

THE INFLUENCE OF LEARNING ACTIVITIES ON THE CAREER DECISION SELF-
EFFICACY OF HIGH SCHOOL SENIORS IN AGRICULTURAL EDUCATION

by

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(Under the Direction of John C. Ricketts)

ABSTRACT

Preparing students for successful careers and a lifetime of informed choices is the primary mission of agricultural educators (National FFA, 2007). This causal-comparative study described the learning activities of high school seniors in the North Region of Georgia Agricultural Education, and explored the influence of various learning activities (including FFA activities) on students' career decision self-efficacy, which is a predictor of career choice behavior (Betz & Taylor, 2006). A model of career decision-making for students in agricultural education based on Lent, Brown, and Hackett's social cognitive career theory (1994) was also proposed. Most students in the study had moderate to high career decision self-efficacy. Several low, positive relationships were found between FFA involvement and career decision-self efficacy scores. Career development intervention implications were discussed. Additional research was recommended to account for other variables that influence self-efficacy, and to further investigate the proposed conceptual model.

INDEX WORDS: Agricultural Education, Career Decision-Making, Career Decision Self-Efficacy, Career Success, Career Development Events, FFA, Leadership, Learning Activities, Social Cognitive Career Theory, Supervised Agricultural Experience

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DEDICATION

This thesis is dedicated to any student who has ever wondered, “What am I going to do with my life?”

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CHAPTER 1

INTRODUCTION

In 1917, the United States Congress passed the Smith-Hughes Act, which provided federal funds for the purpose of establishing and promoting vocational education programs, with the intent to train people engaged in or preparing for farm work (Prentice Hall, n. d., para.1). This seemingly narrow depiction of agricultural career preparation came against a backdrop of shifting vocational opportunities and attitudes in the early 20th century—a cultural context of work and education that is quite different from the experience of today’s student.

As America became increasingly industrialized, the nature of work changed from the “the rugged individualism” of small farms and business to a “corporate culture” of large companies built around industry and manufacturing processes (Niles & Harris-Bowlsbey, 2005, p. 6). The transition of the national economy, along with political and societal changes, created a new set of opportunities for work, as well as the challenge of making career decisions around those opportunities (2005). It was not unusual in the early twentieth century for people to start working at a young age. For example, in 1910 nearly one in five children between ages 10 and 14 were gainfully employed (Strauss & Howe, 1991). Child labor laws were put in place not only to prevent abuse of children, but also to protect the jobs of adults (Daggett, 2005). Many people found themselves in a system of work that involved choosing a job for life, and following a prescribed career

plan. Vocational guidance during this time emphasized the act of making a choice, and the decision-making process was viewed as a single, one-time event. The new work ethic became “find your fit and don’t quit” (Niles & Harris-Bowlsbey, 2005, p. 7).

The model of decision-making that emerged focused on the differences between occupations—using standardized aptitude or interest tests to help students learn about their characteristics and options, and then matching them to an appropriate occupational choice (Herr, Cramer, & Niles, 2004).

This matching model would influence vocational guidance for the next 50 years. By the mid-to-late twentieth century, the continually changing social, political, and economic environment ushered in broader work choices, resulting in a shift of focus from *occupations* to *careers*. A longitudinal study by the U. S. Bureau of Labor Statistics tracked late *Baby Boomers* (born 1957-1964) over a considerable segment of their lives ($n=9,964$). Contrary to their “one job for life” parents, the study found that this group held an average of 10.5 jobs between age 18 and 40 (Bureau of Labor Statistics, 2006, p. 1). A career-oriented perspective in career guidance emphasized not only job choice, but the interaction between education and occupational choices across time. The role of career development interventions became more prominent as individuals navigated through a sequence of jobs and made decisions about their future (Herr et al., 2004).

Today’s picture of work continues to change with the current generation of students. Called the *Millennials* (born 1984-2002), the oldest of this group have just recently entered the workforce. Howe and Strauss (2000) characterize Millennials as cooperative, civic minded, and team players. In general, they are accepting of authority, tend to follow the rules, think it’s a good thing to be smart and educated, and are hopeful

about the future (2000). The largest group of young people in history, they have incredible purchasing power, although their money is usually not their own, but rather their parents' (Howe & Strauss, 2003). They may be accustomed to being told what the best decision is, instead of being asked to figure out the best decision (Howe & Strauss, 2000). Millennials are confident, but experience a great deal of pressure. According to a study by Howe & Strauss (2003), 28 percent of incoming college freshman report feeling "frequently overwhelmed" and six percent say they will likely "seek personal counseling" (p. 89).

In contrast to their grandparents, today's young people may be nearly 19 before they take their first full-time job, primarily because of longer time spent in the education system (Daggett, 2005). Some experts forecast that by 2100, the average age of first-time employment could be as old as 21 years (2005, p. 3).

Millennials are entering a workforce characterized by mobility and connected by technology. These factors, along with increasing diversity in the workforce, globalization, environmental issues, and public policy contribute to the fundamental transformation that is happening in organizations' structure, processes, and work environment (Ware & Grantham, 2003). The rise of a "creative class" (Florida, 2000), or those who work in a wide range of knowledge-intensive industries, has shifted much of the process structure of work. More people tend to work on varied and individualized schedules, are self-directed and self-motivated, expect to work in a variety of job situations over time, and prefer to work closely with others who share their interests and skills. "Creatives," who make up 30 percent of the workforce, often choose where they want to live and work first, then worry about what job they will find in that area (Florida, 2000; Ware &

Grantham, 2003). Given these new attitudes, values, and work environments, career development and career guidance become continually more complex.

Statement of the Problem

The literature posits that because most teenagers plan to attend college, decisions about work are generally postponed (Arnett, 2000; Daggett, 2005; Kerckhoff, 2002; Mortimer, Zimmer-Gembeck, Holmes, & Shanahan, 2002). Mortimer et al. (2002) studied the contemporary context on the transition from school to work and its implications for vocational decision making. Drawing on qualitative interviews as part of a longitudinal study ($n=1000$) of individuals through adolescence and early adulthood, they found “the timing and quality of adolescence and the transition to early adulthood are highly sensitive to social and economic conditions, which have undoubtedly changed in the 21st century” (2002, p. 440). They identified multiple themes, including *delay*, *postponement*, and *resources*—or the access to significant people who help facilitate or hinder decision-making. Family and friends were found to be very important influences on career decisions, as well as significant unrelated adults like teachers and coaches; however, guidance counselors were rarely referred to as positive influences (2002).

In *Decisions Without Direction*, a national study on career guidance and decision-making among America’s youth, researchers at Ferris State University found that students perceive a lack of career guidance, with 51 percent citing that no one in their school has been helpful in advising on career options (Hurley & Thorp, 2002). “This lack of career guidance leads to high school graduates who are either undecided as to what career to pursue or who may make poorly informed decisions that they may regret or abandon altogether” (Hurley & Thorp, 2002, p. 3).

Also, according to the Ferris State study, there is a bias in education toward attending four-year colleges or universities (Hurley & Thorp, 2002). Sixty-eight percent of students surveyed nationally planned to attend a four-year school, while 26 percent planned to attend a community college or technical school (2002). With so many students planning to attend college, occupational decision-making during middle school and high school may seem premature to adolescents and to their parents. The adolescents' primary concern becomes getting into college, rather than making career decisions. Consequently, the role of the high school counselor becomes primarily assisting students with college entry. Once in college, many young people continue to postpone serious consideration of work until they graduate (Hurley & Thorp, 2002; Mortimer et al., 2002; Schneider and Stevenson, 1999).

Yet, lifespan development experts posit that adolescence is the key time to explore vocation identities (Erikson, 1968; Super, 1976). Erikson describes the time of adolescence (age 10-18) as a period of exploring alternative vocational identities without the burden of adult responsibilities. Super (1976) describes age 14-24 as the "exploration" phase of development where adolescents begin to plan for the future by crystallizing and specifying occupational preferences based on self and occupational information (as cited in Niles & Harris-Bowlsbey, 2005, p. 44). However, Arnett (2000) suggests that societal changes of the last half-century have altered the development of young people. He proposes that this new stage, called "emerging adulthood," occurs between age 18-25 and is characterized as

... a time of life when many different directions remain possible, when little about the future has been decided for certain, when the scope of independent exploration of life's possibilities is greater for most people than it will be at any other period of the life course. (Arnett, 2000, p. 469)

Research has shown that many individuals do not approach career decision-making in a rational or systematic manner (Hall, 1986 as cited in Betsworth & Hansen, 1996; Hurley& Thorp, 2002). Students do not carefully gather information about themselves and occupational opportunities, integrate the information, evaluate it, and make decisions. They may use decision-making strategies that are emotionally based, using personal reasons and intuition rather than the information gathering and goal-setting recommended by career decision-making experts (Hurley& Thorp, 2002). According to McDaniels and Hummel (1984), most people spend over 100,000 hours, or one-sixth of their lives, at work. They suggest, “anything that takes up so much of our lives should be carefully planned” (p. 231).

It is against this present backdrop that today’s agricultural education programs operate. Lewis (2000) believes that the purpose of education is to facilitate individual development, while also playing a critical role in selecting and socializing young people for the future positions they will assume in the workforce, and that vocational/occupational education at the secondary level has the potential to provide learning experiences that are more relevant and useful in achieving these goals than traditional academic subjects alone (2000).

Preparing students for “successful careers and a lifetime of informed choices” is the primary mission of agricultural educators (National FFA, 2007, p. 5). As both teachers and advisors of the National FFA Organization, agricultural educators strive to promote the FFA’s mission of making a “positive difference in the lives of students by developing their potential from premier leadership, personal growth, and career success through agricultural education” (National FFA, 2007, p. 5). The National FFA

Organization is part of the career and technical education family of organizations created as a result of the Smith-Hughes Act of 1917. Since its inception in 1928, the FFA has developed numerous activities, such as leadership conferences, conventions, competitive skill-based events and awards, officer training, and service-oriented programs to help achieve its mission (p. 5).

FFA members are, or have been, students in agricultural education. The traditional model teachers use to help students achieve career success involves formal classroom instruction, work experiences through supervised agricultural experience programs (SAEs), and involvement in FFA, which includes the opportunity to participate in career development events (CDEs) and leadership development activities (Croom, 2007, p. 610).

Career development events are an opportunity for students to apply agribusiness, agriscience, and technology knowledge and skills gained in the classroom in the real world. Achievement in any of the over 300 agriculture-related careers requires students to think critically, communicate clearly, and perform effectively. “These skills and many others are enhanced through participation in CDEs” (National FFA FFA, 2007, p. 52). Additionally, preparing for CDEs requires students to learn how to work with peers, teachers, business people, and community leaders (2007).

Supervised agricultural experience programs are planned, practical agricultural activities that support skill and competency based development, allow students to apply classroom knowledge through real-world applications, and create opportunities to receive recognition, grants, scholarships, and awards (National FFA, 2007). SAEs, along with

CDEs, leadership development activities, and classroom learning all work together to contribute to students' career success.

The factors that influence career success are an important topic for agricultural educators, as career guidance is often considered part of their job. Kotrlik and Harrison (1987) cite a study by Eaddy (1968) that found that the agriculture teacher is often more effective than the school counselor in the area of career guidance. In their own study they found that for agricultural education students, the agricultural instructor is almost equally as influential as the school counselor in regard to career decisions (1987). Agricultural educators not only help students learn career-related skills, but they can also help students to identify interests, gather career-related information, and navigate through the many variables of career decision-making.

Career success in agricultural education and FFA has traditionally focused on skills-based competencies. FFA's *LifeKnowledge* provides a definition of career success: "Demonstrating skills necessary to be professionally successful" (Croom, 2004, p. 11). The skills necessary for career success are further defined by four precepts, or competencies: a) communication, b) decision-making, c) flexibility and adaptability, and d) technical and functional skills in agriculture and natural resources, as illustrated in Figure 1-1 (Croom, 2004).

The specific "signs of success", or objectives of *decision-making and implementation*, include a student's ability to a) demonstrate the decision-making process, b) demonstrate problem-solving skills, c) make ethical decisions, and 4) choose a career based on passion, abilities, and aptitudes (National FFA, n. d.).

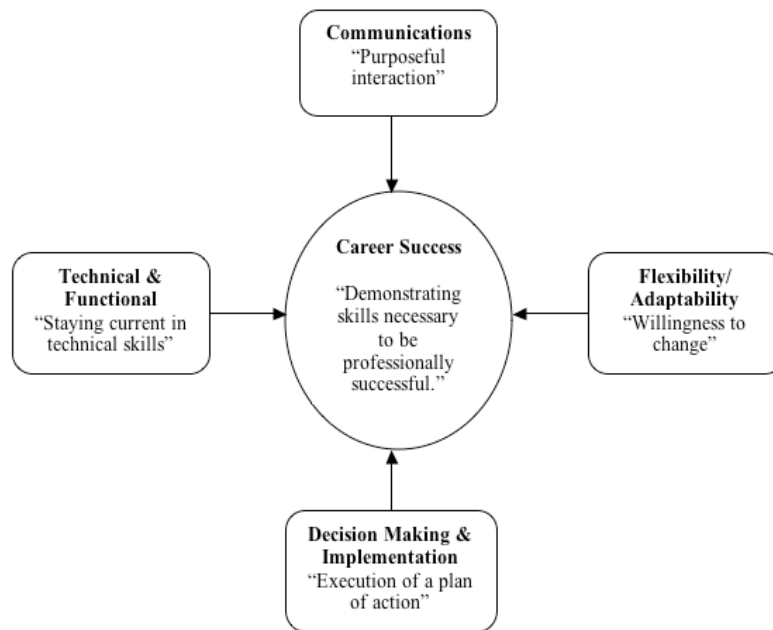


Figure 1-1. National FFA career success and its defining precepts.

Adapted from "FFA Members, why are we here?: Standards-based accountability in the FFA" by B. Croom, 2004, *Agricultural Education Magazine*, 74, (4), p. 11.

FFA activities like CDEs, SAEs, and leadership training may help students gain these competencies of career success. Talbert and Balschweid (2004) found in a national survey that FFA members more than nonmembers believed that their agricultural classes were preparing them for the future; however, they also found that two-fifths of FFA members surveyed had never participated in a CDE, one-half had never participated in a leadership event, and one-third did not have an SAE (p. 29).

In an investigative research review, Zirkle and Connors (2003) found that "little research exists to support the claims of career and technical organizations of the benefit to their members" (p. 16). Their findings support Lankard's (1996) writings about *Myths and Realities: Youth Organizations*, "Although participation in these organizations has been associated with the development of positive work attitudes and leadership skills, it is

unclear the extent to which participation in career and technical student organizations contributes to participants' career and occupational development" (as cited by Zirkle & Conners, 2003, p. 16).

However, a report from the Center for Labor Market Studies shows that exposure to work experiences in high school has been linked to both greater success in the workforce and in postsecondary education (as cited in Kline & Williams, 2007, p. 3). Bajema, Miller, and Williams (2002) report, "Agricultural education in public schools has a successful record of helping students set and achieve career and educational goals" (p. 62). There is also strong evidence that participation in extracurricular youth activities provides opportunities and conditions that may foster development, increase levels of motivation, and fuel the personal and occupational development process (Eccles & Barber, 1999; Eccles, Barber, Stone, & Hunt, 2003; Hansen, Larson & Dworkin, 2003). A study of high school students in Texas found that students who participate in extra curricular activities score significantly higher on measures of career maturity and career decision self-efficacy (Carns et al., 1995). While FFA is considered an *intracurricular* aspect of agricultural education, for the purpose of this study, any developmental experience or youth involvement activity with the potential for performance success or personal accomplishment, intra- or extracurricular, was considered a *learning activity*.

Purpose of Study

The purpose of this study was to increase agricultural educators' understanding of the career development process of adolescents in an effort to further define career success. Specifically, this study will describe a proposed model of career decision-making for students in agricultural education and identify key learning

activities/experiences contributing to career choice behaviors. Objectives of this study are the following:

1. Describe select demographic characteristics, including gender and post-education plans, of high school seniors in agricultural education;
2. Describe the career decision self-efficacy of high school seniors in agricultural education;
3. Describe types of learning activities participated in by high school seniors in agricultural education; and
4. Determine the relationship between learning activities and career decision self-efficacy of high school seniors in agricultural education.

Justification of Study

In an educational context that seems to delay adolescents from making career decisions, agricultural education and FFA strive to develop an adolescent's potential for career success. Since the National FFA Organization has identified "Choosing a career based on passion, abilities, and aptitudes" as a sign of success (competency needed for career success), and career-decision self-efficacy contributes to career choice behavior, then the potential for career success could be measured by career decision self-efficacy.

Social cognitive career theory (SCCT) (Lent & Brown, 1996; Lent, Brown, & Hackett, 1994) 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. The application of Bandura's (1977) self-efficacy theory to career behavior, specifically career decision-making (Betz & Hackett, 1981; Taylor & Betz, 1983) used in SCCT provides a useful framework for measuring students' confidence in performing

career choice tasks, as well as offers clues to career interventions that may build self-efficacy beliefs.

While it seems that FFA members should be better prepared to make career decisions given their opportunity for involvement in learning activities that expose them to efficacy-building sources, the relationship between FFA participation and career decision self-efficacy (CDSE) is unknown. Given the complexity of the cultural context of today's student, this study sought to discover if traditional learning activities employed by FFA and agricultural education contribute more to students' career choice behaviors than do other learning activities.

Limitations of Study

The primary limitation of this study was that it was conducted with a limited sample of students 18 years or older (for the purpose of collecting data at the end of students' agricultural education experience), who were enrolled in agricultural education courses in the Northern Region of Georgia (for the purpose of resource management and cost savings). While a cluster random sample was utilized, the researcher was only able to collect data from selected schools that returned a letter of authorization, causing the random sample to be smaller and less generalizable than was originally intended. Additionally, the self-reporting nature of instrument suggests caution in interpretation due to potential error in self-reporting.

List of Terms

- **Agricultural Education** – Term used in reference to instructional programs which prepare students for careers in all areas of the food, fiber, and natural resource system utilizing classroom/laboratory work, FFA involvement, and the Supervised Agricultural Experience (SAE) program (National FFA, 2007, p. 8).

- **Career Decision Self-Efficacy (CDSE)** – An individual’s degree of belief that he or she can complete tasks necessary to making career decisions (Betz & Taylor, 2006). For this study, CDSE was measured by the Career Decision Self-Efficacy Scale-Short Form (CDSE-SF) (Betz, Klein, & Taylor, 1996).
- **Career Development Events (CDEs)** - Competative, knowledge- and skill-based events allowing students to apply classroom learning to the real world.
- **Career Success** - Demonstrating skills necessary to be professionally successful (Croom, 2004).
- **FFA Degree(s)** – Structured reward program honoring active FFA members for progress in all phases of leadership, skills, and occupational development (National FFA, 2007, p. 12).
- **Learning Activity** - Any developmental experience or youth involvement activity with the potential for performance success or personal accomplishment.
- **LifeKnowledge** – National FFA’s comprehensive leadership training curriculum designed to reach every student in every classroom.
- **National FFA Organization** - Formerly known as the Future Farmers of America, the FFA is a dynamic youth organization within agricultural education that changes lives and prepares students for premier leadership, personal growth, and career success (National FFA, 2007, p. 7).
- **North Region of Georgia Agricultural Education** – Regional designation of Georgia Department of Education serving agricultural education curriculum and programming needs.
- **Smith Hughes Act of 1917** - The first national approval of vocational education in public schools, leading to the establishment of agricultural education courses and eventually FFA.
- **State and National Convention** – Yearly gatherings of FFA members at the state or national level. Often includes delegate business sessions, presentations of awards and degrees, guest speakers, and other leadership training opportunities.
- **Supervised Agricultural Experience (SAE)** - A “learning by doing” tool in agricultural education, through which students receive hands-on training in goal setting, planning, and record keeping (National FFA, 2007, p. 8).
- **4-H** - A youth organization administrated by the Cooperative Extension Service to assist youth in acquiring knowledge, developing life skills, and forming attitudes that will enable them to become self-directing, productive and contributing members of society.

Summary

The purpose of this study was to further define career success by investigating a proposed model of career decision-making for students in agricultural education. Additionally it sought to identify key learning activities/experiences contributing to career choice behaviors. Chapter one provided a summary of the history of work and career guidance, as well as the current career and education context in which agricultural educators strive to develop students' potential for career success.

The guiding objectives were discussed. This study sought to describe agricultural education students' career decision self-efficacy and participation in various learning activities, as well as explore the relationship between learning activities and CDSE. As a result of this study, agricultural educators may have a better understanding of the factors that influence adolescents' career development. Chapter two will discuss relevant career theories, as well as propose a conceptual framework for career decision-making.

CHAPTER 2

LITERATURE REVIEW

The purpose of this study was to increase agricultural educators' understanding of the career development process of adolescents and further define career success. Specifically, it sought to a) describe the demographics of students, including post-graduation plans; b) describe students' career decision self-efficacy; c) describe students' participation in learning activities; and d) determine relationships between learning activities and career decision self-efficacy. The review of literature will examine various theories of career development relevant to the study, discuss the background and use of measures for career decision self-efficacy, and present a conceptual model for examining career decision-making in agricultural education students.

Definition of Career Development Terms

The term *career* is often synonymous with the term *work*. Modern perspectives support the idea that *career* is more than one's job, but rather a lifestyle concept and unique to each individual (Herr et al., 2004; Niles & Harris-Bowlsbey, 2005). Super (1976) offers this definition of career:

The sequence of major positions occupied by a person throughout his pre-occupational, occupational, and post-occupational life; includes work-related roles such as those of student, employee, and pensioner, together with complementary avocational, familial, and civic roles. Careers exist only as people pursue them. They are person-centered. (p. 20)

Career development refers to lifelong processes, including the contextual influences that shape how people prepare to choose, choose, and continue to make

choices regarding their career (Niles & Harris-Bowlsbey, 2005). *Career development interventions* involve any activities designed to improve an individual's ability to make career decisions and cope with career developmental tasks (Duggan & Jurgens, 2007; Spokane, 1991).

Issacson & Brown (2000) define *career education* as the systematic attempt to influence career development of individuals' educational strategies, which may include gathering occupational information, integrating career-related concepts into the academic curriculum, offering various on-the-job or work-based experiences, and offering career planning courses (as cited in Niles & Harris-Bowlsbey, 2005). *Career development programs*, then, are a planned approach to facilitating needs-based interventions in the career development of students or adults (Herr et al., 2004).

Career Development and Agricultural Education

Career success is the term generally used by agricultural education and the National FFA Organization to describe the career development of students through agricultural education programs and FFA activities (National FFA, 2007). Career success is defined as "Demonstrating skills necessary to be professionally successful" (Croom, 2004, p. 11). The precepts, or competencies, that contribute to students' career success include communication, flexibility/adaptability, decision-making and implementation, and technical and functional skills (p. 11)

Theories of Career Development

There are numerous theories of career development that seek to describe processes related to the structure of career interest, career choice, and work behavior over time. It is important to study various approaches to career theory because no one theory

can sufficiently explain a person or group's career behavior. Like pieces of a puzzle, each theory adds to the comprehensiveness of total career theory (Herr et al., 2004; Niles & Harris-Bowlsbey, 2005). There is a growing movement toward a unifying theory based on the similarity of variables within vocational psychology, career counseling and guidance, and social-cognitive theory (2004). The ultimate goal of any career theory is to provide a framework from which to identify and apply career interventions to help students and adults in the career development process.

Trait-and-Factor Approach

The early twentieth century was characterized by industrialization and urbanization. Thus, the primary need became finding workers with specific skills who were willing to choose a job and stick to it (Krumboltz, 1996; Niles & Harris-Bowlsbey, 2005). Frank Parsons (1909 as cited in Krumboltz, 1996) proposed one of the earliest approaches to career development, recommending a systematic, three-step model to match individuals with occupations:

1. Know the individual's characteristics;
2. Know the occupational requirements; and
3. Exercise "true reasoning" on the relations of these two groups of facts. (1996, p. 55)

These three requirements: self-knowledge, occupational knowledge, and decision-making skills, formed the basis for what is now considered the trait-and-factor approach. This approach not only dominated 20th century career counseling, but it also influences the practices of career counselors today. Trait-and-factor career development interventions focus on matching workers to jobs. This is accomplished by using any of various standardized tests to determine interests, values, and abilities; providing clients

with occupational information; and then advising them toward occupational choices with the “best fit” or most reasonable chance for success (Niles & Harris-Bowlsbey, 2005).

In the United States, the Occupational Information System (O*NET) is a primary source of occupational information. Through a series of assessments, the website provides users an opportunity to identify key attributes, such as work-related interests, values, and skills, and then matches them to compatible or congruent jobs based on the over 800 occupations described by the O*NET database. The user can then further explore education and training requirements of these occupations (“O*Net”, n.d).

Person-Environment Fit Theory

The person-environment fit theory follows the trait-and-factor approach in that it seeks to describe individual characteristics, in this case personality types, and link them to corresponding job titles. John Holland’s (1973, 1985, 1997) theory of career development is most notable in this area, and is based on four assumptions:

1. In our culture, most persons can be categorized as one of six personality types: Realistic, Investigative, Artistic, Social, Enterprising, or Conventional;
2. There are six model environments: Realistic, Investigative, Artistic, Social, Enterprising, or Conventional;
3. People search for environments that will let them exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles; and
4. Behavior is determined by an interaction between personality and environment. (Holland, 1997, p. 2-4)

The acronym *RIASEC* represents the name and order of the six types, which are both genetically and environmentally based. An individual’s type is never just one type, but rather a combination of the types in varying degrees by order of prominence (Duggan

& Jurgens, 2007). According to Holland (1997), job satisfaction is likely to result when personality patterns are matched with comparable work environments.

There are three main constructs in Holland's theory, that of *consistency*, *congruence*, and *differentiation*. Consistency refers to the degree of relatedness between personality types or between environmental models (Holland, 1997). Some types have more in common and show consistent patterns. Congruence describes the degree of fit between a person's personality type and the current or prospective environment. Different types require different environments. A person is congruent when his or her work environment and personality match (e.g., social type working as a teacher). Incongruence is when they don't match (e.g., social type working as an auto mechanic) (1997). Differentiation refers to the degree to which a personality or environment is well defined. The more a person resembles one type, the more differentiated they are. A person who resembles many types is considered undifferentiated, and can have more difficulty making career decisions (Holland, 1997).

Life-Span, Life-Space Theory

While the trait-and-factor approach is useful to address assessment and gathering of occupational information, it was not designed to address the more complex contextual, developmental, and environmental factors that contribute to modern-day career decision-making and vocational success. The life space, life-span theory is a synthesis of theories resulting from over 40 years of work, but is contributed primarily to Donald Super (1957, 1976, 1990). It provides an overarching framework for conceptualizing career development over the lifespan and describes key aspects of career development, including a) life span, b) life space, and c) self-concept.

The basic idea of *life-span* development is that our careers develop over time within different developmental stages. Super (1976) identified the stages of career development in their typical sequence as the following:

1. Growth – (age 4 to 13). The interaction between child and home, neighborhood and school environment, children are confronted with the developmental tasks of developing a beginning sense of self and a basic understanding of the world of work. Occupational preferences are based on emotional need and change often.
2. Exploration – (ages 14 to 24) Adolescents building upon information gathered in the growth stage. As young people try out a variety of activities, roles, and situations, they determine occupational preferences and crystallize the type of work they would enjoy. Exploration results in further development of interest and abilities and confirms or contradicts the suitability of role models or self-concepts.
3. Establishment – (age 25 – 45) This phase is characterized by stabilizing, performance, and advancing in one’s chosen career. Super notes that this stage “usually begins in the mid-twenties, although some people drift, flounder or explore for as many as 10 years longer and never achieve stable careers” (1976, p. 23). Super, Kowalski, and Gotkin (1967) also state that even though this stage happens after a young person leaves school, “how schools prepare for it has a great deal to do with how much drifting, floundering, and stagnating there is during the later school and early work years” (as cited in Super, 1976, p 23).
4. Maintenance – (age 45 to 65). Workers in this stage often encounter the choice to keep up with advancements in their field or change occupations. Those who update and innovate will advance, while those who do not update their skills may become stagnate in their performance (Niles & Harris-Bowlsbey, 2005).
5. Decline or Disengagement – (about age 65). This stage is one of declining involvement in occupations and consideration toward retirement lifestyles and activities. (Niles & Harris-Bowlsbey, 2005; Super, 1976)

Within each life stage there can be different positions or roles that an individual may take on, including child, student, worker, spouse, parent, homemaker, citizen, “leisurite,” and pensioner (Super, 1976; 1990). Each of these roles can be played out in a number of “theaters,” such as the home, the community, the school, or the workplace.

The concept of *life-space* then is simply “the varying multiple roles of the life cycle and the number of theaters in which the roles are played out” (Super, 1976, p. 25).

Self-concept develops over time and consists of people’s view of self and of the situation or condition in which they exist (Super, 1990). Self-concept contains both objective and subjective elements that are used to construct meaning from our life experiences and also to identify appropriate career goals (Niles and Harris-Bowlsbey, 2005).

Social Learning Theory of Career Decision Making

The social learning approach is based on psychological research into the human learning process. John Krumboltz (1976) proposed that an individual’s career development and career decisions are based on learned behaviors shaped by unique learning experiences. “These learning experiences consist of contact with and cognitive analysis of positively and negatively reinforcing events” (Mitchell & Krumboltz, 1990, p. 145). Mitchell and Krumboltz’s (1990) social learning theory of career decision-making (SLTCDM) specifies that the determinants on career choice and career development include the following:

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 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. (1990, p. 148-155)

These four factors influence an individual's belief about herself and the world, and influence career decision-making through a) self-observation generalizations about abilities, interests, and values, b) worldview generalizations, c) task-approach skills, and d) choice actions (Mitchell & Krumboltz, 1990). Within this theory, "it is important to distinguish between career-choice intentions, which are easy to change, and career choice actions, which may be more difficult to change" (1990, p. 167). Ultimately, this theory suggests that in order to maximize career development, all individuals should have equal opportunity to be exposed to the widest possible array of learning experiences (1990).

Social Cognitive Career Theory

Lent, Brown, and Hackett's social cognitive career theory (SCCT) (1994, 1996) represents a convergence of theory, as it seeks to explain the interplay among many constructs that are dealt with by other existing career development theories (Lent & Brown, 1996). Derived primarily from Bandura's (1986) general social cognitive theory, SCCT builds upon Krumboltz's (1976) assumption that cognitive factors play an important role in career development and career decision-making behavior, emphasizes the experiential process, and distinguishes between choice intentions (goals) and choice actions (behaviors) (Mitchell & Krumboltz, 1990). It also incorporates research on self-efficacy beliefs in the career domain (Betz & Hackett, 1981; Taylor & Betz, 1983). The resulting conceptual framework helps provide an understanding of the processes through which people develop career-related interests, make career decisions, and achieve career success through performance and persistence (Lent & Brown, 1996).

Model of Career Choice

Social cognitive career theory conceptualizes career-related interest, choice, and performance processes within three interlocking, segmental models (Lent et al., 1994). At its most basic, SCCT illustrates how personal characteristics, contextual factors, and learning experiences interact bi-directionally to influence self-efficacy beliefs and outcome expectation beliefs. These beliefs in turn shape interests, goals, actions, and ultimately our attainments in the domains of career interest, career choice, and career development. It is important to note, however, that interest, goals, and actions can also be directly influenced by contextual factors (e.g., job opportunities, training opportunities, or financial resources) (Lent & Brown, 1996; Lent et al., 1994).

Specifically, the model of career choice (as seen in Figure 2-1) hypothesizes that people are attracted to activities for which they feel efficacious and expect positive outcomes. They are likely to form goals for sustaining or increasing the activity. The goals increase the likelihood of subsequent practice. Practice efforts give rise to a pattern of attainments that create a feed back loop which reinforce self-efficacy and outcome expectations, and affect the shape of future career behavior (Lent & Brown, 1996; Lent et al., 1994).

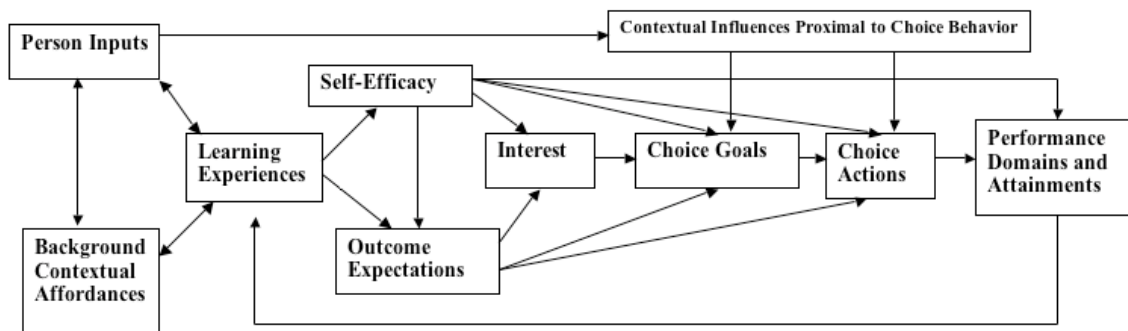


Figure 2-1. Model of person, contextual, and experiential factors affecting career-related choice behavior.

Reproduced from “Toward a Unifying Social Cognitive Theory of Career and Academic Interest, Choice, and Performance,” by R. W. Lent, S. D. Brown, and G. Hackett, 1994, *Journal of Vocational Behavior*, 45, p. 93. Copyright 1993.

Triadic Model of Causality

Social cognitive career theory is based on Albert Bandura’s (1986) model of triadic reciprocal causation (triadic reciprocity), which describes how overt behaviors (learning experiences), personal attributes (person inputs), and external environmental influences (background contextual affordances) all “operate as interlocking mechanisms that affect one another bi-directionally” (Lent & Brown, 1996; Lent et al., 1994). Figure 2-2 illustrates this interlocking and bi-directional relationship.

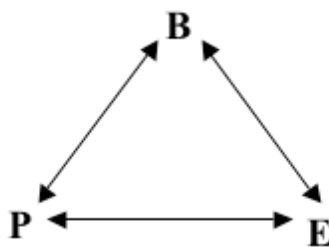


Figure 2-2. The relationship between three classes of determinants (behavior, personal characteristics, and environment) in triadic reciprocal causation.

From *Social foundations of thought and action: A social cognitive theory* by A. Bandura, 1986, Englewood Cliffs, NJ: Prentice Hall, pp. 24.

Behaviors.

The SCCT model emphasizes sources of experiential learning that contribute to self-efficacy beliefs and outcome expectations. Bandura (1977, 1986) describes four sources of information that shape self-efficacy beliefs: a) personal performance accomplishments, or experience in successfully performing a behavior; b) vicarious learning, or modeling; c) social persuasion, for example, encouragement and support from others; and d) physiological states and reactions, or lower levels of emotional arousal (anxiety) in connection with the behavior. Personal performance accomplishments are generally seen as the most influential to self-efficacy, as successful accomplishments tend to result in raising self-efficacy beliefs, while failures lead to more negative or weaker self-efficacy beliefs (Bandura, 1986; Niles & Harris-Bowlsbey, 2005). Therefore, overt behaviors that provide opportunities for exposure to these sources of information would be considered learning experiences.

Personal characteristics.

In the SCCT model of career choice, person inputs may include biological and psychosocial attributes such as predisposition, gender, race/ethnicity, or disability/health status (Lent et al., 1994). In a study of 217 college students, Leong and Chervinko (1996) concluded that individuals with high levels of career indecision also tend to have high levels of negative personality traits. They found that the negative personality constructs of fear of commitment, self-oriented and socially prescribed perfectionism, private self-consciousness, and social anxiety “account for a significant proportion of the variance (20 percent) of career indecision” (1996, p. 327).

Most of the psychometric characteristics known for measures of career decision self efficacy come from samples of predominantly White college students (Chaney, Hammond, Betz, & Multon, 2007). Lent et al. (1994) cite Hackett & Lent (1992) regarding the study of gender and race in career research:

While gender and race/ethnicity have long been the focus of career development research, until recently, much of this inquiry has involved documenting simple sex or race differences in particular vocational outcomes. . . . there is continuing controversy over whether gender- and culture-specific models may be required. (Hackett & Lent, 1992 as cited in Lent et al., 1994, p. 103)

Unique to each person, yet possibly shaped by environment, is the impact of personal belief systems or values. Krumboltz suggested that “ a personal private belief system may govern most career decisions and that these beliefs are not easily tapped by traditional methods” (1983 as cited by Spokane, 1991, p. 7).

Environmental influences.

Described as contextual affordances in SCCT, environmental influences include situations or contexts that offer supports or barriers to learning experiences that fuel career choices, as well as the opportunity structure within which career plans are made and implemented (Lent et al., 1994). These factors may includes emotional or financial supports, and family or other social inputs (1994).

For example, Ferry (2006) explored factors that play key roles in rural high school seniors and young adults’ career choice process. Through qualitative interviews she concluded that the social context of family, school, and community culture and structure were instrumental in how youth learn about careers and made career decisions (2006).

Roderick et al. (2008) reports in a research summary of Chicago Public Schools that students who attended high schools with a strong college climate were significantly more likely to plan to attend and enroll in four-year schools (2008, p. 3).

Thompson and Russell (1993) posit that counselors and parents play a vital role in the education and career plans of rural youth. They found an important relationship exists between parents' and counselors' beliefs about agriculture and students' intentions to select it as a possible career (1993). Several studies conclude that parents are involved in, and influential on, agricultural education students' educational and career choices (Kotrlik & Harrison, 1989; Reagor & Rehm, 1995; Resche & Kneirim, 1987).

Other contextual influences.

The SCCT model also notes the influence of contextual factors proximal to career choice. These are factors that come into play at critical choice junctures and may include personal career network contacts, discriminatory hiring practices, or unplanned events (Lent et al., 1994). For example, lack of well-paying jobs was found to be a barrier influencing the out migration of young adults from rural areas of Pennsylvania (Ferry, 2006). Betsworth and Hansen (1996) studied the influence of serendipitous events, or events that were not planned or predictable, on an individual's career. In their analysis of 167 stories of critical incidents ($n=141$), they determined several reasons individuals chose to pursue a given career field, including a) professional or personal connections, b) being in the right place at the right time, c) encouragement of others, and d) unexpected exposure to interest area (1996, p. 95).

Within the triadic reciprocal model, SCCT highlights three building blocks of career development: a) self-efficacy beliefs, b) outcome expectations, and c) personal goals (Lent & Brown, 1996).

Self-Efficacy Beliefs

Bandura describes self-efficacy as “people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performances. It is concerned not with the skills one has, but with judgments of what one can do with whatever skills one possesses” (1986, p. 391). Self-efficacy beliefs are both dynamic and domain specific, meaning that perceived beliefs about self must be applied to a specific task (e.g., “Can I complete this application?”). Beliefs, then, play an important role in choice behavior. People tend to avoid tasks and situations they believe exceed their capabilities, but they move toward and perform confidently activities they judge themselves capable of handling (Bandura, 1977). In the domain of the career decision-making process, this means that people may move toward occupations they believe they have the capability to do, and avoid occupations requiring skills or abilities they do not think they possess or cannot develop (Niles & Harris-Bowlsbey, 2005).

Outcome Expectations

Another important component of social cognitive career theory is outcome expectations. According to Bandura (1986), if self-efficacy is a person’s belief concerning the ability to successfully perform a certain task or behavior, then outcome expectation is a judgment of the likely consequence such behavior will produce (e.g., “If I attain a part-time job, I will be able to save money for college”). Outcomes expectations include beliefs about physical or extrinsic rewards (money), social (approval), or self-

evaluative (pride) (Lent & Brown, 1996, p. 83). Related to the various domains of career behavior, self-efficacy and outcome expectation influence each other, as an individual may believe that a certain action will produce positive outcomes (outcome expectation), but does not take action because he or she does not believe they have the skills to successfully execute the activity (self-efficacy).

Personal Goals

Personal goals can be defined as one's intention to engage in a certain activity or to produce a particular outcome (Bandura, 1986). Personal goals influence choice career behaviors in important ways; they relate to the determination to engage in certain career development objectives in order to produce particular career choice outcomes. Goals help organize and guide behavior over periods of time (Niles & Harris-Bowlsbey, 2005). A person with high self-efficacy is likely to set higher goals and demonstrate firmer commitment to them (Bandura, 1989). "Challenging goals raise the level of motivation and performance attainment" (1989, p. 1176).

Career Decision Self-Efficacy

As previously noted, SCCT applies self-efficacy theory to the career domain. Bandura's (1977) theory of self-efficacy posits that belief in one's ability to successfully perform a given task or behavior will influence the kinds of behaviors attempted or avoided. The application of self-efficacy expectations in counseling psychology is useful in understanding and predicting behaviors, as well as creating interventions targeted to specific behavioral domains based on the sources of self-efficacy information: a) performance accomplishments, or mastery experiences; b) exposure to models, or

vicarious learning; c) verbal persuasion and encouragement; and d) anxiety management, or the experience physiological feedback (1977).

Betz and Hackett (1981) were the first to apply self-efficacy to career counseling, focusing specifically on the career development of women. Because self-efficacy is domain specific, they distinguished between career choice content domains (e.g., math, writing, or science) and career choice process domains (behavioral domains related to career decision-making (1981).

Taylor & Betz (1983) developed the Career Decision-Making Self-Efficacy Scale (CDMSE) utilizing Bandura's (1977) self-efficacy theory, along with Crites' (1978) career maturity theory. This scale is currently referred to as the Career Decision Self-Efficacy Scale (CDSE) (Betz & Taylor, 2006).

Crite's career maturity theory (1978) provides a framework for operationalizing the skills required in career decision-making. In Crites (1978) model, "good" career decisions are facilitated by competence with respect to five competencies that make up the career choice process: a) accurate self-appraisal, b) gathering of occupational information, c) goal-selection, d) making plans for the future, and e) problem solving. These five behavioral domains make up the subscales of the CDSE scale. "Thus, the conceptualization and measurement of career decision self-efficacy involved the integration of two major theories, one originally stemming from clinical/social psychology and the other having its origins in counseling/vocational psychology" (Betz & Luzzo, 1996, p. 416).

The CDSE has been frequently documented in career counseling and development literature. Taylor & Betz (1983) found that individuals with lower career decision self-

efficacy exhibited higher levels of vocational indecision. Taylor and Pompa (1990) also examined vocational indecision and found that career decision self-efficacy predicted vocation indecision in college students. Bluestein (1989) found that career decision self-efficacy plays a prominent role in evoking career exploration activity. Additionally, Betz and Klein (1996) found career decision self-efficacy to be the most important predictor of generalized self-efficacy.

Impact of Learning Experiences on Student Development

Social cognitive career theory posits that learning experiences (which may include behaviors displayed in extra curricular activities) influences academic and career interest, choice, and development. In a study of ninth graders ($n=595$) in Texas, Carnes et al. (1995) found that those who participated in extra curricular activities scored significantly higher on measures of career decision self-efficacy than those who did not. Eccles et al. (2003) describe how “involvement in constructive, non-academic activities both at school and in the community facilitates continued school engagement and academic achievement, as well as other aspects of positive development during adolescence and into the early adult years” (p. 883). Eccles and Barber (1999) cite evidence that participation in extracurricular activities is associated with positive development including school achievement and educational attainments, and postulate that activity choices are part of a larger system of psychological and social forces that influence development such as identity formation (1999).

In their study on what adolescents learned in youth activities, Hansen et al. (2003) found that students reported higher experiences involving goal setting, problem solving, effort, and time management in youth activities than in required academic classes.

Additionally, teens reported youth activities offer more experiences of identity exploration and reflection, as well as provide a frequent context for emotional learning experiences, such as learning to manage anger, anxiety, and stress (2003).

Proposed Model of Career Decision-Making for Students in Agricultural Education

While much literature exists on the process of career decision-making, little research exists to support the specific definition and objective of career success developed by the National FFA Organization. One purpose of this study was to propose a career decision-making model for agricultural education. Based on the literature, as well as considering the National FFA Organization's definition and objectives of career success, it seems like social cognitive career theory provides a useful model for both understanding and influencing students' potential for career success. Figure 2-3 presents a career choice model based on a subset of Lent et al.'s (1994) model of career choice (p. 93). This model takes into consideration the interlocking influence of person inputs, environment (or contextual situations), and learning experiences on a student's career decision self-efficacy and outcome expectation. Self-efficacy beliefs and outcome expectancy in turn influence career decision-making actions, or competencies identified by the National FFA Organization as signs of success for the domain of decision-making and implementation. Because performance attainment is a source of efficacy building (Bandura, 1977), this in turn becomes a source of motivation to participate in additional learning experiences that provide access and opportunity for more personal mastery experiences, models and vicarious learning, verbal persuasion or encouragement, and physiological feedback.

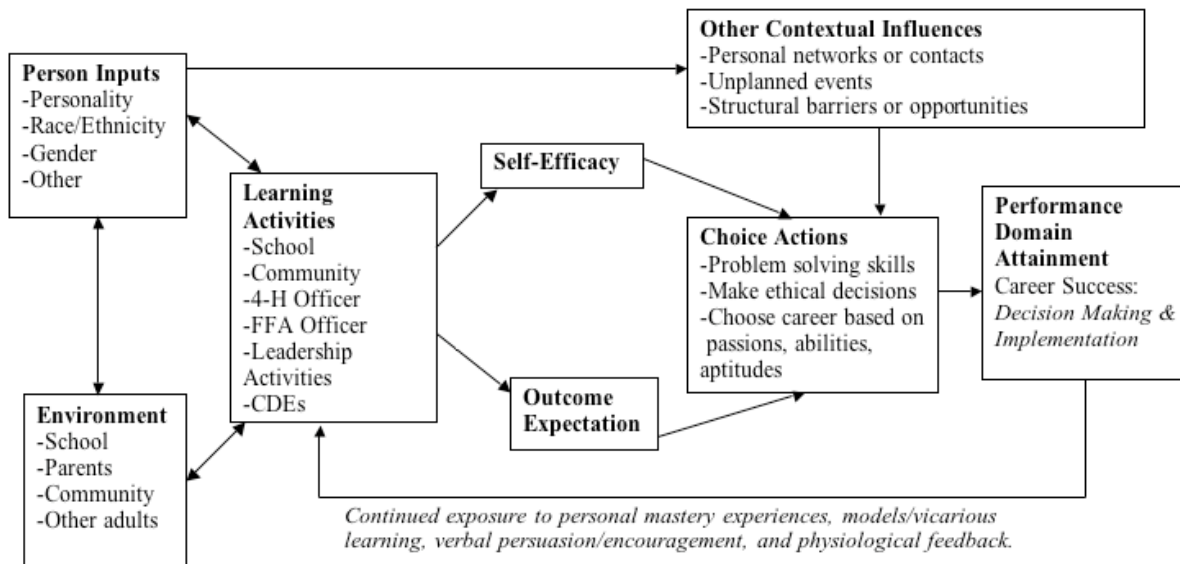


Figure 2-3. Proposed model of career decision-making for students in agricultural education.

Note. An adequate measure of self-efficacy in regards to the National FFA Organization's career decision-making actions (*problem solving skills, making ethical decisions, and choosing a career based on passions, abilities, and aptitudes*) was unknown by the researchers. The CDSE-SF was determined a useful replacement for the purpose of investigation, therefore choice actions measured were: *gathering occupational information, accurate self-appraisal, goal selection, planning, and problem solving.*

This model illustrates how career choice is not merely a one-time event, but rather a continual process. It also accounts for contextual influences or events that may influence students' decisions at the time of career choice. It may provide agricultural educators insight into the types of learning activities and support needed to help students develop their potential for career success.

Summary

Chapter two presented an overview of several major career development theories, including the trait-and-factor approach, person-environment fit theory, developmental theory, and social learning theory. Social cognitive career theory was presented as a proposed unified theory that helps explain and predict the interaction between person

inputs, contextual influences, and learning experiences on self-efficacy beliefs, outcome expectations, and goal selection related to career interest, choice, and performance. As the specific connection between learning activities and career-decision self-efficacy was the focus of this study, this chapter also detailed the application and measurement of self-efficacy to career decision-making through the Career Decision Self Efficacy Scale (CDSE). Based on the review of literature, a model of career decision-making for students in agricultural education was proposed to highlight the application of social cognitive career theory within current structure of agricultural education programs.

Chapter three will provide a detailed description of the methods used in this study, including the research design, population and sample selection, procedures, survey instruments, and measurement and scoring of data.

CHAPTER 3

METHODS AND PROCEDURES

Purpose and Objectives

In an effort to increase agricultural educators' understanding of the career development process of adolescents and further define career success, quantitative surveys were used to gather and analyze information on high school seniors enrolled in agricultural education in the North Region of Georgia. This study sought to a) describe the demographics of students, including post-graduation plans; b) describe students' career decision self-efficacy; c) describe students' participation in learning activities; and d) determine relationships between learning activities and career decision self-efficacy. Chapter three will discuss the research design, review the study population, explain the instruments used, and describe the data collection process.

Research Design

The design of this study, which incorporated a cluster random sample of schools, was a one-shot causal comparative survey that was descriptive and exploratory in nature (see Figure 3-1). Type, level, and/or amount of learning activities served as the independent variables (X) and career decision self-efficacy score was the dependent variable (O)

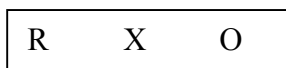


Figure 3-1. One shot survey design employing causal-comparative quasi-experimentation.

In this design, participants completed two questionnaires: a) the *Career Decision Self-Efficacy Scale - Short-Form* (CDSE-SF) (Betz, Klein, & Taylor, 1996), and b) a *learning activities survey* summarizing their involvement in school, community, and FFA activities (see Appendix A and B).

The strength of this design was that it enabled the researcher to observe the differences between individuals CDSE scores and learning experiences that have already occurred and then attempt to determine the reason for, or the results of, this difference. This allowed the researcher to identify potential relationships that can be studied further experimentally.

While it did describe key learning activities and CDSE scores, a weakness of this design was it could not provide a complete understanding of students' level of involvement in the activities. Also, there are several threats to internal validity associated with the one-shot causal comparative survey design. The primary threats to validity were the inability to manipulate the independent variables (the participants had already been exposed to the learning activities), as well as the lack of control over individual participant selection.

Because all students are not the same, another threat to validity was that of subject characteristics. While the researcher attempted to control for this by qualifying subjects as *18 years old* and *enrolled in agricultural education*, not all agricultural education programs offer the same opportunities and experiences for students. Differences in size of school, gender, ethnicity, and socio-economic level of the student could also play a role in the opportunities available to the subjects. There was also the

threat related to instrumentation, which includes the data collection itself. All surveys were administered by the agricultural education instructor, therefore there was a risk that the instructor may have chosen a convenience sample rather than selecting participants randomly within the cluster (school). Surveys were administered in different locations, by different data collectors, and under different conditions for each group; thus location was also a threat to validity.

Additionally, caution must be expressed in interpreting the outcomes of a causal-comparative study. As with correlational studies, relationships can be identified, but causation cannot be fully established (Fraenkel & Wallen, 2006).

Population and Sample Selection

The target population for this study was all seniors enrolled in agricultural education in the North Region of Georgia. Participants included in the sample were attained from a cluster sample of schools. To be included in the cluster, the school must a) be identified as part of the North Region of Georgia Agricultural Education, and b) have a high school agricultural education program. To obtain this sample:

1. An estimation of the entire population was determined. There were a total of 86 high school agricultural education programs in the North Region of Georgia, with an estimated ten senior-level students, age 18 or older, for a total population of 860.
2. Using Israel's (2003) equation five, it was determined that a sample size of 350 in a population of 860 students would allow for a precision of 4.1%. To attain this sample, a list of 35 schools (estimated 10 students per school) was randomly selected from the North Region Agricultural Education roster using a table of random numbers.
3. The agricultural education instructor of each school was contacted by email requesting a letter of authorization granting the school permission to

participate in the study (see Appendix C). Twenty-three schools responded with authorization allowing them to be included in the study.

The updated sample included 23 approved schools, which using Israel's (2003) equation allows for a precision level (e) of 5.6%. Twenty schools returned surveys within the 6-week study time frame, for a school response rate of 87 % (20 out of 23). A total of 118 students participated in the study. The student response rate was 51.3 % (118 out of 230). It was estimated that the primary reason for non-response was due to inaccurate estimation of sample size (some schools did not have 10 senior-level students enrolled in agricultural education, therefore could not return 10 surveys).

Procedures

Dillman's (2000) *Mail and Internet Surveys: The Tailored Design Method* was used for this study. The researcher sent an introductory email to agricultural education instructors of 35 schools regarding the opportunity to participate in the study and requesting a letter of authorization. Follow-up contacts were made via email and phone with non-respondent instructors. Twenty-three schools agreed to participate. Pre-notice postcards were mailed to each of the participating schools (Appendix D). Packets were mailed to each school containing a cover letter to the instructor (Appendix E), informational letters to students (Appendix F), 10 sets of survey instruments, and prize eligibility forms (Appendix G). A self-addressed, postage-paid return envelope and small gift of appreciation (a University of Georgia pencil for each student and teacher) was also included in the packets. Instructors were asked to randomly select up to 10 students based on the criteria (seniors, 18 years or older, and enrolled in agricultural education),

administer both surveys, and mail back both completed and uncompleted surveys along with prize eligibility forms in the return envelope. A follow-up email was sent to non-respondents approximately two weeks after the initial packet was sent. Additional follow-up calls were made as needed. Twenty of the 23 schools returned their packets within the six-week survey time frame. One hundred eighteen students completed the survey; however, 10 sets of data were discarded due to incomplete survey responses.

Data from the remaining 108 respondents was entered into Excel, identifiers were removed, and aggregate data was analyzed in SPSS. Means, standard deviations, and descriptive statistics were conducted to describe the learning activities and career decisions self-efficacy scores of participants. Inferential statistics were used to determine if relationships exist between types and involvement in learning activities and CDSE score.

The researcher randomly selected one of the respondents as a prize-winner of an iPod Shuffle. The winner was notified via email as indicated on the prize eligibility form. A follow-up/thank you letter was sent to participating schools. All survey instruments remained stored in a locked file cabinet for six months, at which time they were destroyed.

Instruments

Two primary instruments were used to gather information on the participants' involvement in learning activities and their career decision self-efficacy score: the CDSE-SF (Short Form) (Betz, Klein & Talyor, 1996) and a researcher-developed learning activities survey.

The Career Decision Self-Efficacy Scale-SF

The CDSE-SF is an adaptation of Taylor & Betz's (1983) Career Decision Making Self-Efficacy Scale, which was created to assess the individual's belief that he or she can successfully complete tasks necessary to making career decisions. The domain of interest—competent career decision-making—is represented by the instrument's subscales, which are based on Crites (1978) model of career maturity. For the original version of the CDSE, ten items were written to reflect each career choice competency area: a) accurate self-appraisal, b) gathering occupational information, c) goal selection, d) making plans for the future, and e) problem solving (Taylor & Betz, 1983). The CDSE-SF consists of only 25 questions and was developed by eliminating five of the ten items from each of the five CDSE scales (Betz, Klein, & Taylor, 1996). In 2006, the authors implemented a minor change to the CDSE-SF to reflect contextual changes in technology. The item stating, "Find information *in the library* about occupations you are interested in" was changed to "*Use the internet* to find information about occupations that interest you" (Betz & Taylor, 2006, p. 8).

The original version of the CDSE-SF had a 10-level response continuum; however, the five-item continuum was used for this study (1=No confidence at all, 2=Little confidence, 3=Moderate confidence, 4=Much confidence, 5=Complete confidence). Based on a study involving three samples of college students ($n=1,832$), Betz, Hammond, and Multon (2005) reported that five-level response continuum for the short form of the CDSE proved at least as reliable and valid as those obtained with the 10-level response continuum (2005).

The CDSE-SF has been reported to be highly reliable (Betz & Taylor, 2006). According to Betz et al. (1996), the internal consistency reliability of the short form ranged from .73 (self-appraisal) to .83 (goal selection) for the 5-item subscales and .94 for the 25-item total score. Betz & Voyten (1997) also found that short form reliabilities ranged from .69 (problem solving) to .83 (goal selection) for the subscales and .93 for the total score (as cited in Betz & Taylor, 2006).

In regard to construct validity of the CDSE-SF, the five constructs reflect a sound conceptual basis of career maturity theory (Crites, 1978); however, Betz et al. found that the five-factor theoretical basis is only marginally supported by factor analysis (1996). The authors retain the five-subscale structure as it has important implications for the design of career development interventions that may teach the career choice competencies (Betz & Taylor, 2006)

There is also solid evidence for the criterion-related validity of the CDSE and CDSE-SF in its relationship to other variables related to career indecision, career exploratory behaviors, and progress toward career goals (Betz & Taylor, 2006). A number of investigations (Betz, Klein & Taylor, 1996; Taylor & Betz, 1983; Taylor & Popma, 1990) found stronger perceptions of CDSE are related to lower levels of career indecision as measured by Osipow, Carney, and Barak's (1976) Career Decision Scale (CDS) (as cited in Betz & Taylor, 2006), and Betz & Klein (1997) determined that CDSE-SF scores were the best predictor of career indecision.

The original scale was validated using data from college students at two Midwest universities ($n=346$), of which a majority (76%) were freshman and the mean subject age was 19.1 years (Taylor & Betz, 1983, p. 70). Likewise, the CDSE-SF was tested for

reliability and validity on 180 college students (Betz, Klein, & Taylor, 1996). Jones (1992) developed a revision of the 50-item CDSE for high school students (CDSE-HS) by substituting “high school” where “college” appeared (as cited in Carnes et al., 1995). While Carnes et al. used the CDSE-HS version to determine that career decision self-efficacy was related to participation in extra curricular activities of ninth graders, the researcher of this study determined that the population of second semester twelfth-grader students would be closer in maturity to freshman in college; therefore, the CDSE-SF was acceptable.

Learning Activities Survey

For the purpose of this study, a learning activity was defined as developmental or youth activity with the potential for personal success experience or personal accomplishment. This definition reflects Bandura’s triadic model of causality (1986) and potential sources of self-efficacy beliefs (Bandura, 1977), and includes any educational and occupationally relevant activities in which direct experiences and/or vicarious learning could occur.

The list of general learning activities used in the survey reflected previous research by Eccles and Barber (1999) who studied the potential benefits and risks associated with participation in extra-curricula activities. In their study, Eccles and Barber provided a list to students, asking them to check off all activities in which they participated. “These organizational extra-curricular activities were selected because they require effort and are settings in which adolescents can express their identities and passions” (Csikszentmihalyi & Kleiber, 1991 as cited in Eccles & Barber, 1999). They then categorized the activities according to their actual content or domain: prosocial

(church and volunteer activities), team sports, school involvement, performing arts, and academic clubs (1999, p. 14).

The researcher used Eccles & Barber's (1999) list of activities as a model to create the learning activities survey used in this study. The instrument provided a list of 48 different activities organized by type, including: a) *school involvement* (e.g., student government, peer counseling, ROTC); b) *academic clubs/activities* (e.g., debate, math club, science fair, art club); c) *performance activities* (band, choir, drama, dance); d) *team sports* (cheerleading, football, baseball, basketball); and e) *community clubs/activities* (church/youth group, volunteer organizations, community service, scouts). Additional blanks, titled "other," were included for participants to write in any activities not listed. Participants checked a box beside any activity in which they had participated during high school, and wrote in any leadership position or role they held for that activity.

Because the students were enrolled in agricultural education, the researcher also included several questions related to involvement in 4-H (four questions) and FFA (11 questions). The FFA questions related to years of involvement, types of career development event (CDE) activities, leadership experiences, and supervised agricultural experience (SAE) involvement.

Two faculty of agricultural education at the University of Georgia reviewed the instrument for content validity and determined that it adequately sampled the domain of content it was intended to represent (general learning activities and specific FFA activity involvement). They also checked the format for readability, clarity of directions and appropriateness of language. While the original list of career development events was based on a list published by the National FFA Organization (National FFA, 2007, p. 53),

it was revised to maintain consistent language used and events offered by the Georgia FFA Association.

Measures and Scoring

Frequencies were determined for the demographic data of gender and post-graduation plans. Mean scores were calculated for each of the five CDSE constructs (accurate self-appraisal, gathering occupational information, goal selection, making plans for the future, and problem solving), as well as for total CDSE score. A total participation score was determined for each of the general activity categories (school involvement, academic clubs/activities, performance activities, team sports, and community clubs/organizations). Each activity selected by the respondent was worth one point. Any leadership involvement indicated for that activity was worth one point. The total participation score for each activity construct was determined by summing all of the points for that construct. This score was used in determining the relationship between category involvement and CDSE score.

Independent *t*-tests were conducted to compare mean CDSE scores based on a) 4-H membership, b) FFA membership, c) participation in a CDE, and d) participation in a SAE or student project.

The remaining items of the learning survey were coded to determine scores on key variables. Pearson's product moment correlations were conducted using the following variables:

1. Total school involvement score
2. Total academic clubs participation score
3. Total performance activities participation score
4. Total team sports participation score
5. Total community clubs/activities participation score
6. Years in FFA

7. FFA officer involvement score
8. FFA leadership activity involvement score
9. CDE participation score
10. Years involved in SAE
11. Highest FFA degree earned
12. CDSE – Accurate self-appraisal
13. CDSE – Gathering occupational information
14. CDSE – Goal selection
15. CDSE – Planning
16. CDSE – Problem Solving
17. Total CDSE score

Summary

Chapter three explained the methods and procedures conducted in this quantitative study regarding learning activities and career decision self-efficacy of high school seniors in agricultural education in the North Region of Georgia. The causal-comparative research methods of this study utilized Dillman's (2002) *Tailored Design Method* for internet and mail surveys. Mailed-survey instruments were used to collect data from a cluster sample of 20 schools, $n=108$ participants. The threats to validity were discussed. Methods and procedures were outlined, and descriptions of instruments used were reported. Finally, data collection and analysis were described. Chapter four will provide a more detailed report of data and discussion of results.

CHAPTER 4

RESULTS

In this chapter, research findings are presented to address the objectives of the study: a) describe the demographics of high school senior students in agricultural education, including post-graduation plans; b) describe students' career decision self-efficacy; c) describe students' participation in learning activities; and d) determine relationships between learning activities and career decision self-efficacy. Utilizing data collected from 108 survey participants at randomly selected high schools, results are divided into categories corresponding with the study's objectives.

Objective 1: Describe Gender and Post-Graduation Plans of High School Seniors in Agricultural Education

Gender

One hundred eight respondents completed the survey instruments, 69 were males (63.9 %) and 39 females (36.1%) (Table 4-1). All respondents were required to be a senior in high school, 18 years old, and enrolled in an agricultural education course at a high school located in the North Region of Georgia Agricultural Education.

Table 4-1
Gender of Participants (n=108)

Gender	<i>f</i>	%
Male	69	63.9
Female	39	36.1

Post Graduation Plans

Members were asked two questions related to post-graduation plans: a) *What do you plan to do directly after graduation* and b) *If you plan to attend school, have you chosen a major?* As seen in Table 4-2, the majority of students plan to attend some form of post-secondary school. Thirty-four (31.5%) plan to attend a four-year college or university, 26 (24.1%) plan to attend trade school or technical school, and 25 (23.2%) plan to attend a community/two-year college. Four students indicated they plan to both work full time and attend a trade or technical school (3.7%), while three plan to go directly into military service (2.8%). Nine students indicated they were unsure what they would do (8.3%). Of the students planning to attend school, 76 (70.4%) have decided on a major and 20 (18.5%) are undecided.

Table 4-2
Post Graduation Plans (n=108)

Variable	<i>f</i>	%
What do you plan to do directly after graduation?		
Attend a 4-year college or University	34	31.5
Attend trade school or technical school	26	24.1
Attend a community/2-year college	25	23.1
Unsure	9	8.3
Work Full Time	7	6.5
Both work full time and attend a trade or technical school	4	3.7
Military Service	3	2.8
Have you decided on a major?		
Yes	76	70.4
No	20	18.5
No response	12	11.1

Objective 2: Describe the Career Decision Self-Efficacy of High School Seniors in Agricultural Education

CDSE Scores

Table 4-3 identifies the mean scores of each of the constructs of the Career Decision Self-Efficacy Scale. Participants rated themselves on items related to each construct on a summative rating scale ranging from one to five (1= No confidence, 2=Very little confidence, 3=Moderate confidence, 4=Much confidence, 5=Complete confidence). The mean score was determined by summing the response of each of the five items for that construct and dividing by the number of items (five). The two highest scoring constructs were gathering occupational information ($M=4.11$, $SD=0.74$) and accurate self-appraisal ($M=4.10$, $SD=0.71$). The lowest scoring construct was problem solving ($M=3.75$, $SD=0.66$). The total mean CDSE score was determined by summing the rating for all 25 items and dividing by the total number of items.

The total mean CDSE score for this population was 3.94 ($SD=0.66$). According to Betz & Taylor (2006), a scale score of 3.5 or above is considered moderate to high, and could be predictive of willingness to try the career-decision behaviors.

Table 4-3
Mean Career Decision Self-Efficacy Scores (n=108)

Construct	<i>Mean</i>	<i>SD</i>
Gathering Occupational Information	4.11	0.74
Accurate Self Appraisal	4.10	0.71
Goal Selection	3.93	0.70
Planning	3.83	0.78
Problem Solving	3.75	0.73
Total CDSE Score	3.94	0.66

Note. 1=No confidence, 2=Very little confidence, 3=Moderate confidence, 4=Much confidence, 5=Complete confidence.

Ranking of CDSE Items

The CDSE-SF consisted of five constructs with five items each, for a total of 25 items. The items and their respective mean scores are reported to indicate the composition of the subscales. While no direct inferences can be made using individual items, they are described for the purpose of illustrating counseling interpretation and use. Table 4-4 lists the mean scores and standard deviation of all 25 CDSE-SF items. Each item represents a behavior that demonstrates maturity in a particular construct. The highest-ranking item was 19: *Talk with a person already employed in a field you are interested in* ($M=4.44$, $SD=0.84$), which represents the gathering occupational information construct. The lowest ranking item was 16: *Make a career decision and then not worry whether it was right or wrong* ($M=3.34$, $SD=1.20$), representing the construct of goal selection.

Table 4-4
Ranking and Mean Scores of all CDSE Items (n=108)

Item	Mean	SD
19. Talk with a person already employed in a field you are interested in.	4.44	0.84
22. Define the type of lifestyle you would like to live.	4.39	0.77
20. Choose a major or career that will fit your interests.	4.39	0.83
1. Use the internet to find information about occupations that interest you.	4.27	0.99
11. Choose a career that will fit your preferred lifestyle.	4.24	0.77
15. Find out about the average yearly earnings of people in an occupation.	4.16	0.98
14. Decide what you value most in an occupation.	4.15	0.94
9. Determine what your ideal job would be.	4.13	0.97
8. Persistently work at your major or career goals even when you get frustrated.	4.04	1.00
23. Find information about graduate or professional schools.	4.03	1.08
5. Accurately assess your abilities.	4.01	0.95
6. Select one occupation from a list of potential occupations you are considering.	3.97	0.93
21. Identify employers, firms, and institutions relevant to your career possibilities.	3.94	1.04
7. Determine the steps you need to take to successfully complete your chosen major.	3.86	0.95
25. Identify some reasonable major or career alternatives if you are unable to get your first choice.	3.84	0.90
24. Successfully manage the job interview process.	3.83	1.14
18. Figure out what you are and are not ready to sacrifice to achieve your career goals.	3.81	1.14
12. Prepare a good resume.	3.79	1.05
3. Make a plan of your goals for the next five years.	3.71	1.10
13. Change majors if you did not like your first choice.	3.69	1.05
2. Select one major from a list of potential majors you are considering.	3.69	0.92
10. Find out the employment trends for an occupation over the next ten years.	3.65	1.09
17. Change occupations if you are not satisfied with the one you enter.	3.65	1.09
4. Determine the steps to take if you are having academic trouble with an aspect of your chosen major.	3.55	0.92
16. Make a career decision and then not worry whether it was right or wrong.	3.34	1.20

Note. 1=No confidence, 2=Very little confidence, 3=Moderate confidence, 4=Much confidence, 5=Complete confidence.

In order to provide a clear visual of the make-up of each subscale, Table 4-5 categorizes each item by subscale and ranks them by mean score. For the gathering occupational information construct, the highest item was 19: *Talk with a personal already employed in a field you are interested in* ($M=4.44$, $SD=0.84$). The notably lowest ranking item was 10: *Find out the employment trends for an occupation over the next ten years* ($M=3.65$, $SD=1.09$).

For the construct of accurate self-appraisal, the item with the highest mean score was 22: *Define the type of lifestyle you would like to live* ($M=4.39$, $SD=0.77$). Item 18, *Figure out what you are and are not ready to sacrifice to achieve your career goals*, had the lowest mean score of this construct ($M=3.65$, $SD=1.09$).

Item 20, *Choose a major or career that will fit your interests*, ranked highest under the construct of goal selection ($M=4.39$, $SD=0.83$). The lowest ranking item in this construct was number 16: *Make a career decision and then not worry whether it was right or wrong* ($M=3.34$, $SD=1.20$).

There was less range of mean score in the planning construct. Item 21, *Identify employers, first, and institutions relevant to your career possibilities*, ranked first ($M=3.94$, $SD=1.04$), while item 3, *Make a plan of your goals for the next five years*, ranked last ($M=3.71$, $SD=1.10$).

For the construct of problem solving, item 8, *Persistently work at your major or career goals even when you get frustrated*, had the highest mean score ($M=4.04$, $SD=1.0$). Item 4, *Determine the steps to take if you are having academic trouble*, was lowest ranking for this construct ($M=3.55$, $SD=.92$).

Table 4-5
Item Ranking and Mean CDSE Scores by Construct (n=108)

Items by Construct	Mean	SD
Gathering Occupational Information		
19. Talk with a person already employed in a field you are interested in.	4.44	0.84
1. Use the internet to find information about occupations that interest you.	4.27	0.99
15. Find out about the average yearly earnings of people in an occupation.	4.16	0.98
23. Find information about graduate or professional schools.	4.03	1.08
10. Find out the employment trends for an occupation over the next ten years.	3.65	1.09
Accurate Self Appraisal		
22. Define the type of lifestyle you would like to live.	4.39	0.77
14. Decide what you value most in an occupation.	4.15	0.94
9. Determine what your ideal job would be.	4.13	0.97
5. Accurately assess your abilities.	4.01	0.95
18. Figure out what you are and are not ready to sacrifice to achieve your career goals.	3.81	1.14
Goal Selection		
20. Choose a major or career that will fit your interests.	4.39	0.83
11. Choose a career that will fit your preferred lifestyle.	4.24	0.77
6. Select one occupation from a list of potential occupations you are considering.	3.97	0.93
2. Select one major from a list of potential majors you are considering.	3.69	0.92
16. Make a career decision and then not worry whether it was right or wrong.	3.34	1.20
Planning		
21. Identify employers, firms, and institutions relevant to your career possibilities.	3.94	1.04
7. Determine the steps you need to take to successfully complete your chosen major.	3.86	0.95
24. Successfully manage the job interview process.	3.83	1.14
12. Prepare a good resume.	3.79	1.05
3. Make a plan of your goals for the next five years.	3.71	1.10
Problem Solving		
8. Persistently work at your major or career goals even when you get frustrated.	4.04	1.00
25. Identify some reasonable major or career alternatives if you are unable to get your first choice.	3.84	0.99
13. Change majors if you did not like your first choice.	3.69	1.05
17. Change occupations if you are not satisfied with the one you enter.	3.65	1.09
4. Determine the steps to take if you are having academic trouble	3.55	0.92

Note. 1=No confidence, 2=Very little confidence, 3=Moderate confidence, 4=Much confidence, 5=Complete confidence.

Objective 3: Describe Types of Learning Activities Participated in by High School Seniors in Agricultural Education

General Learning Activity Participation Scores

General learning activities were organized into five categories: a) school involvement (e.g., student government, class officer, pep club); b) academic clubs (e.g., debate, drama club, math club, FFA, art club); c) performance activities (e.g., band, choir, dance classes); d) team sports (e.g., cheerleading, football, basketball, track); and e) community clubs/activities (e.g., church/youth group, community service, 4-H). Participants used a check list format to indicate activities in which they had participated. They also listed any leadership positions held in the activity or organization. The sum of each activity (worth one point) and each leadership position (worth one point) determined the total participation score for each category. Table 4-6 presents the mean and standard deviation of these scores for all respondents.

There was a significant gap between highest and lowest category. Students' highest level of participation was in the category of academic clubs ($M=1.83$, $SD=1.56$). Community clubs/activities ranked quite lower with a mean of 1.07 ($SD=1.09$), but was followed closely by team sports ($M=0.87$, $SD=1.25$). School involvement ($M=0.45$, $SD=0.84$) and performance activities ($M=.43$, $SD=.74$) ranked much lower than the others.

Table 4-6
Mean General Learning Activity Involvement Scores by Category (n=108)

Category	<i>M</i>	<i>SD</i>
Academic Clubs	1.83	1.56
Community Clubs/Activities	1.07	1.09
Team Sports	0.87	1.25
School Involvement	0.45	0.84
Performance Activities	0.43	0.74

School Involvement Activities

Table 4-7 lists the frequency of respondents who indicated participation in each of the organization/activities listed under the category of school involvement. For this construct, students most frequently participated in FCA (Fellowship of Christian Athletes) ($f=12$; 11.1%). Five participants indicated they were involved in student government (4.6 %). Each of the other activities ranged from one to three participants. The category of other was also identified 12 times, for which nine activities were given.

Table 4-7
Frequency of School Involvement Activities (n=108)

Organization/Activity	<i>f</i>	%
FCA	12	11.1
Student Government	5	4.6
Peer Counseling	3	2.8
ROTC	3	2.8
Class Officer	2	1.9
Students Against Drunk Driving (SADD)	2	1.9
Key Club	2	1.9
Pep Club	1	0.9
Other	12	11.1
Beta Club	3	2.8
FBLA	1	0.9
HOSA	1	0.9
Internship	1	0.9
L.E.A.D	1	0.9
National Honor Society	1	0.9
Spanish Club	1	0.9
Voca (Vocational Opportunities Club of America)	1	0.9
Y-Club (YMCA Leadership Delegations)	1	0.9
Not Specified	1	0.9

Academic Clubs

Table 4-8 describes the frequency of individual academic club participation. Participants indicated participation in FFA most frequently ($f=97$; 89.8%), followed by science fair ($f=10$; 9.3%), drama club ($f=9$; 8.3%), and foreign language club ($f=6$; 5.6%).

All other clubs ranged from one to four respondents. No students indicated that they participated in computer club. In the category of other, of the seven self-identified activities, the highest was Beta club ($f=5$; 4.6%) and HOSA ($f=3$; 2.8%).

Table 4-8
Frequency of Academic Clubs (n=108)

Organization/Activity	<i>f</i>	%
FFA	97	89.8
Science Fair	10	9.3
Drama Club	9	8.3
Foreign Language Club	6	5.6
Tutoring/other subjects	4	3.7
Chess Club	3	2.8
Art Club	3	2.8
Math Club	2	1.9
Tutoring/math, science, computer	2	1.9
Music Club	2	1.9
Debate	1	0.9
Forensics	1	0.9
DECA	1	0.9
FCCLA	1	6.5
Computer Club	0	0.0
Other	14	13.0
Beta Club	5	4.6
HOSA	3	2.8
National Honor Society	2	1.9
FBLA	1	0.9
Gaming Club	1	0.9
International Thespian Society	1	0.9
Lion Pride	1	0.9

Performance Activities

As indicated in Table 4-9, band was the performance activity most frequently participated in by respondents ($f=18$; 16.8%). Ten percent of the respondents participated in drama/plays ($f=1$), and seven respondents participated in choir (6.5%).

Table 4-9
Frequency of Performance Activities (n=108)

Organization/Activity	<i>f</i>	%
Band	18	16.8
Drama/plays	11	10.2
Choir	7	6.5
Dance Classes	2	1.9
Dance Team	1	0.9
Orchestra	0	0.0
Other	2	1.9
Color Guard	1	0.9
Not Specified	1	0.9

Team Sports

Table 4-10 ranks the most popular team sports among respondents. The most frequently indicated activity was football ($f=14$; 13%), followed by a tie between basketball and baseball, each with nine responses (8.3%) and track/cross country ($f=8$; 7.4%). Others sports ranged from zero to six participants.

Table 4-10
Frequency of Team Sports (n=108)

Organization/Activity	<i>f</i>	%
Football	14	13
Basketball	9	8.3
Baseball	9	8.3
Track/Cross-Country	8	7.4
Cheerleading	6	5.6
Wrestling	6	5.6
Soccer	5	4.6
Softball	4	3.7
Volleyball	4	3.7
Tennis	3	2.8
Gymnastics	3	2.8
Golf	2	1.9
Swimming/Diving	2	1.9
Archery	1	0.9
Ice Hockey	0	0.0
Other	5	4.6
Marching Band	1	0.9
Paintball	1	0.9
Showing Calves	1	0.9
Not Specified	2	1.9

Community Clubs/Activities

As seen in Table 4-11, the largest number of respondents in the community clubs/activities category was for church/youth activities ($f=41$; 38%). 4-H was the second most frequently participated in activity ($f=24$; 22.2%), followed by volunteer organizations and community service activities, which tied at 13 percent each ($f=14$). Nine respondents participated in scouts (8.3%), and three indicated participation in other related activities (2.8%).

Table 4-11
Frequency of Community Clubs/Activities (n=108)

Organization/Activity	<i>f</i>	%
Church/Youth Group	41	38.0
4-H	24	22.2
Volunteer Organizations	14	13
Community Service	14	13
Scouts/Girls and Boys Club	9	8.3
Other	3	2.8
High Venture Scouts	1	0.9
Jr. ROTC	1	0.9
Not Specified	1	0.9

4-H Demographics

Besides general learning activity involvement, specific information on 4-H involvement was determined. In response to the question, *Were you ever a 4-H member?*, 58 participants (53.7%) said yes and 50 (46.3%) said no. (This number differs from reported 4-H participation in Table 4-11; $f=24$; 22.2%.) Table 14-2 indicates that of the 58 4-H members, 48 (82.8%) were members between one and three years, six (10.3%) were members four to six years, and four (6.9%) were members seven to nine years. Only 10 (17.2%) of 4-H members surveyed served as an officer.

Table 4-12
 4-H Demographics ($n=58$)

Variable	<i>f</i>	%
Years in 4-H		
1-3	48	82.8
4-6	6	10.3
7-9	4	6.9
4-H Officer		
Yes	10	17.2
No	48	82.8

FFA Membership and Officer Involvement

Of the sample ($n=108$), 97 (89.7%) were FFA members. As indicated in Table 4-13, FFA membership ranged from one year ($f=25$; 25.8%) to five or more years ($f=13$; 13.4%). The mean years of membership was 2.82 years ($SD=1.41$). Thirty-one (32%) of the 97 members surveyed indicated that they had served as an officer. Of the 31 officers, 29 (93.5 %) served only at the chapter level. One officer's highest level attained was at the district level and one officer served at the state level (3.2 %).

In order to measure impact of officer involvement on career decision self-efficacy, a FFA officer involvement score was determined for each FFA member ($n=97$). This number was a summation of the total number of different offices indicated (one point each) plus a weighted score for the level of highest office indicated (chapter=1, district=2, state=3, national=4). The mean FFA officer involvement score of all FFA members was 0.62 ($SD=.97$). Among FFA officers ($n=31$), the mean officer involvement score was 1.94 ($SD=0.57$).

Table 4-13
FFA Membership and Officer Involvement

Variable	<i>f</i>	%
Years in FFA (<i>n</i>=97)		
1	25	25.8
2	18	18.6
3	16	16.5
4	25	25.8
5 +	13	13.4
FFA Officer (<i>n</i>=97)		
Yes	31	32.0
No	66	68.0
Highest Level FFA Office (<i>n</i>=31)		
Chapter	29	93.5
District/Region	1	3.2
State	1	3.2
National	0	0

FFA Leadership Activities

FFA leadership activities included leadership events that were not considered CDEs, such as camps, conferences, and conventions. As seen in Table 4-14, 51.5% of FFA members indicated that they had not participated in any leadership Activity ($f=50$). Participants most frequently participated in State FFA Convention ($f=33$; 34%), followed by National FFA Convention ($f=23$; 23.7%). Only one member had participated in the state's Discovery Conference (1%), and several other state events were attended by approximately 10 % of members each: Success Conference ($f=10$; 10.3%), Greenhand Jamboree ($f=10$; 10.3%), and Summer Leadership Camp ($f=12$; 12.4%).

For the purpose of determining the relationship between FFA leadership activity involvement and career decision self-efficacy, a FFA leadership activity involvement score was calculated by summing the total number of FFA leadership activities (non

CDE) in which each student participated. The mean FFA leadership activity involvement score ($n=97$) was 1.34 ($SD=1.93$).

Table 4-14

Frequency of FFA Leadership Activities (n=97)

FFA Leadership Activity	<i>f</i>	%
None	50	51.5
State FFA Convention	33	34.0
National FFA Convention	23	23.7
Local Officer Retreat	14	14.4
Summer Leadership Camp	12	12.4
Proficiency Award Program	12	12.4
Other	11	11.3
Success Conference	10	10.3
Greenhand Jamboree	10	10.3
Washington Leadership Conference (WLC)	4	4.1
Discovery Conference	1	1.0

Career Development Event Participation

Of the 97 FFA members in this study, 55 (56.7%) indicated that they had participated in at least one career development event (CDE). Participants indicated the highest level at which they participated in each CDE area (local/district, state, or national). Table 4-15 describes the frequencies of highest participation levels for each CDE area. Career development events are also ranked by the total number of participants in each area. Participation ranged from none (dairy showmanship and discussion meet) to 14 (forestry). In the forestry CDE, 12 participated at the local/district level only (12.4%), and two participated at the state level (2.1%). Agricultural mechanics was also a popular CDE among respondents, with a total of 17 participants, followed by environmental and natural resources ($n=13$) and floriculture ($n=12$). Several CDEs had participants reach the national level, including agricultural marketing plan ($f=1$), creed speaking ($f=1$), extemporaneous public speaking, ($f=1$), job interview ($f=2$), prepared public speaking ($f=1$), and wildlife management ($f=1$).

A total CDE participation score was calculated in order to measure the relationship between CDEs and career decision self-efficacy. Participants received a score for highest level of participation in each CDE area (none=0, local/district=1, state=2, national=0). The individual participants' scores were each summed for all 33 CDE areas to determine total CDE participation scores. The mean CDE participation score of FFA members ($n=97$) was 2.64 ($SD=3.91$).

Table 4-15
Highest Level of CDE Participation (n=97)

Career Development Event	Local		State		National		Total Participants(n)
	f	%	f	%	f	%	
Forestry	12	12.4	5	5.2	0	0.0	17
Agricultural Mechanics	13	13.4	1	1.0	0	0.0	14
Environmental and Natural Resources	6	6.2	7	7.2	0	0.0	13
Floriculture	10	10.3	2	2.1	0	0.0	12
Land Judging	8	8.2	3	3.1	0	0.0	11
Poultry Judging	5	5.2	6	6.2	0	0.0	11
Livestock Judging	7	7.2	3	3.1	0	0.0	10
EMC Wiring	8	8.2	1	1.0	0	0.0	9
Farm Business Management	4	3.7	4	3.7	0	0.0	8
Floral Design	7	7.2	1	0.0	0	0.0	8
Tractor Operation and Maintenance	6	6.2	2	2.1	0	0.0	8
Agriscience Fair	2	2.1	2	2.1	2	2.1	6
Ag Sales	5	5.2	1	1.0	0	0.0	6
Creed Speaking	5	5.2	0	0.0	1	1.0	6
FFA Quiz	5	5.2	1	1.0	0	0.0	6
Nursery and Landscape	4	4.1	2	2.1	0	0.0	6
Parliamentary Procedure	3	3.1	3	3.1	0	0.0	6
Job Interview	2	2.1	1	1.0	2	2.1	5
Wildlife Management	2	2.1	2	2.1	1	1.0	5
Meats Judging	3	3.1	1	1.0	0	0.0	4
Prepared Public Speaking	2	1.9	0	0.0	1	1.0	3
Other	3	3.1	0	0.0	0	0.0	3
Ag Marketing Plan	1	1.0	0	0.0	1	1.0	2
Extemporaneous Public Speaking	0	0.0	1	1.0	1	1.0	2
Horse Judging	1	1.0	1	1.0	0	0.0	2
Wood Fabrication	1	1.0	1	1.0	0	0.0	2
Agricultural Communications	1	1.0	0	0.0	0	0.0	1
Dairy Judging	1	1.0	0	0.0	0	0.0	1
Dairy Showmanship	0	0.0	0	0.0	0	0.0	0
Discussion Meet	0	0.0	0	0.0	0	0.0	0

Highest FFA Degree Earned

Table 4-16 describes the frequency of highest FFA degree earned by students who were members of FFA. Thirty-eight members (35.2%) did not receive any degree.

Twenty-three members earned their state degree (21.3%), while 21 earned their chapter degree (19.4%) as their highest degree.

For the purpose of measuring the relationship between highest degree earned and career decision self-efficacy, the highest degree was coded using a continuous scale (None=0, Discovery Degree=1, Greenhand Degree=2, Chapter Degree=4, State Degree=5, and American Degree=6).

Table 4-16
Highest FFA Degree Earned (n=97)

Degree	<i>f</i>	%
None	38	35.2
Discovery Degree	0	0.0
Greenhand Degree	15	13.9
Chapter Degree	21	19.4
State Degree	23	21.3
American Degree	0	0.0

SAE or Student Program Involvement

Of the 108 participants in the sample, 94 indicated that they had a SAE or student project (87.1%). Table 4-17 describes the frequency of the type of SAE, as well as years involved in the SAE project. The most common types of SAE were entrepreneurship ($f=27$; 28.7%), placement ($f=25$; 26.6%), and exploratory ($f=20$; 21.3%). Two students participated in both an entrepreneurship and placement project (4.3%).

A majority of the surveyed seniors with a SAE were involved only 0-1 year ($f=52$; 55.3%). Twenty seven (28%) were involved in their SAE for 2-3 years. Six indicated five or more years involvement in a SAE (6.4%).

Responses to years involved in SAE were scored (0-1 year=1, 2-3 years=2, 3-4 years=3, 5+ years=4) to be used in determining if there were a relationship between years in SAE and career-decision self-efficacy.

Table 4-17
SAE Program or Student Project Involvement (n=94)

Variable	<i>f</i>	%
Type of SAE (N=97)		
Ownership/ Entrepreneurship	27	28.7
Placement	25	26.6
Exploratory	20	21.3
Research/ Experimentation and Analysis	16	17.0
Both Entrepreneurship and Placement	4	4.3
Did not respond	2	2.1
Years involved in SAE		
0-1	52	55.3
2-3	27	28.7
3-4	9	9.6
5+	6	6.4

Objective 4: Determine the Relationship Between CDSE and Learning Activities

The categorical variables used to determine relationships with CDSE scores were a) 4-H membership, b) FFA membership c) participation in a CDE, and d) participation in a SAE or student project. Several continuous variables were also determined in order to investigate bivariate correlations with CDSE scores, including the following:

1. Total school involvement score
2. Total academic clubs participation score
3. Total performance activities participation score
4. Total team sports participation score
5. Total community clubs/activities participation score
6. Years in FFA
7. FFA officer involvement score

8. FFA leadership involvement score
9. CDE participation score
10. Years involved in SAE
11. Highest FFA degree earned

Relationships Between CDSE Scores and General Learning Activities

Pearson's product moment correlations were conducted between CDSE scores and total school involvement scores, total academic clubs participation scores, total performance activities participation scores, total team sports participation scores, and total community clubs/activities participation scores. According to David (1971), a Pearson's product moment correlation of .01 - .09 represents a negligible relationship; .10 - .29 represents a low relationship; and .30 - .49 represents a moderate relationship. As Table 4-18 shows, no significant relationship was found between general learning activity categories and the CDSE construct of accurate self-appraisal. However, significant but low relationships were found between participation in academic clubs/activities and the constructs of planning, $r(106)=.25, p<.05$ and problem solving, $r(106)=.27, p<.01$, as well as total CDSE score, $r(106)=.22, p<.05$.

Total community club/activities involvement also showed a low correlation with the CDSE constructs of gathering occupational information, $r(106)=.20, p<.05$ and goal selection, $r(106)=.21, p<.05$; however, these low relationships indicate little predictive value.

Table 4-18
Relationships Between Learning Activities and CDSE Scores (n=108)

Variable	1	2	3	4	5	6	7	8	9	10	11	<i>M</i>	<i>SD</i>
1. Total School Involvement		.19	.09	.10	.33**	.04	.07	.02	.00	-.01	.03	.45	.84
2. Total Academic Clubs			.32**	-.03	.31**	.14	.17	.14	.25**	.27**	.22*	1.83	1.56
3. Total Performance Activities				.15	.18	-.05	-.11	-.19	-.05	-.05	-.10	.43	.74
4. Total Team Sports Participation					.07	-.03	-.06	-.06	-.03	-.04	-.05	.87	1.25
5. Total Community Clubs						.13	.20*	.21*	.11	.19	.19	1.07	1.09
6. Accurate Self Appraisal							.77**	.79**	.76**	.68**	.89**	4.10	.71
7. Gathering Occupational Information								.80**	.83**	.71**	.92**	4.11	.74
8. Goal Selection									.79**	.71**	.91**	3.93	.70
9. Planning										.72**	.92**	3.83	.78
10. Problem Solving											.85**	3.75	.73
11. Total CDSE Score												3.94	.66

Note. **Significant at the 0.01 level (2-tailed); *Significant at the 0.05 level (2-tailed).

CDSE Scores Based on 4-H Membership

A two-tailed independent *t*-test was used to compare the means between 4-H members and non-4-H members for each of the CDSE constructs and total CDSE score. Cohen's *d* was determined to be the most appropriate measure of effect size for an independent groups *t*-test. Using Cohen's (1977) statistic, 0.20 represents a small effect size, 0.50 represents a medium effect size, and 0.80 represents a large effect size.

As Table 4-19 shows, the greatest difference between members and nonmembers was found for the construct of gathering occupational information, $t(106)=1.6, p>.05, d=.33$. The 4-H members did have higher mean scores in each construct; however, as can be seen from the *p* of .112, this was not statistically significant. No additional tests were conducted for level of 4-H involvement.

Table 4-19
Differences in CDSE Scores based on 4-H Membership (n=108)

Construct	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	Cohen's <i>d</i>
Accurate Self Appraisal						
4-H Member (<i>n</i> =58)	4.18	.65	1.36	106	.176	.28
Non 4-H Member (<i>n</i> =50)	4.00	.78				
Gathering Occupational Information						
4-H Member	4.21	.67	1.60	106	.112	.33
Non 4-H Member	3.99	.79				
Goal Selection						
4-H Member	4.00	.65	1.10	106	.273	.20
Non 4-H Member	3.85	.75				
Planning						
4-H Member	3.87	.71	.54	106	.592	.13
Non 4-H Member	3.78	.87				
Problem Solving						
4-H Member	3.80	.69	.71	106	.481	.14
Non 4-H Member	3.70	.78				
Total CDSE Score						
4-H Member	4.01	.60	1.17	106	.243	.25
Non 4-H Member	3.86	.72				

Note. Effect size interpretation: 0.20=small effect size, 0.50=medium effect size, 0.80=large effect size.

CDSE Scores Based on FFA Membership

A two-tailed independent *t*-test was used to compare the means between FFA members and non-FFA members for each of the CDSE constructs and total CDSE Score. As found in Table 4-20, a statistically significant difference exists between FFA members and nonmembers for the construct of problem solving, $t(106)=1.98$, $p=.05$, $d=.64$. The effect size of .64 is large enough to be considered important. While the total mean CDSE score was not significantly different, nonmembers mean scores ($M=3.70$, $SD=.80$) were slightly below the moderately high designation of 3.75, which may indicate a lower likelihood of approach attitudes towards career decision-making skills (Betz & Taylor, 2006).

Table 4-20
Differences in CDSE Scores Based on FFA membership (n=108)

Construct	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	Cohen's <i>d</i>
Accurate Self Appraisal						
FFA Member (<i>n</i> =97)	4.11	.69	.74	106	.462	.24
Non FFA Member (<i>n</i> =11)	3.95	.95				
Gathering Occupational Information						
FFA Member	4.13	.73	.78	106	.438	.25
Non FFA Member	3.95	.84				
Goal Selection						
FFA Member	3.96	.68	1.37	106	.172	.45
Non FFA Member	3.65	.87				
Planning						
FFA Member	3.85	.78	.85	106	.395	.27
Non FFA Member	3.64	.84				
Problem Solving						
FFA Member	3.80	.71	1.98	106	.050	.64
Non FFA Member	3.35	.85				
Total CDSE Score						
FFA Member	3.97	.64	1.27	106	.207	.41
Non FFA Member	3.71	.80				

Note. Effect size interpretation: 0.20=small effect size, 0.50=medium effect size, 0.80=large effect size.

Differences in FFA Members' CDSE Scores Based on CDE Participation

A two-tailed independent *t*-test was used to compare the means CDSE scores between FFA members who had participated in at least one CDE and those who had not participated in any CDE. As indicated in Table 4-21, there were no significant differences found. In fact, there was no difference at all between total CDSE scores of members who participated in a CDE and those who had not, $t(95)=.00$, $p>.05$, $d=.00$.

Table 4-21
Differences in FFA Members' CDSE Scores Based on CDE Participation (n=97)

Construct	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	Cohen's <i>d</i>
Accurate Self Appraisal						
Participated in at least one CDE (<i>n</i> =55)	4.12	.70	.17	95	.867	.04
Did not participate in a CDE (<i>n</i> =42)	4.10	.68				
Gathering Occupational Information						
Participated in at least one CDE	4.09	.79	-.57	95	.568	.13
Did not participate in a CDE	4.18	.64				
Goal Selection						
Participated in at least one CDE	3.98	.71	.38	95	.702	.08
Did not participate in a CDE	3.93	.63				
Planning						
Participated in at least one CDE	3.86	.87	.13	95	.901	.03
Did not participate in a CDE	3.84	.65				
Problem Solving						
Participated in at least one CDE	3.80	.77	.00	95	1.00	.00
Did not participate in a CDE	3.80	.63				
Total CDSE Score						
Participated in at least one CDE	3.97	.70	.00	95	1.00	.00
Did not participate in a CDE	3.97	.56				.00

Note. Effect size interpretation: 0.20=small effect size, 0.50=medium effect size, 0.80=large effect size.

Differences in CDSE Scores Based on SAE Participation

Results of a two-tailed independent *t*-test (Table 4-22) show that there was no significant difference between the CDSE scores of participants who had a SAE or student project and the CDSE scores of those who did not have a SAE or student project.

Table 4-22
Differences in CDSE Scores Based on SAE or Student Project Participation (n=108)

Construct	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	Cohen's <i>d</i>
Accurate Self Appraisal						
Had a SAE (<i>n</i> =94)	4.07	.73	-.90	106	.386	.31
Did not have a SAE (<i>n</i> =42)	4.26	.60				
Gathering Occupational Information						
Had a SAE	4.08	.75	-1.04	106	.300	.34
Did not have a SAE	4.30	.64				
Goal Selection						
Had a SAE	3.92	.71	-.41	106	.681	.13
Did not have a SAE	4.00	.63				
Planning						
Had a SAE	3.83	.78	-.08	106	.939	.02
Did not have a SAE	3.84	.84				
Problem Solving						
Had a SAE	3.72	.73	-1.20	106	.234	.35
Did not have a SAE	3.97	.71				
Total CDSE Score						
Had a SAE	3.92	.66	-.80	106	.425	.24
Did not have a SAE	4.07	.62				

Note. Effect size interpretation: 0.20=small effect size, 0.50=medium effect size, 0.80=large effect size.

Relationships Between FFA Involvement and CDSE Scores

Pearson's product moment correlations were determined for select FFA involvement variables and CDSE scores. As indicated in Table 4-23, there was no significant relationship between years in FFA and CDSE score and highest FFA degree earned and CDSE scores. FFA officer involvement had a positively but low correlation to the CDSE constructs of goal selection, $r(95)=.24, p<.05$; planning, $r(95)=.25, p<.05$; and problem solving, $r(95)=.26, p<.01$, as well as total CDSE score $r(95)=.23, p<.05$. A significant but low relationship also existed between involvement in FFA leadership activities and the constructs of goal selection, $r(95)=.24, p=.05$ and planning, $r(106)=.20, p<.05$.

Table 4-23

Relationships Between FFA Involvement and CDSE Scores (n=97)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	<i>M</i>	<i>SD</i>
1. Years in FFA		.41**	.53**	.50**	.59**	.56**	-.15	-.08	-.07	-.03	-.09	-.09	2.82	1.41
2. Total FFA Officer Involvement			.70**	.59**	.51**	.49**	.11	.17	.24*	.25*	.26**	.23*	.62	.96
3. Total FFA Leadership Activity				.53**	.55**	.63**	.083	.16	.24*	.20*	.13	.18	1.34	1.93
4. Total CDE Participation Score					.65**	.57**	-.079	-.08	-.01	.00	.04	-.03	2.64	3.91
5. Years involved in SAE						.62**	.027	.05	.07	.16	.13	.10	1.67	.90
6. Highest FFA Degree Earned							.066	.09	.12	.11	.14	.12	1.71	1.67
7. Accurate Self Appraisal								.77**	.79**	.76**	.68**	.89**	4.10	.71
8. Gathering Occupational Information									.80**	.83**	.71**	.92**	4.11	.74
9. Goal Selection										.79**	.71**	.91**	3.93	.70
10. Planning											.72**	.92**	3.83	.78
11. Problem Solving												.85**	3.75	.73
12. Total CDSE Score													3.94	.66

Note. **Significant at the 0.01 level (2-tailed); *Significant at the 0.05 level (2-tailed).

Summary

Chapter four presented results related to the study's four research objectives: a) describe the demographics of high school senior students in agricultural education, including post-graduation plans; b) describe students' career decision self-efficacy; c) describe students' participation in learning activities; and d) determine relationships between learning activities and career decision self-efficacy. Chapter five will offer additional analysis and discussion of the data, as well draw conclusions and make recommendations based on the results.

CHAPTER 5

SUMMARY AND RECOMMENDATIONS

Agricultural education programs operate against a backdrop of changing work environments and shifting attitudes toward work and career. In a cultural context that seems to delay career decisions, developing a student's potential for career success remains a key goal of the agricultural educator.

An examination of career success, as described by the National FFA's precepts of communication, decision-making and implementation, flexibility/adaptability, and technical/functional skills (Croom, 2004) has become necessary to ensure that current career development strategies and programs are meeting the development needs of students. The specific competency of decision-making was explored according to the relationship between two variables: learning activities and career decision self-efficacy.

Purpose and Objectives of Study

The purpose of this study was to increase agricultural educators' understanding of the career development process of adolescents in an effort to further define career success, as well as to propose a model of career decision-making for students in agricultural education. By collecting data on general learning activities related to school, academic clubs, performance activities, team sports, and community activities, as well as specific activities related to 4-H and FFA, this study identifies key learning experiences

contributing to career choice behaviors. The specific objectives of this study were the following:

1. Describe select demographic characteristics, including gender and post-graduation plans, of high school seniors in agricultural education;
2. Describe the career-decision self efficacy of high school seniors in agricultural education;
3. Describe types of learning activities participated in by high school seniors in agricultural education; and
4. Determine the relationship between learning activities and career decision self-efficacy of high school seniors in agricultural education.

Review of Methods

A total of 23 high schools (230 students) from the North Region of Georgia Agricultural Education were invited to participate in this study. Twenty high schools (118 students) returned survey instruments. The surveys were administered over a two-month period using Dillman's (2000) *Tailored Design Method*. Ten sets of data were removed due to incompleteness; therefore, the final sample consisted of was 108 high school seniors, age 18 or older, who were enrolled in an agricultural education course.

Students completed two surveys, the *Career Decisions Self-Efficacy Scale-Short Form* (CDSE-SF) (Betz, Klein & Taylor, 1996), and a researcher developed *learning activities survey*, which sought to identify the type and amount of learning activities participated in by students in the categories of school involvement, academic clubs, performance activities, team sports, and community clubs/activities, as well as more specific involvement in 4-H and various FFA learning activities.

Survey items were coded and data were transferred into SPSS. Descriptive statistics were used to identify gender, frequency of activities, and mean scores of career

decision self-efficacy. Independent *t*-tests were used to determine relationships between select categorical variables and CDSE scores. Pearson's product moment correlations were also used to determine relationships between select continuous variables and CDSE scores.

Summary of Findings

Objective 1: Describe select demographic characteristics, including gender and post-graduation plans, of high school seniors in agricultural education

Of the 108 participants, 63.9% were male and 36.1% were female. While not all participants were members of FFA, these numbers are somewhat consistent with FFA membership statistics, which approximate female membership at 38% (Georgia Ag Ed Curriculum Office, 2006).

Most students surveyed planned to attend a four-year university (31.5%); however, 24.1% planned to attend a trade or technical school, and 23.1% planned to attend a two-year or community college. Only 6.5% planned to go directly into the workforce upon graduation, and 8.3% were unsure. This data was different from the study *Decisions Without Directions* (Hurley & Thorp, 2002), which found that nationally 68% of young people plan to attend a four-year college, 26% plan to attend a trade or technical school or two-year college, and 6% plan to enter the workforce. In this study, nearly half of agricultural education students planned to pursue a two-year option (47.2%; including both trade/technical and community college). Given the post-secondary agricultural education context in Georgia, it is not unusual for students to attend a two-year school before transferring to a four-year institution to complete their degree.

Another potential reason for the higher percentage of students attending a two-year post-secondary school option could be that these students actually made informed career decisions utilizing effective planning skills developed through learning; or, it could be a result of delayed decision making (e.g., “I don’t know what I want to do so I will go to a two year school now and then decide later”). Further investigation could seek to identify relationships between post-graduation plans and CDSE. According to the conceptual model, a combination of learning activities, person inputs, and contextual influences may influence choice goals.

It is notable that nearly one third of the total sample indicated they were unsure about future plans in general or unsure about their major. However, it was encouraging that a majority of students planning to attend some form of post-secondary education (70.4%) had decided on a major. According to Arnett’s (2000) description of life phases, the students in this sample could be considered in the phase of “emerging adulthood”, an extended time of exploration of opportunities. Given that that students will likely change majors several times during their college experience, the need for continued development of career decision skills seems important. Agricultural educators at the college level could play an important role in providing guidance, creating learning opportunities, and encouraging students to participate in additional learning experiences that may help them to crystallize interests and make informed career choices. For example, Allen, Ricketts, and Priest (2008) found that participation in student organizations at the university level was most influential in self-perceptions of leadership skills of alumni, which included communication, goal setting, and decisiveness (2008). According to the National FFA Organization (Croom, 2004), these variables are also measures of career success.

Objective 2: Describe the career decision self-efficacy of high school seniors in agricultural education

The mean total CDSE score for this study was 3.94 ($SD=0.66$). Betz & Taylor (2006) recommend that scores be interpreted based on Bandura's self-efficacy theory, which means the score is predictive of approach versus avoidance behavior. High self-efficacy predicts approach behavior, while low self-efficacy predicts avoidance behavior, in this case to the specific constructs of gathering occupational information, accurate self appraisal, goal selection, planning, and problem solving. Generally, a scale score of 3.5 or above (moderate to high confidence) could be predictive of willingness to approach or try the behaviors, while scores below 3.5 could be predictive of inadequate confidence to approach the behaviors (Betz & Taylor, 2006). For this study, students had a moderate to high self-confidence overall. The construct of gathering occupational information had the highest mean score ($M=4.11$, $SD=0.74$), while problem solving had the lowest ($M=3.75$, $SD=0.73$); however, even the lowest construct could still be considered moderate to high. Taylor and Betz (1983) also found in a study of two groups of college students ($n=346$) that problem solving was the lowest scoring subscale; however, self-appraisal was the highest. In this study, self-appraisal was second highest.

It could be assumed, based on Bandura's (1977) self-efficacy theory, that students in the North Region of Georgia Agricultural Education are currently exposed to many efficacy-building sources of information, thus resulting in moderate to high scores. However, given agricultural education's rich traditions in problem solving—from curriculum strategy to career development events—it does seem surprising that this construct scored the lowest.

Because the “responses to each behavioral item is intended to be interpretable and to have utility for intervention strategies” (Taylor & Betz, 1983, p. 69), it is also valuable to look at scores of individual CDSE items for clues into the types of activities that help build CDSE. In this sample, the item for which highest confidence was shown was item 19: *Talk with a person already employed in a field you are interested in* (gathering occupational information construct). This is consistent with Taylor and Betz (1983) findings, as was the lowest ranking item, 16: *Make a career decision and then not worry if it was right or wrong* (goal selection construct).

This may indicate that students in agricultural education have adequate exposure to career professionals. It also seems that the nature of goal selection involves both cognitive and affective processes, as an individual is encouraged to consider personal beliefs and values (which are determined through accurate self-appraisal), against potential career options. The role of an agricultural educator could be to help students see that career choice is not a one-time event, but rather a continual process, so the student should not worry about making a wrong choice.

In regard to the low ranking of problem solving, agricultural educators could use results from individual item scores to help design specific interventions that may develop confidence in that construct. For example, one item in the problem-solving construct was 17: *Change occupations if you are not satisfied with the one you enter*. Possible interventions may include additional exposure to sources of occupational information and interviews or case studies of people who changed careers. A focus on classroom related interventions could be helpful as well. Hawley-McWhirter, Rasheed, and Crothers (2000)

found that sophomores who participated in a nine-week career class saw an increase in CDSE scores.

Additional research should be conducted to determine the validity of CDSE items within the context of high school agricultural education students. For example, questions that refer to “majors” or “academic trouble” may not apply to individuals who have decided not to go to college.

Objective 3: Describe types of learning activities participated in by high school seniors in agricultural education

General learning activities.

Students participated in a wide range of learning activities. Based on the mean learning activity participation scores, the category of academic clubs (which includes FFA) had the most participation. Performance activities had the least participation. The school involvement activity with the highest amount of participation was FCA (Fellowship of Christian Athletes). Participation in other school activities was varied, but infrequent. FFA was found to be by far the most participated in academic club. Band was the most participated in performance activity, followed by drama/plays and choir.

A variety of team sports were played. Football was the most frequent followed by basketball and baseball. Over one-third of the sample participated in church/youth group, which was the highest community club/activity. Over one-fourth of the students in this study participated in volunteer organizations or community service. Involvement in many of these activities could be attributed to social contexts within the school or community (e.g., a tradition of high school football or a dominant regional faith/religious system), which are represented as background/environmental influences in the conceptual model. Additionally, participation in service activities is looked on highly by college recruiters

and employers. Several recent studies (Furco, 2002 and Yamauchi, 2006 as cited by Learn & Serve Clearinghouse, 2007) affirmed research that has consistently shown the value of service learning in helping young people explore career options and develop career-related skills (2007).

Social learning theory (Mitchell & Krumboltz, 1990), a contributing theory towards SCCT, suggests that students be exposed to as many different learning experiences as possible in order to maximize career development. Overall, this study found that students in agricultural education were not very active in other school activities. This could be because of the amount of time and responsibility needed specifically for agricultural education/FFA activities, family or home responsibilities, work responsibilities, or simply lack of interest. Based on Bandura's (1986) triadic model, further investigation into the influence of personal inputs and environmental/contextual factors could help explain this lack of involvement.

4-H membership and involvement.

While responses in the category of community clubs/activities indicated only 24 students were members of 4-H, a follow up question specific to 4-H membership found that more than half ($n=58$) students had been 4-H members. This discrepancy could be due to oversight when completing the check list portion of the survey. Most members had been in 4-H only one to three years, and most had not served as an officer. This seems to indicate a lack of active involvement in 4-H. Given the high number of FFA members, there could also be some competition for time dedicated to these activities. A replication of this study with 4-H members only may reveal a more significant relationship between

4-H and CDSE, as well as provide better insight into the specific learning activities related to 4-H that contribute to career decision-making behaviors.

FFA membership and officer involvement.

A majority of the participants were FFA members (89.7%), most likely due to the fact that the sample was of agricultural education students; however, this was higher than the national average of FFA membership of around 56 percent (Staller & Staller, 1999 as cited in Talbert & Balschweid, 2004). FFA membership ranged from one to five years, and the average number of years in FFA was 2.82. Twenty-five percent of senior FFA members had only been members for one year. Thirty-one members had served as officers, and the sample included one district officer and one state officer. The rest had served at the chapter level. This was not surprising, given that many were only members for three years or less. The conceptual model implies that repeated exposure to learning activities through the feedback loop should lead to higher levels of self-efficacy for career choice behaviors. Given that many in this sample were only exposed to FFA learning experiences for a few years, yet still have moderate to high self-efficacy score could mean that students are either a) being exposed to powerful sources of self-efficacy in a short amount of time; or, b) their self-efficacy is being influenced (as well if not more) by others sources. Additional research should be conducted to determine what other factors are involved in determining CDSE.

FFA leadership activities.

Of the 97 FFA members, over half reported that they had never participated in a leadership activity. This is consistent with Talbert & Balschweid's (2004) national study that showed one-half of FFA members had never participated in a leadership event. This

could imply that while many are FFA members, they are not very active. Considering many were also FFA members only a short time and did not hold a leadership position, it is reasonable to assume that they may have not had an opportunity to attend a leadership event. Perhaps of the schools included in the sample, some did not attend all of the leadership events described on the survey. It may be beneficial to replicate this survey with a purposive sample of schools that are equal in size and level of involvement in order to control for this variable.

The highest leadership activity participation was for State and National FFA Convention. Agricultural education leaders could utilize these opportunities by providing career education workshops at these events.

Career development event participation.

A little more than half (56.7%) of FFA members had participated in at least one CDE, with less than half never participating in a CDE. This is also consistent with Talbert & Balschweid's (2004) study that found 44.9% of FFA members had never participated in a CDE. While it is unknown why many do not participate, it could be a result of lack of opportunity based on number of CDEs the school attends and number of teams available to participate on. The CDEs with the highest overall participation in this study was forestry, agricultural mechanics, and environmental and natural resources. The lowest were dairy showmanship, discussion meet, dairy judging, and agricultural communications. Future studies could investigate the impact of individual CDEs on CDSE. In support of the overall model, it may also be valuable to determine if CDE participation influenced career choice goals.

Agricultural educators can use all CDEs as an opportunity to expose students to career-related sources of self-efficacy by encouraging outside professionals to assist with coaching and mentoring teams and encouraging personal performance accomplishments in the CDE competition. They should also seek ways to involve as many students as possible in CDE activities, even if it is only at the local/school level.

Highest FFA degree earned.

Thirty-eight FFA members (35.2%) did not earn any degree. Twenty-three earned their state degree and 21 earned their chapter degree. Level of degree accomplishment indicates a dedicated involvement to FFA and its various learning activities related to leadership, skills and occupational development (FFA, 2007). The high percentage of degrees in this sample indicates that a majority of FFA members had active participation, not only in leadership activities, but also through SAE activities. While in this study there was no relationship between highest degree earned and CDSE, additional research regarding the influence of degree participation on self-efficacy beliefs, outcome expectations, and personal goals related to career success should be conducted.

SAE or student project involvement.

Out of all participants, 94 indicated they had a SAE or student project. Most had been involved only one year, but nearly one third had been involved two to three years. Ownership/entrepreneurship was the most common type of SAE, followed by placement and exploratory. “Work experience has been shown to develop a number of positive effects on adolescents, including development of time and money management skills, guidance in making more realistic career decisions, and an understanding of employer expectations” (Rojewksi, 1997, p. 3). Because of these benefits, agricultural educators

should encourage all students to engage in work experiences, even if that means providing school-based work projects as an alternative to a home-based project.

Objective 4: Determine the relationship between learning activities and career decision self-efficacy of high school seniors in agricultural education

Independent *t*-tests found that there were no significant differences between mean CDSE scores of 4-H members and non-members. However, when comparing FFA members to non-members, a statistically significant and important difference was found for the construct of problem solving. This is especially important, given that problem solving was the overall lowest scoring construct by this population. This, along with the fact that FFA was the most participated in academic club, speaks to the value of agricultural education's "intracurricular," applied education model. FFA members are being exposed to experiences that build confidence in problem solving which, according to the model, is a contributing behavior to career success.

No difference in CDSE scores was found between students who participated in a career-development event (CDE) and those who had not. Also, in this sample there was no difference between the CDSE scores of students who participated in an SAE or student project and those who did not have an SAE. These are somewhat troubling findings given that CDE and SAE are two activities assumed to be specific to developing career success. However, due to the fact that overall CDSE scores were still moderate to high, we should be cautious in concluding that these activities are not valuable learning experiences and contributing sources of self-efficacy information.

Pearson's product correlations revealed low, significant relationships between CDSE scores and several variables. One such correlation was between total community/club activities and the CDSE constructs of gathering occupational

information and goal selection. According to the conceptual model, this means that students who participate in community activities, such as church/youth group, scouts, 4-H, or community service, are more likely to confidently approach career decision behaviors that contribute to career success.

A relationship was also found between total academic club involvement and the CDSE constructs of planning, problem solving, and total CDSE score. Data previously showed that FFA was the most frequent academic club, which supports the finding that FFA membership contributes to the development of CDSE. In this study, total FFA leadership activity (non-CDE) also had a low, positive correlation to the CDSE construct of planning for the future, indicating that students gain confidence in planning behaviors through participation in leadership conferences, camps, and award programs.

Finally, the measure of total FFA officer involvement was found to correlate with the CDSE constructs of goal selection, planning, problem solving, and total CDSE score. For this study, officer involvement was determined by a combination of both number and level of offices held by the individual. While officer involvement seems to be the most influential source of CDSE for this population, further investigation should be conducted to determine what specific experiences related to serving as an officer may most influence CDSE.

Conclusions and Recommendations

Results of this study indicate that high schools seniors in agricultural education in the North Region of Georgia Agricultural Education have a moderate to high career decision self-efficacy, implying a high probability that they will confidently approach career decision behaviors, namely behaviors demonstrating gathering occupational

information, accurate self-appraisal, planning for the future, goal selection, and problem solving. Because most relationships found between learning activity variables and CDSE scores were low, the actual predictive value of this study is also low. Also, the design of this study (exploratory and descriptive) causes the researcher to extend caution in generalizing results beyond the North Region of Georgia Agricultural Education.

However, several observations and conclusions can be made:

- Most students enrolled in agricultural education in the North Region of Georgia were involved in FFA, but few other activities. The reason for this is unknown.
- Nearly all students had moderate to high career decision self-efficacy scores, indicating confidence in approaching career decision behaviors. It is likely that these students have been exposed to various sources of self-efficacy building information.
- However, nearly one-third indicated that they were unsure or unclear about their future plans, either in general or in terms of further education. It seems as though students can have the ability and or potential ability needed to make decisions, but still suffer from career indecision. Perhaps additional contextual or personal factors present barriers to decision-making.
- On average, students in agricultural education are most confident in approaching behaviors related to gathering occupation information. They are least confident in approaching behaviors related to problem solving.
- Students who participated in FFA had higher mean CDSE scores than those who did not. FFA membership had an important and significant correlation with problem solving, and FFA officer involvement had a positive but low relationship with several constructs of CDSE, including total CDSE score.
- Based on relationships alone, there was no statistical evidence to support a hypothesis that participation in CDEs or SAEs results in higher measures of career success. Involvement in the community, as well as serving as an officer, appears to contribute to measures of career success.

The following recommendations are provided in an effort to continually strengthen the total agricultural education program and provide programs and services to help students develop their potential for career success:

- Additional data analysis should be conducted, including multiple regression, to determine if additional variance in CDSE scores can be explained as a result of combinations of learning activities.
- Additional research related to person inputs, environmental influences, and other contextual influences should be conducted to help explain variance in relationships between learning experiences and career decision self efficacy.
- More valid measures of leadership involvement, FFA officer involvement, CDE and SAE should be developed in order to further investigate their impact on career success.
- Given the different contextual situations that influence females' choices related to agricultural education and agricultural careers (Bell & Fritz, 1992), it may be beneficial to investigate differences between CDSE and gender.
- Career development and career education should be a focus of teacher workshops and in-service in the North Region of Georgia Agricultural Education, to ensure that educators understand the process of adolescent career development and enhance their influence in that process.
- Given that CDSE helps predict the potential for career success, the North Region of Georgia Agricultural Education should develop a series of career education lesson plans and/or career education course utilizing the constructs and items of CDSE as objectives.
- Agricultural educators should use the CDSE scale as a diagnostic tool to identify and design career development opportunities for students. They should expose students to many different learning experiences and encourage career decision behaviors at an early age.
- Agricultural educators at the post-secondary level should consider utilizing the CDSE scale as a basis for continued career guidance, and additional emphasis should be placed on career decision making behaviors in all levels of agricultural education
- Agricultural educators should continue to work closely with parents, counselors, administrators, and community leaders to provide relevant, process-based career-interventions based on an individual student's needs.
- Additional research should investigate the theory base and empirical support of National FFA's career success competencies and objectives (e.g., LifeKnowledge). Further studies should be conducted to provide support for the proposed model of career decision-making for students in agricultural education. The model should also be applied and tested with FFA's other variables of *career success* (technical/functional skills, adaptability/flexibility, and communication), as well as to the other components of the FFA's mission (*leadership* and *personal growth*).

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APPENDIX A

CAREER DECISION MAKING SELF EFFICACY – SHORT FORM

INSTRUCTIONS: For each statement below, please read carefully and indicate how much confidence you have that you could accomplish each of these tasks by marking your answer according to the key, Mark your answer by filling in the correct circle on the answer sheet.

NO CONFIDENCE AT ALL	VERY LITTLE CONFIDENCE	MODERATE CONFIDENCE	MUCH CONFIDENCE	COMPLETE CONFIDENCE
1	2	3	4	5

Example: How much confidence do you have that you could:

- a. Summarize the skills you have developed in the jobs you have held?

If your response was "Moderate Confidence," you would circle the number 3.

HOW MUCH CONFIDENCE DO YOU HAVE THAT YOU COULD:	NO CONFIDENCE AT ALL	VERY LITTLE CONFIDENCE	MODERATE CONFIDENCE	MUCH CONFIDENCE	COMPLETE CONFIDENCE
1. Use the internet to find information about occupations that interest you.	1	2	3	4	5
2. Select one major from a list of potential majors you are considering.	1	2	3	4	5
3. Make a plan of your goals for the next five years.	1	2	3	4	5
4. Determine the steps to take if you are having academic trouble with an aspect of your chosen major.	1	2	3	4	5
5. Accurately assess your abilities.	1	2	3	4	5
6. Select one occupation from a list of potential occupations you are considering.	1	2	3	4	5
7. Determine the steps you need to take to successfully complete your chosen major.	1	2	3	4	5
8. Persistently work at your major or career goal even when you get frustrated.	1	2	3	4	5

9. Determine what your ideal job would be.	1	2	3	4	5
10. Find out the employment trends for an occupation over the next ten years.	1	2	3	4	5
11. Choose a career that will fit your preferred lifestyle.	1	2	3	4	5
12. Prepare a good resume.	1	2	3	4	5
13. Change majors if you did not like your first choice.	1	2	3	4	5
14. Decide what you value most in an occupation.	1	2	3	4	5
15. Find out about the average yearly earnings of people in an occupation.	1	2	3	4	5
16. Make a career decision and then not worry whether it was right or wrong.	1	2	3	4	5
17. Change occupations if you are not satisfied with the one you enter.	1	2	3	4	5
18. Figure out what you are and are not ready to sacrifice to achieve your career goals.	1	2	3	4	5
19. Talk with a person already employed in a field you are interested in.	1	2	3	4	5
20. Choose a major or career that will fit your interests.	1	2	3	4	5
21. Identify employers, firms, and institutions relevant to your career possibilities.	1	2	3	4	5
22. Define the type of lifestyle you would like to live.	1	2	3	4	5
23. Find information about graduate or professional schools.	1	2	3	4	5
24. Successfully manage the job interview process.	1	2	3	4	5
25. Identify some reasonable major or career alternatives if you are unable to get your first choice.	1	2	3	4	5

APPENDIX B

LEARNING ACTIVITIES SURVEY

1. In which of the following organizations/activities have you participated? What leadership position did you hold in each? *(Check all that apply and fill in the appropriate leadership position if applicable)*

Organization/Activity**Leadership Position or Role****School Involvement**

<input type="checkbox"/> Student Government	
<input type="checkbox"/> Class Officer	
<input type="checkbox"/> Pep Club	
<input type="checkbox"/> Students Against Drunk Driving (SADD)	
<input type="checkbox"/> Peer Counseling	
<input type="checkbox"/> ROTC	
<input type="checkbox"/> Key Club	
<input type="checkbox"/> FCA	
<input type="checkbox"/> Other _____	

Academic Clubs /Activities

<input type="checkbox"/> Debate	
<input type="checkbox"/> Forensics	
<input type="checkbox"/> Drama Club	
<input type="checkbox"/> Foreign Language Club	
<input type="checkbox"/> Math Club	
<input type="checkbox"/> Chess Club	
<input type="checkbox"/> Science Fair	
<input type="checkbox"/> Tutoring/math, science, computers	
<input type="checkbox"/> Tutoring/other subjects	
<input type="checkbox"/> Computer Club	
<input type="checkbox"/> FFA	
<input type="checkbox"/> DECA	
<input type="checkbox"/> FCCLA	
<input type="checkbox"/> Art Club	
<input type="checkbox"/> Music Club	
<input type="checkbox"/> Other _____	

Performance Activities

<input type="checkbox"/> Band	
<input type="checkbox"/> Orchestra	
<input type="checkbox"/> Choir	
<input type="checkbox"/> Drama/plays	
<input type="checkbox"/> Dance Team	
<input type="checkbox"/> Dance Classes	
<input type="checkbox"/> Other _____	

Team Sports

- Cheerleading
 Football
 Basketball
 Tennis
 Soccer
 Baseball
 Softball
 Volleyball
 Golf
 Ice hockey
 Wrestling
 Archery
 Track/Cross-Country
 Gymnastics
 Swimming/Diving
 Other _____

Community Clubs/Activities

- Church/Youth Group
 Volunteer organization (s)
 Community service
 Scouts/Girls and Boys Club
 4-H
 Other _____

2. Were you ever a 4-H member?

- Yes
 No (if no, proceed to question #6)

3. How many years were you in 4-H?

- 1-3
 4-6
 7-9
 10

4. In 4-H were you an officer? If so, what office(s) did you hold?

- Yes _____
 No (if no, proceed to #6)

5. To what level in 4-H did you hold an office?

- Club
 County
 State
 National

6. Have you ever been an FFA member?

- Yes
 No (if no, proceed to #13)

7. If you were an FFA member, how many years were you a member?

- 1
 2
 3
 4
 5+

8. In which of the following FFA leadership activities or events did you participate? (*check all that apply*)

- None
 Local Officer Retreat
 Success Conference
 Greenhand Jamboree
 Discovery Conference
 State FFA Convention
 Summer Leadership Camp
 National FFA Convention
 Washington Leadership Conference (WLC)
 Proficiency Awards Program
 Other _____

9. In which of the following Career Development Events (CDEs) did you participate? (*check all that apply*)

Event	Level of Participation		
<input type="checkbox"/> Ag Communications	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Ag Marketing Plan	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Agricultural Mechanics	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Agriscience Fair	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Ag Sales	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Creed Speaking	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Dairy Judging	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Dairy Showmanship	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Discussion Meet	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Environmental and Natural Resources	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> EMC Wiring	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Extemporaneous Public Speaking	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> FFA Quiz	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Farm Business Management	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Floral Design	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Floriculture	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Forestry	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Horse Judging	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Job Interview	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Land Judging	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Livestock Judging	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Meats Judging	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Nursery and Landscape	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Parliamentary Procedure	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Poultry Judging	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input type="checkbox"/> Prepared Public Speaking	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National

<input type="checkbox"/> Tractor Operation & Maintenance	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input checked="" type="checkbox"/> Wood Fabrication	<input checked="" type="checkbox"/> Local/District	<input checked="" type="checkbox"/> State	<input checked="" type="checkbox"/> National
<input type="checkbox"/> Wildlife Management	<input type="checkbox"/> Local/District	<input type="checkbox"/> State	<input type="checkbox"/> National
<input checked="" type="checkbox"/> Other _____	<input checked="" type="checkbox"/> Local/District	<input checked="" type="checkbox"/> State	<input checked="" type="checkbox"/> National

10. In FFA, were you an officer? If so, what office(s) did you hold?

- Yes _____
 No (*if no, proceed to #12*)

11. To what level in the FFA did you hold an office? (*check all that apply*)

- Chapter
 District/Region
 State
 National

12. Which of the following FFA degrees you have earned? (*check all that apply*)

- None
 Discovery Degree
 Greenhand Degree
 Chapter Degree
 State Degree
 American Degree

13. Do/Did you have a Supervised Agricultural Experience Program (SAE) or student project?

- Yes
 No (*if no, proceed to #16*)

14. How would you best classify your SAE or project?

- Exploratory (learning about agriculture and its careers)
 Research/Experimentation and Analysis (conduct an experiment to gain new knowledge)
 Ownership/Entrepreneurship (plan and operate an agri-related business)
 Placement (work for someone else)

15. Of these, how many years have you developed your most prominent SAE?

- 0-1
 2-3
 3-4
 5+

16. What do you plan to do directly after graduation?

- Unsure (*If unsure, proceed to #18*)
 Work full-time (*If so, what do you plan to do?* _____)
 Attend a trade school or technical school
 Attend a community/2-year college
 Attend a 4-year college or university

17. If you plan to attend school or college, have you decided on a major? If yes, please list.

- Yes _____
 No, undecided

18. What is your gender?

- Male
 Female

For the next two questions, please provide a short answer.

19. What activity or learning experience has been most influential to your career decisions?

20. Who has been most influential to your career decisions?

You have completed the first of two surveys. Thank you for your participation. Please continue with the second survey titled: Career Decision Self-Efficacy – Short Form.

APPENDIX C

INTRODUCTORY LETTER TO INSTRUCTORS

Dear Ag Teacher,

Your school's agricultural education program has been selected to be part of an important research study being conducted by the University of Georgia. The study concerns the career decisions of students enrolled in agricultural education in schools in the North Region of the Georgia FFA Association. The purpose of this study is to increase agricultural educators' understanding of the career development process of adolescents in an effort to further define career success. We are interested in learning what activities students participate in that are most influential to their career decisions. While there is no direct benefit to students, by discovering answers to these questions, agricultural education teachers in Georgia, and possibly in other states, will be to better instruct and advise students to help them prepare for successful careers.

In order to complete this study, we must have an authorization letter from your school to submit to the University of Georgia Institutional Review Board, granting permission to administer surveys to your students. Here is an overview of the procedures and your students' participation:

- *Around April 15* – Packets mailed to agricultural education instructor with two surveys (10 copies each) – a) Demographics/Learning Activities Service (15 questions) and b) Career Decision Self-Efficacy Survey (25 questions)
- *By approximately May 15* – Instructors choose up to 10 high school seniors enrolled in agricultural education who are 18 years or older to complete the surveys and return them in the self-addressed stamped envelope provided. Both surveys together should take around 20 minutes to complete.
- *By approximately May 20* – Drawing will be held for iPod shuffle; all students who completed surveys are eligible.

Because participants are 18 years old, we plan to use a waiver of consent – meaning that by participating in the survey, the students voluntarily agree to participate. Any information that is obtained in connection with this study and that can be identified with you will remain confidential. Upon completion of the drawing and contact of the winner, the list of names and contact info will be destroyed. The results of the research study may be published, but no names will be used. Your school and your students' identities will not be associated with your responses in any published format.

The study is an important one that will help agricultural educators better understand the factors that contribute to career success. We hope that you will agree to participate. Attached is a sample authorization letter. **Feel free to modify the text with your school's information and simply return in an email to our graduate assistant, Kerry Priest at kpriest@uga.edu by April 14.** You can also **FAX** a copy of the letter on school letterhead to **706.542.0262** or send a scanned copy attachment of the letter via email.

As schools have different authorization procedures, please check with your administrator to determine the proper signature(s) required. Feel free to contact Kerry or me with any questions or concerns.

Sincerely,

John C. Ricketts
jcr@uga.edu

APPENDIX D

PRE-SURVEY NOTIFICATION POSTCARD

Date

Dear Instructor's Name:

Your school's agricultural education program has been selected to be part of an important research study being conducted by the University of Georgia.

The study concerns the career decisions of students enrolled in agricultural education in schools in the North Region of the Georgia FFA Association. A few days from now you will receive in the mail a packet containing 10 sets of surveys to be completed by high school seniors enrolled in agricultural education who are 18 years of age or older. If you do not have 10 students who are 18 years of age or older, then please complete and submit as many of the 10 as you can.

I am writing in advance because we have found that many instructors like to know ahead of time that they will be contacted. The study is an important one that will help agricultural educators better understand the factors that contribute to career success.

Sincerely,

Kerry Priest
University of Georgia
Department of Agricultural Leadership, Education & Communication

PS: We will be enclosing a small token of appreciation with the questionnaires as a way of saying thanks. Also, your students who participate will be entered into a drawing for an iPod shuffle.

APPENDIX E

INSTRUCTIONAL COVER LETTER FOR TEACHERS

Date

Address

Hello Instructor's Name,

We are writing to ask your help in a study of agricultural education students in the North Region of the Georgia FFA. This study is part of an effort to learn what learning activities influence career decision self-efficacy, a component of career success.

We are contacting a random sample of schools from the North Region of the Georgia FFA. Each school may select up to 10 students to participate in the survey. The students must be enrolled in agricultural education and be 18 years or older. If you have more than 10 students who qualify, you may select any 10 to complete the survey. If you have less than 10 students who qualify, then please complete as many surveys as applicable and returned the unused surveys in the stamped envelope along with the completed surveys.

Please make sure each student selected reads the cover letter (attached to Leadership Activity survey) completely. By completing the survey, the student gives consent to be a part of the study. The students' answers are completely confidential and will be released only as summaries in which no individual answers can be identified. When you return your students' completed questionnaires, their names will be collected only for the purpose of a drawing for an iPod shuffle. They will then be deleted from our database and never connected to their answers in any way. This survey is voluntary. However, you can help us very much by encouraging your students to take a few minutes to share information about themselves and their career decision-making skills. If for some reason you prefer not to respond, please let us know by returning the blank questionnaires in the enclosed stamped envelope.

Results from this survey will be used to help state and local agricultural educators better understand how students achieve career success. We have enclosed a small of appreciation token for you and for each student as a way of saying thanks for your help.

If you have any questions or comments about this study, we would be happy to talk with you. Our contact information is listed below. Thank you very much for helping with this important study.

Sincerely

Kerry Priest
Graduate Assistant
Ag Leadership, Education, and
Communication
University of Georgia
770.605.3946
kpriest@uga.edu

Dr. John C. Ricketts
Associate Professor
Ag Leadership, Education, and
Communication
University of Georgia
706.542.8646
jcr@uga.edu

APPENDIX F

INFORMATIONAL COVER LETTER TO STUDENTS

Date

Dear Student:

I am a graduate student in the Department of Agricultural Leadership Education, and Communication at The University of Georgia. I would like to invite you to participate in a research study entitled "The Influence of Learning Activities on the Career Decision Self-Efficacy of High School Seniors in Agricultural Education." The purpose of this study is to increase agricultural educators' understanding of the career development process of adolescents in an effort to further define career success. We are interested in learning what activities students participate in that are most influential to their career decisions. While there are no direct benefits to you from participating, by discovering answers to these questions, agricultural education teachers in Georgia, and possibly in other states, will be able to better instruct and advise students to help them prepare for successful careers.

You have been selected by your agricultural education instructor on the basis that you are 1) a senior in high school, 2) enrolled in agricultural education, and 3) 18 years of age or older. Your participation will involve completing two surveys: a *Learning Activities Survey* and the *Career Decision Self-Efficacy Survey*. There is no foreseeable risk associated with this study. Both surveys together should take only 20 minutes to complete. By participating in this study, you will be automatically eligible for a drawing for an iPod shuffle.

Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. You may also ask to have information related to you that can be identified as yours returned to you, removed from the research records, or destroyed. Any information that is obtained in connection with this study and that can be identified with you will remain confidential and be kept secure in a locked office and/or a password-protected computer. Only the researcher and advisor will view the score sheets. All identifying information will be removed once the data has been collected. After six months the survey instruments will be destroyed. The results of the research study may be published, but your name will not be used. In fact, the published results will be presented in summary form only. Your identity will not be associated with your responses in any published format.

As a token of our appreciation for your participation, we have enclosed a small gift. Again, all students who participate will be included in a drawing with participants from other schools for an iPod shuffle. The winner will be notified upon completion of data collection, approximately May 30, 2008. In order to process and deliver the winner's prize for participation, the researchers need to collect your name and mailing address on a separate form. Upon completion of the drawing and contact of the winner, the list of names and contact info will be destroyed. *This completed form will be seen only by the researcher. The researcher may have to release your name and the value of your compensation to the IRS, if ever asked. The researchers connected with this study will protect your private information and will keep this confidential by storing in a secured location.*

If you have any questions about this research project, please feel free to call me at (770) 605-3946 or send an e-mail to kpriest@uga.edu. Questions or concerns about your rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board, 612 Boyd GSRC, Athens, Georgia 30602-7411; telephone (706) 542-3199; email address irb@uga.edu.

By completing this questionnaire, you are agreeing to participate in the above described research project. Thank you for your consideration! Please keep a copy of this letter for your records.

Sincerely,

Kerry Priest
Graduate Assistant
Agricultural Leadership, Education, and Communication
University of Georgia

APPENDIX G

PRIZE ELIGIBILITY FORM

Prize Eligibility Form

"I have agreed to be a subject in a research study # 2008-10657-0 conducted by Kerry Priest. I understand that taking part in this study entitles me to be entered into the drawing for an iPod shuffle described in the research informational letter. To be able to process my entry, the University of Georgia Business Office requires that I provide my Name and Mailing Address for tax reporting and/or audit purposes. I realize that if I do not provide this information, I will not be included in the drawing. I also understand that if I decide not to provide the requested information and I waive my right to compensation, I can still take part in the research study."

*Signature of Subject**Date*

Printed Name of Subject

*School Name**Mailing Address (Please Print):* _____
_____*Email Address:* _____

_____ (Please put your initials.) I do not want to provide the above information. I will not be compensated for my participation.