A LONGITUDINAL STUDY OF CAREER MATURITY AND CAREER DECISION-MAKING SELF-EFFICACY OF RURAL SECONDARY SCHOOL STUDENTS

By

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A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

2017

To my husband, son, and parents

ACKNOWLEDGMENTS

First, and foremost, I thank my Lord and Savior Jesus Christ for the promise of salvation and the gift of grace. It is because of this promise I have the strength to complete what I believed was impossible. It is because of this grace and mercy that I am stronger in my faith and my walk with Christ and know without fail, this too shall pass.

To my husband, Duke Emerson, I am thankful for the love, support, wisdom, humor, and dedication you have shown me during this process. I am humbled by your ability to encourage and stay optimistic in the face of a challenge. You have carried the emotional weight of our family, and for that, I am forever grateful. I love you more than I will ever be able to express.

To my one and only son, Case Emerson, I hope I have set an example of perseverance and strength of mind and character for you to follow throughout your life. I appreciate your forgiveness when I could not be where you may have needed me. I am thankful for your encouragement when I was in need and your love in moments of doubt. I pray you will always put God, faith, and family first in your life.

To my parents, Bill and Loretta Westmoreland, I have never been more inspired by two individuals in my life. You are the embodiment of wisdom, the pinnacle of support and the definition of unconditional love. I love you both. You are the reason I am the individual I am today. I am truly blessed. To my brother, Forrest Westmoreland and his family, thank you for supporting and loving me unconditionally.

To my mother-in-law, Gail Emerson, thank you for feeding my family when I was working to complete this dissertation. I am thankful for you for many reasons, but mostly

for raising a kind, hard-working, supportive man. I pray I have done half as good a job with my son as you did with yours.

To the rest of my family near and far, thank you for understanding when I could not attend every family function and event. They said this would be a sacrifice, and they were right.

To my committee chair, advisor, and most importantly my friend, Dr. Brian Myers, a simple thank you does not seem to be adequate to express my gratitude. You have believed in me, supported me, scolded me and lifted me up on a multitude of occasions. This journey has been long and drawn out, one that has included frustrations, revelations and certainly a lot of tears. Your advice, patience, and guidance have served as a beacon of light throughout this process.

To my mentor and friend, Dr. R. Elaine Turner, Dean of the College of Agricultural and Life Sciences, thank you for being my person. Your support of me is second to none, and for this I am beyond grateful. Your academic and institutional knowledge amazes me on a daily basis. I will never be able to repay you for the pats on the head, words of wisdom and your commitment to my success.

To the remainder of my committee, Dr. R. Kirby Barrick and Dr. Ed W. Osborne, you both are such an inspiration and an example of dedication and academic excellence. Both of you have been not only a part of this trip, but you had invested in me professionally well before I started this process. The respect and admiration I have for you both is beyond description- “ya’ll” are extraordinary people. I am grateful you agreed to take this especially long walk with me.

To the faculty and staff in the College of Agricultural and Life Sciences Dean's office, each of you is an irreplaceable part of my life. I am blessed to have the opportunity to work with each of you and have you in my corner. A special thank you to Ms. Jenai Collins and Ms. Marie Thomas for taking up the "professional" slack when I was preoccupied with reading, writing, statistical analysis, or simply stressed about what was ahead.

To my statistician friend, James Colee, thank you for answering my emails and calls every single time. Your willingness to help me speaks volumes about the kind and compassionate person you are.

To my colleagues and friends, Cathy Carr, Natalie Coers, and Jason Headrick, thank you for being my cheerleaders and providers of chocolate, cupcakes or words of encouragement in the most critical of times.

To my district and school level partners in this project, Carlton Faulk, Mike Ripplinger, Lanier Clyatt and the faculty, staff and students of the high school, your support of me goes well beyond the scope of this particular project. I am forever thankful to have started my teaching career in a school district that continues to embrace the idea of learning for the sake of learning and is dedicated to the success of students.

To my former teaching colleagues, Tom Williams, David Harris, and Scott Register, astonishingly, I believe you molded me into the educator I am today. The foundation you helped me establish in the high school classroom will not soon be forgotten. I am tougher, more prepared and more resilient because of the three of you. You cannot make old friends, and I am glad you are mine!

To the past and present College of Agricultural and Life Sciences Ambassadors, former and current graduate assistants, the members of the University of Florida Collegiate Farm Bureau Chapter and the brothers of Alpha Gamma Rho, Alpha Gamma Chapter, thank you for being an inspiration to me. I am blessed by each of you and will forever be proud to be affiliated with you. I pray each of you continue to grow academically, professionally, and personally. Your contribution to the world is important, do not take it lightly.

To Dick Wolf, you know what you did.

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LIST OF ABBREVIATIONS

AP	Advanced Placement Courses
CDSME	Career Decision-Making Self-Efficacy
CDSME-SF	Career Decision-Making Self-Efficacy Short Form
CMI	Career Maturity Inventory
DE	Dual Enrollment
DQ	Demographic Questionnaire

Abstract of Dissertation Presented to the Graduate School
of the University of Florida in Partial Fulfillment of the
Requirements for the Degree of Doctor of Philosophy

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By

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August 2017

Chair: Brian Myers
Major: Agricultural Education and Communication

The purpose of this study was to examine the relationships between career maturity and career decision-making self-efficacy and selected demographic characteristics.

The study utilized three instruments for data collection: the Career Maturity Inventory (CMI-R), the Career Decision-Making Self-Efficacy Short-Form (CDSE-SF) and a demographic information survey, which was developed by the investigator. The population for this study was students attending a rural high school. All students in grades 9th-12th completed the Demographic Questionnaire, CMI, and the CDMSE-SF. Students selected for the study were chosen based on completion of the informed consent forms. This study was conducted as a longitudinal study over the course of three years. The population completed each of the instruments (CMI, CDSE-SF and Demographic Survey) in the fall of each academic year.

Descriptive statistics were calculated for gender, ethnicity, extracurricular activities, athletic involvement, Advanced Placement courses and dual enrollment courses for 2013 and 2014. Correlation analysis and linear regression models were

used to determine the relationship between career maturity and individual student demographic characteristics and the relationship between career decision-making self-efficacy and individual student demographics.

Statistical analysis found students who did not take Advanced Placement (AP) courses had higher career maturity scores than those who took AP courses. Correspondingly, those students who took dual enrollment courses scored lower on the Career Maturity Inventory (CMI-R) than those who did not. Additionally, participation in extracurricular activities was found to be significant. Students who participated in zero to one activity had a higher CMI-R than those who participated in two or more extracurricular activities. Students who participated in two or three extracurricular activities and dual enrollment were found to have significantly higher CDMSE-SF means than others ($p < .01$). No other variables examined in this study were found to be significant.

These findings suggested additional resources should be dedicated to career development by school administrators, counselors and teachers in order to enhance students' career maturity and career decision-making self-efficacy before the end of their secondary school experience.

Further investigation should be conducted to further understand and enhance the process of career development in secondary students.

CHAPTER 1
INTRODUCTION

"In the wise choice of a vocation there are three broad factors: first, a clear understanding of yourself, aptitudes, abilities, interests, resources, limitations, and other qualities; second, a knowledge of the requirements and conditions of success, advantages and disadvantages, compensations, opportunities, and prospects in different lines of work and lastly, true reasoning of the relations of these two groups of facts" (Parsons, 1909). Frank Parsons' thoughts were not considered a formal theory at the time; however, as it relates to career development and career choices, his basic conceptual framework provided one of the first guides for career counseling. Parsons believed if people are actively involved in choosing their own career, based on their own attributes, they will be more satisfied and content with their chosen career or vocation.

Numerous factors influence an individual's career development, including physical, cognitive and emotional factors (Seligman, 1980). According to Brown, Career development is an ever changing and metamorphic process that develops over a significant period of time, rather than developing rapidly (2002). Additionally, career development requires an individual to understand certain personal traits, be able to analyze one's own personality, and identify self-preconceptions to determine how each will influence personal career decision-making (Brown, 2002). Career development can also be about how an individual lives and how early life experiences, such as curricular and extracurricular experiences in school, interact to establish career choices. Two constructs that address career development include career maturity and career decision-making self-efficacy. Studies of career maturity and career decision-making self-efficacy have been numerous, particularly as they relate to post-secondary

students, students with disabilities in post-secondary settings, career maturity and career decision-making self-efficacy in minorities, emotional intelligence and career maturity, and career decision-making self-efficacy in millennials.

According to Human Resources Executive Online, technology and globalization will also require more employees to engage in "lifelong learning," (McIlvaine, 2004), leading to the belief that students who have an understanding of career development and have an appreciation of their own attributes will be led to a career that is suitable. Administrators, as well as others involved with student success, need an understanding of career trends in order to effectively guide students into appropriate career paths.

Directing and facilitating students into a certain career path has been routine since the 1800s. The goal has been to guide students from school to work in a way that supports interests and goals. Career guidance starts in elementary school and typically ends when an individual graduates from high school; however, research has indicated the need for better career development services during post-secondary education as well (Getzel et al., 2001). Students who pursue post-secondary programs benefit from effective and continued career guidance not only while in elementary school and throughout their secondary education, but also on a continuum that lasts throughout their post-secondary program of study. Maduakolam Ireh (2000) recommended career guidance continue past high school, because career concerns occur throughout one’s lifetime, and one of the most important aspects of an individual’s personal happiness is career choice.

Statement of the Problem

Today's high school graduates do not efficiently and effectively transition into careers that align with their abilities and interests in a way that supports a reasonable standard of living.

Purpose of the Study

The purpose of this study was to examine the relationship between career maturity and selected demographics and career decision-making self-efficacy and selected demographic characteristics of rural high school students. Demographic characteristics include age, gender, ethnicity, extracurricular activities, co-curricular activities, athletics, Advanced Placement courses taken and dual enrollment courses taken.

Statement of Objectives

The objectives of this study included the following:

1. Describe the demographic characteristics of selected rural high school students.
2. Assess the level of career maturity of students in a selected rural high school.
3. Assess the level of career decision-making self-efficacy of students in a selected rural high school.
4. Examine levels of career maturity, based on demographic characteristics.
5. Examine levels of career decision-making self-efficacy, based on demographic characteristics.

Significance of the Study

This career maturity and career decision-making self-efficacy longitudinal study of secondary students will be of interest to high school administrators, faculty and staff of high schools, and community and state colleges and universities who are concerned about and dedicated to helping students determine a career path and enhance the

process of career development. The fundamental need for this study was to provide faculty and staff at high schools, community and state colleges, and universities with relevant research that will be useful and relevant in advising students in high school and college course choices, providing career counseling, and encouraging career exploration. This study will give support to the population mentioned above in determining career paths that are suited to the individual student, based on the student's interests, educational abilities and self-confidence level. Additionally, students will benefit in that guidance counselors, and other administrators will be better equipped to aid in the career choice exploration process. This longitudinal study collected data from secondary students over a period of time, documenting change in Career Maturity Inventory (CMI) and Career Decision-Making Self-Efficacy (CDMSE) scores, and changes in key attributes.

This longitudinal study will add to the body of knowledge regarding working with high school students and preparing them for making decisions regarding career possibilities. Further, this study will serve as a basis for changing how teachers and counselors work with students in grades 9-12 in ways that support their career maturity and career decision-making self-efficacy. The impact of this study will provide a reference for educational entities to better prepare students for the world of work, based on various factors and key attributes.

Definition of Terms

For this study the following terms were defined operationally:

1. Administrators. An administrator oversees the daily operations of schools, colleges, universities, day care centers and preschools. A school administrator's specific responsibilities differ between organizations, but often these administrators are an important link between students and local communities.

2. Advanced Placement Courses. Rigorous, college-level classes in a variety of subject areas that give students an opportunity to gain skills and experience. American colleges and universities may grant placement and course credit to students who obtain certain scores on AP examinations.

3. Athletics. Athletic events participated in by student-athletes; organized by the school system.

4. Career Decision-Making Self-Efficacy. An individual's confidence in her or his ability to effectively engage in career decision-making tasks and activities (Taylor & Betz, 1983). In this study, career decision-making self-efficacy was defined as the score on the Career Decision-Making Self-Efficacy Short Form (CDMSE-SF).

5. Career Development. The enhancement or growth of a career, it is the enrichment of human potential in creating a pattern of relationships between life roles, within the parameters of place, and over a lifetime (Peruniak, 2010).

6. Career Maturity. Career maturity is an important variable in the career developmental process (Burkhead & Cope, 1984). In this study career maturity was defined as an individual's attitude toward his or her readiness to make career choices appropriate to age or developmental stage (Crites, 1976).

7. Co-curricular Activities. Activities considered intra-curricular to courses offered on the high school campus.

8. Demographic Characteristics. Factors that may affect a student's self-efficacy or career maturity while enrolled in high school. Factors examined in this study included Advanced Placement courses, dual enrollment, extracurricular activities, co-curricular activities, and participation in athletics and sports.

9. Dual Enrollment. College courses available for eligible high school students where the student can concurrently acquire high school and college credit.

10. Economically Disadvantaged. The Florida Department of Education reports economically disadvantaged students to be those who qualify for free or reduced-price lunches, which is the indicator used to calculate the percentages of students classified as economically disadvantaged in the state and school (2012).

11. Employers. Employers are persons or organizations that employ others.

12. Extracurricular Activities. Activities that do not fall within the scope of the regular curriculum. And are usually approved by the school and affiliated with a school-based student organization.

13. Gender. Identifying as male or female.

14. Honors Courses. Courses that are more intense and faster paced than typical high school classes.

15. Parents/Guardian. A person who is entrusted by law with the care of the person or property, or both, of another, as a minor or someone legally incapable of managing his or her own affairs, may be a father, mother or other designee (Dictionary.com, 2017).

16. Secondary student. A student enrolled in grades 9-12.

17. Self-efficacy. Students' perception of their own ability, the barriers they might face, the resources the school or college should provide them, and the opportunity they have regarding their actions related to the information they have received (Simpson et al., 1994). For the purpose of this study, self-efficacy was defined as a student's score on the CDMSE-SF questionnaire.

18. Skyward. Software for online school management and distribution for students, family, administrators, and faculty and staff.

19. Sports. Organized athletic events by an entity other than the school.

20. Stakeholders. According to Great Schools Partnership a stakeholder is anyone who is interested in the welfare and success of a school, including students, parents, families, community members, local business leaders and elected officials, such as school board members and other elected officials (2014).

21. High School. A school that typically comprises grades 9 through 12 grades, attended after primary school or middle school.

22. Rural. The U.S. Census Bureau defines rural as what is not urban—that is, after defining individual urban areas, rural is what is left, urban areas represent densely developed territory, and encompass residential, commercial, and other non-residential urban land uses (2012).

Limitations of the Study

The conclusions and implications drawn from this study were subject to certain limiting factors including:

1. The population for the study were students in a rural Florida high school in grades 9-12.

2. The findings of the student could not be generalized beyond the sample.

3. Due to the typical pattern of students entering and leaving high school, some attrition occurred in this longitudinal study.

4. The school community chosen for the study lacked economic, ethnic, and racial diversity.

5. The study's web-based survey may have been intimidating to the participants who did not regularly use a computer.

6. An underrepresented percentage of minorities in the school population exists and therefore minority data are not comparable.

7. Technological difficulties may have occurred when students were completing the instruments.

8. The lack of privacy when taking the surveys may have been an issue for some students.

9. All information and data collected were self-reported and may have given way to a social desirability response factor that could not be controlled in this study.

Assumptions of the Study

The following assumptions were made for the purposes of this study:

1. Participants involved in this study completed the demographic questionnaire, career maturity inventory and career decision-making self-efficacy inventory to the best of their ability.

2. Participants involved in this study responded to the survey instruments truthfully.

3. School administrators and teachers facilitating the survey process allowed students ample time to complete the instruments.

Chapter Summary

The purpose of this study was to examine the relationship between career maturity and student demographics, and career decision-making self-efficacy and student demographics. Student demographics in secondary students were defined as extracurricular activities, co-curricular activities, athletics, Advanced Placement courses, and dual enrollment. It was hypothesized that students who possess multiple positive demographic characteristics would have high career maturity scores and high career decision-making self-efficacy.

CHAPTER 2
REVIEW OF LITERATURE

Chapter 1 provided the rationale influencing career maturity and career decision making self-efficacy in rural secondary students. The purpose of this study as outlined in Chapter 1, was to examine the relationship between career maturity and selected demographics and career decision-making self-efficacy and selected demographics in secondary students. Chapter 1 provided objectives that framed this study, along with the hypotheses. Key terms were defined and assumptions and limitations were stated.

Chapter 2 describes the theoretical and conceptual frameworks and delineates research significant to this particular study. Additionally, this chapter will present empirical literature related to the components of the conceptual model (Figure 2-1) developed by the researcher for this study. The review of literature focused on textbooks and refereed and non-refereed publications.

Constructivism

Constructivism, while not considered a theory as much as a philosophy, is the major dynamic and foundation of this study. Constructivism is a learning philosophy established on the premise that reflecting on one's experiences serves to construct one's understanding of the world. Doolittle and Camp (1999) described constructivism as the construction of meaning from a learner's active participation in experiences. As previously stated, constructivism is not viewed as a single theoretical position but as a continuum. The constructivism continuum is typically divided into three categories: cognitive constructivism, social constructivism and radical constructivism. Cognitive constructivism suggests that learning is the "process of internalization and (re)construction of external reality" (Doolittle & Camp, 1999, p. 7). Social constructivism

focuses on “shared social experience and social negotiation of meaning” (Doolittle & Camp, 1999, p. 9). Radical constructivism suggests that knowledge is subjective and is constructed internally by the learner (Doolittle & Camp, 1999).

First and foremost, constructivism focused on cognitive development and understanding of the learners; “Constructivism construes learning as an interpretive, recursive, nonlinear building process by active learners interacting with their surrounding physical and social world” (Fosnot, 2005, p. 34). Constructivists believe learning is development, a state of imbalance facilitates learning, reflection drives learning, and social interactions provoke further thinking (Fosnot, 2005). The following are essential factors of a constructivist approach to pedagogy:

> Learning should take place in authentic and real-world environments… Learning should involve social negotiation and mediation… Content and skills should be made relevant to the learner… Content and skills should be understood within the framework of the learner’s prior knowledge… Students should be assessed formatively, serving to inform future learning experiences… Teachers serve primarily as guides and facilitators of learning, not instructors… Teachers should provide for and encourage multiple perspectives and representations of content. (Doolittle & Camp, 1999, pp.9-13)

Fosnot (1996) and Schunk (2004) concurred that constructivism has a theoretical foundation entrenched in Sociocultural Theory (Vygotsky, 1978) and the Theory of Cognitive Development (Piaget, 1972). According to Brooks and Brooks (1993) and Fosnot (1996), constructivism is a theory about knowledge, thinking, and learning, not a theory about teaching.

Social Cognitive Theory

Social Cognitive Theory is the underlying theory encompassing this study. According to Bandura (1986, 1997), the social cognitive theory emphasizes how

cognitive, behavioral, individual and environmental factors interact to determine motivation and behavior. Further, social cognitive theory explains how people acquire and maintain certain behavioral patterns, while also providing the basis for intervention strategies (Bandura, 1997). Essentially, the principal focus of social cognition is to evaluate behavioral change as it relates to environment, people and behavior. Environment refers to factors which affect an individual's behavior, both socially and physically. Socially, an individual exposed to family members, friends, teachers, co-workers or colleagues; physically, the size of a room, temperature, or available amenities may affect behavior. In the end, environment and situation provide the framework for understanding behavior (Parraga, 1990). Environmental factors, social factors, and behavior are persistently and continuously influencing one another. Behavior is not simply the result of the environment and the person, just as the environment is not simply the result of the person and behavior (Glanz et al, 2002). Models of behavior are provided by the individual's environment, specifically what the individual observes, thus giving way to observational learning. Observational learning occurs when a person watches the actions of another person and the reinforcements that the person receives (Bandura, 1997). Behavior as a whole is defined in various ways, but the simplest definition is that if individuals perform certain behaviors, they must understand what the behavior is and have the skills and competencies to perform the particular behavior.

The theory of social cognition includes four interrelated basic processes of goal attainment including; self-observation, self-evaluation, self-reaction, and self-efficacy (Redmond, 2010). Bandura (1986) stated that how a person functions is determined by

the interactions of personal factors, including cognition, affect and biological events; behavior factors; and environmental factors. Human performance is the result of the interaction of all three of the functions mentioned above, which are referred to as Bandura's Triadic Reciprocal Determinism (Figure 2-2). Pajares (2002) stated, "People are viewed as self-organizing, proactive, self-reflecting and self-regulating rather than as reactive organisms shaped and shepherded by environmental forces or driven by concealed inner impulses."

Theoretical Framework

The theoretical framework (Figure 2-1) for this study was based on the overall work of Albert Bandura (Figure 2-2). Bandura set forth one of the most academic and realistic applications of concepts related to the general psychology of how self-efficacy is defined. Further, according to Bandura (1977), the concept of self-efficacy includes our beliefs in and capabilities to successfully perform a given behavior or set of behaviors. Self-efficacy is claimed to influence behavioral choices, performance, and persistence. Bandura (1977) further suggested that one of the primary roles of a counselor is to assist the client in increasing his or her expectations of self-efficacy with respect to targeted behavioral domain(s) through interventions based on the sources of efficacy information, such as performance accomplishments, vicarious learning, anxiety management, and verbal persuasion and encouragement. Fundamentally, self-efficacy is an individual's conviction regarding his or her capacity to perform a given assignment, behavior or job. Bandura's theories supported the foundation of this study. Additionally, Bandura describes self-efficacy as being derived from four sources of influence: mastery experiences, modeled behavior, social persuasion, and physiological responses to experiences (Bandura, 1994). It is likely that students who have strong

perceptions and confidence about career opportunities and development are better prepared and more confident when choosing a career, or will, at least, have a better perception of their own interests and aspirations.

Career Guidance

Guiding students into a particular career path has been routine since the early 19th century, the idea is that students are fostered and guided from school to work in such a way that satisfies the independent interests and goals and their overall well-being. Ideally, career guidance and direction starts in elementary school and traditionally ceases when the individual graduates from high school; however, research has shown the need for better career development services during post-secondary education (Getzel et al., 2001). Students who pursue a post-secondary education would benefit from effective and continued career guidance not only while in elementary school and throughout their secondary education, but on a continuum lasting through their post-secondary program of study. Maduakolam Ireh (2000) suggested career choice supervision should continue past high school because career concerns occur throughout one's lifetime, and one of the most important aspects of an individual's contentment is career choice. Career guidance as related to this study focused on self-efficacy, career maturity, and career decision-making self-efficacy.

Career Development

Career development is a continuous process. There are numerous studies and theories associated with career development. Gies (1990) compared and contrasted two career theorists, David Tiedman and Donald Super. Gies (1990) described Super's definition of vocational development as a compromise between personal and social factors and self-concepts and reality. Super's theory clarified that a more meaningful

career is chosen when the career choice is closer to self-concept or the discernment or image of an individual's aptitude and uniqueness (Gies, 1990). When an individual has an understanding of himself, then decisions about a career can be made. Gies (1990) carefully outlined Super's central ideas, and therefore, provided a foundation for his theory. Initially, it is important to take uniqueness into consideration in career development; people have different capabilities, interests, and traits (Gies, 1990). Super's next argument was that every individual has a range of abilities, personality characteristics, and traits. These traits help individuals become successful in a number of careers (Gies, 1990). Super continued, each occupation requires different experiences that allow variation for each individual (Gies, 1990). Significant to Super's Theory is that career likes, desires, and abilities are not permanent. The developmental process can be separated into life stages recognized as growth (self-concept is formed when experiences provide knowledge of the work world), exploration (unrealistic desired occupation), establishment (deciding if career choice made in the exploration stage is realistic), maintenance (adjustments and improvements to career), and decline (focus is on retaining the job, not enhancing) (Gies, 1990). Super's theory has suggested that a career pattern is set out by the individual parents' socioeconomic level, his or her mental ability and personality characteristics, and by the opportunities, the individual is given. In order to make successful career choices, individuals should be encouraged to expand their abilities and interests. As a final point, Super recognized that work and life approval are related to a person's ability to share their interests, skills, personal traits and beliefs (Gies, 1990).

Tiedman's theory of career development stated that career development is the process of organizing and identifying with work through the interaction of one's personality with society (Gies, 1990). Tiedman described two decision-making periods: the period of anticipation and the period of implementation and adjustment (Gies, 1990). The career selections that individuals make influence the way they behave in certain situations. When people are confident in a decision, then they can further define the results of the choice and specification occurs (Gies, 1990). Tiedman designated the period of implementation and adjustment in three sub-stages: induction, transition, and maintenance. Induction starts when a person fits his or her goals into a group or society (Gies, 1990). When individuals begin to put their goals into action, group goals become part of personal goals as the interaction between the individual and group grows (Gies, 1990).

Self-Efficacy Theory

Bandura's (1977) explained the perception of a theoretical self-efficacy framework. His theory "presented the view that changes achieved by different methods derive from a common mechanism" (Bandura, 1977, p. 191). Bandura's self-efficacy theory is "based on the principal assumption that psychological procedures, whatever their form, serve as a means of creating and strengthening expectations of personal efficacy" (Bandura, 1977, p. 193). Personal efficacy is the part of an individual that interacts in a complex manner with the environment, as well as with other motivational and self-regulatory mechanisms and with personal capabilities and performance accomplishments (Bandura, 1996). Bandura's (1977) theory highlighted outcome expectancy and efficacy expectations as important components of self-efficacy theory. Outcome expectancy is a person's estimate that a given action will lead to specific

results. Efficacy expectation, on the other hand, is the assurance that an individual can effectively execute the behavior required to produce a result. Bandura identified distinct and clear associations between outcome expectations and efficacy expectations.

Bandura (1977) divided self-efficacy expectations into various dimensions, all having important performance implications. Self-efficacy expectations are a person's beliefs concerning his or her ability to successfully perform a given task or behavior, and those expectations differ in magnitude, generality, and strength. According to Bandura (1977), efficacy expectations also differ in generality. Bandura noted that "some experiences create circumscribed mastery expectations, while others instill a more generalized sense of efficacy that extends well beyond the specific treatment situation" (Bandura, 1977, p. 194). Expectancies also vary in strength. "Weak expectations are easily extinguishable by disconfirming experience, whereas individuals who possess strong expectations of mastery will persevere in their coping efforts despite disconfirming experiences" (Bandura, 1977, p. 194).

Bandura's (1977) theory provided four primary sources of efficacy expectations: performance accomplishments, vicarious experiences, verbal persuasion, and physiological states (Figure 2-3). These primary sources interrelate to influence performance judgments and influence human actions. An individual's performance accomplishments are possibly the most significant, due to the relationship to personal experiences. Vicarious experiences are those gleaned from watching another individual experience an activity with little or no recourse. Witnessing others perform or participate in activities with success breeds the expectation of personal improvement and success in others. Verbal persuasion is frequently utilized because of "its ease and ready

availability" (Bandura, 1977, p. 198). Bandura proposed that people are led from suggesting to believing they can cope successfully with what has overwhelmed them in the past. Bandura's (1977) emotional arousal suggests that "stressful and taxing situations generally elicit emotional arousal and depending on the circumstances the situation might have informative value concerning personal competency" (p. 198).

Bandura's primary efficacy expectations play a significant role in the formation of career maturity and career decision-making self-efficacy. With proper reinforcement and support, secondary students can choose valuable post-secondary experiences and long term career path.

Career Decision-Making Self-Efficacy

Career Decision-Making Self-Efficacy describes an individual's expectations regarding her or his ability to perform the specific task and behaviors that are important to effective career decision-making (Taylor & Betz, 1983). Researchers have found a significant relationship between career decision-making self-efficacy and career decision-making attitudes (Luzzo, 1993b), career decidedness (Robbins, 1985; Taylor & Popma, 1990) vocational identity (Robins, 1985), self-esteem (Robbins, 1985), career exploration behavior (Bluestein, 1989) career indecision (Robbins, 1985; Taylor & Betz, 1983), and career locus of control (Taylor & Popma, 1990). Since the inception of Bandura's self-efficacy theory in 1977, there has been a great deal of attention in the literature to its application in career development. The first to apply Bandura's self-efficacy theory were Hackett and Betz (1981), because of their belief that it could further explain traditional gender roles and male and female evaluations in relationship to career choice and certain behaviors. Taylor and Betz (1983) were the next to develop

the construct of CDMSE and the inception of Social Cognitive Career Theory. Taylor and Betz developed a measurement tool for career decision-making self-efficacy.

Hackett and Betz (1981) were the first to define the relationship between self-efficacy and career-related performance. Career-related behavioral domains were determined by Crites (1971) as the following: (a) accurate self-appraisal, (b) gathering occupational information, (c) goal selection, (d) making future plans, and (e) problem-solving. Hackett and Betz (1981) identified two additional domains- assertion and the ability to take the initiative- with the intent of explaining the relationship between self-efficacy and women's career development.

Career Maturity

Career maturity was originally referred to as "vocational maturity". Career maturity is defined as "the place reached (by the individual) on the continuum of vocational development from exploration to decline" (Super, 1955, p. 153). The concept of career maturity has been researched for more than 50 years, and numerous measures have been created to evaluate this variable (Brown & Lent, 2005). Crites (1976) divided career maturity into two separate dimensions: attitudinal and cognitive. The attitudinal dimension refers to individuals' attitudes and feelings about making a vocational (career) choice and whether they continue to pursue their career choice as they enter the workforce. The cognitive dimension refers to decision-making skills; and the affective dimension includes attitudes toward the career decision-making process (Patton & Creed, 2001).

Researchers have discovered that career maturity is significantly associated with a variety of other career development variables, such as self-concept (Onivehn, 1991; Salami, 1999), career decision-making (Wanberg & Muchinsky, 1992), career

preference (Salami, 1997), career commitment (Lam, Poong, & Moo, 1995), career planning, career exploration, and occupational information-seeking behavior (Naidoo, 1998). Career maturity has been one of the most universally researched outcome measures in career counseling and career development (Cook 1991; Luzzo, 1995; Spokane, 1991).

Summary

Chapter 2 provided a review of literature related to the problem of this study. The research literature relating to career maturity and career decision-making self-efficacy was examined to gain an enhanced understanding of previous studies and research. Past research has supported the importance of career maturity and career decision-making self-efficacy for secondary students.

Chapter 3 will provide the methodology and procedures that were used in this study. Further, Chapter 3 outlines the research design and perspective, research methods, research procedures, population and instrumentation, data collection, data analysis and potential threats to validity and reliability.

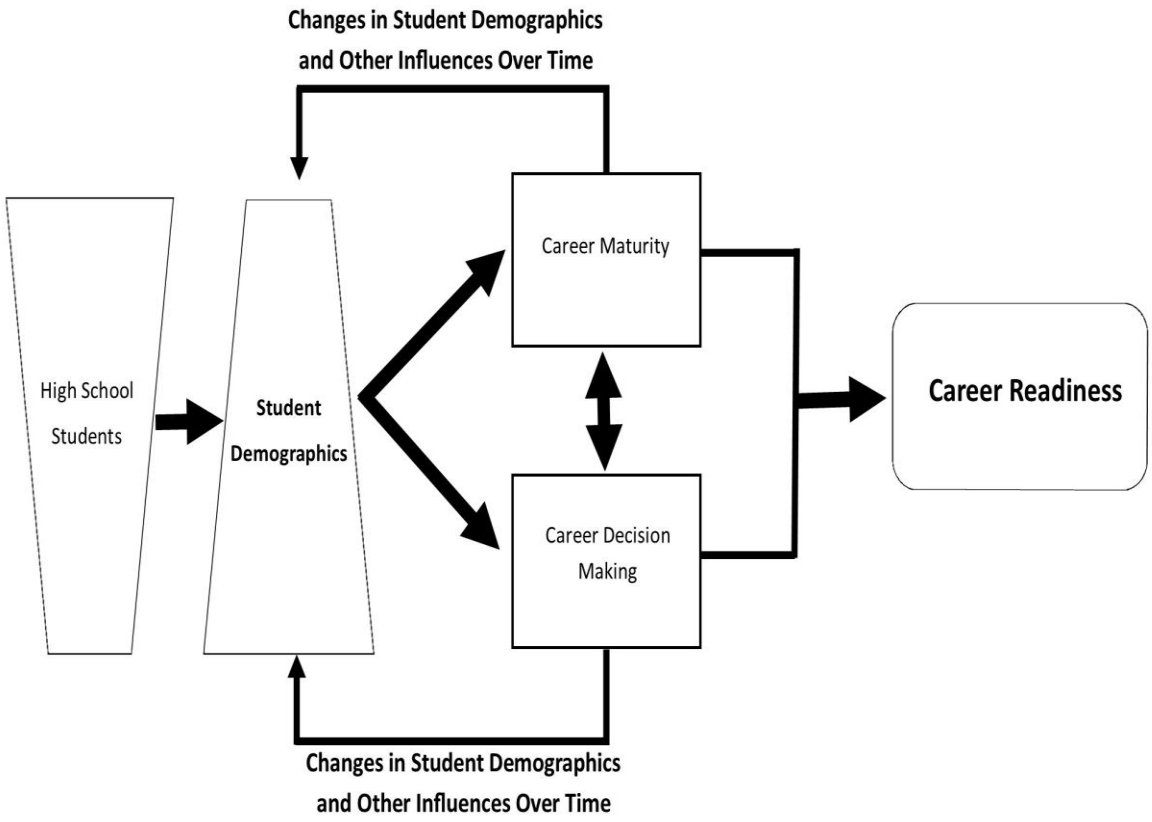

Figure 2-1. Conceptual Model (Adapted from Lent, Brown & Hackett's Model of Social Cognitive Theory)

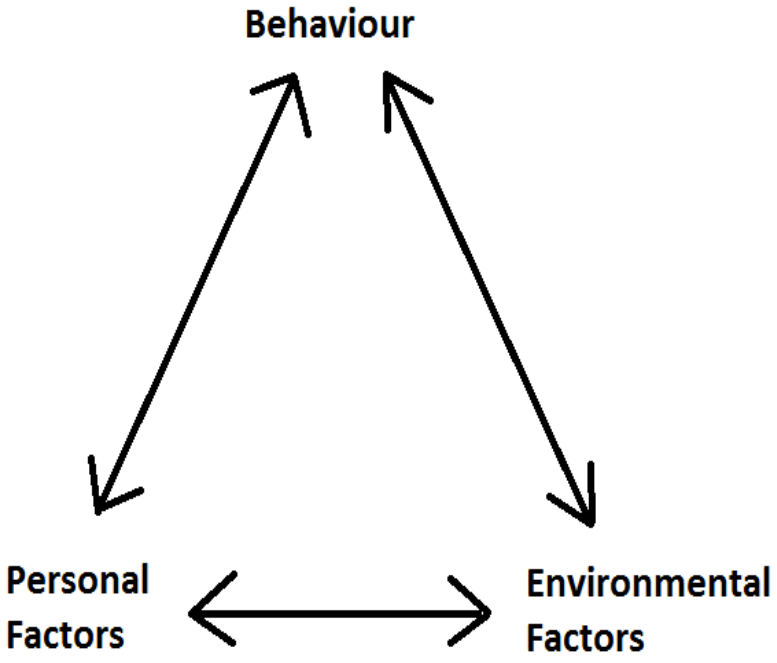

Figure 2-2. Bandura's Triadic Reciprocal Model (Bandura 1985)

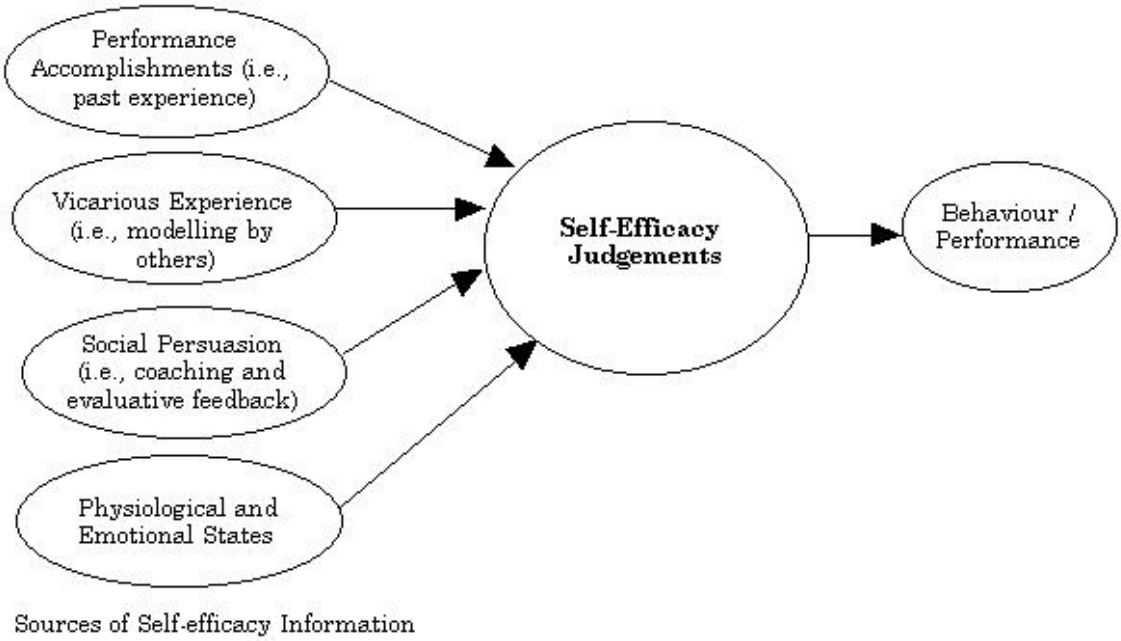

Figure 2-3. Bandura's Self-Efficacy Model (Bandura, 1977)

CHAPTER 3
METHODOLOGY

Chapter 1 provided a historical perspective on career maturity and career decision-making self-efficacy among secondary school students. The purpose of this study was outlined, along with the objectives. Key terms were defined, and assumptions and limitations were stated.

Chapter 2 described the theoretical framework and the conceptual model used to guide this study on career maturity and career decision-making self-efficacy. Chapter 2 additionally presented previous research findings related to components of the conceptual model employed in this study.

In Chapter 3 methods used to address the research objectives are discussed. Specifically, Chapter 3 outlines the research design and perspective, research methods, research procedures, population and instrumentation, data collection, data analysis and potential threats to validity and reliability.

Research Design

This longitudinal study employed a descriptive correlational research design using a survey data collection methodology. Survey design is broadly used and reputable in the field of social sciences (Hackett, 1981). A cross-sectional survey design was used in this study to gather data at several points in time and study changes in career maturity and career decision-making self-efficacy over an extended period. By using questionnaires, data can be collected from a predetermined population allowing for comparisons to be made across two or more groups of participants (Fraenkel & Wallen, 2003). Further, this study described the group as a whole and the demographic characteristics related to career maturity and career decision-making self-efficacy.

Procedures

Before the compilation of any data, University Internal Review Board (IRB) authorization was sought and granted, based on a brief description of this study (Appendix A). The governing school board and school administration of the rural high school granted approval, allowing students to participate in this study (Appendix B). Informed consent letters (Appendix C) explained the purpose of this study, provided information regarding confidentiality and anonymity of data collection, and included the contact information for the researcher, should guardians or parents have questions not addressed in the informed consent letter. Informed consent letters, teacher introduction letters (Appendix D), student assent letters (Appendix E), and a copy of the university IRB approval were distributed to each student. Students were asked to return all forms with a guardian or parent signatures, indicating permission to participate in the study. IRB consent forms were collected and securely filed for reference purposes.

The data collection procedure for the study was determined by the researcher and was administered in cooperation with school administrators and classroom teachers in the rural high school. The predetermined day and period for each class level (freshman, sophomore, junior or senior) were established by the school administrator for the completion of the web-based surveys. Students were asked to complete the demographic questionnaire (Appendix F), the Career Maturity Inventory Revised Form (CMI-R) (Appendix G), and the Career Decision-Making Self-Efficacy Short Form (CDMSE-SF) (Appendix H), using the web-based instruments.

As an incentive for students to complete and return all IRB forms and parent or guardian permission forms, students were informed that upon completion of the surveys they would qualify for a $25.00 gift card. Each participant who submitted forms and

completed surveys was entered into a drawing at the conclusion of the data collection phase. Four gift cards, one for each grade level, were given away in 2012, 2013 and 2014. In order to protect the anonymity of participants, four student numbers were drawn, one from each grade level, and returned to the school administrator, along with the gift cards for distribution to the winning students.

Population and Sample

The population for this study included students in grades 9-12 attending a rural county high school in Florida, a census of the entire population was assessed. In 2012 the high school population (Table 3-1) included 619 students and 45 administrators, and teachers (Table 3-2). Approximately 51.9% of students were classified as economically disadvantaged (Table 3-3). The percentage of ethnic groups of students in the high school was 78.5% White, 14.5% Black or African American, 3.2% Hispanic or Latino and 2.3% list more than one ethnicity (Table 3-4). The high school population was 53.2% male and 46.8% female (Table 3-6). In 2013 the high school student population (Table 3-1) included 628 students and 44 administrators and teachers (Table 3-2). Approximately 51.9% of students were classified as economically disadvantaged (Table 3-3). The percentage of ethnic groups of students in the high school was 78.5% White, 13.2% Black or African American, 3.3% Hispanic or Latino and 4.3% list more than one ethnicity (Table 3-4). The high school student population was 50.7% male and 49.3% female (Table 3-6). In 2014 the high school population (Table 3-1) included 632 students and 44 administrators and teachers (Table 3-2). Approximately 51.9% of students were classified as economically disadvantaged (Table 3-3). The percentage of ethnic groups of students in the high school was 77.4% White, 12.7% Black or African

American, 4.7% Hispanic or Latino and 4.1% list more than one ethnicity (Table 3-4). The high school population was 48.9% male and 51.1% female (Table 3-6).

The overall school district included three schools- an elementary school, middle school, and high school. Student enrollment in the district was 2,257 students in 2012, 2,336 in 2013 and 2,342 in 2014 (Table 3-1). To serve these students, the district had an average of 170 instructional and school administrators over the period of this study (Table 3-2). For the district, approximately 60.8% in 2012, and 62% in 2013 and 2014 of the students were classified as economically disadvantaged (Table 3-2). The percentages of ethnic groups in the district in 2012 were 79% white, 13.2% African American, 3.5% Hispanic, and 3.4% list one or more ethnicity (Table 3-5). In 2013, 78.5% white, 13.2% African American, 3.3% Hispanic, and 4.3% list one or more ethnicity, in 2014, 77.4% white, 13.9% African American, 3.6% Hispanic, and 4.2% list one or more ethnicity (Table 3-5).

The student population was stable for the three years of the study, and transfer in and out of the district were minimal. The school was accredited by the Southern Association of Colleges and Schools (SACS) and offered programs in agricultural education, business education, health and leadership education, unified arts programs, and honors courses, in addition to the standard high school curriculum. The school offered five Advanced Placement courses. According to College Board AP archived data, an average of 769 public and private schools in the state of Florida offered Advanced Placement courses in 2012, 2013, and 2014 (2014). Further, the average number of courses offered in schools nationally was 9.01 subjects per school, and 214.24 exams were administered per school (College Board, 2014). According to school

data, 50 students at the school selected for this study completed one or more Advanced Placement courses in 2012, 2013 and 2014 combined and 58 AP exams were taken over 2012, 2013, and 2014. The high school supported a plethora of athletics and extracurricular clubs and organizations.

According to the Florida Department of Education, state-assigned district grades were “A” for 2012-2013 (2013), a “B” in 2013-2014 (2014) and an “A” for 2014-2015 (2015). The high school received an overall grade of “A” for the 2012-2013 (2013) academic year, a “B” for the 2013-2014 (2014) academic year and a grade of “A” for the 2014-2015 (2015) school year (Table 3-7). District and school grades were calculated based on 11 components, including four achievement components, components for learning gains, learning gains of the lowest 25% of students, middle school acceleration, graduation rate, and college and career acceleration. The Florida Department of Education added all 11 components together and divided that total by the total number of available points to determine a percentage. Further, the grade was based on the following percentages: A= 62% or greater of the total points available in the rating system, B= 54% to 61% of total points available, C= 41% to 53% of total points available, D= 32% to 40% of total points available, and F= 31% or less of total points available.

The selected high school offered five Advanced Placement (AP) courses, American history, world history, human geography, environmental science, and biology. Students had access to a multitude of dual enrollment (DE) courses offered at a nearby accredited state college. Extracurricular activities included, but were not limited to, FFA, honor societies, academic clubs, football, softball, boy’s golf, boy’s and girl’s tennis,

boy's and girl's track and field, boy's and girls' basketball, boy's and girl's weightlifting and girls' volleyball.

The school was located in a small county in the southeastern tier of the United States. The total county population was 15,535 people, according to the United States Census Bureau (2010), and had an average household income of $45,645. The county consisted of 64.8% males and 35.2% females. In 2010, 76% of the adult population in the county had a high school diploma, and 10% held a bachelor's degree or higher. According to the 2010 census, county ethnicity percentages were divided as follows: 75.3%, white, 22.7% African American, and 2% Hispanic, Latino, Native American or Asian combined. Primary employers in the county included the Department of Corrections, the school board and numerous industrial transportation companies.

Instrumentation

Three instruments were utilized during this study for data collection: the Career Maturity Inventory (CMI-R), the Career Decision-Making Self-Efficacy Short Form assessment (CDMSE-SF) and a demographic information survey (Demographic Questionnaire or DQ – see Appendix F), which was developed by the investigator for this study. The following items were included in the demographic questionnaire: age, gender, grade, ethnicity, extracurricular activities, athletics activities, current career goals, and Advanced Placement (AP) and dual enrollment courses.

The Career Maturity Inventory (CMI) instrument developed by Crites (1978) was chosen for this study because the instrument has been well researched and used as an efficient and effective measure of career maturity (Busacca & Taber, 2002). The CMI evaluates the level of which participants are equipped to make practical decisions regarding their own career choices (Crites, 1978)

The original assessment was called the Vocational Development Inventory (VDI), which included 50 true-false attitude scale questions and 100 multiple choice competence questions (Crites, 1961). Later versions used in this study measured feelings and disposition of an individual toward making a career decision (Crites, 1978a, 1978b). Researchers have indicated the CMI is reliable and valid. However, a few inadequacies in the 1978 version have been found. These have included the length of questionnaire, length of time needed to administer the questionnaire, applicability to all demographics, use of the subscales, limited scoring options, and limited career counseling (Crites and Savickas, 1996). Crites and Savickas (1996) revised the CMI as a result of the limitations mentioned above. The Career Maturity Inventory-Revised (CMI-R) was intended to be more relevant and functional to counseling and career development programs (Busacca & Taber, 2002). Unlike the VDI, the CMI-R has been accepted as appropriate for secondary school students, post-secondary school students, the employed, the unemployed, and male and female individuals, as well as minority groups.

Crites, as influenced by the work of Super (1955), proposed a structure for career development that included, (1) career choice attitudes, (2) career choice competencies, (3) realism of career choices, and (4) consistency of career choices. To test for career development cognition the CMI consists of a competency test and an attitude test. The competence test addresses career choice attitudes and career choice competencies. Further, the competence test addresses characteristics of behavior including, (1) self-appraisal, (2) occupational information, (3) goal selection, (4) planning, and (5) problem solving. The CMI attitude test references feelings and reactions that are subjective, the

disposition the individual has toward making a career choice and entering the world of work (Crites, 1978b, p.3).

Other differences between the 1978 CMI questionnaire and the 1995 CMI-R include the change from “True” and “False” responses to “Agree” and “Disagree” responses. According to Crites and Savickas (1996), this has allowed for contrasting responses.

For this study the CMI-R attitude scale was used exclusively. The attitude scale of the career maturity inventory measured career maturity (Savickas, 1984). The attitude scale scrutinizes attitudes toward decision-making, including decisiveness, involvement, independence, orientation, and compromise (Busacca & Taber, 2002). The CMI attitude test is used as a screening tool to address areas of concern when the clients may not have enough information about themselves or the world in order to make a realistic career decision (Powell & Luzzo, 1998). The CMI-R attitude scale consisted of 25 varied statements. Individuals accrued a score from 1-25 for career maturity attitude, based on their responses to each statement. Student responses for each item were compared to the scoring rubric and given a score of zero or one. The values for each question were then summed, and a score for career maturity was determined. A higher CMI-R score, above 20, indicated advanced attitudes towards career decisions, career planning preparedness and career exploration. Individuals who scored in the 16-19 range were considered to be progressing at a normal pace, while individuals who scored 15 or lower were determined not yet to be ready to make career choices and should be the target of career-related interventions (Busacca & Taber, 2002). According to Crites (1978) mean scores increase monotonically across grades,

with grade 12 students being more career mature than those in grade 11, and so on down to elementary school.

Busacca and Taber (2002) were some of the first researchers to scrutinize the internal construct and criterion validity of the CMI-Revised (CMI-R). The original 1978 CMI scale was standardized with 1,648 students in grades 6 through 12 (Hansen, 1974). The K-R20 internal consistency coefficients for the attitude scale of the 1978 version averaged .74, and the competence test coefficients ranged from .63 to .86 (Crites, 1978b). Even though Busacca and Taber's (2002) findings were somewhat lower for the reliability coefficients for the CMI-R, they did find some corroboration evidence related to the CMI-R, with higher scores being associated with greater readiness to make occupational decisions. Crites and Savickas (1996) reported that because the items in the 1995 CMI-R were drawn from the 1978 CMI, the reliability and validity of the CMI-R is equivalent to the previous version.

Numerous researchers have concurred that the CMI-R has suitable reliability and validity (Busacca & Taber, 2002; Dipeolu, 2007; Powell & Luzzo, 1998). However, investigators have been advised to interpret the results of the CMI-R judiciously until future studies, and supplementary data have been generated (Crites & Savickas, 1996; Dipeolu, 2007; McDivitt, 2001). According to Crites and Savickas (1996) attitude scales have been written on a fifth or sixth-grade reading level. CMI-R limitations have included a lack of usability of the questionnaire with individuals who are mentally challenged or have a visual or hearing impairment (Crites & Savickas, 1996). Those individuals were exempt from participating in this study.

The Career Decision-Making Self-Efficacy instrument was the second questionnaire utilized in this study. This instrument measures a person's level of confidence that he or she can productively complete tasks necessary for making career decisions (Taylor & Betz, 1983). This instrument was based on Crites' (1978b) model of career maturity and included a five career choice competency scale that included (1) accurate self-appraisal, (2) gathering occupational information, (3) goal selection, (4) establishing plans for the future, and (5) problem solving. The Career Decision-Making Self-Efficacy Scale Short Form (CDMSE-SF) was developed as a result of original concerns that the CDSME instrument was too long and required an unwarranted amount of time to administer and complete. The original instrument included 50 items relating to career decision-making tasks and behaviors, while the shorter version included only half the number of questions. The instrument developer of the CDMSE-SF questionnaire narrowed the questions from 50 to 25 by discarding and eliminating five of the ten items from each of the five CDMSE scales (Betz, Klein, and Taylor, 1996).

The researcher chose the CDMSE-SF (Betz, Klein, and Taylor, 1996) as a means of measuring career decision-making self-efficacy as it relates to career tasks. The CDMSE-SF instrument allowed the researcher to evaluate a student's career decision-making self-efficacy on five scales about self-appraisal, knowledge of occupational information, goal selection, future plans, and problem solving. The Career Decision-Making Self-Efficacy (CDMSE-SF) instrument used in this study included 25 questions with responses ranging from 1 (no confidence) to 5 (complete confidence). Each question was answered on a five-point Likert-type scale. Higher scores on the CDMSE-SF indicated a higher level of career decision-making self-efficacy.

The original CDMSE scale was standardized using a sample of 346 students from a large university and private college. Reliability (Cronbach's alpha) ranged from 0.86 to 0.89 for the subscales and generated an alpha of 0.97 for the total scale score (Betz, Klein, & Taylor, 1983). Other researchers have described similar levels of reliability (Robbins, 1985; Taylor & Betz, 1983). Luzzo (1993a) reported a test-retest reliability coefficient of .83 for the scale, while Bluestein (1989) and Taylor & Betz (1983) presented support for the construct, content and criterion validity of the measure.

The CDMSE and CDMSE-SF have both been found to be reliable. Reliability measures (Cornbach's alpha) for CDMSE-SF have ranged from .73 for self-appraisal to .83 for goal selection for internal reliability and have yielded an alpha score of .94 for the 25-item total score (Betz et al., 1996). Various researchers have also conveyed equivalent levels of internal consistencies; Nilsson et al. (2002) reported a .97 Cronbach's alpha, and two other studies generated a .93 Cronbach's alpha for the total scale score (Betz & Voyten, 1997; Luzzo, 1996). The validity of the CDMSE short form (CDMSE-SF) was established and showed scale scores that were linked to career indecision (Betz et al., 1996). Further, Betz et al. disclosed that the relationship of the CDMSE-SF to career indecision ranged from -.19 to - .66 for indecision and from -.03 to -.76 for certainty.

Data Collection

The data collection period for this study was during the fall of 2012, 2013 and 2014. The demographic questionnaire (DQ), added in 2013 and 2014, CMI-R and CDMSE-SF were administered to all students during the normal school day under the direction of their homeroom or other designated teacher in the school's computer

laboratory or classroom setting. The demographic questionnaire, along with the two career instruments, took approximately 20-30 minutes to complete.

The students completed each of the instruments in the fall of each academic year. In order to address the attrition potential in this study, students were added and deleted to the study each year as students entered and left the school. Students who did not complete the Institutional Review Board (IRB) form were excluded from the data set and were not used in data analysis. However, the majority of students completed the survey, and all results were reported to the school for its interpretation and use. For the purpose of overall data collection, it is important to report that collection is dependent on the cooperation of the administration and faculty of the school to administer and guarantee that students completed the surveys each year.

Confidentiality

For this study, no data from the Career Maturity Inventory, Career Decision-Making Self-Efficacy Short Form, and the student demographic survey included recognizable information specific to any student. No identifying student characteristics were used in the analysis or reporting of this study. Further, all IRB consent forms were collected and securely stored.

In order to award incentives, participant identification numbers, assigned by grade level, were drawn from a manila envelope. The gift cards and student identification numbers, one for each grade level were delivered to the school administrator for distribution. This process was repeated in 2012, 2013 and 2014.

Analysis of Data

The primary dependent variables in this study were career maturity and career decision-making self-efficacy, as measured by the CMI-R and CDMSE-SF. The

following student demographic characteristics were antecedent variables- gender, ethnicity, ethnicity, extracurricular activities, Advanced Placement courses taken, and dual enrollment courses taken.

Data were analyzed using JMP® version 13 for Windows. In order to determine the relationships and interactions between selected demographic characteristics and career maturity and career decision-making self-efficacy of secondary students in a rural high school a linear mixed model was used.

Summary

Chapter 3 described the methods, procedures, instrumentation, and research design procedures used to examine the relationships between career maturity, career decision-making self-efficacy and selected student demographics of students in a rural high school. Additionally, Chapter 3 addressed threats to validity and reliability. Chapter 4 will present the findings of the study.

Table 3-1. District and High School Student and Faculty Population

Year	District-Student	School-Student	District-Faculty	School-Faculty
2012-2013	2257	619	173	45
2013-2014	2336	628	168	44
2014-2015	2342	632	170	44

Table 3-2. District and School Faculty

Year	District	School
2012-2013	123	45
2013-2014	168	44
2014-2015	170	44

Table 3-3. District and High School Economically Disadvantaged

Year	District	School
2012-2013	60.8%	51.9%
2013-2014	62%	51.9%
2014-2015	62%	51.9%

Table 3-4. High School Ethnic Groups

Year	White	African American	Hispanic	More than One
2012-2013	78.5%	14.5%	3.2%	2.3%
2013-2014	78.5%	13.2%	3.3%	4.3%
2014-2015	77.4%	12.7%	4.1%	4.1%

Table 3-5. District Ethnic Groups

Year	White	African American	Hispanic	More than One
2012-2013	79%	13.2%	3.5%	3.4%
2013-2014	78.5%	13.2%	3.3%	4.3%
2014-2015	77.4%	12.7%	3.6%	4.1%

Table 3-6. District and High School Male-Female Ratio

Year		District	School
2012-2013			
	Male	52.1%	53.2%
	Female	48.8%	46.8%
2013-2014			
	Male	50.7%	50.7%
	Female	49.3	49.3%
2014-2015			
	Male	50.9%	48.9%
	Female	49.10%	50.1%

Table 3-7. District and High School Grades

Year	District Grade	School Grade
2012-2013	A	A
2013-2014	B	B
2014-2015	A	A

CHAPTER 4
RESULTS

The purpose of this study was to examine the relationship between career maturity and selected demographics, and career decision-making self-efficacy and selected demographic characteristics.

Chapter 1 established the need for determining the relationship between career maturity and career decision-making self-efficacy in secondary students and the relationship of these scores and with various student demographic characteristics.

The purpose of Chapter 2 was to provide a conceptual and theoretical framework through which the study was developed and completed. Substructures for this study included constructivism, social cognitive theory, and self-efficacy theory. A review of the literature included in Chapter 2 examined studies focusing on the processes of career maturity, career decision-making, and career development.

Chapter 3 detailed the methods and procedures through which the study was conducted. Further, Chapter 3 outlined the research design and perspective, population and instrumentation, data collection, data analysis and potential threats to validity and reliability. Data were collected using three instruments and were analyzed using descriptive statistics and regression.

Chapter 4 will present the findings of the study using the objectives outlined in Chapter 1. Results concerning the relationships between career maturity and career decision-making self-efficacy and student demographics are presented in the following sections.

Sample

The population for this study included students in grades 9-12 attending a rural county high school in Florida, a census of the entire population was assessed. Permission from the district's school board and high school administration was granted (Appendix A) for each of the three years or until the study was completed. The school administrator agreed to distribute and collect all teacher letters (Appendix B), student assent letters (Appendix C) and completed informed consent forms (Appendix D) for the duration of the study. Table 4-1 exhibits the number of students who completed the comprehensive survey in comparison to the total student population. A total of 652 students completed the signed consent forms over the course of 2012, 2013 and 2014. Table 4-2 illustrates the number of students who completed the survey in multiple years. Over the course of the longitudinal study 70 students completed the survey over two years and 9 students completed the survey in 2012, 2013 and 2014. To account for students being measured multiple times and their correlation responses over time, students were treated as a random effect.

The results of the study were used to examine if there was a relationship between career maturity and selected demographics and career decision-making self-efficacy and selected demographics and which variables were more impactful.

Objective One: Describe the demographic characteristics of selected rural high school students.

Objective one was analyzed using descriptive statistics for the selected demographic variables. Students who completed the demographic questionnaire in 2013 and 2014 were mostly female (Table 4-3); white, non-Hispanic (Table 4-4); and in the 9th grade (Table 4-5). The majority of the students in this sample participated in at

least one extracurricular activity (Table 4-6), but less than 25% engaged in athletic or sports activities (Table 4-7). Further, the vast majority of students did not participate in dual enrollment courses (Table 4-8) or complete an Advanced Placement course (Table 4-9). In 2013, 0.64% of students were enrolled in dual enrollment courses, 0.32% of students were enrolled in Advanced Placement courses and no students were enrolled in both dual enrollment and Advanced Placement courses. In 2014, 8.70% of students were enrolled in dual enrollment courses, 9.02% students were enrolled in Advanced Placement courses, and 2.69% were enrolled in both. Approximately one-third of students participated in one or more co-curricular activities (Table 4-10).

The age of students 2012 was not collected in the demographic questionnaire. The mean age for participants in 2013 was 16 years with a range in age from 14 years to 17 years. In 2014, the mean age was 16 years and an age range of 14 years to 20 years (Table 4-11).

Objective Two: Assess the level of career maturity of students in a selected rural high school.

Career maturity of the participants was assessed using the Career Maturity Inventory-Revised (CMI-R). A higher CMI-R score, above 20, indicates advanced attitudes towards career decisions, career planning preparedness and career exploration. Individuals who score in the 16-19 range are considered to be progressing at normal pace, while individuals who score 15 or lower are determined to not yet be ready to make career choices and should be the target of career-related interventions (Busacca & Taber, 2002).

Participants in the 2013 data year showed the highest mean CMI-R score (M = 16.21) with the 2014 cohort showing the lowest (M = 14.24). However, it should be

noted that all three years (2012, 2013, and 2014) had relatively similar mean scores of 14.54, 16.21, and 14.24, respectively (Table 4-12), and the 2013 sample size was very small.

Further investigation of career maturity and grade level reveals a higher mean score for 9th graders in 2013, of 19.20, compared to the mean scores of 10th, 11th and 12th graders of 18.00, 16.32 and 12.58, respectively (Table 4-13). It should be noted the number of students participating in 2013 was extremely low, with only 5 students in the 9th grade, 1 in the 10th grade, 32 students in the 11th grade and 3 in the 12th grade (Table 4-13). However, in 2014, participants were more representative of the student population, with 9th grade participation at 125 students, 10th grade participation at 103, and both 11th grade and 12th grade participation at 78 (Table 4-13). The 2014 mean scores showed 9th graders with a higher career maturity score of 15.16, followed by 11th graders with a mean score of 14.43, 10th graders a 14.24 and 12th graders a 13.01 (Table 4-13). Career Maturity scores appear to be declining as a student progresses through high school, further, career maturity scores appear to be declining among female students as well (Table 4-14).

Further, when making male versus female comparisons by grade levels for 2013 and 2014 combined, career maturity mean score differences were the greatest between males and females in the 10th grade, 15.44 and 13.55 respectively (Table 4-14). Career maturity scores for males in the remaining grade levels were higher than those of females, but the difference in male and female career scores was small (Table 4-14).

Objective Three: Assess the level of career decision-making self-efficacy of students in a selected rural high school.

The career decision-making self-efficacy of students in this sample was assessed using the Career Decision-Making Self-Efficacy Short Form (CDMSE-SF). Participants in the 2012 study showed the highest mean CDMSE-SF score (M = 94.17) with the 2013 cohort showing the lowest (87.90). However, it should be noted that all three years (2012, 2013, and 2014) had similar mean scores of 94.17, 87.90, and 91.76, respectively (Table 4-15) with a standard deviations of 0.56, 0.56, and 0.43 respectively. Career decision-making self-efficacy scores range from 1 to 25 no confidence at all, 26 to 50 very little confidence, 51 to 75 moderately confident, 76 to 100 much confidence, and 101 to 125 complete confidence based on the computation of highest possible scores.

Further investigation of career decision-making self-efficacy and grade level revealed a higher mean score in the 2013 data set for 9th graders (94.73), compared to 10th, 11th and 12th graders (88.93, 93.88 and 87.85, respectively) (Table 4-16). Again, it should be noted the number of students participating in 2013 was extremely low. The 2014 mean scores showed 12th graders have a higher career decision-making self-efficacy mean score of 96.38 , followed by 10th graders with a mean score of 94.93, 9th graders with a mean score of 92.65 and 11th graders with a mean score of 87.22 (Table 4-16).

Further, when making male versus female comparisons by grade levels for 2013 and 2014 combined, career decision-making mean score differences were the greatest between males and females in the 10th grade, 88.93 versus 94.73 respectively (Table 4-17). Career decision-making self-efficacy mean scores for males in the remaining

grade levels were also lower than those of females, except for 9th graders where males had a higher score than females (Table 4-17). CDMSE scores for 10th grade males and females were 88.93 and 94.73, respectively. Students in the 11th grade had mean scores of 87.85 for males and 93.88 for females and 12th grade male and female scores were 94.93 and 96.38, respectively (Table 14-17).

Objective Four: Examine levels of career maturity based on demographic characteristics.

A number of demographic characteristics were found to be significantly related to career maturity. Students who had not completed Advanced Placement courses were found to have significantly lower CMI-R scores ($p = 0.01$). Students who did complete Advanced Placement courses had a least squares mean of 13.57. Those students who did not complete an AP course had a least squares mean of 15.44. Similarly, students who completed dual enrollment courses also had a significantly higher CMI-R scores than those who did not ($p < .01$). Those who did complete at least one dual enrollment course had a mean score of 11.59, while those who did not complete a dual enrollment course had a mean score of 15.81. (Table 4-18). Participating in extracurricular activities was also found to be significant in comparing CMI-R scores ($p = 0.03$). Students with zero or one extracurricular activity had higher mean scores than those who participated in two or more activities. Student self-reported ethnicity also was found to be significant ($p < .01$) (Table 4-19). Students who self-reported as Hispanic or Latino were found to have the highest levels of career maturity followed by Asian or Asian American, Black or African American, American Indian, Other, Hawaiian or Other Pacific Islander, Other and White, Non-Hispanic or Latino, (Table 4-19). The variables of age, participation in sports, career interest and gender were not found to be significant.

Objective Five: Examine levels of career decision-making self-efficacy based on demographic characteristics.

All demographic characteristics were compared to participant career decision-making self-efficacy scores. There were two demographic characteristics with significantly higher CDMSE-SF means, participants who took dual enrollment courses and those participants with two or three extracurricular activities (Table 4-20).

Participants who took dual enrollment courses were found to have a mean score of ($p < .01$) (Table 4-20) for career decision-making self-efficacy. Participation in extracurricular activities was also found to be significant. Students who participated in two or three extracurricular activities were found to have significantly higher CDMSE-SF mean scores than others ($p < .01$) (Table 4-20). No other variables examined in this study were found to be significant.

Summary

Chapter 4 presented results of the study as dictated by the objectives and hypothesis. Objectives included: (1) to describe the demographic characteristics of selected rural high school students, (2) to assess the level of career maturity of students in a selected rural high school, (3) to assess the level of career decision-making self-efficacy of students in a selected rural high school, (4) to examine levels of career maturity based on demographic characteristics and (5) to examine levels of career decision-making self-efficacy based on demographic characteristics.

Chapter 5 will summarize these findings, offer recommendations and conclusions as related to the aforementioned results. Chapter 5 will further detail how these findings can strengthen career maturity and career decision-making self-efficacy in high school students.

Table 4-1. Respondents by Year

Year	*n*	Percent of School Population
2012 Survey	225	36.40
2013 Survey	43	6.84
2014 Survey	385	60.90

Table 4-2. Respondents With Multiple Surveys

Years	*n*
One	652
Two	70
Three	9

Note. To account for students being measured multiple times and their correlation responses over time, students were treated as a random effect.

Table 4-3. Respondents by Gender Participation

Year	Male	Female	Total
2013			
Number	24	18	42
Percentage	57.14	42.86	
2014			
Number	172	213	385
Percentage	44.68	55.32	

Note. Includes data from 2013 and 2014.

Table 4-4. Analysis of Self-Reported Ethnicity Description

Self-Description		2013	2014	Total
Asian or Asian American				
	Number	0	4	4
	Percentage	0	1.04	
Black or African American				
	Number	3	43	46
	Percentage	7.14	11.23	
Hawaiian or Pacific Islander				
	Number	0	1	1
	Percentage	0	0.26	
Hispanic or Latino				
	Number	5	13	18
	Percentage	11.90	3.39	
Native American				
	Number	0	11	11
	Percentage	0	2.87	
White, Non-Hispanic or Latino				
	Number	34	294	328
	Percentage	80.95	76.76	
Total		42	383	425

Note. Includes data from 2013 and 2014.

Table 4-5. Respondent Analysis of Grade Level

Year		9th Grade	10th Grade	11th Grade	12th Grade	Total
2013						
	Number	5	1	32	3	41
	Percentage	12.20	2.44	78.05	7.32	
2014						
	Number	125	103	78	78	384
	Percentage	32.55	26.82	20.31	20.31	
Total		130	104	110	81	425

Note. Includes data from 2013 and 2014.

Table 4-6. Respondent Analysis of Extracurricular Activities

Year		0	1	2	Total
2013					
	Number	12	22	8	42
	Percentage	28.57	52.38	19.05	
2014					
	Number	116	171	98	385
	Percentage	30.13	44.42	25.45	

Note. Includes data from 2013 and 2014. Extracurricular activities coded as 0= none; 1= 1-2; 2=3 or more.

Table 4-7. Respondent Analysis of Sports Activities

Year		0	1	2	Total
2013					
	Number	26	14	2	42
	Percentage	61.90	33.33	4.76	
2014					
	Number	292	83	10	385
	Percentage	75.84	21.56	2.60	
Total		318	97	12	427

Note. Includes data from 2013 and 2014.

Table 4-8. Analysis of Dual Enrollment Courses

Year	Not Enrolled	Enrolled	Total
2013	38	4	42
	90.48	9.52	
2014	330	55	385
	85.71	14.29	
Total	368	59	427

Note. Includes data from 2013 and 2014.

Table 4-9. Analysis of Advanced Placement Courses

Year	Not Enrolled	Enrolled	Total
2013	40	2	42
	95.24	4.76	
2014	328	57	385
	85.19	14.81	
Total	368	59	427

Note. Includes data from 2013 and 2014.

Table 4-10. Analysis of Co-Curricular Activities

Year	0	1	2	Total
2013				
Number	28	14	0	42
Percentage	66.67	33.33	0.00	
2014				
Number	223	150	12	385
Percentage	57.92	38.96	3.12	
Total	251	164	12	427

Note. Includes data from 2013 and 2014. Co-curricular activities coded as 0= none; 1= 1-2; 2=3 or more.

Table 4-11. Analysis of Student Age in Years

Year	Mean	Min. Age	Max. Age	*SD*
2013	16.14	14	17	.04
2014	16.00	14	20	.02

Note. Information not available for 2012 data collection.

Table 4-12. Means and Standard Deviations for Career Maturity Inventory

Year	Mean	*SD*	*SE*	Min	Max
2012	14.54	0.57	0.01	0	1
2013	16.21	0.56	0.03	0	1
2014	14.24	0.43	0.01	0	1

Note. CMI-R scores above 20, indicates advanced attitudes towards career decisions, scores 16-19 are considered to be progressing at normal pace, scores 15 or lower are determined to not yet be ready to make career choices.

Table 4-13. Means and Standard Deviations for Career Maturity by Grade Level

Year	*n*	Mean	*SD*	*SE*
2013				
9th Grade	5	19.20	5.40	2.42
10th Grade	1	18.00		
11th Grade	32	16.32	6.05	1.07
12th Grade	3	12.58	5.55	3.20
2014				
9th Grade	125	15.16	4.85	0.43
10th Grade	103	14.24	5.33	0.53
11th Grade	78	14.45	5.63	0.64
12th Grade	78	13.01	4.72	0.53

Note. Includes data from 2013 and 2014. CMI-R scores above 20, indicates advanced attitudes towards career decisions, scores 16-19 are considered to be progressing at normal pace, scores 15 or lower are determined to not yet be ready to make career choices.

Table 4-14. Means and Standard Deviations of Career Maturity Scores by Gender

Year		*N*	Mean	*SD*	*SE*
9th Grade					
	Male	63	15.48	5.06	0.64
	Female	67	15.16	4.80	0.59
10th Grade					
	Male	40	15.44	4.87	0.77
	Female	64	13.55	5.48	0.69
11th Grade					
	Male	52	15.91	6.12	0.85
	Female	58	14.14	5.40	0.71
12th Grade					
	Male	40	13.06	4.62	0.73
	Female	41	12.92	4.86	0.76

Note. Includes data from 2013 and 2014. CMI-R scores above 20, indicates advanced attitudes towards career decisions, scores 16-19 are considered to be progressing at normal pace, scores 15 or lower are determined to not yet be ready to make career choices.

Table 4-15. Means and Standard Deviations for Career Decision-Making Self-Efficacy

Year	Mean	*SD*	*SE*	Min	Max
2012	94.17	17.00	3.25	1	5
2013	87.90	18.25	1.00	1	5
2014	91.76	17.25	0.25	1	5

Note. Career decision-making self-efficacy scores range from 1-25 no confidence at all, 26-50 very little confidence, 51-75 moderately confident, 76-100 much confidence, and 101-125 complete confidence, the higher the CDMSE-SF score the more career mature. In 2012 respondents totaled 245, 43 in 2013, and 385 in 2014.

Table 4-16. Means and Standard Deviations for Career Decision-Making Self-Efficacy by Grade Level

Year	*n*	Mean	*SD*	*SE*
2013				
9th Grade	5	84.98	19.75	2.50
10th Grade	1	119		2.25
11th Grade	32	89.27	19.50	2.25
12th Grade	3	86.65	13.50	2.50
2014				
9th Grade	125	90.50	16.50	1.50
10th Grade	103	92.24	18.00	1.75
11th Grade	78	91.75	17.50	2.00
12th Grade	78	96.01	17.75	2.00

Note. Includes data from 2013 and 2014. Career decision-making self-efficacy scores range from 1-25 no confidence at all, 26-50 very little confidence, 51-75 moderately confident, 76-100 much confidence, and 101-125 complete confidence, the higher the CDMSE-SF score the more career mature.

Table 4-17. Means and Standard Deviations for Career Decision-Making Self-Efficacy by Grade Level and Male and Female

Year	*n*	Mean	*SD*	*SE*
9th Grade				
Male	63	92.65	17.50	2.25
Female	67	87.22	15.00	1.75
10th Grade				
Male	40	88.93	14.25	2.25
Female	64	94.73	19.75	2.50
11th Grade				
Male	52	87.85	18.25	2.50
Female	58	93.88	17.25	2.25
12th Grade				
Male	40	94.93	15.50	2.25
Female	41	96.38	19.75	3.00

Note. Includes data from 2013 and 2014. Career decision-making self-efficacy scores range from 1-25 no confidence at all, 26-50 very little confidence, 51-75 moderately confident, 76-100 much confidence, and 101-125 complete confidence, the higher the CDMSE-SF score the more career mature.

Table 4-18. Analysis of Difference in Career Maturity Inventory

Construct	*dF*	*F*	*p*
AP Course	1	0.01	0.01
Dual Enrollment	1	39.54	<0.01
Co-Curricular Clubs	5	1.39	0.23
Extracurricular Clubs	7	2.32	0.03
Athletics Participation	5	1.99	0.08
Number of Athletic Activities	5	1.99	0.08
Number of Career Areas of Interest	6	0.99	0.43
Number of Extracurricular Activities	3	3.00	0.03

Note. Advanced Placement courses coded as 1= yes and 0= no; Dual Enrollment courses coded as 1= yes and 0= no. Extracurricular activities, co-curricular activities, athletics coded as 0= none; 1= 1-2; 2=3 or more. In 2012 respondents totaled 245, 43 in 2013, and 385 in 2014.

Table 4-19. Means Scores for Ethnicity and Career Maturity Inventory

Self-Description	LSM	SE
Asian or Asian American	3.19	0.23
Black or African American	3.05	0.10
Hawaiian or Pacific Islander	2.38	0.44
Hispanic or Latino	3.21	0.12
American Indian	3.04	0.18
White, Non-Hispanic or Latino	2.80	0.07

Note. In 2012 respondents totaled 245, 43 in 2013, and 385 in 2014.

Table 4-20. Analysis of Difference in Career Decision-Making Self-Efficacy

Construct	*dF*	*F*	*p*
AP Course	1	0.24	0.62
Dual Enrollment	1	23.59	<0.01
Co-Curricular Clubs	2	1.80	0.17
Extracurricular Clubs	3	5.77	<0.01
Athletics Participation	2	0.32	0.73
Number of Athletic Activities	2	2.26	0.11
Number of Career Areas of Interest	6	1.79	0.10
Number of Extracurricular Activities	2	4.98	0.01

Note. Advanced Placement courses coded as 1= yes and 0= no; Dual Enrollment courses coded as 1= yes and 0= no. Extracurricular activities, co-curricular activities, athletics coded as 0= none; 1= 1-2; 2=3 or more. In 2012 respondents totaled 245, 43 in 2013, and 385 in 2014. In 2012 respondents totaled 245, 43 in 2013, and 385 in 2014.

Table 4-21. Means for Career Maturity and Career Decision-Making Self-Efficacy

Construct	Yes	*SE*	No	*SE*
Career Maturity				
Advanced Placement	13.57	1.23	15.44	1.03
Dual Enrollment	11.59	1.21	18.81	1.05
Career Decision-Making				
Advanced Placement	92.85	10.00	91.61	2.50
Dual Enrollment	101.94	3.50	90.26	2.50

Note. In 2012 respondents totaled 245, 43 in 2013, and 385 in 2014.

CHAPTER 5
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to examine the connection between career maturity and career decision-making self-efficacy and specific student demographics, including age, gender, ethnicity, extracurricular activities, co-curricular activities, athletics, Advanced Placement courses taken, and dual enrollment courses taken.

Chapter 1 established the need for determining the relationship between career maturity and various student demographic characteristics and the relationship between career decision-making self-efficacy and student demographic characteristics in secondary students. The study aimed to determine the demographic characteristics that affect career maturity and career decision-making self-efficacy.

The purpose of Chapter 2 was to provide a conceptual and theoretical framework along with previous research relevant to the study. Theories and principles guiding this study included constructivism, social cognitive theory, self-efficacy theory and principles of career decision-making. A review of the literature supporting the framework focused on career guidance, career development, and career maturity.

Chapter 3 detailed the methods and procedures used to conduct the study, including research design, procedures, treatment, the population and the sample. Chapter 3 discussed data collection, procedures and techniques used to analyze data.

Chapter 4 presents the results associated with the objectives as well as the hypotheses. Objectives included, describing the demographic characteristics of selected rural high school students, assessing the level of career maturity of students in a selected rural high school, assessing the level of career decision-making self-efficacy of students in a selected rural high school, examining the levels of career maturity based

on demographic characteristics and examining levels of career decision-making self-efficacy based on demographic characteristics.

Chapter 5 offers a summary of the study and provides conclusions based on findings. In addition, recommendations will be presented for future research.

Objectives

The following objectives were the guiding factors for this study:

1. Describe the demographic characteristics of selected rural high school students.
2. Assess the level of career maturity of students in a selected rural high school.
3. Assess the level of career decision-making self-efficacy of students in a selected rural high school.
4. Examine levels of career maturity based on demographic characteristics.
5. Examine levels of career decision-making self-efficacy based on demographic characteristics.

Methods

This study employed an online combined set of surveys consisting of three components; a demographic survey, the Career Maturity Inventory-Revised and the Career Decision-Making Self-Efficacy Short Form questionnaire. The instruments were found to be valid and reliable (Crites and Savickas, 1996).

The study's population was students in grades 9-12 in a rural high school in Florida with a disproportionate number of males versus females (46% males, 54% females). Additionally, more than 75% of the study participants were White, Non-Hispanic or Latino.

An online survey was administered at the beginning of each school year from 2012 through 2014 under the direction of the high school administrator. For 2012, the survey assessed career maturity and career decision-making self-efficacy. In 2013 and

2014, a demographic information survey was added, as the original questionnaire did not include the collection of this information. The addition of the demographic survey required Internal Review Board approval. The school used its online school management system's student portal, Skyward, to provide students with the Qualtrics® link to the online survey. Students were permitted to complete the survey during a designated class period on a designated day which varied each year as determined by the school level administrator. Data were analyzed using JMP® version 13 for Windows.

Summary of Findings

Findings are summarized using the study's objectives and hypotheses presented in previous chapters. While the school population was 618 in 2012, 628 in 2013, and 632 in 2014, the number of study participants was much less due to failure to complete and return the necessary institutional review board consent forms. Final student participation numbers were 225 in 2012, 43 in 2013, and 385 in 2014.

Objective One

Objective one sought to describe the demographic characteristics of selected rural high school students. Study participants at this rural school were reported to be majority female, white non-Hispanic and in the 9th grade. The majority of students participated in at least one extracurricular activity and did not take Advanced Placement courses or dual enrollment courses.

Objective Two

Objective two sought to assess the level of career maturity of students in a selected rural high school through the Career Maturity Inventory-Revised (CMI-R) questionnaire. Career maturity is an individual's awareness of the need to choose an occupation and the factors which enter into this decision (Crites, 1973). The results

presented in Chapter 4 showed mean scores for 2012, 2013, and 2014 of 14.54, 16.21 and 14.24 respectively.

Objective Three

Objective three assessed the level of career decision-making self-efficacy of students in a selected rural high school. Career decision-making self-efficacy is an individual's expectancy level of his or her own aptitude to complete and perform certain tasks as they relate to careers (Bandura, 1977). Mean scores on the CDMSE-SF for 2012, 2013 and 2014 were 94.17, 87.90, and 91.76 respectively.

Objective Four

The fourth objective was to examine levels of career maturity based on demographic characteristics. Students who did not take Advanced Placement courses had higher career maturity scores than those who took Advanced Placement courses. Correspondingly, those students who took dual enrollment courses scored lower on the Career Maturity Inventory (CMI-R) than those who did not. Additionally, participation in extracurricular activities was found to be significant. Students who participated in zero to one activity had a higher CMI-R than those who participated in two or more extracurricular activities.

Analysis of ethnicity ranged from a least means squared of 3.21 for Hispanic or Latino to a least means square of 2.38 Hawaiian or Pacific Islander. The variables age, participation in athletics or sports, and gender were not related to CMI score.

Objective Five

The fifth objective was to examine levels of career decision-making self-efficacy based on demographic characteristics. Career Decision-Making Self-Efficacy assessment examines an individual's expectations regarding her or his ability to perform

the specific task and behaviors that are important to effective career decision-making (Taylor & Betz, 1983). Students who participated in two or three extracurricular activities and dual enrollment were found to have significantly higher CDMSE-SF means than others ($p < .01$). No other variables examined in this study were found to be significant.

Conclusions

Based on the study's findings, various interpretations can be drawn.

1. The vast majority of participants in this study were white. The male to female overall ratio for this study was 45.90% male to 54.09% female.
2. A small percentage of participants took Advanced Placement or dual enrollment, participated in athletics, extracurricular, or co-curricular activities.
3. A small percentage of respondents participated in athletic activities or sports outside the school.
4. Students who completed at least one Advanced Placement course or at least one dual enrollment course have lower Career Maturity Inventory scores
5. Students who participated in zero extracurricular activities had a tendency to have higher Career Maturity Inventory scores than those students who participated in two or more extracurricular activities.
6. Students who completed at least one dual enrollment course had a tendency to have higher Career Decision-Making Self-Efficacy scores.
7. Students who participated in two or three extracurricular activities tended to have higher Career Decision-Making Self-Efficacy scores.

Discussion and Implications

This particular rural high school was not representative of high schools across the state. The high school revealed a balanced male to female ratio yet lacks significant ethnic diversity. Additionally, the high school offers well below the average number of Advanced Placement courses and honors courses as compared to schools in the state. While the school offers a plethora of athletic sports and activities, the variability is

nonetheless lesser in comparison to larger urban schools in the area and in the state of Florida.

Data in this study revealed that most high school students reported a CMI-SF score of 15 or lower indicating a lack of readiness to make a career decision. This was consistent with previous literature on students in this high school age group. A higher CMI-R score, above 20, indicates advanced attitudes towards career decisions, career planning preparedness and career exploration. Individuals who score in the 16-19 range are considered to be progressing at normal pace, while individuals who score 15 or lower are determined to not yet be ready to make career choices and should be the target of career-related interventions (Busacca & Taber, 2002). According to Crites (1978), the means scores increased monotonically across grades, with the grade 12 students being more career mature than those in grade 11 and so on down to elementary school students. In this study, younger students tended to report higher CMI scores than older students and males tended to have higher scores than females. Although these differences were not found to be statistically significant, further study on these areas is warranted. As stated in Chapter 2, Super's theory states that a career pattern is set by the individual's parents' socioeconomic level, his or her mental ability and personality characteristics, and by the opportunities the individual is given. Further, Super states that career development is a lifelong process and self-concept is constantly being shaped, work and life satisfaction is dependent upon extent of adequate outlets for abilities, interests, personality, and values (1957). Career adaptability depends on a person's ability to face, pursue, or accept career change

(Super, 1957). In order to make successful career choices, individuals should be encouraged to expand their abilities and interests.

Completion of dual enrollment courses was found to lead to higher CDMSE-SF scores. While the literature does not provide information about “typical” scores for students in the age range of this study, further investigation is needed to understand how completion of these types of courses affect CDMSE-SF scores. The same is true with participation in extracurricular activities. The question is raised if participation in these activities affects the CDMSE-SF scores or if students with higher CDMSE scores tended to be drawn to these types of activities.

Factors outside the scope of this study, such as the need or perceived need or desire of the student to engage in activities outside of the school setting, such as after-school jobs, organizations outside of school, and family commitments may have been a factor. These outside of school activities most likely include components that would affect career decision-making. Further, the students’ perceived need or desire for post-secondary education most likely impacted the students’ decision to enroll in Advanced Placement and dual enrollment courses.

The finding that dual enrollment tended to increase CDMSE-SF scores and lower CMI-R is worth further investigation. Does this imply that students who complete these courses feel they are able to make a career decision, but were unable or did not have enough information to select the “right” career? Perhaps exposure to a college campus broadens dual enrollment students’ perspective of career options. Further, the finding that participation in extracurricular activities was associated with differences in CMI and CDMSE-SF score, suggests a need to seek a deeper understanding about how and

why participation in these activities was found to make a difference. Are there characteristics of the different extracurricular activities that influence these variables? Is extracurricular participation or lack thereof, related to socio-economic factors?

The convenience sample used in this study, lack of demographic data for all three years and low participation rate in 2013 limited the generalizability of the findings. Findings are generalizable to schools that are similar in demographics and provide practical value to the school. Moreover, the results are nonetheless useful in guiding a student's career development and the development of future studies similar in nature. Providing district and school level administrators and faculty with insight into a student's career development will only further develop the student's career decision-making and career maturity growth.

The original questionnaire, including career maturity and career decision-making self-efficacy, did not include a demographic questionnaire and, therefore, did not allow for comparisons to be made between 2012 scores and relationships between the career maturity and career decision-making self-efficacy and a student's demographic characteristics. It was not possible to follow progression of individual student's scores over time. Because of this omission, in 2013, the IRB was revised to allow for collection and analysis of demographic information.

Student participation numbers varied significantly from year to year. Responses in 2012 and 2014 accounted for 36.4% of the school population and 60.9% of the school population, respectively. In 2013, a dismal 6.84% of the school student population successfully completed the survey. Conversations with the school level administrator revealed a possible complication with the school based online student e-

learning system. Nonetheless, the results of the 43 students who completed the survey were included in results.

Discussion and Implications of Research Methods

The study offers findings that indicate that career maturity or career decision-making self-efficacy may not be directly related to a student's level of academic rigor or a student's level of involvement in school activities. Students in the rural secondary school displayed similar mean scores for 2012, 2013 and 2014, and student career decision-making self-efficacy for this rural high school was relatively consistent from year one to year three. The finding that students enrolled in academically challenging courses and a multitude of activities compared to those who were did not participate in these activities had a lower career maturity inventory but higher career decision-making self-efficacy scores shows the need for future study.

Recommendations for Practitioners

Based on the findings of this study, the following recommendations were made for stakeholders in the school system:

1. School stakeholders (administrators, counselors, faculty and staff) must be prepared to help students increase their perceptions of career development, career maturity and career decision-making through curriculum and instruction as students matriculate through the high school years. Professional development should be designed and delivered to school officials on this topic.

2. District stakeholders (superintendent, associate superintendent, curriculum and instruction directors, reading coaches, career and technical education directors, etc.) must be prepared to seek out and implement a career development and preparation curriculum to prepare and provide faculty with the instruments and tools necessary to expose students to career growth.

3. District and school stakeholders must invest in faculty professional development to support awareness and implementation of career development strategies in secondary schools and their students. Assessment of career maturity and career decision-making should become a regular event throughout a student's high school career in order to provide targeted assistance.

4. Requirements for students to select a distinct career pathway early in their high school career should be reconsidered. Data in this study questioned a high school student's ability to make informed career decisions and choices. Educational programs should focus on helping students gain the skills and information needed to make career decisions rather than forcing an early decision.

Recommendations for Future Research

This study served as a continuation of previous studies related to career maturity and career decision-making and the relationship of these constructs to gender, ethnicity, students with disabilities, college students, college athletes, and career and technical education students. Future studies should include the following.

1. This study should be repeated with all surveys in place from the beginning of the study to ensure complete data collection for each year and longitudinal comparisons by student.

2. This study should be conducted in a school where there is a more diverse minority population, given the lack of representation in this study.

3. An investigation, using the methods of this study, should be repeated in various size schools and geographical areas to determine if school setting and environment are indeed a factor in career maturity and career decision-making.

4. An investigation is suggested to compare co-curricular courses and clubs in a school, such as business, agriscience, technology and health occupations for example.

5. An investigation is suggested that includes the demographics included in this study, and the addition of socio-economic status, societal influence, and family demographic disclosure.

6. An investigation is suggested to compare traditional academic programs and accelerated academic programs.

7. Consideration should be given to a qualitative methods component. A qualitative design, including, but not limited to, focus groups or interviews, would allow for further exploration into behavior, beliefs, opinions, emotions and relationships about career maturity and career decision-making.

8. Consideration should be given to a study that includes the elements of this study with the addition of a career occupational survey.

Additional follow-up studies may perhaps help school level administrators, guidance counselors, and classroom teachers gain a better understanding of the factors that impact a student's career maturity and career decision-making abilities. The aforementioned recommendations for further research would be successful if district administrators, school administrators and faculty take ownership in the design, methods, variables and objectives of future studies. Further, a partnership between school administrators, faculty, students and the researcher would better foster an understanding of the career development benefits of the study.

Summary

Chapter 5 presented the results associated with the detailed inspection of the relationships between career maturity and student demographics and career decision-making self-efficacy and student demographics. Chapter 5 also provided recommendations for district and school administrators, stakeholders, faculty and staff. Finally, the chapter offered recommendations for future research to enhance the body of knowledge as it relates to career maturity and career decision-making self-efficacy. The study's findings combined with previous research, provided recommendations for teachers and administrators, the possibility of future research can impact student career development. The study's findings combined with previous research, provided recommendations for teachers and administrators, the possibility of future research can impact student career development.

APPENDIX A
STUDY INTRODUCTION LETTER

UF UNIVERSITY of FLORIDA
College of Agricultural and Life Sciences
Office of the Dean

August 23, 2012

Greetings Union County High School Student!

My name is Charlotte Emerson, I a former Agricultural Educator at Union County High School and currently working for the College of Agricultural and Life Sciences at the University of Florida.

It is my desire help to make sure the students at UCHS are successful in preparing themselves to enter the world of work, whether it is as a doctor, lawyer, pharmacist, salesperson or educator. I am currently conducting research on ***factors influencing a student's immediate post-secondary plans*** and will be asking you in the near future to participate in a survey.

You will not have to do anything out of the ordinary as a part of this study as the survey will be administered during class and will only take about 15-20 minutes to complete.

I look forward to sharing the results of this study with you and the other students at Union County High School.

Sincerely,

H. Charlotte Emerson

H. Charlotte Emerson
Director Student Development and Recruitment

2002 McCarty Hall D
PO Box 110270
Gainesville, FL 32611-0270

Institute of Food and Agricultural Sciences
http://www.cals.ufl.edu
An Equal Opportunity Institution

352-392-1963
352-392-8988 Fax

UF UNIVERSITY of FLORIDA
College of Agricultural and Life Sciences
Office of the Dean

August 24, 2013

Greetings Union County High School Student!

My name is Charlotte Emerson, I a former Agricultural Educator at Union County High School and currently working for the College of Agricultural and Life Sciences at the University of Florida.

It is my desire help to make sure the students at UCHS are successful in preparing themselves to enter the world of work, whether it is as a doctor, lawyer, pharmacist, salesperson or educator. I am currently conducting research on ***factors influencing a student's immediate post-secondary plans*** and will be asking you in the near future to participate in a survey.

You will not have to do anything out of the ordinary as a part of this study as the survey will be administered during class and will only take about 15-20 minutes to complete.

I look forward to sharing the results of this study with you and the other students at union County High School.

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September 2, 2014

Greetings Union County High School Student!

My name is Charlotte Emerson, I a former Agricultural Educator at Union County High School and currently working for the College of Agricultural and Life Sciences at the University of Florida.

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I look forward to sharing the results of this study with you and the other students at union County High School.

Approved by
University of Florida
Institutional Review Board 02
Protocol # 2012-U-0842
For Use Until 10/15/2015

Sincerely,

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APPENDIX B
SCHOOL SUPPORT CORRESPONDENCE

Reply Reply All Forward IM

Ripplinger, Mike <ripplingerm@union.k12.fl.us> Emerson,H Charlotte 8/14/2012

Student Surveys

You replied to this message on 8/14/2012 3:18 PM.

Hello Charlotte,

I would like to thank you for the interest you and the University of Florida have shown in conducting a longitudinal study of our students at Union County High School. We look forward in working with you as you administer the studies and surveys of our students over the next few years and sharing insights that will be helpful as we provide the services our students need to be successful in post-secondary life. You will have our full cooperation and support as the studies are conducted during the course of our regularly scheduled class periods. Please do not hesitate to contact me if there is anything we can do to help further your study.

--
Mike Ripplinger
Principal
Union County High School
1000 S. Lake Avenue
Lake Butler, FL 32054
386-496-3040
386-867-9038 (Cell)
386-496-4187 (Fax)

Sent: Wednesday July 31, 2013 1:45 PM
To: Emerson,H Charlotte <cemer@ufl.edu>
Subject: Re: 2013 Longitudinal Study

We are willing and able. Thank you again for including our students in this study.

Mike Ripplinger
Sent from my iPhone

> On July 31, 2013 at 8:08 AM, "Emerson,H Charlotte" <cemer@ufl.edu> wrote:
>
> Mike, It's that time again! Time to survey your students for career maturity and career decision-making self-efficacy! I hope all is well and you are gearing up for a successful new school year. If you are willing and able I would like to get all the paper work to you in the next three weeks to make this as easy as possible on you and your faculty. I look forward to hearing from you and moving forward with year two of this study.

Charlotte
>
> Charlotte Emerson
> College of Agricultural and Life Sciences
> IFAS
> University of Florida

From: Mike Ripplinger [mailto:ripplingerm@union.k12.fl.us]
Sent: Thursday August 3, 2014 2:15 PM
To: Emerson,H Charlotte <cemer@ufl.edu>
Subject: Re: Continuation of the Longitudinal Study

It would be my pleasure to assist.

Mike Ripplinger
Sent from my iPhone

> On Aug 3, 2014, at 8:51 AM, "Emerson,H Charlotte" <cemer@ufl.edu> wrote:
>
> Mike, Thank you for your help over the past two years! Your help and flexibility have made this process enjoyable. I am writing to confirm that you are willing to have your students take the surveys for the 2014-2015 school year. We can discuss the details at your preference. I hope to hear from you soon.
>
> Charlotte Emerson
>cemer@ufl.edu
> College of Agricultural and Life Sciences
> IFAS
> University of Florida

APPENDIX C
INFORMED CONSENT FORM

UF UNIVERSITY of FLORIDA
College of Agricultural and Life Sciences

Office of the Dean

August 23, 2012

Dear Parent/Guardian,

As a former Agricultural Educator at Union County High School, I spent many hours working with our students to help them make academic and career decisions that would affect the rest of their lives. It is my desire help to make sure the students at UCHS are successful in preparing themselves to enter the world of work, whether it is as a doctor, lawyer, pharmacist, salesperson or educator. I am currently working on my graduate degree in the Department of Agricultural Education and Communication at the University of Florida, conducting research on ***factors influencing a student's immediate post-secondary plans*** under the supervision of Dr. Brian Myers. The purpose of this study is to identify the relationships among career maturity, career decision making self-efficacy and key student attributes. This study is a multi-year study and partnership between UF-CALS Department of Agricultural Education and Communication and Union County High School. The results of the study may help teachers and school communities better prepare students for the world of work.

Your child will not have to do anything out of the ordinary to participate in this study. The survey will be administered in class and will only take about 15-20 minutes to complete. Their identity will be kept confidential to the extent allowed by law.

Your child's participation in this study is voluntary. You and your child have the right to withdraw consent for your child's participation at any time without consequence. There are no known risks or immediate benefits to the participants. No compensation is offered for participation. If you have any questions about this research protocol, please contact me at 352-392-1963 or my faculty supervisor, Dr. Myers, at 352-273-2567. Questions or concerns about your child's rights as research participant may be directed to the IRB02 office, University of Florida, Box 112250, Gainesville, FL 32611, (352) 392-0433.

Sincerely,

H. Charlotte Emerson

Approved by
University of Florida
Institutional Review Board 02
Protocol # 2012-U-0842
For Use Through 08-17-2013

I have read the procedure described above. I voluntarily give consent for my child,

_____, to participate in this study. I have received a copy of this description.

_____ _____
Parent/Guardian Date

_____ _____
2nd Parent/Witness Date

2002 McCarty Hall
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UF UNIVERSITY of FLORIDA
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Office of the Dean

August 24, 2013

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Your child will not have to do anything out of the ordinary to participate in this study. The questionnaire will be administered in class and will only take about 15-20 minutes to complete. Additionally, school level officials will release other key student attributes (FCAT scores, PERT scores, schedules, GPA, STEM courses taken, socioeconomic status and discipline records) upon return of this form. Their identity will be kept confidential to the extent allowed by law.

Your child's participation in this study is voluntary. You and your child have the right to withdraw consent for your child's participation at any time without consequence. There are no known risks or immediate benefits to the participants. Students returning all appropriate IRB and permission forms will be entered into a drawing for a $25.00 gift card. One card will be given for each grade level. If you have any questions about this research protocol, please contact me at 392-1963 or my faculty supervisor, Dr. Myers, at 352-273-2567. Questions or concerns about your child's rights as research participant may be directed to the IRB02 office, University of Florida, Box 112250, Gainesville, FL 32611, (352) 392-0433.

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Parent/Guardian Date

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UF UNIVERSITY of FLORIDA

College of Agricultural and Life Sciences

Office of the Dean

September 2, 2014

Dear Parent/Guardian,

As a former Agricultural Educator at Union County High School, I spent many hours working with our students to help them make academic and career decisions that would affect the rest of their lives. It is my desire help to make sure the students at UCHS are successful in preparing themselves to enter the world of work, whether it is as a doctor, lawyer, pharmacist, salesperson or educator. I am currently working on my graduate degree in the Department of Agricultural Education and Communication at the University of Florida, conducting research on ***factors influencing a student's immediate post-secondary plans*** under the supervision of Dr. Brian Myers. The purpose of this study is to identify the relationships among career maturity, career decision making self-efficacy and key student attributes. This study is a multi-year study and partnership between UF-CALS Department of Agricultural Education and Communication and Union County High School. The results of the study may help teachers and school communities better prepare students for the world of work.

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Sincerely,

Approved by
University of Florida
Institutional Review Board 02
Protocol # 2012-U-0842
For Use Until 10/15/2015

H. Charlotte Emerson

I have read the procedure described above. I voluntarily give consent for my child, (please print)

_____, to participate in this study. I have received a copy of this description.

_____ _____
Parent/Guardian Signature Date

_____ _____
2nd Parent/Witness Signature Date

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APPENDIX D
TEACHER ASSENT LETTER

UF UNIVERSITY of FLORIDA
College of Agricultural and Life Sciences
Office of the Dean

October 2, 2012

Teachers,

I hope this note finds you well! I am writing to request your help and cooperation. I am in the middle of completing my PhD in Agricultural Education and Communication and I am in the preliminary stages of administering my survey and collecting data (which many of you may have already had your students complete). The purpose of this study is to identify the relationships among career maturity, career decision making self-efficacy and key student attributes. This study is a multi-year study and partnership between UF-CALS Department of Agricultural Education and Communication and Union County High School. The results of the study will ultimately help teachers and school communities better prepare students for the world of work.

In order to use the data we have already collected and future data and we must have an IRB form in hand for each student. Please send the attached form home with your students and ask them to return them by next Friday, October 12, 2012.

I appreciate your help in this matter and should you have additional questions please contact me via email at cemer@ufl.edu or 352.494.6208. Go TIGERS!

Sincerely,

H. Charlotte Emerson
Director, Student Development and Recruitment

2002 McCarty Hall D
PO Box 110270
Gainesville, FL 32611-0270

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UF UNIVERSITY of FLORIDA
College of Agricultural and Life Sciences
Office of the Dean

August 23, 2013

Teachers,

I hope this note finds you well! I am writing to request your help and cooperation. I am in the middle of completing my PhD in Agricultural Education and Communication and I am in the preliminary stages of administering my survey and collecting data (which many of you may have already had your students complete). The purpose of this study is to identify the relationships among career maturity, career decision making self-efficacy and key student attributes. This study is a multi-year study and partnership between UF-CALS Department of Agricultural Education and Communication and Union County High School. The results of the study will ultimately help teachers and school communities better prepare students for the world of work.

In order to use the data we have already collected and future data and we must have an IRB form in hand for each student. Please send the attached form home with your students and ask them to return them by September 13, 2013.

I appreciate your help in this matter and should you have additional questions please contact me via email at cemer@ufl.edu or 352.494.6208. Go TIGERS!

Sincerely,

H. Charlotte Emerson
Director, Student Development and Recruitment

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UF UNIVERSITY of FLORIDA
College of Agricultural and Life Sciences
Office of the Dean

August 21, 2014

Teachers,

I hope this note finds you well! I am writing to request your help and cooperation. I am in the middle of completing my PhD in Agricultural Education and Communication and I am in the preliminary stages of administering my survey and collecting data (which many of you may have already had your students complete). The purpose of this study is to identify the relationships among career maturity, career decision making self-efficacy and key student attributes. This study is a multi-year study and partnership between UF-CALS Department of Agricultural Education and Communication and Union County High School. The results of the study will ultimately help teachers and school communities better prepare students for the world of work.

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352-392-1963
352-392-8988 Fax

APPENDIX E
STUDENT ASSENT LETTER

UF UNIVERSITY of FLORIDA
College of Agricultural and Life Sciences
Office of the Dean

August 23, 2012

Greetings Union County High School Student!

My name is Charlotte Emerson, I a former Agricultural Educator at Union County High School and currently working for the College of Agricultural and Life Sciences at the University of Florida.

It is my desire help to make sure the students at UCHS are successful in preparing themselves to enter the world of work, whether it is as a doctor, lawyer, pharmacist, salesperson or educator. I am currently conducting research on ***factors influencing a student's immediate post-secondary plans*** and will be asking you in the near future to participate in a survey.

You will not have to do anything out of the ordinary as a part of this study as the survey will be administered during class and will only take about 15-20 minutes to complete.

I look forward to sharing the results of this study with you and the other students at union County High School.

Sincerely,

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H. Charlotte Emerson
Director Student Development and Recruitment

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UF UNIVERSITY of FLORIDA
College of Agricultural and Life Sciences
Office of the Dean

August 26, 2013

Greetings Union County High School Student!

My name is Charlotte Emerson, I a former Agricultural Educator at Union County High School and currently working for the College of Agricultural and Life Sciences at the University of Florida.

It is my desire help to make sure the students at UCHS are successful in preparing themselves to enter the world of work, whether it is as a doctor, lawyer, pharmacist, salesperson or educator. I am currently conducting research on ***factors influencing a student's immediate post-secondary plans*** and will be asking you in the near future to participate in a survey.

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UF UNIVERSITY of FLORIDA
College of Agricultural and Life Sciences
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August 25, 2014

Greetings Union County High School Student!

My name is Charlotte Emerson, I a former Agricultural Educator at Union County High School and currently working for the College of Agricultural and Life Sciences at the University of Florida.

It is my desire help to make sure the students at UCHS are successful in preparing themselves to enter the world of work, whether it is as a doctor, lawyer, pharmacist, salesperson or educator. I am currently conducting research on ***factors influencing a student's immediate post-secondary plans*** and will be asking you in the near future to participate in a survey.

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APPENDIX F
DEMOGRAPHIC QUESTIONNAIRE

Greetings Union County High School Student!

My name is Charlotte Emerson, I am former agricultural educator at Union County High School and currently working for the College of Agricultural and Life Sciences at the University of Florida. It is my desire to help make sure students at UCHS are successful in preparing themselves to enter the workforce, whether it be as a computer programmer, doctor, lawyer, pharmacist, salesperson, educator or some other profession. I am conducting research on ***factors influencing a student's immediate post-secondary plans*** and I am asking you to participate in this survey.

This survey will only take about 15-20 minutes to complete.

I look forward to sharing the results of this study with you and the other students at Union County High School.

Please enter your five digit student ID number in the following box:

>>

aec

I have returned all IRB and parental permission forms.

- (●) Yes
- ( ) No

I would like to be entered in the drawing for a $25.00 gift card.

- (●) Yes
- ( ) No

Gender

- (●) Male
- ( ) Female

Age

[ ]

How do you describe yourself?

[ ]

Grade in school

Please list all extracurricular activities you participate in:

Please list all athletic teams or individual sports you participate in:

What career areas interest you? (Medicine, Business, Education, Agricultural or Biological Sciences, etc)

Have you taken or are you enrolled in Dual Enrollment courses?

- ◯ Yes
- ◯ No

<< >>

If YES, please list all Dual Enrollment courses.

Have you taken or are you enrolled in Advanced Placement (AP) courses?

- Yes
- No

<< >>

If YES, please list all Dual Enrollment courses.

Have you taken or are you enrolled in Advanced Placement (AP) courses?

- Yes
- No

<< >>

If YES, please list all Advanced Placement courses.

APPENDIX G
CAREER MATURITY INVENTORY QUESTIONNAIRE

Career Maturity Inventory - Attitude Scale

Read each statement and blacken the circles for whether you Agree "A" or Disagree "D" with the statement provided.

	A	D
1. Everyone seems to tell me something different; as a result I don't know what kind of work to choose.	O	O
2. It's probably just as easy to be successful in one occupation as it is in another.	O	O
3. I have little or no idea what working will be like.	O	O
4. Once you choose a job, you can't choose another one.	O	O
5. I keep wondering how I can reconcile the kind of person I am with the kind of person I want to be in my future occupation.	O	O
6. Sometimes you have to take a job that is not your first choice.	O	O
7. Work is dull and unpleasant.	O	O
8. I can't understand how some people can be so certain about what they want to do.	O	O
9. As far as choosing an occupation is concerned, something will come along sooner or later.	O	O
10. Choosing an occupation is something you have to do on your own.	O	O
11. As long as I remember, I've known what kind of work I want to do.	O	O
12. There may not be any openings for the job I want most.	O	O
13. I don't know how to go about getting into the kind of work I want to do.	O	O
14. There is no point in deciding upon a job when the future is so uncertain.	O	O
15. I spend a lot of time wishing I could do work I know I can never do.	O	O
16. If someone would tell me which occupation to enter, I would feel much better.	O	O
17. I know very little about the requirements of the job.	O	O
18. When choosing an occupation, you should consider several different ones.	O	O
19. There is only one occupation for each person.	O	O

	A	D
20. The best thing to do is to try out several jobs, and then choose the one you like best.	O	O
21. You get into an occupation mostly by chance.	O	O
22. I seldom think about the job I want to enter.	O	O
23. You almost always have to settle for a job that's less than you had hoped for.	O	O
24. I really can't find any work that has much appeal to me.	O	O
25. I'd rather work than play.	O	O

APPENDIX H
CAREER DECISION-MAKING SELF-EFFICACY SHORT FORM QUESTIONNAIRE

Career Decision Making Self-Efficacy Scale-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 filling in the correct circle on the answer sheet.

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 fill In the circle for "Moderate Confidence" on the answer sheet.

HOW MUCH CONFIDENCE DO YOU HAVE THAT YOU COULD:

	COMPLETE CONFIDENCE	MUCH CONFIDENCE	MODERATE CONFIDENCE	VERY LITTLE CONFIDENCE	NO CONFIDENCE AT ALL
1. Find information in the library about occupations you are interested in.	O	O	O	O	O
2. Select one major from a list of potential majors you are considering.	O	O	O	O	O
3. Make a plan of your goals for the next five years.	O	O	O	O	O
4. Determine the steps to take if you are having academic trouble with an aspect of your chosen major.	O	O	O	O	O
5. Accurately assess your abilities.	O	O	O	O	O
6. Select one occupation from a list of potential occupations you are considering.	O	O	O	O	O
7. Determine the steps you need to take to successfully complete your chosen major.	O	O	O	O	O
8. Persistently work at your major or career goal even when you get frustrated.	O	O	O	O	O
9. Determine what your ideal job would be.	O	O	O	O	O

	COMPLETE CONFIDENCE	MUCH CONFIDENCE	MODERATE CONFIDENCE	VERY LITTLE CONFIDENCE	NO CONFIDENCE AT ALL
10. Find out the employment trends for an occupation over the next 10 years.	O	O	O	O	O
11. Choose a career that will fit your preferred lifestyle.	O	O	O	O	O
12. Prepare a good resume.	O	O	O	O	O
13. Change majors if you do not like your first choice.	O	O	O	O	O
14. Decide what you value most in an occupation.	O	O	O	O	O
15. Find out about the average yearly earnings of people in an occupation.	O	O	O	O	O
16. Make a career decision and then not worry whether it was right or wrong.	O	O	O	O	O
17. Change occupations if you are not satisfied with the one you enter.	O	O	O	O	O
18. Figure out what you are and are not ready to sacrifice to achieve your career goals.	O	O	O	O	O
19. Talk with a person already employed in a field you are interested in.	O	O	O	O	O
20. Choose a major or career that will fit your interests.	O	O	O	O	O
21. Identify employers, firms, and institutions relevant to your career possibilities.	O	O	O	O	O
22. Define the type of lifestyle you would like to live.	O	O	O	O	O

	COMPLETE CONFIDENCE	MUCH CONFIDENCE	MODERATE CONFIDENCE	VERY LITTLE CONFIDENCE	NO CONFIDENCE AT ALL
23. Find information about graduate or professional schools.	O	O	O	O	O
24. Successfully manage the job interview process.	O	O	O	O	O
25. Identify some reasonable major or career alternatives if you are unable to get your first choice.	O	O	O	O	O

LIST OF REFERENCES

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Betz, N. E., Klein, K. L., & Taylor, K. M. (1996). Evaluation of a short form of the career decision-making self-efficacy scale. *Journal of Career Assessment, 4*(1), 47-57.

Betz, N. E., & Voyten, K. K. (1997). Efficacy and outcome expectations influence career exploration and decidedness. *The Career Development Quarterly, 46*(2), 179-189.

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BIOGRAPHICAL SKETCH

Helen Charlotte Emerson was born in Douglas, Georgia and moved to the Gainesville, Florida area in 1975. Her interest in agriculture began when she was a little girl following in the footsteps of her grandfather on the farm. Once in middle school she enrolled in agricultural education courses, which continued into high school where she became an active member of the intracurricular National FFA Organization (formerly, Future Farmers of America Organization).

After graduating with honors from Santa Fe High School (Alachua, Florida) in 1988, she became one of seven Florida State FFA Officers and traveled the state sharing the opportunities for students in the FFA and agriculture. Additionally, she and her teammates were able to meet with legislators and industry representatives to garner support for agricultural education and the FFA. Upon completion of her year of service to FFA, she completed her Associate of Arts degree at Santa Fe College and transferred to the University of Florida and completed a bachelor's degree in agricultural education and communication.

In 1994 Charlotte accepted a teaching position at Union County High School, where she was the first female agriculture teacher in the schools 50 plus year history. During her 12 year tenure she taught courses in animal sciences, horticulture, agriculture foundations, and was responsible for writing the state student performance standards for agricultural communication and later one of the first to teach the curriculum. Additionally, she served on multiple school and district level committees, served as the president of the Florida Association of Agricultural Educators and a regional secretary for the National Association of Agricultural Educators. She was recognized as the district Teacher of the Year by Union County in 1997 and the

Agriscience Teacher of the Year by the Florida FFA Association in 2006. Her true successes came through the efforts of her students. She coached a multitude of FFA Career Development Events (CDE) where her students became state champions on seven different occasions in 3 different CDE's.

While teaching, she completed her master's degree at Florida Gulf Coast University in curriculum and instruction in 2003 and became a Nationally Board Certified Teacher in career and technical education in 2002.

In 2006, she became the Director of Recruitment and Alumni Services for the College of Agricultural and Life Sciences (CALS) at the University of Florida. In this position she was responsible for the college's efforts to recruit and retain highly qualified students into one of the 23 majors in CALS. Additionally, she was responsible for the day to day operations of the CALS Alumni and Friends group. It was not until August of 2009 that she made the decision to pursue a Ph.D. in agricultural education and communication part-time.

To date, Charlotte continues to serve CALS in the capacity of Director of Student Development and Recruitment. In this capacity, Charlotte is responsible for student organizations, groups, events and initiatives including the CALS Ambassadors, the CALS Leadership Institute and the Florida Youth Institute. Charlotte is the academic adviser of Alpha Gamma Rho Fraternity, Alpha Gamma Chapter, the adviser of Collegiate Farm Bureau and a newly inducted member of the University of Florida Blue Key Leadership Honorary.