to collect data. Custer, Scarcella, and Stewart (1999) reported that three rounds are sufficient to collect appropriate data and reach “consensus of agreement.” Accordingly, this study used a modified Delphi technique consisting of three rounds instead of four.

Expert jury members received an electronic notice from the researcher detailing the purpose and goals of the study. The message also included a hyperlink to access the questionnaire via Qualtrics for each round (see Appendix E).

Creswell (2005) clarified that validity refers to the strength of a researchers’ conclusion and is described as how accurately the research instrument measures what it is intended measure. Further, Gay, Mills, and Airasian (2006) described validity as the most important characteristic a test can exhibit.

The researcher in this study was concerned with the face and content validity of the instrument. Gay et al. (2006) stated that face validity is the degree an instrument appears to measure what it claims to measure. Content validity can be determined by expert judgment (Gay et al., 2006). Accordingly, face validity and content validity were evaluated by a panel of experts who were Oklahoma State University Agricultural Education and Communications faculty members. Feedback from this panel was collected and slight modifications were made to the Round One instrument as a result.

“Reliability is the degree to which a test consistently measures whatever it is measuring” (Gay et al., 2006, p. 139). Dalkey, Rourke, Lewis, and Snyder (1972) stated that a reliability of .70 or greater could be accomplished if a panel consists of 11 members or more. Additionally, Dalkey et al. (1972) reported a group size of 13 was required for reliability with a correlation coefficient of .90. The authors therefore



recommended a group size of 12 to 15 jurors. Sutphin and Camp (1990) explained the sample should be large enough to acquire the necessary information to conduct a good study. Moreover, the authors also concluded too large of a sample size could be detrimental to the study. Sixteen members formed the final expert jury suggesting the reliability of the multiple-round Delphi procedure used in this study would meet the expected reliability of .90 described by Dalkey et al. (1972).

#### Data Collection Procedure

Beech (1999) stated, “[t]he 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” (p. 283). This Delphi study sought to identify the benefits of career development events as perceived by school-based agricultural education teachers in Oklahoma.

#### Round One

In Round One, personal and professional characteristics were investigated. Personal and professional characteristics unique to each juror included: number of years teaching agricultural education, identification of the Oklahoma FFA District the jurors represented, level of jurors personal involvement in CDEs, number of CDE teams trained each year, and the CDE teams in which students participated.

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

Round One included three open-ended questions used to obtain feedback from the expert jury.

- What skills do students acquire as a result of their participation in CDEs?
- How do CDEs prepare students for potential agricultural careers?

- How do CDEs improve students' knowledge about potential agricultural careers?

Electronic follow-up messages were sent to jurors two weeks after the initial invitation (See Appendix G). From Round One, 196 total juror statements ( $n = 30$ ) were provided by the Delphi jurors. One hundred twenty-six skills were listed for the first question, "*What skills do students acquire as a result of their participation in CDEs?*" Thirty-six statements were provided for the second question, "*How do CDEs prepare students for potential agricultural careers?*" Thirty-four statements were listed for the third question, "*How do CDEs improve students' knowledge about potential agricultural careers?*"

Each statement was analyzed by the researcher, and similar or duplicate statements were combined or eliminated (Shinn, Wingenbach, Briers, Lindner, & Baker, 2009). From the 196 original juror statements, the researcher retained 37 for presentation in round two. Accordingly, the round two instrument was developed using Qualtrics.

### Round Two

The round two instrument (see Appendix I) was emailed to the 30 jurors who participated in Round One. Electronic follow-up messages were sent to jurors approximately two weeks after the initial round two invitation (see Appendix J). Eight of the jurors did not participate in the second round. The round two instrument asked each panelist ( $n = 22$ ; 73% response rate) to rate their level of agreement on the 37 statements identified in Round One for each of the three open-ended questions. Jurors were asked to use a six-point, summated scale to rate their level of agreement with the skills derived from the Round One question, "*What skills do students acquire as a result of their participation in CDEs?*" i.e., 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Slightly Disagree*,

4 = *Slightly Agree*, 5 = *Agree*, 6 = *Strongly Agree* (Jenkins, 2009; Shinn et al., 2009).

Jurors were also asked to use a six-point summated scale to rate their level of agreement with the statements derived from the Round One question, “*How do CDEs prepare students for potential agricultural careers?*” i.e., 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Slightly Disagree*, 4 = *Slightly Agree*, 5 = *Agree*, 6 = *Strongly Agree*. Finally, jurors were asked to use a six-point summated scale to rate their level of agreement with the statements derived from the Round One question, “*How do CDEs improve students’ knowledge about potential agricultural careers?*” i.e., 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Slightly Disagree*, 4 = *Slightly Agree*, 5 = *Agree*, 6 = *Strongly Agree*.

Based on a literature review of Delphi studies, items that received a score of 5 (*Agree*) or 6 (*Strongly Agree*) by 75% of the respondents were considered items for which consensus was reached (Jenkins, 2008; Ramsey, 2009; Shinn et al., 2009). Items for which less than 51% of the respondents scored the item a 5 (*Agree*) or 6 (*Strongly Agree*) were removed from further investigation. Therefore, in round two, consensus began to build.

#### Qualitative Data Collection, Round Two

Round Two also provided jurors the opportunity to reorganize or re-phrase items or state their rationale regarding ratings and priorities among items (Jacobs, 1996).

#### Round Three

The Round Three instrument was emailed to the 22 jurors who participated in round two of the survey. Buriak and Shinn (1989) described the third round of a Delphi as developing consensus. The third round instrument (see Appendix L) focused on developing consensus for the remaining five items which received greater than 51% but

less than 75% agreement in round two. Electronic follow-up messages were sent to jurors approximately two weeks after the initial round three invitation (see Appendix M).

Jurors were asked to rate their level of agreement for three skills derived from the question, “*What skills do students acquire as a result of their participation in CDEs?*” Jurors were also asked to rate their level of agreement for two statements derived from the question, “*How do CDEs prepare students for potential agricultural careers?*”

### Qualitative Data Collection, Round Three

In Round Three, an additional opportunity was provided for jurors to make further clarifications to the items provided. In addition, a final opportunity for jurors to share their thoughts or recommendations regarding the perceived benefits of career development events was provided.

### Data Analysis

Data for this study were analyzed using Qualtrics, a web-based, research surveying software. The personal and professional characteristics of the jury of experts were analyzed using modes of central tendency such as percentages and frequencies (Buriak & Shinn, 1989). The frequency distribution valid percentage approach was used to analyze data from rounds two and three (Buriak & Shinn, 1989). This approach was used to determine whether an item reached consensus or was unstable and should be removed from the study. Percentages were then derived from the frequencies.

## CHAPTER IV

### FINDINGS

#### Purpose

The primary purpose of this study was to identify the benefits of career development events as perceived by school-based, agricultural education teachers in Oklahoma.

#### Objectives

Four objectives guided this study:

1. Identify the personal and professional characteristics of school-based, agricultural education teachers in Oklahoma who have trained a first place team at the 2011 or 2012 Oklahoma State FFA Interscholastic event.
2. Determine the skills students acquire as a result of their participation in career development events, as perceived by school-based agricultural education teachers in Oklahoma.
3. Discover how CDEs prepare students for potential agricultural careers, as perceived by school-based agricultural education teachers in Oklahoma.

4. Establish how CDEs improve students' knowledge about potential agricultural careers, as perceived by school-based agricultural education teachers in Oklahoma.

The objectives served as a guide for presenting the findings of the study. Findings for each objective will be presented in separate sections in this chapter.

#### Sources of Data: Delphi Jurors

The respondents who provided the findings presented in this chapter consisted of school-based, agricultural education teachers in Oklahoma who were selected based on their students' success during the 2011 or 2012 State FFA Interscholastic events held at Oklahoma State University. Fifty-nine jurors were initially invited to participate in the study. Sixteen jurors participated in all three rounds of the consensus building exercise.

#### **Selected Personal and Professional Characteristics of the Delphi Jurors**

School-based agricultural education teachers were asked to respond to questions that described selected personal and professional characteristics. This information was summarized and reported to provide a profile of the school-based agricultural education teachers who participated in this study.

Of the school-based agricultural education teachers who completed the Round One instrument, 23.3% reported their teaching experience to be five years or less (see Table 2). More than one-fourth (26.7%) of the teachers reported six to ten years of teaching experience. The option, 11 to 15 years teaching experience, was identified by only 10.0% of the participants. Four of the 30 jurors (13.3%) indicated 16 to 20 years of experience, four (13.3%) selected 21 to 25 years of experience, and four other jurors (13.3%) selected over 25 years of experience (see Table 2).

Regarding the Oklahoma FFA district that jurors represented, 20.0% reported the central district, 23.3% the northeast district, 30.0% the northwest district, 13.3% the southeast district and 13.3% taught in the southwest district (see Table 2). When queried about their personal involvement in CDEs as a high school student, each school-based, agricultural education teacher reported some level of involvement. Ninety-six percent of teachers indicated personal involvement in CDEs at the high school level. Ten of the 29 respondents (34.5%) reported personal involvement in CDEs at the collegiate level (e.g. Soils judging, livestock evaluation, crops judging) (see Table 2). When asked to indicate the number of teams each juror prepared each year, a majority of respondents (51.7%) chose zero to five teams, 44.8% reported six to ten teams, only one person (3.4%) reported 11 to 15 teams and no one selected preparing 16 or more teams (see Table 2).

The number of students who participate in CDEs each year within the respective agricultural education programs represented by the jurors was also of interest to the researcher. Accordingly, slightly more than three percent of respondents selected zero to ten students, and six jurors (20.7%) reported 11 to 20 students. Participation by 21 to 30 students received the most indications of any selection with 37.9%. More than 13% reported 31 to 40 students participated, 10.3% reported 41 to 50 students participated, and 13.8% reported 51 or more students participated in CDEs in their agricultural education programs (see Table 2).

Table 2

*Selected Personal and Professional Characteristics of School-based Agricultural Education Teachers in Oklahoma*

Characteristics	<i>f</i>	%
Years teaching Ag Ed ( <i>N</i> = 30)*		
0 to 5 years	7	23.3
6 to 10 years	8	26.7
11 to 15 years	3	10.0
16 to 20 years	4	13.3
21 to 25 years	4	13.3
More than 25 years	4	13.3
FFA District currently teaching ( <i>N</i> = 30)*		
Central	6	20.0
Northeast	7	23.3
Northwest	8	30.0
Southeast	4	13.3
Southwest	4	13.3
Personal involvement in CDEs <sup>a</sup> ( <i>N</i> = 29)*		
High School	27	96.6
Collegiate	10	34.5
None	0	0
Number of CDE teams annually ( <i>N</i> = 29)*		
0-5 teams	15	51.7
6-10 teams	13	44.8
11-15 teams	1	3.4
16+ teams	0	0
Number of students involved in CDEs ( <i>N</i> = 29)*		
0-10	1	3.4
11-20	6	20.7
21-30	11	37.9
31-40	4	13.8
41-50	3	10.3
51 or more	4	13.8

*Note.* \**N* varies for this question due to a lack of responses by jurors on certain questions.  
<sup>a</sup>For the item, "Personal involvement in CDEs," jurors were asked to mark all that apply, so the total exceeds 100%.



The school-based, agricultural education teachers were also asked to identify the CDEs in which their students participated each year. The researcher listed 31 options for the jurors to select from while also providing an opportunity for the jurors to select “other.” Those jurors who selected “other” were asked to list any CDEs in which their students participated that were not listed (see Table 3).

Table 3

*Career Development Events (N = 30)*

Event	<i>f</i>	%
Public Speaking	28	93.3
Livestock Evaluation	20	66.7
Opening Ceremonies <sup>a</sup>	20	66.7
Agricultural Mechanics	19	63.3
Land Judging <sup>a</sup>	13	43.3
Entomology	12	40.0
Agricultural Communications	10	33.3
Floriculture	10	33.3
Agronomy	8	26.7
Farm Business Management	8	26.7
Food Science and Technology	8	26.7
Parliamentary Procedure	8	26.7
Freshman Agriscience Quiz Bowl <sup>a</sup>	7	23.3
Job Interview	7	23.3
Agricultural Education <sup>a</sup>	5	16.7
Agriscience Fair <sup>a</sup>	5	16.7
Dairy Cattle Evaluation	5	16.7
Horse Evaluation	5	16.7
Marketing Plan	5	16.7
Meats Evaluation and Technology	5	16.7

(continued)

Table 3 (continued)

*Career Development Events (N = 30)*

Event	<i>f</i>	%
Agricultural Sales	4	13.3
Animal Science Quiz Bowl <sup>a</sup>	4	13.3
Nursery and Landscape	4	13.3
Agricultural Issues Forum	3	10.0
Homesite Judging <sup>a</sup>	3	10.0
Milk Quality and Products	3	10.0
Forestry	2	6.7
Dairy Cattle Handlers	1	3.3
Poultry Evaluation	1	3.3
Rangeland Judging <sup>a</sup>	1	3.3
Environmental and Natural Resources	0	0.0
Other <sup>b</sup>		

*Note.* <sup>a</sup>Additional Oklahoma CDEs were also added to the 24 National CDE events for consideration by the jury. <sup>b</sup>Other CDEs listed by the jurors include: Sporting Clays ( $n = 5$ ), Commercial Cattle Grading ( $n = 2$ ), Soil and Water Management ( $n = 1$ ), Greenhand Quiz ( $n = 1$ ), Electricity ( $n = 1$ ), and Cattle Handling ( $n = 1$ ).

#### Delphi Jury, Round One Findings

Round One of this Delphi study sought to identify the benefits of CDEs in school-based agricultural education, as perceived by teachers who prepared a first placed CDE team at the Oklahoma State FFA Interscholastic. Round One included three open-ended questions used to gain feedback from the expert jury. The following questions were

posed by the researcher to gain more knowledge about the jurors' perceptions of the benefits students derived from participating in CDEs.

*Q.1 - What skills do students acquire as a result of their participation in CDEs?*

*Q.2 - How do CDEs prepare students for potential agricultural careers?*

*Q.3 - How do CDEs improve students' knowledge about potential agricultural careers?*

From Round One, 196 total juror statements ( $n = 30$ ; 51% response rate) were provided by the Delphi jurors. The first question, "*What skills do students acquire as a result of their participation in CDEs?*" resulted in 126 responses. Thirty-six statements were provided for the second question "*How do CDEs prepare students for potential agricultural careers?*" Thirty-four statements were listed for the third question "*How do CDEs improve students' knowledge about potential agricultural careers?*"

Each statement was analyzed by the researcher, and similar or duplicate statements were combined or eliminated (Shinn et al., 2009). From the 196 original juror statements, the researcher retained 37 statements for presentation in round two.

### **Q.1 What skills do students acquire as a result of their participation in CDEs?**

The Round One question, "*What skills do students acquire as a result of their participation in CDEs?*" received the greatest number of comments from the Delphi jury. The skills ranged from teamwork skills to critical thinking skills (see Table 4).

Table 4

*Skills Identified by the School-based, Agricultural Education Teacher Jury in Oklahoma in Response to the Question, "What skills do students acquire as a result of their participation in CDEs?" (N = 30)*

Skills gained from CDEs, Round One	<i>f</i>	%
Teamwork	16	12.7
Public speaking/Communication	14	11.1
Technical Agriculture skills	9	7.1
Time management	8	6.3
Leadership	6	4.8
Decision making	6	4.8
Work Ethic	6	4.8
Responsibility	5	4.0
Problem solving	5	4.0
Core Curriculum	5	4.0
Self-motivation	4	3.2
Public relations	4	3.2
Higher level thinking skills	4	3.2
Dedication	4	3.2
Critical thinking	4	3.2
Career Selection	4	3.2
Reasoning	3	2.4
Evaluation	3	2.4
Confidence	3	2.4

(continued)

Table 4 (continued)

*Skills Identified by the School-based, Agricultural Education Teacher Jury in Oklahoma in Response to the Question, “What skills do students acquire as a result of their participation in CDEs?” (N = 30)*

Skills gained from CDEs, Round One	<i>f</i>	%
Social Interaction	2	1.6
Setting and achieving goals	2	1.6
Job readiness	2	1.6
Defending opinions	2	1.6
Competition	2	1.6
Analysis	2	1.6
Creativity	1	0.8

**Q.2 How do CDEs prepare students for potential agricultural careers?**

Fifty-seven statements were provided by the jurors for the second question, “*How do CDEs prepare students for potential agricultural careers?*” All of the responses were examined by the researcher and many were determined to be duplicate statements and were condensed into four statements (see Table 5).

Table 5

*Statements Identified by the School-based, Agricultural Education Teacher Jury in Oklahoma in Response to the Question, “How do CDEs prepare students for potential agricultural career?” (N = 30)*

How CDEs prepare students for Ag careers, Round One	<i>f</i>	%
Career development events expose students to specific agricultural careers	14	40.0
Career development events spark an interest in agriculture	9	25.0
Career development events provide real-world experiences	7	20.0
As a result of their participation in CDEs, students have greater exposure to college campuses	6	17.1

**Q.3 How do CDEs improve students’ knowledge about potential agricultural careers?**

Fifty-eight statements were listed by the jurors for the third question, “*How do CDEs improve students’ knowledge about potential agricultural careers?*” Each statement was analyzed by the researcher and similar or duplicate statements were combined or eliminated resulting in seven condensed statements (see Table 6).

Table 6

*Statements Identified by the School-based, Agricultural Education Teacher Jury in Oklahoma in Response to the Question, “How do CDEs improve students’ knowledge about potential agricultural careers?” (N =30)*

How CDEs improve students’ knowledge of agricultural careers, Round One	<i>f</i>	%
While preparing for a CDE, students deepen their knowledge about specific agricultural careers	8	23.5
A competitive environment enhances students’ ability to learn	6	17.6
Students involved in CDEs have a greater likelihood of pursuing an agricultural career	5	14.7
Students become acquainted with agricultural industry specialists while practicing and competing in CDEs	5	14.7
Career development events provide real-world application of the curriculum	4	11.8
Winning creates motivation to explore careers in agriculture	3	8.8
Participation in CDEs exposes students to diverse geographic and agricultural differences	3	8.8

Delphi Jury, Round Two Findings

In round two, the school-based, agricultural education expert jury ( $n = 22$ ; 73% response rate) was asked to rate their level of agreement on 37 items related to the benefits of CDEs, i.e., those skills and statements they had identified in Round One of the study.

**Q.1 What skills do students acquire as a result of their participation in CDEs? –**

**Round Two**

Jurors were asked to use a six-point, summated scale to rate the skills students acquired as a result of their participation in CDEs: 1 = *Strongly Disagree*, 2 = *Disagree*,



3 = *Slightly Disagree*, 4 = *Slightly Agree*, 5 = *Agree*, 6 = *Strongly Agree* (Jenkins, 2009; Shinn et al., 2009). Twenty-three skill items received a score of 5 (*Agree*) or 6 (*Strongly Agree*) by 75% or more of the jurors; therefore, the researcher determined that “consensus of agreement” was reached on those items (Jenkins, 2008; Shinn et al., 2009) (see Table 7).

Table 7

*Items Identified by the School-based, Agricultural Education Teacher Jury in Oklahoma in Response to the Question, “What skills do students acquire as a result of their participation in CDEs?” Items that Reached “Consensus of Agreement” During Round Two of the Study (N = 22)*

Skills gained from CDEs, Round Two	% Agreement <sup>a</sup>
Teamwork	89%
Competition	89%
Setting and achieving goals	89%
Time management	89%
Self-motivation	89%
Work Ethic	89%
Confidence	89%
Leadership	89%
Dedication	89%
Critical thinking	89%
Decision making	89%
Reasoning	89%
Problem solving	89%
Evaluation	89%
Analysis	89%
Defending opinions	84%
Social Interaction	84%
Creativity	84%

(continued)

Table 7 (continued)

*Items Identified by the School-based, Agricultural Education Teacher Jury in Oklahoma in Response to the Question, “What skills do students acquire as a result of their participation in CDEs?” Items that Reached “Consensus of Agreement” During Round Two of the Study (N = 22)*

Skills gained from CDEs, Round Two	% Agreement <sup>a</sup>
Responsibility	84%
Public speaking/Communication	79%
Higher level thinking skills	79%
Technical Agriculture skills (i.e., Animal selection, Welding, Plant ID)	79%
Core Curriculum (i.e., Science, Math, Literacy)	79%

*Note.* <sup>a</sup>“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).

In round two of the study, at least 51% but less than 75% of the jurors selected 5 (*Agree*) or 6 (*Strongly Agree*) for three skill items (see Table 8).

Table 8

*Items Identified by the School-based, Agricultural Education Teacher Jury in Oklahoma in Response to the Question, “What skills do students acquire as a result of their participation in CDEs.” Items that did not reach “Consensus of Agreement” During Round Two of the Study but did Achieve 51% Agreement or Higher (N =22)*

Skills gained from CDEs, Round Two	% Agreement <sup>a</sup>
Public relations	68%
Career Selection	63%
Job readiness	63%

*Note.* <sup>a</sup>Items for which at least 51% but less than 75% of jurors selected *Agree (5) or Strongly Agree (6)*. These items were included in round three of the study.

## **Q.2 How do CDEs prepare students for potential agricultural careers? – Round**

### **Two**

Table 9

*Statements Identified by the School-based, Agricultural Education Teacher Jury in Oklahoma in Response to the Question, “How do CDEs prepare students for potential agricultural careers?” Items that Reached “Consensus of Agreement” During Round Two of the Study (N = 22)*

How CDEs prepare students for Agricultural careers, Round Two	% Agreement <sup>a</sup>
As a result in their participation in CDEs, students have greater exposure to college campuses	89%
Career development events spark an interest in agriculture	89%
Career development events provide real-world experiences	89%

*Note.* <sup>a</sup>“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).

In round two, at least 51% but less than 75% of jurors selected 5 (*Agree*) or 6 (*Strongly Agree*) for one statement (see Table 10).

Table 10

*Items Identified by the School-based, Agricultural Education Teacher Jury in Oklahoma in Response to the Question, “How do CDEs prepare students for potential agricultural careers?” Items that did not reach “Consensus of Agreement” During Round Two of the Study but did Achieve 51% Agreement or Higher (N =22)*

How CDEs prepare students for Agricultural careers, Round Two	% Agreement <sup>a</sup>
Career development events expose students to specific agricultural careers	68%

*Note.* <sup>a</sup>Items for which at least 51% but less than 75% of jurors selected *Agree (5) or Strongly Agree (6)*. This item was included in round three of the study.

**Q.3 How do CDEs improve students’ knowledge about potential agricultural careers?**

Table 11

*Statements Identified by the School-based, Agricultural Education Teacher Jury in Oklahoma in Response to the Question, “How do CDEs improve students’ knowledge about potential agricultural careers?” Items that Reached “Consensus of Agreement” During Round Two of the Study (N = 22)*

How CDEs improve students’ knowledge of Agricultural careers, Round Two	% Agreement <sup>a</sup>
A competitive environment enhances students’ ability to learn	84%
Students become acquainted with agricultural industry specialists while practicing and competing in CDEs	84%
While preparing for a CDE, students deepen their knowledge about specific agricultural careers	84%
Career development events provide real-world application of the curriculum	84%
Participation in CDEs exposes students to diverse geographic and agricultural differences	84%
Winning creates motivation to explore careers in agriculture	79%

*Note.* <sup>a</sup>“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).

In round two, at least 51% but less than 75% of the jurors selected 5 (*Agree*) or 6 (*Strongly Agree*) for one statement (see Table 12).

Table 12

*Items Identified by the School-based, Agricultural Education Teacher Jury in Oklahoma in Response to the Question, “How do CDEs prepare students for potential agricultural careers?” Items that did not Reach “Consensus of Agreement” During Round Two of the Study but did Achieve 51% Agreement or Higher (N =22)*

How CDEs improve students’ knowledge of Agricultural careers, Round Two	% Agreement <sup>a</sup>
Students involved in CDEs have a greater likelihood of pursuing an agricultural career	74%

*Note.* <sup>a</sup>Items for which at least 51% but less than 75% of jurors selected *Agree (5) or Strongly Agree (6)*. These items were included in round three of the study.

### Delphi Jury, Round Three Findings

In round three, jurors was asked to rate their level of agreement on five items related to the benefits of CDEs (N = 16, 73% response rate).

#### **Q.1 What skills do students acquire as a result of their participation in CDEs?–**

#### **Round Three**

Table 13

*Skills Identified by the School-based. Agricultural Education Teacher Jury in Oklahoma in Response to the Question, “What skills do students acquire as a result of their participation in CDEs?” Skills that Reached “Consensus of Agreement” During Round Three of the Study (N =16)*

Skills gained from CDEs, Round Three	% Agreement <sup>a</sup>
Public relations	87%
Job readiness	87%

*Note.* <sup>a</sup>“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).

In round three, at least 51% but less than 75% of the jurors selected 5 (*Agree*) or 6 (*Strongly Agree*) for one statement (see Table 14).

Table 14

*Items Identified by the School-based, Agricultural Education Teacher Jury in Oklahoma in Response to the Question, “What skills do students acquire as a result of their participation in CDEs?” Skills that did not Reach “Consensus of Agreement” During Round Three of the Study but did Achieve 51% Agreement or Higher (N =16)*

Skills gained from CDEs, Round Three	% Agreement <sup>a</sup>
Career Selection	73%

*Note.* <sup>a</sup>Items for which at least 51% but less than 75% of jurors selected *Agree (5) or Strongly Agree (6)* in round three of the study.

**Q.2 How do CDEs prepare students for potential agricultural careers? – Round**

**Three**

Table 15

*Statements Identified by the School-based, Agricultural Education Teacher Jury in Oklahoma in Response to the Question, “How do CDEs prepare students for potential agricultural careers?” Items that Reached “Consensus of Agreement” During Round Three of the Study (N = 16)*

How CDEs prepare students for Ag careers, Round Three	% Agreement <sup>a</sup>
Career development events expose students to specific agricultural careers	93%

*Note.* <sup>a</sup>“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).

**Q.3 How do CDEs improve students’ knowledge about potential agricultural careers? - Round Three**

Table 16

*Statements Identified by the School-based Oklahoma Agricultural Education Teacher Jury in Response to the Question, “How do CDEs improve students’ knowledge about potential agricultural careers?” Items that Reached “Consensus of Agreement” During Round Three of the Study (N =16)*

How CDEs improve students’ knowledge of agricultural careers, Round Three	% Agreement <sup>a</sup>
Students involved in CDEs have a greater likelihood of pursuing an agricultural career	93%

*Note.* <sup>a</sup>“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).



Table 17

*School-based, Agricultural Education Teacher Jury in Oklahoma: Skills that Students Acquire as a Result of their Participation in CDEs; How CDEs Prepare Students for Potential Agricultural Careers; How CDEs Improve Students' Knowledge About Potential Agricultural Careers. Items that Reached "Consensus of Agreement" After Three Rounds of the Study (N = 30)*

Benefits of CDEs	% Agreement
<u>Q.1 Skills gained from CDEs</u>	
Teamwork	89%
Competition	89%
Setting and achieving goals	89%
Time management	89%
Self-motivation	89%
Work Ethic	89%
Confidence	89%
Leadership	89%
Dedication	89%
Critical thinking	89%
Decision making	89%
Reasoning	89%
Problem solving	89%
Evaluation	89%
Analysis	89%
Public relations	87%
Job readiness	87%
	(continued)

Table 17 (continued)

*School-based, Agricultural Education Teacher Jury in Oklahoma: Skills that Students Acquire as a Result of their Participation in CDEs; How CDEs Prepare Students for Potential Agricultural Careers; How CDEs Improve Students' Knowledge About Potential Agricultural Careers. Items that Reached "Consensus of Agreement" After Three Rounds of the Study (N = 30)*

Benefits of CDEs	% Agreement
<u>Q.1 Skills gained from CDEs (continued)</u>	
Defending opinions	84%
Social Interaction	84%
Creativity	84%
Responsibility	84%
Public speaking/Communication	79%
Higher level thinking skills	79%
Technical Agriculture skills (i.e., Animal selection, Welding, Plant I.D.)	79%
Core Curriculum (i.e., Science, Math, Literacy)	79%
<u>Q.2 How CDEs prepare students for Agricultural careers</u>	
Career development events expose students to specific agricultural careers	93%
As a result of their participation in CDEs, students have greater exposure to college campuses	89%
Career development events spark an interest in agriculture	89%
Career development events provide real-world experiences	89%
<u>Q.3 How CDEs improve students' knowledge of Agricultural careers</u>	
Students involved in CDEs have a greater likelihood of pursuing an agricultural career	93%
A competitive environment enhances students' ability to learn	84%
(continued)	

Table 17 (continued)

*School-based, Agricultural Education Teacher Jury in Oklahoma: Skills that Students Acquire as a Result of their Participation in CDEs; How CDEs Prepare Students for Potential Agricultural Careers; How CDEs Improve Students' Knowledge About Potential Agricultural Careers. Items that Reached "Consensus of Agreement" After Three Rounds of the Study (N = 30)*

Benefits of CDEs	% Agreement
<u>Q.3 How CDEs improve students' knowledge of Agricultural careers</u> (continued)	
Students become acquainted with agricultural industry specialists while practicing and competing in CDEs	84%
While preparing for a CDE, students deepen their knowledge about specific agricultural careers	84%
Career development events provide real-world application of the curriculum	84%
Participation in CDEs exposes students to diverse geographic and agricultural differences	84%
Winning creates motivation to explore careers in agriculture	79%

Delphi Jury Qualitative Data

In round three, an additional opportunity was provided to the jurors to make further clarifications to the skill items and their relative importance. In addition, a final opportunity for jurors to share their thoughts, concerns, or recommendations was provided. However, no additional comments were provided by the school-based agricultural education teacher jurors in Round Three.

## Summary

The personal and professional characteristics of the school-based agricultural education teachers who served as jurors for this study revealed a wide range of teaching experience. The greatest proportion of teachers, over one-fourth (26.7%) reported six to ten years of teaching experience (see Table 2). Regarding the Oklahoma FFA district represented by jurors, the northwest district was represented the most with 27.6% of the jurors (see Table 2).

When questioned about their personal involvement in career development events, each school-based agricultural education teacher reported some level of involvement. The majority of teachers (96.6%) indicated personal involvement in CDEs at the high school level. Over one-third of the respondents (34.4%) reported personal involvement in CDEs at the collegiate level (see Table 2). When asked about the number of teams each school-based, agricultural education teacher prepared each year, a majority (51.7%) chose zero to five teams, 44.8% reported six to ten teams, one person (3.4%) reported 11 to 15 teams (see Table 2).

The number of students who participate in CDEs each year within the jurors' respective agricultural education programs was also of interest to the researcher. Accordingly, participation by 21 to 30 students received the most of any selection with 37.9% (see Table 2).

The school-based, agricultural education teachers were also asked to identify the CDEs that their students participate in each year. The researcher listed 24 national CDEs and seven additional Oklahoma CDEs from which the jurors could select. The CDE areas that received a majority selection included Public Speaking (93.3%), Livestock

Evaluation (66.7%), Opening Ceremonies (66.7%) and Agricultural Mechanics (63.3%). Environmental Science and Natural Resources was the lowest with zero selections. In addition to the 31 choices provided, the researcher also offered an opportunity for teachers to identify other CDEs in which their students participated in that were not listed. As a result: Sporting Clays, Commercial Cattle Grading, Cattle Handling, Soil and Water Management, Electricity and Greenhand Quiz were identified (see Table 3).

Round One of this Delphi study sought to identify the benefits of CDEs in agricultural education. Round One included three open-ended questions used to gain feedback from the expert jury. The questions were posed by the researcher to gain knowledge about jurors' perceived benefits of student involvement with CDEs.

Q.1 - What skills do students acquire as a result of their participation in CDEs?

Q.2 - How do CDEs prepare students for potential agricultural careers?

Q.3 - How do CDEs improve students' knowledge about potential agricultural careers?

As a result of Round One of the study, 196 total juror statements were provided by the Delphi jurors. The first question regarding the skills that students learn from CDEs resulted in 126 responses. Thirty-six statements were provided for the second question of how CDEs prepare students for potential agricultural careers. Thirty-four statements were listed for the third question of how CDEs improve students' knowledge about potential agricultural careers. From the 196 original juror statements, the researcher retained 37 statements for presentation in Round Two. The total number of items that reached "consensus of agreement" after all three rounds of the study was 36 (see Table 17).

## CHAPTER V

### SUMMARY, CONCLUSIONS, RECOMMENDATIONS, IMPLICATIONS AND DISCUSSION

#### Purpose

The primary purpose of this study was to identify the benefits of career development events as perceived by school-based, agricultural education teachers in Oklahoma.

#### Objectives

Four objectives guided this study:

1. Identify the personal and professional characteristics of school-based, agricultural education teachers in Oklahoma who have trained a first place team at the 2011 or 2012 Oklahoma State FFA Interscholastic event.
2. Determine the skills students acquire as a result of their participation in career development events, as perceived by school-based agricultural education teachers in Oklahoma.
3. Discover how CDEs prepare students for potential agricultural careers, as perceived by school-based agricultural education teachers in Oklahoma.

4. Establish how CDEs improve students' knowledge about potential agricultural careers, as perceived by school-based agricultural education teachers in Oklahoma.

The objectives served as a guide for presenting the findings of the study. Findings for each objective will be presented in separate sections in this chapter.

#### Significance of the study

According to Terry (2004), "the purpose of agricultural education is to promote agricultural literacy, with the goal of preparing students for specific careers related to agriculture" (p. 6). Phipps et al. (2008) declared that secondary agricultural education's purpose has focused on preparing students for agricultural occupations and professions, job creation and entrepreneurship, and agricultural literacy. One way to promote these purposes is through students participating in CDEs. Career development events are a direct extension of the school-based, agricultural education classroom (Russell et al., 2010). CDEs provide FFA members the opportunity to apply skills and knowledge learned in the classroom. Participation in CDEs allows students to learn while they are experiencing a lifelike situation (Russell et al., 2010). Therefore this study sought to examine the benefits of CDEs for student participants, as perceived by school-based, agricultural education teachers.

#### Population and Sample

The population for this study consisted of all school-based agricultural education teachers in Oklahoma. Purposeful sampling was used to select members for the jury of experts. Morse (1991) stated that "when obtaining a purposeful sample, the selective and theoretical sampling researcher selects a participant according to the needs of the study"

(p. 129). Stitt-Gohdes and Crews (2002) determined that “careful selection of the panel of experts is the keystone to a successful Delphi study” (p. 60).

The criterion used to determine the qualified members of the expert jury for this study were school-based agricultural education teachers who had trained a first place winning CDE team at the 2011 or 2012 Oklahoma State FFA Interscholastic event held on the campus of Oklahoma State University. These school-based, agricultural education teachers were deemed knowledgeable of CDEs due to the success their students had achieved at the Oklahoma State FFA Interscholastic event. Selection of the Delphi jury resulted in a sample of recognized experts that consisted of a statewide representation of school-based agricultural education teachers.

The researcher informed participants of the study by providing a thorough explanation via the initial email invitation. A consistent email script (see Appendix E) was used for each potential participant to ensure a reliable description of the study. This was done to encourage jurors to remain involved in each round of the study. According to Stitt-Gohdes and Crews (2004), “it is important that participants understand the goal of the study and feel they are a part of a group” (p. 61).

### Research Design

Traditionally, consensus methods such as the Delphi survey technique have been used to help improve decision-making in a variety of social fields, and, when used correctly, it can contribute considerably to expanding knowledge within chosen professions (Hasson et al., 2000). According to Hasson et al. (2000), “[t]he Delphi survey is a group facilitation technique, which is an iterative multistage process, designed to transform opinion into group consensus” (p. 1).



The Delphi technique was developed in the 1950s by Olaf Helmer and Norman Dalkey. These two research scientists developed the Delphi technique as a way to forecast future events using a series of intensive questionnaires combined with controlled-opinion feedback (Dalkey & Hemler, 1963). This technique was utilized originally by the U.S. Government for national defense measures (Dalkey & Hemler, 1963).

The Delphi technique is a widely accepted form of research in agricultural education and in other disciplines (Martin & Frick, 1998; Ramsey, 2009; Smith, 2010). This study employed a three-round Delphi model to bring the jury of experts to consensus regarding the benefits of career development events in the FFA. In theory, the Delphi process can be continued until consensus is determined to have been achieved (Cutright, 2011). In most cases, researchers have found that three rounds are satisfactory to collect the necessary information necessary to reach consensus (Hsu & Sanford, 2007).

#### Data Collection

Data collection for this study began in the Fall of 2012. On September 6, 2012, an electronic message was sent to the 59 potential members of the expert jury (see Appendix E) from the researcher containing an explanation of the study, an invitation to participate and hyperlink to access the instrument for Round One of the study. The initial instrument was developed by the researcher using Qualtrics.

A follow-up reminder message was sent exactly two weeks after the initial invitation. As a result of Round One of the study, 196 total juror statements ( $n = 30$ ; 51% response rate) were provided by the Delphi jurors. The first question, “*What skills do students acquire as a result of their participation in CDEs?*” resulted in 126 responses.

Thirty-six statements were generated for the second question, “*How do CDEs prepare students for potential agricultural careers?*” Thirty-four statements were listed for the third question, “*How do CDEs improve students’ knowledge about potential agricultural careers?*” Each statement was analyzed by the researcher and similar or duplicate statements were combined or eliminated (Shinn et al., 2009). From the 196 original juror statements, the researcher retained 37 statements for presentation in round two. Jurors were also asked to provide selected personal and professional characteristics in Round One of the study.

On October 11, 2012, the round two instrument (see Appendix I) was emailed to the 30 jurors who participated in Round One of the Delphi study. The round two instrument asked each juror ( $n = 22$ ; 73% response rate) to rate his or her level of agreement on the statements identified in Round One for each of the three open-ended questions. Jurors were asked to use a six-point, summated responses scale to rate their level of agreement with the skills derived from the Round One questions, “*What skills do students acquire as a result of their participation in CDEs?*,” “*How do CDEs prepare students for potential agricultural careers?*,” and “*How do CDEs improve students’ knowledge about potential agricultural careers?*” The response scale included six scale anchors: 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Slightly Disagree*, 4 = *Slightly Agree*, 5 = *Agree*, 6 = *Strongly Agree* (Jenkins, 2008; Shinn et al., 2009).

Items that received a score of 5 (*Agree*) or 6 (*Strongly Agree*) by 75% of the respondents were considered items for which consensus was reached. Items for which less than 50% of the respondents scored the item a 5 (*Agree*) or 6 (*Strongly Agree*) were removed from further investigation. Therefore, in Round Two, consensus of agreement

by the jurors began to take shape. Electronic, follow-up messages were sent to jurors approximately two weeks after the initial Round Two invitation (see Appendix J).

On November 13, 2012, the Round Three instrument was emailed to the 22 jurors who participated in round two. Buriak and Shinn (1989) described the third round of a Delphi as developing consensus. The third round instrument (see Appendix L) focused on developing consensus for the remaining items which received greater than 50% but less than 75% agreement in Round Two. Jurors were asked to rate their level of agreement for three skills derived from the question, *“What skills do students acquire as a result of their participation in CDEs?”* Jurors were also asked to rate their level of agreement for two statements derived from the question, *“How do CDEs prepare students for potential agricultural careers?”* Electronic follow-up messages were sent to jurors approximately two weeks after the initial Round Three invitation (see Appendix M).

#### Data Analysis

Data for this study were analyzed using Qualtrics, a web-based, research surveying software. The personal and professional characteristics of the jury of experts were analyzed using modes of central tendency such as percentages and frequencies (Buriak & Shinn, 1989). The frequency distribution valid percentage approach was used to analyze data from rounds two and three (Buriak & Shinn, 1989). This approach was used to determine whether an item reached consensus or was unstable and should be removed from the study. Percentages were then derived from the frequencies.

## Results

Analysis of personal and professional characteristics of the Delphi jurors revealed that 23.3% had five years or less teaching experience. More than one-fourth (26.7%) of the teachers reported six to ten years of teaching experience. The option, 11 to 15 years teaching experience, was identified by only 10.0% of the participants. Four of the 30 jurors (13.3%) indicated 16 to 20 years of experience, four (13.3%) selected 21 to 25 years of experience, and four other jurors (13.3%) selected over 25 years of experience (see Table 2).

Regarding the Oklahoma FFA district that jurors represented, 20.0% reported the central district, 23.3% the northeast district, 30.0% the northwest district, 13.3% the southeast district and 13.3% taught in the southwest district (see Table 2). When queried about their personal involvement in CDEs as a high school student, each school-based, agricultural education teacher reported some level of involvement. Ninety-six percent of teachers indicated personal involvement in CDEs at the high school level. Ten of the 29 respondents (34.5%) reported personal involvement in CDEs at the collegiate level (e.g. Soils judging, livestock evaluation, crops judging) (see Table 2). When asked to indicate the number of teams each juror prepared each year, a majority of respondents (51.7%) chose zero to five teams, 44.8% reported six to ten teams, only one person (3.4%) reported 11 to 15 teams and no one selected preparing 16 or more teams (see Table 2).

The number of students who participate in CDEs each year within the respective agricultural education programs represented by the jurors was also of interest to the researcher. Accordingly, slightly more than three percent of respondents selected zero to ten students, and six jurors (20.7%) reported 11 to 20 students. Participation by 21 to 30

students received the most indications of any selection with 37.9%. More than 13% reported 31 to 40 students participated, 10.3% reported 41 to 50 students participated, and 13.8% reported 51 or more students participated in CDEs in their agricultural education programs (see Table 2).

## The Delphi Process

### Round One

From Round One, 196 total statements were provided by the Delphi jurors ( $n = 30$ ; 51% response rate). The first question, *“What skills do students acquire as a result of their participation in CDEs?”* resulted in 126 responses. Thirty-six statements were provided for the second question, *“How do CDEs prepare students for potential agricultural careers?”* Thirty-four statements were listed by the jurors for the third question, *“How do CDEs improve students’ knowledge about potential agricultural careers?”*

The first Round One question, *“What skills do students acquire as a result of their participation in CDEs?”* received the greatest number of comments from the Delphi jury. The skills listed ranged from teamwork to critical thinking skill. After the researcher combined or eliminated duplicate statements, 26 skills were retained for round two (see Table 4).

Thirty-six statements were provided for the second question, *“How CDEs prepare students for potential agricultural careers?”* All of the responses were examined and analyzed by the researcher and condensed into four statements (see Table 5).

Thirty-four statements were listed for the third question, *“How do CDEs improve students’ knowledge about potential agricultural careers?”* Each statement was

analyzed by the researcher and similar or duplicate statements were combined or eliminated resulting in seven condensed statements (see Table 6).

Each statement was analyzed by the researcher and similar or duplicate statements were combined or eliminated (Shinn et al., 2009). From the 196 original juror statements, the researcher retained 37 statements for presentation in round two.

### Round Two

As a result of round two, the school-based, agricultural education teachers reached “consensus of agreement” on 32 items; i.e., 75% or more of the jurors selected 5 (*Agree*) or 6 (*Strongly Agree*) (see Table 13). “*What skills do students acquire as a result of their participation in CDEs?*” resulted in 23 skills that reached “consensus of agreement” (see Table 7). The second question, “*How do CDEs prepare students for potential agricultural careers?*” resulted in three items that reached “consensus of agreement” (see Table 9). The third question, “*How do CDEs improve students’ knowledge about potential agricultural careers?*” resulted in six items that reached “consensus of agreement” (see Table 11).

### Round Three

Round three included five items for which more than 50% but less than 75% of jurors had indicated 5 (*Agree*) or 6 (*Strongly Agree*) for said skills in round two. As a result of round three, school-based agricultural education teacher jurors reached “consensus of agreement” on an additional 4 items. The first question, “*What skills do students acquire as a result of their participation in CDEs?*” resulted in two skills that reached “consensus of agreement” (see Table 13). The second question, “*How do CDEs prepare students for potential agricultural careers?*” resulted in one additional item that

reached “consensus of agreement” (see Table 15). The third question, “*How do CDEs improve students’ knowledge about potential agricultural careers?*” yielded one additional item that reached “consensus of agreement” (see Table 16).

The total number of items that reached “consensus of agreement” after all three rounds of the study was 36 (see Table 17). The distribution of items by each question was as follows:

- “*What skills do students acquire as a result of their participation in CDEs?*” – 25 items
- “*How do CDEs prepare students for potential agricultural careers?*” – 4 items
- “*How do CDEs improve students’ knowledge about potential agricultural careers?*” – 7 items

## Conclusions

The analysis of data regarding each of the study’s objectives formed the basis for the study’s conclusions:

### Objective #1

*Identify the personal and professional characteristics of school-based, agricultural education teachers in Oklahoma who have trained a first place team at the 2011 or 2012 Oklahoma State FFA Interscholastic event.*

Concerning objective one, this study found that within this particular sample 50% of school-based agricultural education teachers had up to ten years of teaching experience. A majority of jurors prepared between zero and five CDE teams each year. Jurors represented each of Oklahoma’s five FFA districts with the greatest proportion being from the northwest district.

An overwhelming majority of jurors reported personal involvement in CDEs at the high school level and about one-third participated in activities similar to CDEs on the collegiate level. Jurors also reported preparing up to fifteen CDE teams each year. Further, jurors reported student involvement in CDEs ranging from less than 10 students to more than 50. These findings support Super (1957) who described schools as a place that allows for formal exploration of careers through courses, clubs, and organizations.

### Objective 2

*Determine the skills students acquire as a result of their participation in career development events.*

Concerning objective two, school-based agricultural education teachers in Oklahoma who served as jurors for this Delphi study reached “consensus of agreement” on 25 skills students acquire as a result of their participation in career development events.

- Teamwork
- Competition
- Setting and achieving goals
- Time management
- Self-motivation
- Work Ethic
- Confidence
- Leadership
- Dedication
- Critical thinking
- Decision making
- Reasoning
- Problem solving
- Evaluation
- Analysis
- Public relations
- Job readiness
- Defending opinions
- Social Interaction



- Creativity
- Responsibility
- Public speaking/Communication
- Higher level thinking skills
- Technical Agricultural skills (i.e., Animal selection, Welding, Plant I.D.)
- Core Curriculum (i.e., Science, Math, Literacy)

Therefore, it can be concluded that this study supports the research performed by Connors and Mundt (2001) which suggested that through CDEs students attain valuable career and life skills that are beneficial for employment in the agricultural industry.

It can also be determined that skill acquisition through CDEs builds on the third component of Mitchell's (1990) social learning theory of career decision making which involves learning experiences. More specifically, skill acquisition through CDEs can be labeled as *instrumental learning experiences* which occur from the consequences of behavior, or from the consequences of an individual's performance (Mitchell, 1990).

Priest's (2008) model for career decision-making for students in agricultural education provides a framework that is supported by this study. Priest (2008) advocated that participation in CDEs leads to choice actions (also described as behaviors), which include problem solving skills, ethical decision making and choosing a career based on passions, abilities and aptitudes. These choice actions were also identified by jurors for this study. The ultimate outcome of Priest's (2008) conceptual model is career success which is supported by the findings of this study. Based on the perceived skills that students acquire as a result of their participation in CDEs provided by the Delphi jurors, students gain valuable career and life skills that are beneficial for employment in both agriculturally related and non-agriculturally related careers.

### Objective 3

*Discover how CDEs prepare students for potential agricultural careers.*

Regarding objective three, school-based agricultural education teachers reached “consensus of agreement” on four items that described how CDEs prepare students for potential agricultural careers:

- Career development events expose students to specific agricultural careers;
- As a result of their participation in CDEs, students have greater exposure to college campuses;
- Career development events spark an interest in agriculture;
- Career development events provide real-world experiences;

These findings support the mission of career and technical education. Pratzner (1985) posited that vocational education, known now as career and technical education, should focus on content designed to meet the needs of the labor market. He suggested further that CTE should focus on entry-level skill development for specific jobs.

In addition, the statements provided by the agricultural education teacher jury; which indicates the juror’s perceptions of how CDEs prepare students for agricultural careers, supports Croom et al. (2009) who found that students are becoming more concerned about developing skills through CDEs that will help them find, acquire, and build a career in a chosen profession.

#### Objective 4

*Establish how CDEs improve students’ knowledge about potential agricultural careers.*

Concerning objective four, school-based agricultural education teachers reached “consensus of agreement” on seven items that described how CDEs improve students’ knowledge about potential agricultural careers.

- Students involved in CDEs have a greater likelihood of pursuing an agricultural career;
- A competitive environment enhances students' ability to learn;
- Students become acquainted with agricultural industry specialists while practicing and competing in CDEs;
- While preparing for a CDE, students deepen their knowledge about specific agricultural careers;
- Career development events provide real-world application of the curriculum;
- Participation in CDEs exposes students to diverse geographic and agricultural differences;
- Winning creates motivation to explore careers in agriculture;

So, it was concluded that, based on jurors' perceptions, CDEs have the potential to improve students' knowledge about potential agricultural careers. This assumption supports findings by Phipps et al. (2008), Roberts and Ball (2009) and Terry (2004) who suggested one of agricultural education's primary purposes should be to develop the knowledge and skills necessary for successful employment in the agricultural industry.

#### Implications

Phipps et al. (2008) described the purpose of agricultural education as preparing people for entry or advancement in agricultural occupations and professions, job creation, and agricultural literacy. The National FFA Organization reported that more than 300 career opportunities in the agricultural science, food, fiber, and natural resources industry exist (Official FFA Manual, 2012). The National Agriculture, Food, and Natural Resources (AFNR) Career Cluster Content Standards were developed by the National FFA Organization to offer agricultural education leaders and teachers a guide for what

students should know and be able to do through the study of agriculture (CDE Handbook, 2012).

Talbert and Balschweid (2006) specified that “from an occupational perspective, student involvement in career preparation activities is theorized to lead to more informed, more appropriate career selections” (p. 68). The authors further stated that “participation and involvement in agricultural education, especially the career development aspects of FFA and SAE, may have a positive impact on members’ career development processes” (p. 68). Delphi jurors for this study supported this statement by listing 36 valuable skills and statements regarding benefits gained by students’ participation in CDEs. However, not all items met consensus. Career selection was the one statement that failed to reach consensus of agreement with the Delphi jury.

Connors and Mundt (2001) found that students gain valuable career and life skills as a result of their participation in CDEs. For this study, the researcher was able to identify 26 skills that were listed by the Delphi jurors in response to the question “*What skills do students gain as a result of their participation in CDEs?*” However, 23 of those skills can be classified as *soft skills*. According to Bancino and Zevalkink (2007), soft skills are the cluster of personality traits, social graces, facility with language, personal habits, friendliness and optimism that mark people to varying degrees.

Do findings of this study support the National FFA Mission that 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, 2012, p. 6)? The essence of this mission is supported by this study; however, a greater proportion of soft skills (88.5%) were identified by Delphi

jurors as opposed to technical agricultural skills (11.5%) needed for entry-level employment in the agricultural industry (see Table 2). To that end, has agricultural education shifted its emphasis more toward agricultural literacy i.e., education about agriculture versus career preparation i.e., education in agriculture (NRC, 1988)? The fact that not a single juror indicated that they train an environmental sciences and natural resources CDE seems to indicate this suggestion. Since Oklahoma is known for its natural resources and energy production, the environmental sciences and natural resources CDE should be of greater importance to Oklahoma school-based agricultural education teachers.

Most agree that agricultural education programs should teach both technical and non-technical career skills (Ramsey, 2009; Slusher, Robinson, & Edwards, 2010). The National Research Council Board on Agriculture stated, “Agriculture – broadly defined – is too important a topic to be taught only to the relatively small percentage of students considering careers in agriculture and pursuing vocational agriculture studies” (p. 8). Dailey et al. (2001) suggested the comprehensive model of agricultural education, when utilized correctly, provides a context for learning essential content and life skills that prepare students for post-secondary education and career areas.

[t]he findings of this study also support Croom et al. (2009), who stated, The National FFA Organization provides leadership and personal development opportunities for students enrolled in career and technical education. Students learn skills related to specific occupations and, in a broader sense, develop their technical literacy through exposure to the general concepts of business and industry. The finished product is a student’s knowledge of the agriculture

industry. The FFA proposes to add value to this product by improving a student's leadership ability, personal communication skills and personal work habits. The personal and professional development provided by the FFA is intended to assist them once they enter the workforce. (p. 110)

This balanced approach by the National FFA Organization to integrate students learning soft skills as well as technical agricultural skills through their participation in activities such as CDEs, was echoed by the school-based, agricultural education teachers who were members of this study's expert jury.

## Recommendations

### Recommendations for Future Research

Croom et al. (2009) reported that the most important reason for student's participation in a CDE was to learn skills that would translate into a career option for him or her after graduation from high school. This study supported the notion that students gain valuable workforce skills that are beneficial for a variety of future careers. So, additional studies should be conducted to determine the long-term career benefits of participation in CDEs

Further research should be conducted at the post-secondary and post-collegiate level to examine the effects of CDEs on participants' career choices. Talbert and Balschweid (2006) theorized that student involvement in activities such as CDEs lead to more informed, more appropriate career selections. Croom et al. (2009) also found that students' most important reasons for participation in CDEs is that the event related to their career preference. Hughes' and Barrick's model (see Figure 2) illustrates that agricultural education does not end with the completion of secondary education;

employment, additional education and eventually a career are the intended outcomes of an agricultural education program (Hughes & Barrick, 1993). Therefore, further research should study how CDEs assisted students with career choices.

Additional research should be conducted to analyze the need for increased job preparedness of students entering the agricultural industry in Oklahoma (Ramsey & Edwards, 2012). Those students who do make the choice to be in an agricultural education class should be afforded the opportunity to learn about potential careers in the agricultural industry. Based on the findings of this study, more emphasis needs to be placed on career preparation through career development events in agricultural education.

Agriculture and agribusinesses continue to be a major strength in national employment and productivity; however the total number of individuals involved directly in production agriculture has declined significantly (Conroy et al., 1998). Further research should assess employers' perceptions of CDEs regarding entry-level skills needed in the agricultural industry.

This study found that CDEs are an integral part of the agricultural education model. Edwards and Booth (2001) stated agricultural educators need to connect CDEs to the classroom. Planning, practicing for, and participating in CDEs requires a commitment by both school-based, agricultural education teachers and student; therefore, substantial support is needed from local school officials, parents, and community supporters to be effective. However, little is known about the perceptions of these groups in regards to the value associated with students participating in CDEs. Therefore, future research should examine these groups' perceptions on the benefit of student participation in CDEs.

A similar study should be implemented in other states, especially other mid-western states that border Oklahoma (i.e., Arkansas, Colorado, Kansas, Missouri, New Mexico, and Texas). The similarity of significant agricultural enterprises (e.g., beef and wheat) and, therefore, possible entry-level employment opportunities for secondary agricultural education graduates, supports the need for further systematic investigation in other states.

#### Recommendations for Future Practice

State staff, professional teacher organizations (i.e., Oklahoma Agricultural Education Teachers Association [OAETA]/National Association of Agricultural Educators [NAAE]), and teacher educators should work together to inform teachers' practices regarding planning and implementing of CDEs through the agricultural education model. Further, a shared effort between state leaders, teacher professional organizations, and teacher educators could provide knowledge and resources that in-service teachers and pre-service students of agricultural education could use to more effectively implement CDEs.

State staff members who are responsible for facilitating school-based agricultural education programs should place greater emphasis on professional development in the area of CDEs. In-service needs of agricultural education teachers appear to change over time (Roberts & Dyer, 2004). However, in a 1987 study of beginning agriculture teachers in Missouri, Birkenholz and Harbstreit found that more training in the area of career development events was needed. Sorense, Tarpley, and Warnick (2010) also found that preparing CDEs teams was identified as an in-service need for Utah agricultural education teachers.



Because this study concluded that career development events are an integral part of the career decision-making process of school-based, agricultural education students (Priest, 2008) it is recommended that school-based, agricultural education teachers strongly encourage all students to participate in CDEs. Teachers should create a learning environment that extrinsically motivates students to prepare for and compete in CDEs (Russell, 2010). Teachers should also relay the importance and relationship of CDEs to the future career decisions of their students.

It is recommended that the results of this study be shared with pre-service agricultural education students, agricultural education student teachers, and agricultural educators at cooperating student teaching centers. Results should also be shared at the Oklahoma State Agricultural Education Teachers' Conference

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## APPENDICES

### APPENDIX A

#### INSTITUTIONAL REVIEW BOARD APPROVAL FORM

Oklahoma State University Institutional Review Board

Date: Wednesday, September 05, 2012  
IRB Application No: AG1243  
Proposal Title: An Examination of Career Development Events, Benefits Perceived by Oklahoma Agricultural Education Teachers

Reviewed and Processed as: Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 9/4/2013

Principal Investigator(s):

Jerrod Lundry	John Ramsey
HC 80 Bnx 21	458 Ag Hall
Fairview, OK 73737	Stillwater, OK 74076

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.

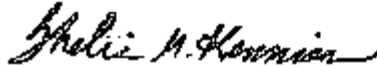
The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

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 of one calendar year. 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 this research, and
4. Notify the IRB office in writing when your research protocol 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 Beth McTemer in 219 Cordell North (phone: 405-744-6700, betmtemer@okstate.edu).

Sincerely,



Shelia Kennison, Chair  
Institutional Review Board

APPENDIX B  
INFORMED CONSENT

## INFORMED CONSENT

Oklahoma State University

[jerrod.lundry@okstate.edu](mailto:jerrod.lundry@okstate.edu)

### **An Examination of Career Development Events: Benefits Perceived by Oklahoma Agricultural Education Teachers**

*Directions: Please read to the bottom of this page. This web page is designed to provide you with an overview of the research study, what is expected of you as a participant, and also your rights as a participant. After you have read the entire page, you may accept or decline to participate in this study. If you have any questions regarding this study, please, submit your questions via e-mail to [jerrod.lundry@okstate.edu](mailto:jerrod.lundry@okstate.edu) or contact me by telephone at 580-977-9016.*

*Thank you!*

#### **PURPOSE:**

This study, which is being conducted for a masters' thesis, is being conducted through Oklahoma State University. **The purpose of this study is to** determine the benefits of career development events as perceived by Oklahoma agricultural education teachers. The Delphi technique for collecting data will be used for all participants.

#### **PROCEDURES:**

The study will involve the completion of three questionnaires. The first questionnaire will ask for demographic information such as your gender, age, ethnicity, formal education, current occupation, and experience in agricultural education. In addition, you will be asked to describe the reasons for training career development event teams.

The second round questionnaire will ask you to rate your level of agreement on answers generated in round #1 that you believe are relevant reasons for student participation in career development events. The third round questionnaire will focus 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.

You will be given the opportunity to provide comments for your selections in rounds two and three. The study is designed to last over the course of approximately 90 days. If at any time you do not wish to continue with the study, you may end your participation without explanation.

**RISKS OF PARTICIPATION:**

There are no risks associated with this project, such as stress, psychological, social, physical, or legal risk which are greater, considering probability and magnitude, than those ordinarily encountered in daily life. If, however, you begin to experience discomfort or stress in this project, you may end your participation at any time.

**BENEFITS OF PARTICIPATION:**

There are no expected personal benefits from you participating in this research study. However, this study seeks to contribute to the body of knowledge regarding the importance and value of the career development event activity in the FFA component of the agricultural education model. An investigation into the benefits acquired through student participation in CDE's and the application of those skills in the agricultural industry could potentially better inform agricultural educators at the local, state and national levels regarding curriculum development, changes in pre-service teacher professional development, new teacher induction, and in-service teacher professional development.

**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 HC 60 Box 21 Fairview, OK 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 five 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 telephone numbers, should you desire to discuss your participation in the study and/or request information about the results of the study: Mr. Jerrod Lundry, HC 60 Box 21 Fairview, OK 73737, (580)977-9016, [jerrod.lundry@okstate.edu](mailto:jerrod.lundry@okstate.edu); Dr. Jon Ramsey, 457 Agricultural Hall, Dept. of Agricultural Education, Communications and Leadership, Oklahoma State University, Stillwater, OK 74078, (405) 744-4260, [jon.ramsey@okstate.edu](mailto:jon.ramsey@okstate.edu) Dr. M. Craig

Edwards, 456 Agricultural Hall, Dept. of Agricultural Education, Communications, and Leadership, Oklahoma State University, Stillwater, OK 74078, (405)744-8141,

craig.edwards@okstate.edu. If you have questions about your rights as a research volunteer, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, (405)744-3377 or [irb@okstate.edu](mailto:irb@okstate.edu)

**PARTICIPANTS RIGHTS:**

**Your participation in this research is voluntary.** There is no penalty for refusal to participate, and you are free to withdraw your consent and participation in this project at any time, without penalty.

By putting your email address in the box below, you are consenting to participate in this study.

If you decide not to participate in this study, please close your web browser at this time.

APPENDIX C  
INSTITUTIONAL REVIEW BOARD APPROVAL FORM  
ROUND TWO



**Oklahoma State University Institutional Review Board**

Date: Wednesday, October 10, 2012 Protocol Expires: 8/4/2013  
IRB Application No. AG1243  
Proposa Title: An Examination of Career Development Events: Benefits Perceived by  
Oklahoma Agricultural Education Teachers  
Reviewed and Exempt  
Processed as: Modification  
Status Recommended by Reviewer(s) **Approved**  
Principal Investigator(s)  
Jerrad Lundry Jon Ramsey  
HC 60 Box 21 455 Ag Hall  
Fairview, OK 73737 Stillwater, OK 74078

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The requested modification to this IRB protocol has been approved. Please note that the original expiration date of the protocol has not changed. The IRB office **MUST** be notified in writing when a project is complete. All approved projects are subject to monitoring by the IRB.

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.

The reviewer(s) had these comments:

Advisor will need to complete required IRB training before application can be approved.

Q2.a.2: Please describe how you will obtain the email addresses for the sample population.

Q2.a.3: Please provide a copy of the email recruitment on a separate page for review and approval. Provide scripts or copies of any email reminders to be used.

Signature :



Shelia Kennison, Chair, Institutional Review Board

Wednesday, October 10, 2012  
Date

APPENDIX D  
INSTITUTIONAL REVIEW BOARD APPROVAL FORM  
ROUND THREE

Oklahoma State University Institutional Review Board

Date: Tuesday, November 13, 2012 Protocol Expires: 9/4/2013  
IRB Application: AG1243  
Proposal Title: An Examination of Career Development Events: Benefits Perceived by Oklahoma Agricultural Education Teachers

Reviewed and Processed as: Exempt  
Modification

Status Recommended by Reviewer(s): **Approved**

Principal Investigator(s):

Jerrold Lundry                      Jon Ramsey  
HC 60 Box 21                      455 Ag Hall  
Fairview, OK 73737              Stillwater, OK 74078

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The requested modification to this IRB protocol has been approved. Please note that the original expiration date of the protocol has **not** changed. The IRB office **MUST** be notified in writing when a project is complete. All approved projects are subject to monitoring by the IRB.

(b) 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.

Signature:

  
Sheila Kohnson, Chair, OSU Institutional Review Board

Tuesday, November 13, 2012  
Date

APPENDIX E  
EMAIL SCRIPT, ROUND ONE

My name is Jerrod Lundry; I am an agricultural education teacher at Fairview Public Schools and also a graduate student at Oklahoma State University. I am conducting a study that is focused on identifying the benefits of career development events (CDEs). You have been identified as a potential panelist based on your success of training career development event teams.

Your participation in this study will require you to complete a minimum of three questionnaires over the course of the next three to four months. Your response will be used to identify the benefits that students receive from their participation in career development events. The first questionnaire will ask for demographic information such as your gender, age, ethnicity, formal education, current occupation, and experience in agricultural education. In addition, you will be asked to describe the benefits of career development event teams. The study is designed to last over the course of approximately 90 days. If at any time you do not wish to continue with the study, you may end your participation without explanation.

Your participation in this study will better inform leaders at all levels of agricultural education 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. If you choose not to participate in the study, thank you for your time and your support of agricultural education.

[https://okstatecasnr.qualtrics.com/SE/?SID=SV\\_cXV7QXQMDzYjEMZ&Preview=Survey&BrandID=okstatecasnr](https://okstatecasnr.qualtrics.com/SE/?SID=SV_cXV7QXQMDzYjEMZ&Preview=Survey&BrandID=okstatecasnr)

APPENDIX F  
ROUND ONE INSTRUMENT

## An Examination of Career Development Events: Benefits Perceived by Oklahoma Agricultural Education Teachers

*Directions: Please read to the bottom of this page. This web page is designed to provide you with an overview of the research study, what is expected of you as a participant, and also your rights as a participant. After you have read the entire page, you may accept or decline to participate in this study. If you have any questions regarding this study, please, submit your questions via e-mail to [jerrod.lundry@okstate.edu](mailto:jerrod.lundry@okstate.edu) or contact me by telephone at 580-977-9016.*

*Thank you!*

### PURPOSE:

This study, which is being conducted for a masters' thesis, is being conducted through Oklahoma State University. The purpose of this study is to determine the benefits of career development events as perceived by Oklahoma agricultural education teachers. The Delphi technique for collecting data will be used for all participants.

### PROCEDURES:

The study will involve the completion of three questionnaires. The first questionnaire will ask for demographic information such as your gender, age, ethnicity, formal education, current occupation, and experience in agricultural education. In addition, you will be asked to describe the reasons for training career development event teams.

The second round questionnaire will ask you to rate your level of agreement on answers generated in round #1 that you believe are relevant reasons for student participation in career development events. The third round questionnaire will focus 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.

You will be given the opportunity to provide comments for your selections in rounds two and three. The study is designed to last over the course of approximately 90 days. If at any time you do not wish to continue with the study, you may end your participation without explanation.

### RISKS OF PARTICIPATION:

There are no risks associated with this project, such as stress, psychological, social, physical, or legal risk which are greater, considering probability and magnitude, than

those ordinarily encountered in daily life. If, however, you begin to experience discomfort or stress in this project, you may end your participation at any time.

#### BENEFITS OF PARTICIPATION:

There are no expected personal benefits from you participating in this research study. However, this study seeks to contribute to the body of knowledge regarding the importance and value of the career development event activity in the FFA component of the agricultural education model. An investigation into the benefits acquired through student participation in CDE's and the application of those skills in the agricultural industry could potentially better inform agricultural educators at the local, state and national levels regarding curriculum development, changes in pre-service teacher professional development, new teacher induction, and in-service teacher professional development.

#### 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 at HC 60 Box 21 Fairview, OK 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 five 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 telephone numbers, should you desire to discuss your participation in the study and/or request information about the results of the study: Mr. Jerrod Lundry, HC 60 Box 21 Fairview, OK 73737, (580)977-9016, [jerrod.lundry@okstate.edu](mailto:jerrod.lundry@okstate.edu); Dr. Jon Ramsey, 457 Agricultural Hall, Dept. of Agricultural Education, Communications and Leadership, Oklahoma State University, Stillwater, OK 74078, (405) 744-4260, [jon.ramsey@okstate.edu](mailto:jon.ramsey@okstate.edu) Dr. M. Craig Edwards, 456 Agricultural Hall, Dept. of Agricultural Education, Communications, and Leadership, Oklahoma State University, Stillwater, OK 74078, (405)744-8141,

[craig.edwards@okstate.edu](mailto:craig.edwards@okstate.edu). If you have questions about your rights as a research volunteer, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, (405)744-1676 or [irb@okstate.edu](mailto:irb@okstate.edu)

#### PARTICIPANTS RIGHTS:



Your participation in this research is voluntary. There is no penalty for refusal to participate, and you are free to withdraw your consent and participation in this project at any time, without penalty.

By putting your e-mail address in the box below, you are consenting to participate in this study.

If you decide not to participate in this study, please close your web browser at this time.

E-MAIL ADDRESS:

Q1 How many years have you been teaching agricultural education?

- 0-5 years (1)
- 6-10 years (2)
- 11-15 years (3)
- 16-20 years (4)
- 21-25 years (5)
- over 25 years (6)

Q2 Identify the FFA District that currently represents your teaching assignment.

- Central (1)
- Northeast (2)
- Northwest (3)
- Southeast (4)
- Southwest (5)

Q3 Identify your personal involvement in Career Development Events (CDE's).(Choose each answer that applies)

- High School (1)
- Collegiate (2)
- None (3)

Q4 On average, how many Career Development Event teams do you train per year?

- 0-5 (1)
- 6-10 (2)
- 11-15 (3)
- 16+ (4)

Q5 In your program, how many students participate in Career Development Events?

- 0-10 (1)
- 11-20 (2)
- 21-30 (3)
- 31-40 (4)
- 41-50 (5)
- 51 or more (6)

Q6 What Career Development Events do your students typically participate in? (Select all that apply)

- Agricultural Communications (1)
- Agricultural Education (2)
- Agricultural Issues Forum (3)
- Agricultural Mechanics (4)
- Agricultural Sales (5)
- Agriscience Fair (6)
- Agronomy (7)
- Animal Science Quiz Bowl (8)
- Dairy Cattle Evaluation (9)
- Dairy Cattle Handlers (10)
- Entomology (11)
- Environmental and Natural Resources (12)
- Farm Business Management (13)
- Floriculture (14)
- Food Science and Technology (15)
- Forestry (16)
- Freshman Agriscience Quiz Bowl (17)
- Homesite Judging (18)
- Horse Evaluation (19)
- Job Interview (20)
- Land Judging (21)
- Livestock Evaluation (22)
- Marketing Plan (23)
- Meats Evaluation and Technology (24)
- Milk Quality and Products (25)
- Nursery and Landscape (26)
- Opening Ceremonies (27)
- Parliamentary Procedure (28)
- Poultry Evaluation (29)
- Public Speaking (30)
- Rangeland Judging (31)
- Other, Please Specify (32) \_\_\_\_\_

Q7 Describe how you introduce Career Development Events to your students?

Q8 Describe your expectations for students as a result of their participation in CDE's?

Q9 How much time is committed to training Career Development Event teams?

Q10 Do you use volunteers to help train CDE teams? If yes, what events do volunteers train?

Q11 What benefits do students receive from their participation in career development events?

APPENDIX G  
FOLLOW-UP REMINDER, ROUND ONE

Dear Teacher Panelist:

Please accept my thanks if you have already completed the Round One questionnaire that was sent on September 6, 2012. If you have not had the opportunity to complete the questionnaire, please take a few moments to complete the instrument. Your input will provide a more complete picture of the benefits of career development events.

Thank you,

Jerrod Lundry

APPENDIX H  
EMAIL SCRIPT, ROUND TWO

Thank you for your participation in round #1 of the study concerning the benefits of Career Development Events. This second round questionnaire will ask to rate your level of agreement on answers generated in round #1.

Your participation in this study will better inform leaders at all levels of agricultural education 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. If you choose not to participate in the study, thank you for your time and your support of agricultural education.

[https://okstatecasnr.qualtrics.com/SE/?SID=SV\\_0AGEcd3ZHidPMFv](https://okstatecasnr.qualtrics.com/SE/?SID=SV_0AGEcd3ZHidPMFv)

Thanks,

Jerrod Lundry



APPENDIX I  
ROUND TWO INSTRUMENT

If you choose to participate in the second round of this study, please enter your e-mail address in the box below.

If you decide not to participate in this study, please close your web browser at this time.

E-MAIL ADDRESS:

1	QID3		MC	SAVR	TX

Directions: In Round One, panelists were asked three opened ended questions pertaining to Career Development Events (CDE's). The first question asked to identify the skills students acquire as a result of their participation in CDE. The next question asked how CDE's prepare students for potential agricultural careers. The third question asked how CDE's improve students' knowledge about potential agricultural careers.

Below are three separate lists representing the answers to the three open ended questions. Please read each statement and determine your level of agreement for each item.

Note: The statements are not listed in any particular order.

A summated rating scale from 1 to 6 scale 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. At the end of each section, space is provided to share additional suggestions that you believe have been overlooked in Round One. Please share any thoughts you have for including or excluding another item.

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 [jerrod.lundry@okstate.edu](mailto:jerrod.lundry@okstate.edu).

Thank you for your time.

The following represents the skills that you said students acquire as a result of their participation in CDE's. Please read each statement and determine your level of agreement for each skill.

	Strongly Disagree (1)	Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Agree (5)	Strongly Agree (6)
Teamwork (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competition (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public Speaking/Communication (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social Interaction (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public relations (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confidence (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creativity (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Responsibility (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dedication (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Critical thinking (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decision making (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reasoning (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Higher level thinking skills (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Defending opinions (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem solving (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluation (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analysis (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical Ag skills (i.e., Animal Selection, Welding, Plant ID) (19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Career selection (20)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job readiness (21)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Core Curriculum (i.e., Science, Math, Literacy) (22)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setting and achieving goals (23)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Time management (24)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self motivation (25)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work ethic (26)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

List any suggestions in this box.

Each of the following statements represents answers that each panelist provided when asked how CDE’s prepare students for potential agricultural careers. Please read each statement and determine your level of agreement.

	Strongly Disagree (1)	Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Agree (5)	Strongly Agree (6)
CDE's expose students to specific agricultural careers (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students have greater exposure to college campuses (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CDE's spark an interest in agriculture (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CDE's provide real-world experiences (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

List any suggestions in the following box.

Each of the following statements represents answers that each panelist provided when asked how CDE’s improve students’ knowledge about potential agricultural careers. Please read each statement and determine your level of agreement.

	Strongly Disagree (1)	Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Agree (5)	Strongly Agree (6)
A competitive environment enhances students’ ability to learn (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students involved in CDE's have a greater likelihood of pursuing an agricultural career (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students become acquainted with agricultural industry specialists while practicing and competing in CDE’s (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
While preparing for a CDE,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<p>students deepen their knowledge about specific agricultural careers (4)</p> <p>CDE's provide real-world application of the curriculum (5)</p> <p>Winning creates motivation to explore careers in agriculture (6)</p> <p>Participation in CDE's exposes students to diverse geographic and agricultural differences (7)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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List any suggestions in the following box.

APPENDIX J  
FOLLOW-UP REMINDER, ROUND TWO

Dear Teacher Panelist:

Please accept my thanks if you have already completed the round 2 questionnaire that was sent on October 11, 2012. If you have not had the opportunity to complete the questionnaire, please take a few moments to complete the instrument. Your input will provide a more complete picture of the benefits of career development events.

Thank you,

Jerrod Lundry

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APPENDIX K  
EMAIL SCRIPT, ROUND THREE

Thank you for your participation in round #1 and # 2 of the study concerning the benefits of Career Development Events. 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 five questions that will require only a minute of your time. Your participation in this study will better inform leaders at all levels of agricultural education 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. If you choose not to participate in the study, thank you for your time and your support of agricultural education.

Thanks again,

Jerrod Lundry

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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 [jerrod.lundry@okstate.edu](mailto:jerrod.lundry@okstate.edu).

If you choose to participate in this study, please enter your email address in the box below.

If you choose not to participate then close your web browser at this time.

Thank you for your time throughout this study.

The following represents the skills that panelists said students acquire as a result of their participation in CDE's. Please read each statement and determine your level of agreement for each skill.

	Strongly Disagree (1)	Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Agree (5)	Strongly Agree (6)
Public relations (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Career selection (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job readiness (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Each of the following statements represents answers that each panelist provided when asked how CDE’s prepare students for potential agricultural careers. Please read each statement and determine your level of agreement.

	Strongly Disagree (1)	Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Agree (5)	Strongly Agree (6)
CDE's expose students to specific agricultural careers (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students involved in CDE's have a greater likelihood of pursuing an agricultural career (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX M  
FOLLOW-UP REMINDER, ROUND THREE

Dear Teacher Panelist:

Please accept my thanks if you have already completed the round 3 questionnaire that was sent on November 13, 2012. If you have not had the opportunity to complete the questionnaire, please take a few moments to complete the instrument. Your input will provide a more complete picture of the benefits of career development events.

Thank you,

Jerrod Lundry

VITA

Jerrod Steven Lundry

Candidate for the Degree of

Master of Science

Thesis: AN EXAMINATION OF CAREER DEVELOPMENT EVENTS: BENEFITS  
PERCEIVED BY AGRICULTURAL EDUCATION TEACHERS IN  
OKLAHOMA: A DELPHI STUDY

Major Field: Agricultural Education

Biographical:

Personal Data: Born in Paris, TX on November 26, 1984, son of Jay and Tina Lundry,  
Married July 23, 2005 to Jaime Lundry, Father of Jalyn Lundry.

Education:

Completed the requirements for the Master of Science/Arts in your major at  
Oklahoma State University, Stillwater, Oklahoma in May, 2013.

Completed the requirements for the Bachelor of Science in Agricultural  
Education at Oklahoma State University, Stillwater, Oklahoma in 2007.

Experience:

Agricultural Education Instructor at Cimarron Public Schools, Agricultural  
Education Instructor at Canton Public Schools, Agricultural Education  
Instructor at Fairview 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,