2011

Goal Instability in Relation to Career Thoughts, Career Decision State, and Performance in a Career Development Course

Sara C. Bertoch
GOAL INSTABILITY IN RELATION TO CAREER THOUGHTS, CAREER DECISION STATE, AND PERFORMANCE IN A CAREER DEVELOPMENT COURSE

By

SARA C. BERTOCH

A Dissertation submitted to the Department of Educational Psychology and Learning Systems in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

Degree Awarded: Summer Semester, 2011
The members of the committee approve the dissertation of Sara Cummings Bertoch defended on July 28, 2010.

Janet G. Lenz
Professor Co-Directing Dissertation

Robert C. Reardon
Professor Co-Directing Dissertation

John R. Reynolds
University Representative

James P. Sampson
Committee Member

Gary W. Peterson
Committee Member

Approved:

Betsy J. Becker, Chair, Department of Educational Psychology and Learning Systems

The Graduate School has verified and approved the above-named committee members.
ACKNOWLEDGMENTS

I am thankful to my loving parents and family, who were always around to listen and provide advice and support whenever I needed it. Thank you to my husband, who encouraged me throughout my graduate student experience and always believed in me. I am extremely thankful and grateful to my major professor, Dr. Robert Reardon, who has been with me in this process since the very beginning of graduate school. I truly believe that his never-ending support, knowledge, and collaboration provided me with strength daily to navigate the dissertation process. In addition, my co-major professor, Dr. Janet Lenz, provided sound supervision and assistance throughout my entire graduate school experience. I am also thankful to those who assisted me in collecting, coding, analyzing and discussing my dissertation data, especially one of my committee members, Dr. Gary Peterson.
# TABLE OF CONTENTS

List of Tables ........................................................................................................ vi
List of Figures ......................................................................................................... vii
Abstract ................................................................................................................ viii

1. Introduction ........................................................................................................ 1
   Statement of the Problem .................................................................................. 1
   Social Significance ......................................................................................... 3
   Research Questions ....................................................................................... 4
   Key Assumptions ............................................................................................ 5
   Operational Definition of Terms .................................................................. 5
   Delimitations .................................................................................................. 7
   Summary ........................................................................................................... 7

2. Review of Literature ......................................................................................... 8
   Overview of Motivational Theories ............................................................... 8
   Introduction to Kohut’s Self-Psychology .......................................................... 17
   Goal Instability ................................................................................................ 19
   Cognitive Information Processing Theory ...................................................... 21
   Career Thoughts ............................................................................................ 25
   Career Decision State .................................................................................... 27
   Career Courses ............................................................................................... 28
   Need for Inclusion of Motivation in Career Research ...................................... 32
   Summary ........................................................................................................... 33

3. Methodology ................................................................................................... 35
   Research Questions and Hypotheses ............................................................... 35
   Population ......................................................................................................... 36
   Sample ............................................................................................................... 36
   Variables .......................................................................................................... 37
   Instrumentation ............................................................................................... 37
   Procedures ......................................................................................................... 43
   Research Design and Statistical Analyses ......................................................... 44

4. Results ............................................................................................................... 47
   Sample Demographic Data .............................................................................. 47
   Instrumentation ............................................................................................... 52
   Data Analysis ................................................................................................... 53
5. Discussion ........................................................................................................ 61
   Summary of Results .................................................................................... 61
   Discussion of Results ............................................................................. 63
   Study Limitations ................................................................................... 67
   Implications for Practice ........................................................................ 69
   Recommendations for Future Research ............................................. 72
   Conclusions ............................................................................................ 74

Appendices ...................................................................................................... 75
   A Student Data Sheet .............................................................................. 75
   B Goal Instability Scale ........................................................................... 78
   C Informed Consent ................................................................................ 80
   D Data Collection Script ........................................................................ 83
   E Performance Contract .......................................................................... 85
   F Syllabus for Career Development Course ................................... 87
   G Bivariate Correlation Matrix ........................................................... 93

References ...................................................................................................... 95

Biographical Sketch ...................................................................................... 103
LIST OF TABLES

Table 1: Demographic Statistics of Sample .................................................... 49

Table 2: Participants’ Career Decidedness and Career Choice
Satisfaction ................................................................................................. 50

Table 3: Item Response Data for the Career Tension Scale ...................... 51

Table 4: Means, Standard Deviations, Skewness, and Kurtosis of
Variables .................................................................................................. 52

Table 5: Item Response Data for the Goal Instability Scale ..................... 53

Table 6: Bivariate Correlations .................................................................. 55

Table 7: Hierarchical Regression Analyses for Career Thoughts
Predicting Goal Instability ......................................................................... 56

Table 8: Hierarchical Regression Analyses for Career Decision State
Predicting Goal Instability ......................................................................... 58

Table 9: Total Points Regressed on Sex and GIS ..................................... 60

Table 10: Extra Credit Points Regressed on Sex and GIS ....................... 60

Table 11: Earned Grade Regressed on Sex and GIS ............................... 60
LIST OF FIGURES

Figure 1: Information Processing Pyramid ...................................................... 22

Figure 2: Cycle of Information Processing Skills Used in Career Decision Making .......................................................... 25
ABSTRACT

The purpose of the present study was to examine the relationships among goal instability, career thoughts, career decision state, and performance in a career development course. Participants enrolled in an undergraduate career course at a large southeastern university completed measures of goal instability, career thoughts, career decision state, and performance in course activities. Bivariate correlations and multiple regression analyses were conducted. Results demonstrated that goal instability was significantly related to career thoughts, career satisfaction and tension, and performance in the course. The strongest relationship was demonstrated between goal instability and career thoughts, indicating that more goal instability is related to more negative career thoughts. Goal instability was not significantly related to career decidedness. Implications for practice and research based on the results of this study are discussed.
CHAPTER I

INTRODUCTION

The purpose of this chapter is to introduce goal instability and related motivational theories available in psychological research, describe a useful career theory, and address a gap in scientific research pertaining to goal instability and career interventions. An introduction to the research, a statement of the problem, the social significance of the study, research questions to be examined, assumptions, and definitions of key terms are included.

Learning involves the acquisition and processing of information; yet, it can also be said that learning requires the attainment of inherent motivational beliefs. Students who possess these motivational beliefs are often more likely to take risks, seek out challenges, persist in difficult situations, and demonstrate higher levels of achievement (Beghetto, 2004). The subject of learner motivation has been studied widely in educational research, and motivation has been studied to gauge worker performance. Yet, little attention has been given to studying motivation that extends beyond these areas in relation to career problem solving and decision making.

The study of motivation itself is thought by many to be difficult because it is something inside an individual and cannot be outwardly observed. Understanding the source of the drive or energy to engage in career decision making could assist practitioners in improving career service delivery. Using goal setting theory to conceptualize motivation has become a common method for educational psychologists (Locke, 1996). Goal setting theory assumes that action is caused by a purpose, and that individuals can choose to set goals through a process of reasoning that can span a lifetime. Studying one’s goals and goal attainment is a good way to measure an individual’s purpose and motivation to achieve.

Statement of the Problem

While the term career development has been defined as “the total constellation of economic, sociological, psychological, educational, physical, and chance factors that combine to shape one’s career” (Sears, 1982, p. 139), the term career has been defined as “time extended working out of a purposeful life pattern through work undertaken by the person” (Reardon, Lenz, Sampson, & Peterson, 2000, p. 6). Individuals are involved in the process of
developing their careers throughout most of their lives. College students in particular may encounter great levels of stress, anxiety, and tension regarding their career development. Many are often required to declare a major at the onset of their four-year tenure in school, without having allotted enough time and energy to understanding and researching potential occupations. Students who find themselves in a major that they are unhappy with may experience a loss of interest in, and motivation for, engaging in a thoughtful decision-making process to help them find a satisfying career. Motivation to engage in the career planning process can serve as energy to engage in career exploration; however, a lack of motivation can lead to dissatisfaction and even failure. Successful career interventions, such as university career courses, are useful for students facing dissatisfaction and indecision about their career development.

Traditionally, vocational psychologists have used interests as the primary vehicle to study motivation for career decision making. Specifically, Holland’s (1997) RIASEC theory has been used to study career choice readiness and career decisions (Hirschi, & Lage, 2008; Tracey, 2008). The psychological construct of motivation has received little attention within the counseling literature, especially with respect to the individual experience of motivation to work (Blustein, 2006). Yet, a fundamental challenge in career interventions involves motivating people to explore and engage in activities that are not necessarily intrinsically interesting or compelling. Self-determination theory, social learning theory, self-psychology, and cognitive information processing theory include numerous theoretical constructs that can provide practitioners and researchers with the tools to enhance the quality of life for those individuals who may be lacking in intrinsic motivation to engage in the career decision-making process.

Kohut’s (1977) self-psychology posits that individuals with healthy levels of idealization are able to set and pursue meaningful life goals. They are also able to maintain realistic goals and set new adaptive goals when necessary. A flexible but strong structure of goals and ideals is believed to orient individuals and act as a stabilization aide during times of stress and transition. However, those with unhealthy levels of idealization are believed by Kohut to possess a weakened sense of goals and values. They are thought to have difficulty maintaining their goals, drive, and sense of continuity in times of transition.

Goal instability has been found to be negatively related to self-esteem, social competency, and career decidedness (Robbins, 1989; Robbins & Patton, 1985). In other
words, individuals with higher levels of goal instability typically possess a weak sense of goals and values, as well as lower levels of self-esteem, social community, and career decidedness. Due to a lack of research examining motivation in the context of career problem solving and decision making, it is appropriate to study these relationships using the construct of goal instability as a way to conceptualize and measure motivation. Specifically, goal instability might be related to the way individuals think about their career decisions. Those with greater goal instability may experience greater levels of dysfunctional thinking about their career decision making and problem solving. These individuals may also experience greater levels of uncertainty and dissatisfaction with their career decisions which may lead to unsuccessful career decision-making and problem-solving experiences.

**Social Significance**

Educational and psychological researchers have demonstrated a great interest in the factors that contribute to predict both academic and vocational success. A review of research pertaining to motivation and career development revealed a plethora of articles on academic achievement motivation, but a gap in research relating achievement motivation to career planning. For example, a recent article examined the different motivational beliefs and learning strategies college students use in their academic classes, but it failed to discuss how these beliefs might transfer into the working world (Lynch, 2008). Another study examined the relationship between three types of achievement goals and academic performance, but also excluded a comparison of these achievement goals with any type of career criteria (Roney & O’Connor, 2008). One study that investigated the influence of students’ personal characteristics, including motivation to attend college, found that motivation to attend college based on intellectual curiosity, personal interest, and attainment of a rewarding career was a significant predictor of college adjustment and college commitment (Dennis, Phinney, & Chauteco, 2005).

Making a career decision, and engaging in the career decision-making process, is one of the major challenges college students face. In today’s changing global economy, this decision is becoming increasingly stressful. This vocational stress can be moderated by an individual’s level of motivation, and by one’s metacognitions, or self-talk, about the career decision-making process. Cote and Levine (1997) examined the academic skills of students attending college for two years and found career and personal motivations to be significant
predictors of these academic skills. Dysfunctional career thoughts can increase students’ uncertainty by making career problem-solving tasks more difficult (Sampson, Peterson, Lenz, Reardon, & Saunders, 1996a). The literature review led to important questions concerning what motivates individuals to achieve at a higher level and why some individuals are engaged in the career decision-making process and others are not. Questions were also raised concerning the role of professionals in assisting individuals in the career decision-making process, and the interventions that might better serve individuals with lower motivation and more negative thinking.

Seven major developmental components for the young adult were identified by Chickering (1969), including “achieving competence, managing emotions, becoming autonomous, establishing identity, freeing interpersonal relationships, clarifying purposes, and developing integrity” (p. 19). These factors remain important today and are included in various theories. For example, managing emotions and interpersonal relationships could be conceptualized in terms of one’s metacognitions, detailed in the next chapter pertaining to cognitive information processing theory and the Career Thoughts Inventory (CIP; CTI; Peterson, Sampson, & Reardon, 1991; Sampson et al., 1996a). The concept of autonomy is included in Deci and Ryan’s (1985) self-determination theory, and clarifying one’s purposes or goals is included in Bandura’s (1982) social learning theory and in Kohut’s (1977) self-psychology. Chapter 2 will describe some of the main psychological theories pertaining to motivation.

**Research Questions**

Given the potential relationship between motivation, career thoughts, career decision state, and achievement in a career planning course, the following research questions are posed:

1. What is the relationship between goal instability and career thoughts?
2. What is the relationship between goal instability and career decision state?
3. What is the relationship between goal instability and performance in a career development course?
Key Assumptions

There are several assumptions related to this study.

1. Introspective reports by individuals provide useful and valid data for measuring psychological phenomena such as motivation, goal instability, career decision state, etc. (Locke, 1996).

2. Career choice is based on one’s knowledge and cognitions (Reardon, Lenz, Sampson, & Peterson, 2000).

3. Goal instability as a measure of motivation related to career decidedness can be inferred and accurately measured by the Goal Instability Scale (Robbins & Patton, 1985).

4. Dysfunctional thoughts related to career decision making and problem solving can be inferred and accurately measured by the Career Thoughts Inventory (Sampson et al., 1996b).

5. Three different dimensions of dysfunctional career thoughts are Decision-Making Confusion, Commitment Anxiety, and External Conflict (Sampson et al., 1996b).

6. Career decidedness levels can be inferred and accurately measured by the Occupational Alternatives Question (Zener & Schnuelle, 1972; modified by Slaney, 1980) and the Satisfaction with Choice Question (Zener & Schnuelle, 1972; modified by Holland, Gottfredson, & Nafziger, 1975).

7. The level of stress pertaining to career decisions can be inferred and accurately measured by the Career Tension Scale (Reed, 2005).

8. Performance can be defined as the total points earned on the standard assignments, the amount of extra credit points obtained, and the earned letter grade of students enrolled in a career development course.

Operational Definition of Terms

Career – “time extended working out of a purposeful life pattern through work undertaken by the person” (Reardon, Lenz, Sampson, & Peterson, 2000, p. 6).

Career development – “the total constellation of economic, sociological, psychological, educational, physical, and chance factors that combine to shape one’s career” (Sears, 1982, p. 139).
Career problem solving – “a series of thought processes in which information about a problem is used to arrive at a plan of action necessary to remove the gap between an existing and a desired state of affairs” (Sampson, Reardon, Peterson, & Lenz, 2004, p. 5).

Career thoughts – “outcomes of one’s thinking about assumptions, attitudes, behaviors, feelings, plans, and/or strategies related to career problem solving and decision making” (Sampson et al., 1996b, p. 2).

Decided individuals – individuals who “have made a private or public commitment to a specific occupational choice” (Sampson et al., 2004, p. 82).

Career decision making – “a process that not only encompasses career choice but involves making a commitment to carrying out the actions necessary to implement the choice” (Peterson et al., 2002, p. 316).

Commitment Anxiety – “an inability to make a commitment to a specific career choice, accompanied by generalized anxiety about the outcome of the decision making process, with the anxiety perpetuating the indecision” (Sampson et al., 1996a, p. 2).

Decision-Making Confusion – “an inability to initiate or sustain the decision making process as a result of disabling emotions and/or lack of understanding about the decision making process itself” (Sampson et al., 1996b, p. 2).

Dysfunctional career thoughts – processing of information which can “impair an individual’s ability to solve career problems and to make career decisions” (Sampson et al., 1996b, p. 2).

External Conflict – “an inability to balance the importance of one’s own self-perceptions with the importance of input from significant others, resulting in a reluctance to assume responsibility for decision making” (Sampson et al., 1996b, p. 2).

Goal instability – “a lack of goal directedness and inhibition in work …associated with preference for introverted activities and lowered career decisiveness, and lower interest pattern maturity” (Robbins & Patton, 1985).

Indecisive individuals – those “who have not made a commitment to a specific occupational choice due to gaps in the knowledge necessary for choosing and who have a maladaptive approach to problem solving in general that is accompanied by a dysfunctional level of anxiety” (Sampson et al., 2004, p. 83).
Self-efficacy – “task specific confidence and is a key component of Bandura’s social-cognitive theory” (Locke, 1996, p. 119).

Undecided individuals – those who “have not made a commitment to a specific occupational choice due to gaps in the knowledge necessary for choosing” (Sampson et al., 2004, p. 82).

Delimitations

Several limitations to this study are addressed here. This study did not examine all undergraduate college students; rather, it only focused on undergraduate students enrolled in a career course at a large Southeastern university. Due to this limitation, results are only generalizable to students matching this description. Also, the study did not use all possible measures of goal instability, career thoughts, career decision state, or career performance. The focus was on the instruments described in the subsequent chapters. The career course used in this study included five sections per semester, with five different instructors for each section. Therefore, instruction and grading likely differed across sections, and students enrolled in different semesters likely differed as well. Finally, this study included the use of paper and pencil-based assessments measuring students' perceptions rather than an actual observation of behavior.

Summary

This chapter briefly introduced some of the motivational theories included in psychological research, and addressed a gap in scientific research pertaining to motivation and career interventions. A statement of the problem, the social significance of the study, research questions to be examined, assumptions, and definitions of key terms were described. Understanding the underlying source of the drive to engage in career decision making could be useful in improving career service delivery. Relating goal instability to negative thinking and career decidedness might provide insight into individuals’ stages of career development. The next chapter will expand more on the literature related to motivation, goal instability, career theory, career thoughts, career decision state, and career courses.
CHAPTER II

REVIEW OF THE LITERATURE

In this chapter, a critical analysis of the literature related to motivation, goal instability, career theory, career thoughts, career decision state, and career courses will be provided. This includes an introduction to motivational theories in educational research, with a primary focus on Heinz Kohut’s self-psychology and the concept of goal instability (Kohut, 1977; Robbins & Patton, 1985). In addition, a leading career theory, cognitive information processing theory (CIP; Peterson et al., 1991), career thoughts, career decision state, and career courses will be introduced. Relevant theoretical literature pertaining to these constructs will be reviewed and a summary indicating gaps in the literature and related research directions will be provided.

Overview of Motivational Theories

Many educational researchers have studied and developed various theories of motivation. For example, motivation is a key concept in expectancy theory (Vroom, 1964), attribution theory (Weiner, 1985), and McClelland’s projective need for achievement (McClelland, 1965). It is also included in Bandura’s (1991) social cognitive theory, Deci and Ryan’s (1985) self-determination theory, and Kohut’s (1977) theory of the self. Motivation in the academic arena, i.e., learner motivation, has been examined widely in educational research. Motivation to improve worker efficiency and on-the-job performance has also been studied. However, a gap exists in the literature examining the relationship between motivation and career decision making and problem solving for undergraduates. Blustein (2006) addresses the need for a motivational theory to address broader issues relating to how individuals find meaningful work, and states that self-determination theory does this better than others. Therefore, this literature review will focus primarily on the relevant theories of Bandura (1991), Deci and Ryan (1985), and Kohut (1977) as they relate motivation to meaning and purpose in work, and goals.

Self-Determination Theory

Self-determination theory (SDT; Deci & Ryan, 1985) was first discussed in the 1970s, and has continued to be prevalent in research pertaining to a variety of psychological studies
throughout the years. SDT falls within the domain of humanistic psychology and views individuals as having the fundamental goal of self-regulation and self-determination. For example, SDT has been used to study behavior in academics, sports, and healthcare (Moller, Deci, & Ryan, 2008; Turner, Chandler, & Heffer, 2009). SDT elaborated on motivation to include different types of motivation, primarily contrasting autonomous motivation and controlled motivation. Consequently, SDT theorists posit that individuals who are capable of engaging in self-regulated activities are more apt to experience greater satisfaction, and are also more likely to integrate these activities with their broader life goals (Blustein, 2006; Ryan & Deci, 2000).

SDT acknowledges that all work is not inherently or intrinsically motivating, but that there is still a way to engage in and feel satisfied with that work. A core concept in this theory is that of “authenticity” which is essentially intrinsic feelings (Deci & Ryan, 1985). SDT posits that motivation is not as simple as intrinsic or extrinsic; rather, people can still feel “authentic” even if they are working in extrinsically motivated situations. For example, in traditional liberal arts colleges or universities, most students must complete a broad array of liberal studies classes before beginning their major coursework. Often, students complain of the boring assignments and tedious work that they will never have to use again. However, many students successfully navigate through these courses, even though they are not necessarily intrinsically motivated to do so. SDT explains the reasons why this is possible and directs the focus to assist psychologists and educators with creating working environments that are more self-deterministic and authentic. A core concept of SDT is the internalization process, which provides an explanation for maintaining motivation even when one’s work is not intrinsically interesting.

**Internalization process.** There are several key concepts to conceptualize self-regulation and motivation within SDT (Ryan & Deci, 2008). The internalization process, comprised of four stages, is a process to aid in creating more authentic situations; in other words, taking externally motivating situations and making them more meaningful by integrating them into one’s internal values and belief systems. It is important to note that although external expectations and demands may become more meaningful as they are incorporated into one’s cognitive schema, they are not fully transformed into intrinsically motivating influences.
The four stages of the internalization process include: external regulation, introjected regulation, identified regulation, and integrated regulation. Each of the stages describes different modes of the internalization and self-regulation process. This internalization process does not follow the stage format where individuals navigate through each phase until they reach the integrated regulation phase. Instead, the internalization process provides a schema to understand how individuals engage in the world of work in order to satisfy basic needs. Research examining the concepts of SDT indicates that stronger internalization has been associated with “more behavioral effectiveness, greater volitional persistence, enhanced subjective well-being, and better assimilation of the individual within his or her social group” (Ryan & Deci, 2000, p.73). The four stages of the internalization process are described in more detail below.

**External regulation.** External regulation can be conceptualized as the polar opposite of authenticity, or completely intrinsically motivated behavior (Ryan & Deci, 2008). Persons who operate using external regulation are motivated solely by external stimuli and rewards. These individuals work in settings where they receive no internal satisfaction; instead, they work to satisfy the basic needs of survival. An example of this type of work would include migrant workers who endure the heat and long hours in order to provide food and shelter for their family.

**Introjected regulation.** The introjected regulation mode is the next stage of the internalization process, and it is also associated with an external locus of causality. This phase, however, includes people whose behavior is motivated by the avoidance of painful emotions like guilt and anxiety, and the protection of self-esteem. These psychological constructs are internal, yet, to be truly autonomous, people must be motivated by positive internal feelings (Ryan & Deci, 2008). An example of someone operating under introjected regulation would include college students who choose majors or pursue occupations that they are unhappy with over ones that they enjoy. Even though their talents and interests may fall in one category, these students may feel pressure from their family members to be in careers that carry prestige along with the title, and that may also elevate their self-esteem.

**Identified regulation.** Gaining a more internalized locus of causality is included in the third phase of the internalization process, identified regulation. In this stage, individuals are motivated more by the outcome of their behavior and less by external forces such as rewards
or avoidance. Although these individuals are operating under a more intrinsically motivating situation, it does not mean that all aspects of their work or behavior are pleasant. It does mean, though, that they are able to see the necessity that the unpleasant work will bring and are more likely to obtain a sense of accomplishment from their work (Ryan & Deci, 2008). For example, students who work full-time in order to pay for their college education might realize that the job they currently hold is not their ideal job, but that it is necessary in order for them to eventually obtain their dream job. They feel a sense of achievement and satisfaction with knowing that they are working hard to reach a desired goal, and that they are self-sufficient and capable of succeeding independently.

**Integrated regulation.** The fourth and final phase of the internalization process is integrated regulation, and it is the most intrinsic and autonomous phase. The integrated regulation phase describes individuals who have successfully and completely incorporated their behaviors and feelings into an internal self-regulating system. In other words, these individuals are intrinsically and self-motivated to initiate activities and engage in behaviors that are not necessarily inherently interesting. These persons have the ability to fully comprehend a situation and integrate it into their own goals and values (Ryan & Deci, 2008). College students who elect to participate in an internship that falls in their field might be an example of individuals characterized by integrated regulation. Although internships are designed to provide reality testing for students figuring out which career path to pursue, the type of work involved is not really at the level one would be at if they were working full-time. So, while it provides a glimpse into the everyday operations of a certain field, many of the job tasks are menial and require little previous knowledge. However, the interns recognize this and understand that this is still a valuable experience that will assist them in their future career decision-making process.

The internalization process can be achieved by meeting the three contextual needs of autonomy, relatedness, and competence, which are described in the following section.

**Contextual needs.** Ryan and Deci (2000) added to their theory by providing three contextual needs that must be fulfilled in order for individuals to be the most likely to internalize externally regulated behaviors. These three needs are autonomy, relatedness, and competence. SDT, therefore, conceptualizes motivation in a contextual form contingent upon the individual’s social and psychological resources, as well as the individual’s own
interpretation of the situation. For example, Grolnick and Ryan (1989) interviewed the mothers and fathers of upper elementary students. These parents were rated on several dimensions by two interviewers. Autonomy support was defined as given by parents who appeared to value self-initiation and to use parenting techniques that encouraged their children to engage in independent problem solving and decision making. They found a positive relationship between a supportive authoritative parenting style and autonomous, or intrinsic, motivation. Turner, Chandler, and Heffer (2009) found that intrinsic motivation, authoritative parenting style, and academic self-efficacy were all significant predictors of the academic performance of students enrolled in a undergraduate psychology class. In contrast, they also found that amotivation, or lack of motivation, was negatively correlated with academic performance. These results indicate that professionals can create supportive environments that are conducive to the internalization process (Deci, Eghrari, Patrick, & Leone, 1994). Counseling professionals who acknowledge clients’ feelings and engage them in the career decision-making process promote the internalization and integration of the process, increasing intrinsic motivation.

The three needs of autonomy, relatedness, and competence should be thought of as interconnected. A sense of autonomy is that feeling of choice, free will, and independence that allows an individual to transform an originally externally motivating situation into one that is authentic. If individuals are successfully meeting the need for autonomy, they are naturally also meeting the needs for relatedness and competence. Enhancing an individual’s sense of autonomy, e.g., by providing a choice, can lead to an increase in intrinsic motivation and energized behavior (Moller, Deci, & Ryan, 2006).

Relatedness is defined as feeling meaningfully connected to others within a specific environmental context. Following an evolutionary tradition, SDT theorists believe that a sense of relatedness is inherent in all individuals due to our social nature. Ryan and Deci (2000) stressed that individuals have an inherent need for connection with others, and that by increasing the availability of interpersonal connections, we foster the conditions for the internalization of self-regulation. Hence, individuals working in an environment where they identify with the other workers in a significant and important manner are more likely to experience greater self-regulation. College students who report feeling satisfied in their major may do so because they enjoy working with their fellow students on group projects. Career counselors often suggest that students examine the types of individuals enrolled in different
classes as a way to determine whether they feel that they “fit in” with that personality type and major (Reardon & Bullock, 2004).

To obtain a feeling of competence in a situation, individuals get a sense of success and mastery. When individuals' needs for competence are met, they may feel less stress and more internalized. Yet, achieving the need for competence in a work situation does not necessarily mean that it is more satisfying. However, combining feelings of competence with those of autonomy and relatedness may lead to a greater sense of self-regulation (Deci & Ryan, 1985; Moller et al., 2006; Turner et al., 2009).

**Life goals.** SDT theorists provide two general categories for the long-term goals that individuals use to guide their activities: intrinsic aspirations and extrinsic aspirations (Deci & Ryan, 2008). Intrinsic aspirations include life goals that are inherent in oneself, such as personal development or affiliation. Extrinsic aspirations include external attainments, such as wealth and fame. Deci and Ryan (2008) reported that individuals who place a greater focus on intrinsic aspirations are associated with greater health, performance, and well-being. For example, Vansteenkiste, Simons, Lens, Sheldon, and Deci (2004) conducted three field experiments using high school and college students. Groups were assigned according to intrinsic goals (personal growth, health, or community contribution) vs. extrinsic goals (money or attractive images) and autonomy-supportive vs. controlling environments. They found that participants engaging in learning behaviors with an intrinsic goal resulted in more learning and better performance than participants engaging in the behaviors with an extrinsic goal. Individuals are better able to understand the importance of an intrinsic goal for their learning when they feel free to decide for themselves to learn as opposed to feeling forced to do so. They also found that presenting tasks in terms that are consistent with satisfying basic needs led to positive learning-related outcomes, such as increased depth of processing, test performance, and persistence.

Self-determination theory focuses on intrinsic and extrinsic aspirations, or goals, that people use to guide their activities. Intrinsic goals include things such as affiliation, generativity, and personal development; extrinsic goals include things such as wealth, fame, and attractiveness (Deci & Ryan, 2008). Extrinsic goals are adopted when the three basic needs for competence, relatedness, and autonomy have been thwarted. These extrinsic goals lead to external indicators of worth, rather than internal feelings of worth that are a result of
satisfying one’s three needs. Educators and psychologists need to work with individuals on satisfying the needs for competence, relatedness, and autonomy by being supportive, fostering independence by providing choices, and engaging them in the process of career decision making and planning, rather than simply the outcome of finding a job.

SDT has provided a framework to explain that individuals who are able to engage in self-regulated activities are more likely to experience greater satisfaction, and are also more likely to integrate these activities with broader life goals (Blustein, 2006; Ryan & Deci, 2000). Specifically, individuals with intrinsic life goals are associated with greater health, performance, and well-being (Vansteenkiste et al., 2004). Career service practitioners could work on creating interventions that encourage students to develop and strengthen intrinsic goals, such as personal growth and health, which could lead to greater satisfaction in their careers. Knowing the relationship between goals and negative thinking could assist practitioners in determining where to start in the career decision-making process. Another theory which also addresses different types of goals, and has implications for professionals in increasing an individual’s level of intrinsic motivation and finding meaningful work, is Bandura’s social learning theory. This theory is described in more detail below.

**Social learning theory**

Numerous theorists have incorporated the use of goals to study the effects of motivation on performance, whether academic, athletic, or vocational. For example, Bandura’s social learning theory posits that motivation is derived from individuals who set goals for themselves and feel dissatisfied with themselves for not achieving their performance goals. This dissatisfaction serves as a motivation factor that drives individuals to achieve. Yet, although dissatisfaction is the propelling force, goals are required to produce this dissatisfaction (Bandura & Cervone, 1983). In other words, when individuals make plans and commit themselves to explicit standards or goals, the perceived gap between where they are and where they want to be creates self-dissatisfaction that acts as a motivational push for increased effort. Outcomes and performances that do not meet the intended goals and/or standards ultimately lead to discouragement and even goal abandonment. Alternately, achievers that meet the goals experience self-satisfactions that foster positive reinforcements for further plans or goals. These individuals increase their confidence in themselves, or increase their level of self-efficacy, which is described in more depth in the following section.
**Self-efficacy.** The component of self-efficacy, which has been demonstrated to play a part in choice, effort, and duration of behaviors (Bandura, 1982; Bandura, 1991), is included in social learning theory and in social cognitive theory. While self-efficacy pertains to individuals’ confidence in their ability to complete a task, goal orientation refers to individuals’ reasons for approaching a task in the first place (DeWitz, Woolsey, & Walsh, 2009). Both self-efficacy and goal orientation, contribute to successful experiences in different disciplines and areas. For example, DeWitz, Woolsey, and Walsh (2009) described motivation as purpose, and compared undergraduate college students’ life purpose, using a purpose-in-life test, with measures of college self-efficacy, social self-efficacy, and general self-efficacy. They found that all of the self-efficacy variables were positively correlated at a significant level with purpose in life.

The concept of self-regulated learners describes individuals who are able to direct the learning process and goals through setting challenging goals for themselves. These types of learners display a high sense of efficacy in their capabilities, which in turn influences the knowledge and skill goals they set for themselves and their commitment to meet those goals (Bandura, 1991). One study found that although both goals and perceived self-efficacy play a part in performance effort, there were no significant effects without the combination of both goals and high self-efficacy (Bandura & Cervone, 1983). This indicates that there is a moderating factor besides goal-setting that affects performance. By teaching low-achieving students to set proximal (e.g., smaller and more attainable) goals for themselves, it is possible to increase their sense of self-efficacy, their academic achievement, and their intrinsic interest in the task at hand (Zimmerman, Bandura, & Martinez-Pons, 1992).

Bandura’s self-efficacy research suggests that persons who approach tasks with a sense of confidence and competence will be more apt to have adequate amounts of motivation to engage in related behaviors (Bandura, 1982; Deci & Ryan, 1985). A series of metaanalyses have indicated that self-efficacy beliefs contribute significantly to one’s level of motivation and performance (Bandura & Locke, 2003). Blustein (1989) found that self-efficacious beliefs about career decision making were associated with environmental and self-exploration in the vocational realm. Luzzo, Hasper, Alber, Bibby, and Martinelli (1999) found that students who possessed higher levels of math and science self-efficacy were more likely to state an interest
in math and science-related careers and choose majors that were more math and science related.

Bandura (1982) posited that there are four sources available to increase one’s level of self-efficacy: performance accomplishments, vicarious learning, social persuasion, and emotional arousal. Three primary behavioral outcomes are listed by Bandura as influenced by self-efficacy beliefs: approach versus avoidance, performance, and persistence. So, individuals who have high levels of self-efficacy are more likely to approach tasks, perform at a higher level, and maintain a high level of persistence in that behavior (Bandura, 1991). These theoretical statements suggest that there is both a behavioral component and a cognitive component to self-efficacy and, ultimately, motivation. Successful experiences, with opportunities to learn and receive feedback from others, assist in fostering one’s self-efficacy and one’s level of goal setting.

In the vocational realm, individuals who have never made a career decision and have observed others make poor vocational choices may have low career decision-making self-efficacy. Bandura’s (1982) theory hypothesizes three dimensions of self-efficacy expectations: level (number of tasks within a given process that individuals feel they will perform successfully), strength (amount of confidence individuals have in their ability to successfully complete the task), and generality (extent to which the individuals’ efficacy beliefs generalize to other life domains). Bandura concluded that the strength of individuals’ self-efficacy varies across different situations. For example, students who have high science self-efficacy may have low reading self-efficacy; however, as self-efficacy in one domain increases, generalized self-efficacy improves (Bandura, 1982). Therefore, students who have high science self-efficacy will generalize this domain-specific self-efficacy to other academic areas, such as math.

Domain-specific self-efficacy has been studied in the area of career development (Betz & Hackett, 1981; Blustein, 1989; Luzzo et al., 1999; Taylor & Betz, 1983). Social cognitive career theory was created to address the domain of career decision-making self-efficacy (SCCT; Lent, Brown, & Hackett, 1994). Although SCCT is not a focus of this review, it is important in that it suggests that career choice is composed of the elements of goal expression, actions, and performance attainments that inform future career decisions. SCCT theorists posit that interests motivate goal development and goals influence actions. Goal-
related actions lead to performance experiences. So, individuals who set goals to research majors or occupations are more likely to engage in that behavior. Goals, therefore, are an underlying variable tied to motivation included in self-determination theory, social learning theory, and social cognitive career theory.

Bandura’s research has demonstrated that there is a moderating factor besides goal-setting that affects performance, namely self-efficacy. However, dysfunctional thinking related to career thoughts could be another moderator to motivation. This relationship merits examination in order to gain a better understanding of the source or the drive to engage in career decision making. Another component of motivation is personality, a central theme in Heinz Kohut’s self-psychology. This theory and related constructs are described in the next section. While self-efficacy and self-determination theories are beyond the scope of the present study, they are noteworthy in their contribution to motivation and goal-setting literature.

**Introduction to Kohut’s Self-Psychology**

Kohut’s self-psychology (1977) added a humanistic component to traditional psychoanalysis, and focused more on personality than on psychological development (Kahn & Rachman, 2000). Kohut’s theory has been compared to the humanistic views of Carl Rogers and Abraham Maslow (Kahn & Rachman, 2000; Pauchant & Dumas, 1991). In alignment with humanistic theory, Kohut believed that psychologists must view their clients as whole beings, rather than as parts that combine to make up the whole. “Kohut stressed that self-psychology is primarily concerned with the study of human subjective experience, defining the self as an organization of experience” (Pauchant & Dumas, 1991, p. 55). Kohut believed that to be a good therapist, one needed to possess the qualities of empathy, the ability to envision and sense the inner life of the client, and introspection. The goal of the individual is to obtain “cohesion of the self” by uniting all facets of one’s personality into a single integrated structure (Bania, Mikulincer, & Shaver, 2005).

**Personality Sectors**

Kohut posited that there were two sectors of the personality—the grandiose sector and the idealizing sector. In the grandiose sector, the immature self represents one whose self-worth is obtained from external influences, such as admiration and approval from others. The mature self, on the other hand, is one who is able to internally regulate and energize one’s self-esteem and ambition. In the idealizing sector, the immature self is again externally
regulated, and receives a sense of security and direction from powerful others; the mature self possesses an internal system of ideals and values (Robbins, 1989). An underlying lack of self-cohesion and vulnerable self-esteem are present in all disorders of the self according to Kohut (1977). These characteristics are a result of early childhood, and the parent’s failure to provide the child with an appropriate model for normal grandiosity. In other words, psychological disorders originate from an early injury of the self, caused by faulty experiences with one’s selfobjects. Therefore, the child becomes “fixated” in a less-mature stage of self-development, lacking mature goals and a healthy expression of grandiosity. This person is characterized by an inability to empathize with others, a vulnerability to criticism, separation, and loss, and an inability to formulate realistic life plans, or the persistence to meet those plans (Robbins & Patton, 1985).

Kohut defined the term “selfobject” as the part of the self that is involved in the development and maintenance of the self. This aspect of the personality is distinguished from the “trueobject,” an independently operating system not attached to the self (Banai et al., 2005). While self psychology tends to place primary emphasis on the individual’s organization of experience through relation with selfobjects, it also aligns itself with the area of social psychoanalytic theory. Kohut stressed the relationship between one’s individual self-perceptions with other more social entities, such as groups, organizations, families, or society, as did Maslow and Bandura (Pauchant & Dumas, 1991).

Kohut described the bipolar self as two dimensions of the self, one of ambitions and one of values. A healthy self will obtain an adequate balance between the pole of values and the pole of ambitions. Each of these poles push and pull an individual in different directions, but ultimately result in an ideal tension arc that provides the individual with skills and talents. The relationship between these two poles is similar to two basic psychic relationships established between the self and its selfobjects. Specifically, the pole of values is equated to the selfobject idealizing function while the pole of ambitions is equated to the selfobject mirroring function. The idealizing function allows the self to integrate with a selfobject that possesses qualities that the self lacks. The mirroring function allows the self to experience a secure feeling of being appreciated and accepted. So, this model posits that one’s skills and talents result from the tension existing between the poles of ambitions and values, which are obtained from the selfobject mirroring and idealizing experiences (Kohut, 1977; Pauchant & Dumas, 1991).
Motivation

Heinz Kohut’s psychology of the self addresses motivation by theorizing that the two lines of development in the normal adult— the idealizing and the grandiose— work together to sustain the structure of experience, which is the primary basis of motivation (Kohut, 1977). While Bandura included four sources for increasing self-efficacy in individuals, Kohut provided three ways for individuals to maintain and/or develop their structure of experience: the mirror experience (supplying the self with feelings of acceptance and admiration), the idealization experience (permitting the self to admire and merge with a selfobject), and the twinship experience (providing the self with feelings of alikeness and mutual admiration with the selfobject). Kohut believed that individuals who could not develop and maintain a healthy structure of experience were characterized by a sense of not being “real,” “inner emptiness,” “falling apart,” and a lack of purpose, direction, energy and focus (Pauchant & Dumas, 1991, p. 54).

The idealizing sector of development is thought to lead to a sense of self-cohesion, which is demonstrated by an internalized and coherent system of goals and ideals. Kohut believed that through an adequate level of support in one’s life, an internalization of mature goals and values would result. This internalization would arise in late adolescence by an overarching sense of goal directedness (Kohut, 1977). The organizing center of the personality in a mature adult is the self according to Kohut (Robbins & Tucker, 1986) and the formulation of these two lines of development, especially the idealizing line, can be useful in understanding how a person engages in career development. Specifically, readiness to engage in career planning behavior is dependent upon the relative maturity and stability of the idealizing sector of the self (Robbins & Tucker, 1986). This idealizing sector of the self can be measured in the domain of career goals using the Goal Instability Scale (Robbins & Patton, 1985) which is described further in the next section.

Goal Instability

In order to measure an aspect of this idealizing self and to examine the absence of orienting goals, the Goal Instability Scale (GIS; Robbins & Patton, 1985) was created. Goal instability is defined as difficulty in the areas of self-direction, setting goals and keeping direction, maintaining the persistence to accomplish goals, and initiating action (Robbins & Patton, 1985). Individuals who have low goal instability and possess orienting goals are
expected to independently create career objectives and energetically engage in the career development process. However, people with high goal instability require the support and encouragement of others to pursue the career development process. Payne, Robbins, and Dougherty (1991) called for counselors and practitioners to measure clients’ goal directedness in order to predict later adjustment and transition difficulties in each stage of development.

Motivation is a key factor in understanding student academic persistence and performance (Robbins, Lauver, Le, Davis, Langley, & Carlstrom, 2004). The items on the GIS assess energy and drive, project completion, losing goal-related focus, and confusion about the self (Casillas, Schulz, Robbins, Santos, & Lee, 2006). In addition, the scale is an indicator of general and achievement motivation. Goal instability has been found to be negatively correlated with items measuring personal competencies and self-esteem (Robbins & Patton, 1985). Lese and Robbins (1994) found goal instability to be negatively correlated with study skills, grade point average, and goal attainment of Southeast Asian adolescent refugees. Elliott, Uswatte, Lewis and Palmatier (2000) found goal instability significantly related to the life satisfaction of adults with a physical disability. The concept of goal instability is attached to Kohut’s idealizing sector of the self, which is characterized by “hypersensitivity to others, a sense of depletion, longing for attachment to others, and career indecision” (Robbins, 1989, p. 123).

Goal instability has been used to examine topics relating to types of career decision makers in a high school sample (Multon, Heppner, & Lapan, 1995), computerized career counseling systems (Kivlighan, Johnston, Hogan, & Mauer, 1994), formats of career advising workshops (Robbins & Tucker, 1986), adjustment to college life (Robbins, Lese, & Herrick, 1993), and later life adjustment (Robbins, Payne, & Chartrand, 1990). University students with higher goal instability who are receiving career counseling services benefit from the use of interactional workshops (Robbins & Tucker, 1986) and benefit less from the use of computer-based counseling systems (Kivlighan et al., 1994). These findings suggest that counselors should be supportive, encouraging, and involved when working with individuals who have high goal instability. Other findings demonstrate that high goal instability relates to lower levels of personal adjustment regardless of perceived level of social support (Robbins et al., 1990; Robbins et al., 1993). In a study of college freshmen, individuals with high goal instability and low appraised social support had lower levels of personal adjustment than individuals with low
goal instability and the same level of appraised social support. Conversely, students with low goal instability and a high sense of belonging had greater personal adjustment than did students with low goal instability and lower levels of social support (Robbins et al., 1993). These findings suggest that practitioners might assist individuals with higher goal instability in obtaining more social resources as coping mechanisms against anxiety and stress. Also, the GIS might be utilized in researching adjustment and successful transitions at other life stages, such as transitioning from college to work.

Blustein (1989) examined different internal factors that might be associated with an inherent tendency to engage in the career decision-making and exploration process. Blustein’s study examined the relationships between goal instability and career exploration, and career decision-making self-efficacy and career exploration. One factor that might be related to intrinsic motivation and career exploration is the degree to which individuals have developed cohesive and integrated selves, or their degree of goal instability. Individuals with lower goal instability, and a more cohesive self, have internalized goals and values. These individuals are generally able to demonstrate the ability to engage in self-initiated activities in various disciplines, including career exploratory activity (Deci & Ryan, 1985; Robbins & Tucker, 1986). The second factor that might be related to intrinsic motivation and career exploration is that of self-efficacy or confidence (Bandura, 1982). Blustein (1989) found that both career self-efficacy and goal directedness were associated with self-exploration in the career development process.

Goal instability provides a useful way to measure motivation to engage in the career decision-making process yet excludes other influences that might serve to decrease motivation, such as dysfunctional thinking. A prominent career theory used in understanding career readiness, dysfunctional thinking, and career decidedness is cognitive information processing theory, which is described in the next section.

**Cognitive Information Processing Theory**

Cognitive information processing theory (CIP; Peterson, Sampson, & Reardon, 1991; Peterson, Sampson, Reardon, & Lenz, 1996; 2002) theory provides a theoretical framework for conceptualizing a person’s readiness and capability to engage in the career problem-solving and decision-making process. The primary goals of CIP theory are to aid individuals in making appropriate career decisions, and to assist them in learning improved problem-solving and
decision-making skills. In CIP theory, a career problem consists of a gap between where one is and where one desires to be. This gap may be an existing state (e.g., Knowing I need to choose a major) and an ideal state (e.g., Knowing I made an informed choice). Tools for problem solving and decision making are included in CIP theory and are described in the two key elements of CIP theory, the Pyramid of Information Processing Domains and the CASVE Cycle (Sampson, Reardon, Peterson, & Lenz, 2004).

**The Pyramid of Information Processing Domains**

The Pyramid of Information Processing includes the “content” of career problem solving and decision making, and incorporates self-knowledge, options knowledge, decision-making skills, and metacognitions. Self-knowledge can be further broken down into one’s values, interests, and skills as they relate to career choice. Options, or occupational, knowledge pertains to one’s individual knowledge of occupations and having a schema for organizing the world of work. Decision-making skills are general information processing skills that assist individuals in solving problems and making choices, and this model is included in the CASVE cycle, described in the next paragraph. Metacognitions are the thoughts and attitudes, or self-talk, individuals have toward themselves and their career development (Sampson et al., 2004).

![Information Processing Pyramid](image_url)

*Figure 1. Information Processing Pyramid*

The CASVE Cycle

The CASVE cycle is a six-step decision-making model including the following phases: Communication, Analysis, Synthesis, Valuing, Execution, and then back to Communication. This component of CIP theory relates to the “process” of career problem solving and decision making, and its cyclical nature is useful in demonstrating that all decisions are usually followed by additional decision situations. It is especially helpful in that its didactic nature allows clients to learn a process for career problem solving and decision making that can guide them in future decisions (Sampson et al., 2004).

The Communication phase is the initial phase of the decision-making process and is where individuals become aware that they need to make a choice. This phase includes the identification of one’s gap, which may be a result of internal cues (one’s perceptions of emotions, avoidance behavior, or physiological influences) or external cues (positive or negative events, or influences of significant others). The Communication phase is also the last phase of the decision-making cycle, where an individual reflects back upon the decision-making process to determine if the gap has been successfully closed (Sampson et al., 2004).

Once individuals have determined their gap, such as a need to choose a major, they move into the Analysis phase of the decision-making process. At this stage, individuals begin to collect information pertaining to their self-knowledge and options knowledge. Here, they begin to develop a schema and examine relationships between the problem and the different influences on the problem. For example, students who are choosing a major might begin to examine their interests and how they relate to the different majors available to them. Monitoring and control of metacognitions also occurs during this phase, as individuals are beginning to evaluate their general information processing skills and metacognitions (Sampson et al., 2004).

After individuals have successfully navigated through the Analysis phase, and gathered and organized information pertaining to their self-knowledge and options knowledge, they move into the Synthesis phase. Here, individuals work to expand and then narrow their career options. In CIP terms, synthesis elaboration refers to the expansion of all of the occupational alternatives the individual is considering. This expansion is free of limits, so that it really becomes a type of brainstorming session for individuals where anything that comes to mind is considered. Synthesis crystallization occurs afterward where individuals eliminate those
alternatives that are not viable for one reason or another. At the end of this phase, individuals would ideally have three to five options that they are actually considering (Sampson et al., 2004).

In the Valuing phase, individuals are conducting further research in order to construct a ranked list of their three to five occupational alternatives. Individuals in this phase evaluate the costs and benefits of each alternative to themselves, significant others, their cultural group, and their community or society in general. Similar to a pros and cons list, the individual begins to determine a first choice, followed by alternatives that are considered to be back-up options (Sampson et al., 2004).

During the Execution phase, individuals begin to take the steps to formulate and implement their plan. CIP theory includes the use of an Individual Learning Plan (ILP) for each person. The ILP includes individuals’ objectives (or goals) and the activities selected to assist them in meeting their goals. Examples of things included on an ILP include visiting an academic department to talk with advisor, reviewing a web-based guide pertaining to occupational paths in a field of study, conducting information interviews with persons in specific occupations, and finding an internship in a field of interest. Individuals return to the Communication phase after the Execution phase to review the external demands and internal states, and to determine if their gap has been closed (Sampson et al., 2004).
Readiness Model

CIP theory also includes an assessment of client readiness. Using a four quadrant model, clients’ levels of complexity and capability are assessed to determine if they are in need of self-help, brief staff-assisted, or individual case-managed counseling. The level of complexity is assessed by examining family, societal, economic, and employment variables that may be affecting a client’s career decisions. The level of capability is assessed by examining clients’ cognitions and emotions that may be affecting their career decisions. These cognitions are synonymous with metacognitions that are included in the Pyramid of Information Processing Domains. If clients are experiencing extremely negative thoughts about themselves, they may have a difficult time making and implementing a variety of career and employment decisions. It is important to consider all factors, both internal and external, that may be impacting a client’s career problem solving and decision making (Sampson et al., 2004).

Career Thoughts

In order to measure the metacognitions that are included in the Pyramid of Information Processing Domains, the Career Thoughts Inventory (CTI; Sampson, Peterson, Lenz, Reardon, & Saunders, 1998) was developed. Career thoughts are defined as “outcomes of
one’s thinking about assumptions, attitudes, behaviors, beliefs, feelings, plans, and/or strategies related to career problem solving and decision making” (Sampson et al., 2004, p. 91). The CTI helps practitioners in determining where in the pyramid clients are experiencing a breakdown in their career decision making. For example, negative career thoughts are negatively correlated with career decision and choosing a field of study or major (Saunders, Peterson, Sampson, & Reardon, 2000) and have also been found to be related to a maximizing decision-making style and rumination (Paivandy, Bullock, Reardon, & Kelly, 2008).

The CTI has been used in research and evaluation as measure of learning outcomes in career services delivery. It can be used as a screening tool to determine the area, or areas, of career development that are most affected by negative thinking. This, combined with goal instability, could assist practitioners in understanding how to create interventions that foster motivation. Practitioners can work with clients to identify, challenge, and alter dysfunctional thoughts, and ultimately act upon new, more functional thoughts in relation to career development. “Individuals identified as having more dysfunctional thoughts will likely require more assistance in making effective use of career services” (Sampson, Peterson, Lenz, Reardon, & Saunders, 1996b, p.1).

The CTI (Sampson et al., 1998) includes three construct scales related to negative thinking: decision making confusion, commitment anxiety, and external conflict. The decision making confusion (DMC) scale contains 14 items and assesses one’s overall emotions regarding career decisions and sense of confusion about the decision-making process. Individuals with elevated DMC scores often demonstrate a lack of understanding and/or and inability to engage in the decision-making process. The commitment anxiety (CA) scale, consisting of 10 items, is designed to measure one’s feelings about committing to a career choice, which often includes anxiety relating to the choice. Individuals with elevated CA scores are characterized by a generalized anxiety about the consequences of their career decisions, and are often unable to commit to a specific career choice as a result of this anxiety. The third scale, the external conflict (EC) scale, assesses individuals’ ability to balance their own needs with the needs of significant others in their life. This 5-item scale is often elevated for individuals who demonstrate a difficult time balancing the relevance and importance of their own self-perceptions and opinions with those of significant others, which leads to hesitations in assuming responsibility for their decision making (Sampson et al., 1996b).
Career Decision State

The world of work is constantly changing and evolving, and career decisions are often complex and difficult. Jobs are constantly being created, while others are becoming obsolete. Students are faced with making career decisions as early as high school, and often have never given real thought to the value and importance of these decisions. This can lead to poorly considered decisions and stress and anxiety. It is important for individuals to learn an effective decision-making schema that can assist them in making successful career decisions.

Cognitive information processing theory posits that career decisions involve individuals’ choices about their occupations, education, training, and employment (Sampson et al., 2004). There are three levels of career decidedness: decided, undecided, and indecisive (Sampson et al., 2004). Decided individuals have committed to an educational, occupational, training, or employment decision. Undecided individuals have not made such a commitment because they are missing knowledge and information pertaining to their choice. Indecisive individuals have also not made such a commitment. However, these individuals are not only missing information, but also possess a maladaptive problem solving method that involves dysfunctional anxiety levels (Sampson et al., 2004). Career decisions can be complicated by a lack of information or knowledge about options, as well as by internal and external pressures, such as being required to choose a major and feelings of anxiety and apprehension about the choice at hand.

Cognitive information processing theory conceptualizes decision making into a six-step model (CASVE cycle) that assists clients and practitioners in learning a process for career problem solving and decision making (Sampson et al., 2004). Self-regulation theorists have created the Self-Regulation Model of Decision Making (SRMDM; Byrnes, 1998), a three-step model that includes a theoretical basis for generating and evaluating options, incorporating chance into decision making, acknowledging faulty decision-making patterns, and incorporating self-regulation skills into the process (Kiener, 2006). The first step, generation, involves goal setting and creating options to meet these goals. The second step, evaluation, involves weighing the options and evaluating the likelihood and desirability of each option. The final step, learning, occurs after a choice has been made. Here, individuals reflect on their actions and consequences and incorporates these experiences into memory (Kiener, 2006). Although each model is based on separate theories, much of the content remains the same. It
is important to note that goal setting occurs in the beginning of each model, and is a core component of the decision making process.

Three measures related to career decision state were included in this study. The Occupational Alternatives Question (OAQ; Zener & Schnuelle, 1972; modified by Slaney, 1980) measures occupational decidedness and includes the number of occupations considered. The OAQ is designed to determine whether or not having a first choice compared to three other levels of career decidedness is an indicator of readiness for career decision making. The Satisfaction with Choice Question (Zener & Schnuelle, 1972; modified by Holland, Gottfredson, & Nafziger, 1975) follows the OAQ by asking a single question, “How well satisfied are you with your first choice?” Individuals who self-rate themselves as “well satisfied with choice” have greater levels of satisfaction with their career decisions. The Career Tension Scale (CTS; Reed, 2005) is a third measure of career decision state that examines the relationship between career decisions and health concerns, such as nervousness, worry, and general health impact. Together, these three measures assess certainty about career decisions, satisfaction with these decisions, and physical and emotional health symptoms that might be related to these decisions. Understanding how motivation and career thoughts relate to career decision state would serve to assist others in creating career interventions, such as career courses, that incorporate activities to increase motivation and decrease negative thinking. Autonomous motivation and competency in decision making serves to increase the amount of congruency between thoughts and behaviors, which lead to successful navigation of career problem solving and decision making.

**Career Courses**

What distinguishes those students who are more effective at making career decisions from others? How can we increase students’ ability to make effective career decisions? One way to do this is a career planning course. Many studies have demonstrated positive gains in students’ career decision making after they completed a career planning course. For example, Scott and Ciani (2008) studied the career decision-making self-efficacy and vocational identity of students enrolled in an undergraduate career planning class. Using a pre-post design, the students reported a significant increase in adaptive career decision-making self-efficacy beliefs after taking the course. Folsom and Reardon (2003) examined 46 different reports of college career courses since the 1920s, and found 38 studies demonstrating positive changes in
output variables, such as career decision-making skills, career thoughts, vocational identity, and career decidedness. They also found 15 studies that demonstrated positive changes in outcome variables, such as course satisfaction, job satisfaction, selecting a major, and GPA.

Career courses are not uncommon among college campuses nationwide, as indicated by a National Association of Colleges and Employers (NACE) survey (Collins, 1998). This survey reported 30% of respondents offering credit-bearing courses and 24% offering noncredit courses. Although career courses have been around since the 1920s, published output and outcome research did not begin to appear until the 1970s (Folsom & Reardon, 2003). Why are college career courses important? More universities across the country are requiring incoming freshmen to declare a major, yet at least half of all students change their major at some point in their academic career (Reese & Miller, 2006). College career courses are useful in assisting students in learning more about themselves as active participants in the career planning process, and can assist students in improving their skills in career decision making. Changing technology and job markets lead to an increased need to prepare students for transitions from college to work. Group interventions, such as college career courses, have grown in popularity due to their effectiveness in sharing information, providing motivation, fostering exploration, and practicing attitude development (Herr & Cramer, 1992).

One way to measure the amount of student learning and achievement related to career course objectives is through grades (Reardon, Leierer, & Lee, 2007). Although career courses have many activities, making it difficult to determine what an “A” grade means, grades could be used to gain a better understanding of whether or not students have fulfilled the career course objectives. Reed, Reardon, Lenz, and Leierer (2001) described the use of a performance contract in the allotting of grade points as different course activities were completed. It is possible that through performance contracts, students might be able to choose the grade they wish to receive, and then work toward that outcome by completing the various activities associated with high performance.

Career courses have been demonstrated to have a positive impact on college students in various areas, including gains in career decision making and reduction of dysfunctional career thoughts (Folsom, Peterson, Reardon, & Mann, 2001; Folsom & Reardon, 2003; Reed, Reardon, Lenz, & Leierer, 2001). Reese and Miller (2006) found increased career decision-making self-efficacy in the areas of obtaining occupational information, career planning, and
career goal-setting for students completing a career course. Higbee and Dwinell (1992) found significant positive increases in the tasks of establishing and clarifying purpose, career planning, educational involvement, lifestyle planning, and life management of freshmen enrolled in a self-awareness course. Johnson and Smouse (1993) compared undergraduate students enrolled in a career planning course with a control group of students enrolled in an introductory psychology course, using a multidimensional pre-post career assessment. The results indicated a significant change in scores for the students enrolled in the career planning course on the dimensions of career decidedness, career comfort, and self-clarity. No significant changes were found for the students not enrolled in the career course.

While earlier career courses typically focused on teaching practical career planning skills, such as resume writing and interviewing techniques, there has been a recent trend toward a more holistic approach to career courses. For example, Smith, Myers, and Hensley (2002) presented a Wheel of Wellness Model for career courses, which incorporates a more developmental and holistic view of career courses. Essentially, this model focuses on the concept of wellness, in which “body, mind, and spirit are integrated in a purposeful manner by the individual, with a goal of living life more fully within all spheres of functioning” (p. 91). Included in this three dimensional model are individual life tasks, different life forces, and global events, which all interact with each other within the individual. A healthy individual is defined as experiencing an interconnection among the five major life tasks: work, recreation, and leisure; spirituality; self-direction; love; and friendship.

Career courses also provide a way to meet the demands for greater accountability within higher education. Carver and Smart (1985) conducted a study of a 3-credit hour college career and self exploration class. The study was designed to address and measure assumptions from several theoretical orientations. The first assumption was that freshman college students are at a stage in their career development where exploration of different life and career opportunities is appropriate. The second assumption was that training freshman college students in decision making and goal setting behaviors encourages both academic and career decision making. The third assumption was that increasing career maturity and decidedness would lead to improved self-concepts. The fourth assumption was that increased involvement and integration of students into the university community should be a goal for any student development intervention. The researchers compared students enrolled in the course
with a comparison group on the following measures: career decidedness; academic major certainty; reduction in academic and career indecision; maturity of career attitudes; overall level of self-esteem; use of academic advising, personal counseling, career planning, placement, and tutorial services, and; involvement in student organizations, university programming and student government. The researchers found significant differences between groups in terms of career choice certainty, academic major certainty, overall indecision, and career maturity. Their results demonstrated that the career and self-exploration course helped undecided freshmen to navigate the exploration stage of the career development process.

College career courses can be structured or unstructured, offered for credit or no credit, and can target first year students or all students. Some college career courses are based on a theory. For example, Reed et al. (2001) examined a university career course based on cognitive information processing theory (Peterson et al., 1991; 1996; 2002; see earlier section for more detail). CIP theoretical concepts were included in the text and in the course activities. They found that students’ negative career thoughts decreased from the beginning of the semester to the end of the semester, indicating that the career course had a positive influence on students’ dysfunctional career thoughts. College career courses provide an effective and meaningful intervention to assist in the career development of students.

Other career interventions are useful in aiding students in the career development process. For example, Wessel, Christian, and Hoff (2003) investigated whether the career development of undergraduate students, by class standing, was enhanced after they participated in a career management plan, provided by the university’s Career Success Club. This club provided services such as career advising, a career management plan, and newsletters in order to increase students’ career maturity. The career management plan included six phases, incorporating such topics as values, skills, and interests; job search skills; gaining career experience; and practicing and maintaining career management through one’s lifetime. Using an instrument developed by the researchers, individual “Career Development Scores” for the participants were obtained using a pre-post design. Five categories were identified and studied: Academic Major and Career Goals, Career Exploration, Work Experience and Involvement in Professional Organizations, Job Search Activities, and Full-Time Professional Employment. The researchers found that implementing the career
management plan, and providing different career interventions, was successful at enhancing the career development of undergraduate students, specifically upper classmen.

Group career interventions, such as workshops or courses, efficiently and effectively assist individuals in the career development and planning process. Counselors and teachers who work with individuals with increased dysfunctional career thoughts and increased goal instability should be supportive, encouraging, and involved. It is also important for career professionals to understand how decided the individuals are about their career decisions. The next chapter describes the current study which included participants enrolled in an introductory career development course.

**Need for Inclusion of Motivation in Career Research**

SDT theorists suggest that practitioners work toward enhancing individuals’ autonomy, while still working on strengthening their need for relatedness with others. This sense of connectedness with others is important in the internalization process. Counselors must work with clients in a warm and genuine way in order to increase the client’s sense of relatedness with others. On the other hand, autonomy is increased through the development of more intrinsically focused aspirations. Therefore, counselors may also work with clients in developing goals that are more intrinsically motivating, such as personal growth and development. Counselors can also assist in enhancing clients’ need for competence by providing a structure and organization to their activities and by providing relevant feedback (Ryan & Deci, 2008).

High motivation (i.e., low goal instability) is related to patterns of vocational maturity, general satisfaction with work, and self-directedness (Robbins & Patton, 1985). Students with lower motivation, and more dysfunctional career thoughts, may be unable to take advantage of information pertaining to careers and career planning. These individuals are characterized as having low energy, low self-esteem, and low self-motivation. They are less likely to utilize available resources and are often anxious, worried, reserved, and cautious. For clients with higher baseline levels of goal instability and negative career thoughts, counselors would start at the beginning of the career decision-making process and work slowly. These clients will typically require the support and encouragement of others to pursue the career development process and an intervention such as a career course might create this environment. Counselors can work to instill intrinsic motivation in these clients through engaging them,
increasing self-knowledge, reframing negative thoughts, and finding a satisfying career direction.

A summary by Brown and Krane (2000) of different meta-analyses conducted on the effects of career interventions concluded that there are five common elements to effective career interventions:

1. The career interventions assist clients in clarifying their career and life goals in writing
2. The interventions provide individual assistance and feedback
3. The interventions demonstrate effective career behavior using mentors and models
4. The interventions include recent information on the costs and benefits of different career occupations and paths
5. The interventions aid clients in forming support networks to assist them in their career choices

Interventions that increase one’s confidence with respect to decision-making tasks might foster exploratory activity. Interventions such as career courses that are supportive, interactional, and that foster success experiences would also provide a safe environment for individuals to increase their career exploratory activities. Goal-setting is an important link to motivation, and motivation can be a strong predictor of persistence (Bandura & Cervone, 1983). Students who are able to provide a clearly defined set of goals are more apt to experience a smoother transition into college and later life (DeWitz et al., 2009). Students who are able to ultimately develop their own adaptive motivational beliefs demonstrate an increased likelihood of seeking out challenges, risk-taking, persistence, and higher levels of achievement (Beghetto, 2004). Therefore, interventions such as group career classes might provide an environment that assists students in increasing their autonomy and motivation. In these courses, students could work at increasing their levels of intrinsic motivation to achieve at a higher level, and increase their levels of engagement in the career decision-making and development process.

**Summary**

This chapter included a critical analysis of the literature related to motivation, selected career theories, career thoughts, career decision state, and career courses. There appears to be both a cognitive component and behavioral component to self-efficacy, and ultimately
motivation. Career interventions, such as career courses, that incorporate both cognitive and behavioral activities, with opportunities to learn and receive feedback from others, assist in fostering goal setting and motivation. Cognitive information processing theory provides a way to conceptualize students' readiness to engage in the career decision-making process. Examining the relationships between negative career thoughts, goal instability, and career decision state would address gaps in the literature by looking at motivation that extends beyond academics and into career development. The next chapter includes a study examining the relationships among goal instability, career thoughts, career decision state, and performance in a career development course.
CHAPTER III

METHODOLOGY

The purpose of this study was to examine the relationships among goal instability, career thoughts, career decision state, and performance in a career development course. The methodology to investigate the research questions and hypotheses and descriptions of the variables, instruments, research design, procedures, and data analyses for the study are included in this chapter.

Research Questions and Hypotheses

1. What is the relationship between goal instability and career thoughts?
   H1: There is a negative relationship between goal instability and total negative career thoughts. As scores on the GIS decrease (indicating more goal instability), total scores on the CTI will increase (indicating more negative career thoughts).
   H2: There is a negative relationship between goal instability and decision making confusion (DMC). As scores on the GIS decrease (indicating more goal instability), scores on the DMC scale will increase (indicating more decision making confusion).
   H3: There is a negative relationship between goal instability and commitment anxiety (CA). As scores on the GIS decrease (indicating more goal instability), scores on the CA scale will increase (indicating more commitment anxiety).
   H4: There is a negative relationship between goal instability and external conflict (EC). As scores on the GIS decrease (indicating more goal instability), scores on the EC scale will increase (indicating more external conflict).

2. What is the relationship between goal instability and career decision state?
   H5: There is a negative relationship between goal instability and career decidedness. As scores on the GIS decrease (indicating more goal instability), scores on the OAQ will increase (indicating less career decidedness).
H6: There is a negative relationship between goal instability and occupational satisfaction. As scores on the GIS decrease (indicating more goal instability), scores on the Satisfaction with Choice Question will increase (indicating more dissatisfaction with career choice).

H7: There is a negative relationship between goal instability and career tension. As scores on the GIS decrease (indicating more goal instability), scores on the CTS will increase (indicating more career tension).

3. What is the relationship between goal instability and performance in a career development course?

H8: There is a positive relationship between goal instability and total points earned in the career development course (minus the number of extra credit points). As scores on the GIS decrease (indicating more goal instability), total points earned in the course will decrease (indicating poorer performance in the course).

H9: There is a positive relationship between goal instability and amount of extra credit points obtained in the career development course. As scores on the GIS decrease (indicating more goal instability), the number of extra credit points obtained will decrease (indicating less participation in external career exploration).

H10: There is a positive relationship between goal instability and grade earned in the career development course. As scores on the GIS decrease (indicating more goal instability), grade earned will decrease (indicating poorer performance in the course).

Population

The population for the present study included students enrolled in a undergraduate career course. Data were collected from 10 sections of a career development class during one fall and one spring semester at a large research university in the Southeastern United States. Due to the nature of the course, students elected to take the class for one, two, or three credits. The course is an upper level undergraduate course, but students enrolled range in class level from freshmen through senior, and came from a broad range of academic majors.

Sample

Participation for the study was voluntary. Students were recruited from the career development course over the fall 2008 and spring 2009 semesters. After the removal of
incomplete folders and students enrolled for less than three credits, the total sample consisted of 258 participants. More information about the demographics of the sample can be found in the next chapter.

**Variables**

The variables of interest in this study included goal instability, career thoughts, career decision state, and performance in a career development course. Goal instability was obtained using scores from the Goal Instability Scale (GIS; Robbins & Patton, 1985). The Career Thoughts Inventory (CTI; Sampson et al., 1996) was used to operationalize the construct of career thoughts. Four scores were obtained from the CTI, including the total score, and three scale scores, decision-making confusion (DMC), commitment anxiety (CA), and external conflict (EC). Career decision state was operationalized using the Occupational Alternatives Question (OAQ; Zener & Schnuelle, 1972; modified by Slaney, 1980), the Satisfaction with Choice question (Zener & Schnuelle, 1972; modified by Holland, Gottfredson, & Nafziger, 1975), and the Career Tension Scale (CTS; Reed, 2005). Performance in a career development course was operationalized using the number of total points earned in the course on the standard course assignments, the number of extra credit points earned for the course, and the earned letter grade coded on a 12 point scale. Data regarding career course performance was obtained from the completed individual student performance contracts.

**Instrumentation**

**Demographic Form**

Information about participant demographic characteristics, including gender, age, ethnicity, year in school, and academic major was collected using the demographic form regularly collected in the career development course (See Appendix A). Participants also indicated on this form their reasons for taking the course, any previous work experiences they had, and any extracurricular activity involvement.

**Occupational Alternatives Question (OAQ; Zener & Schnuelle, 1972; modified by Slaney, 1980)**

The OAQ is a measure of occupational decidedness which asks respondents the number of occupations they are considering and the level of decidedness pertaining to these occupations. It is embedded in the demographic form (Appendix A). The OAQ includes two parts: (a) “List all of the occupations you are considering right now” and (b) “Which occupation
is your first choice? If undecided, write undecided.” The OAQ is scored on a scale from one to four and is rated as follows: 1 = a first choice is given with no alternatives; 2 = a first choice is given with alternatives listed as well; 3 = no first choice is given, only alternatives; and, 4 = no choices nor alternatives are given. Therefore, the higher the OAQ score, the less decided the individual.

Slaney (1980) first used the OAQ to create four groups of college students ranging from those with a primary choice and no alternatives to those with neither a first choice nor alternatives. This research attempted to determine whether having a primary choice with no alternatives was an indication of readiness for career decision making. Slaney (1980) found that the OAQ successfully differentiated students. Individuals who report having one occupational choice with no alternatives are said to be decided individuals. On the other hand, individuals who are unable to list any career choices are classified as undecided. The OAQ has been found to have convergent validity with other measures of career indecision, including the Satisfaction with Career Scale, the Vocational Decision Making Difficulties Scale, and the Career Decision Scale (Slaney, Stafford, & Russell, 1981). Test-retest reliability of a questionnaire that included the OAQ was .93 (Redmond, 1973), and Slaney (1978) found stability of the responses over a 6-week time period.

**Satisfaction with Choice Question (Zener & Schnuelle, 1972; modified by Holland, Gottfredson, & Nafziger, 1975)**

A single question, “How well satisfied are you with your first choice?” can be used to assess one’s level of satisfaction with career choice (Zener & Schnuelle, 1972; modified by Holland, Gottfredson, & Nafziger, 1975). This question is included in the demographic form (Appendix A). This item is rated on a scale from one to six, and is scored as follows: 1 = well satisfied with choice; 2 = satisfied, but have a few doubts; 3 = not sure; 4 = dissatisfied and intend to remain; 5 = very dissatisfied and intend to change; and, 6 = undecided about my future career. Similar to the OAQ, the higher the score on the Satisfaction with Choice Question, the greater the degree of dissatisfaction with choice. Slaney, Stafford, and Russell (1981) reported average correlations of .43, .53, and .44 between the Satisfaction Question and other measures of career decidedness, including the OAQ, Vocational Decision Making Difficulty Scale, and the Career Decision Scale.
Career Tension Scale (CTS; Reed, 2005)

The CTS is a seven-item scale modified from the Job Tension Scale originally developed by House and Rizzo (1972). This scale is included in the demographic form (Appendix A). The Job Tension Scale was designed to measure the relationship between one’s job and several physical and emotional health symptoms, including nervousness, worry, and general health impact. These items were altered in a previous study (Reed, 2005) to measure the relationship between career decisions and the same health concerns. “I have felt fidgety or nervous as a result of having to make career decisions” and “Decisions about my career tend to directly affect my health” are examples of statements included in the CTS. Individuals rate themselves on a seven-point Likert-type scale ranging from Strongly Disagree to Strongly Agree. Responses to the seven questions are summed for a total score. Following the same format as the OAQ and the Satisfaction with Choice Question, the higher one’s CTS score, the greater the degree of stress or tension experienced in making a career decision. The CTS has reported correlations of .37, .28, and .36 with the three CTI construct scales of DMC, CA, and EC (Bullock, Peterson, Reardon, Leierer, & Reed, in press).

Goal Instability Scale (GIS; Robbins & Patton, 1985)

The Goal Instability Scale (GIS; Robbins & Patton, 1985; see Appendix B) is a self-report 10-item scale arranged in a 6-point Likert-type format (1 = Strongly Agree, 6 = Strongly Disagree). High agreement with the items on the scale results in lower scores and is an indication of more goal instability. Examples of the items include “I have more ideas than energy” and “After a while I lose sight of my goals.” Research conducted using the GIS shows support for the psychometric properties concerning validity and reliability (Kivlighan, Johnston, Hogan, & Mauer, 1994; Robbins & Patton, 1985; Robbins & Tucker, 1986). The GIS has been found to have high stability (test-retest over 2-week interval $r = .76$) and high internal consistency (Cronbach’s $\alpha = .81$; Robbins & Patton, 1985). Confirmatory factor analyses have been conducted and have demonstrated the GIS to measure a single construct of goal instability (Robbins, Payne, & Chartrand, 1990). The GIS was found to be correlated with scales on the Millon Clinical Multiaxial Inventory pertaining to “social withdrawal, hypersensitivity to others, and turbulent affectivity,” as well as measures of dysthymia, anxiety, and somatoform disorders (Robbins, 1989, p.130). The GIS was also found to correlate significantly with measures of career-planning confidence, such as
readiness to make a career decision, generating options, and information-seeking confidence (McAuliffe, Jurgens, Pickering, Calliotte, Macera, & Zerwas, 2006).

**Career Thoughts Inventory (CTI; Sampson, Peterson, Lenz, Reardon, & Saunders, 1998)**

The CTI is comprised of 48 negative self-statements rated on a 4-point Likert-type scale, ranging from Strongly Disagree to Strongly Agree. All items are written in a negative direction to simplify both scoring and reframing of negative thoughts. The CTI can be administered to adults, college students, and high school students, and is designed to measure dysfunctional career thoughts in career decision making and problem solving. Examples of statements on the CTI include “I get upset when people ask me what I want to do with my life,” and “There are few jobs that have real meaning.” The self-administered assessment takes approximately 10 to 15 minutes to complete, and is useful in both research and counseling settings (Sampson et al., 1996b).

CTI normative data were collected for adults, college students, and high school students in eleventh and twelfth grades. Each group was appropriately representative according to geographic distribution, gender and ethnicity; however, female adults were overrepresented and Hispanic American adults were underrepresented. An analysis of CTI total score data for all groups combined showed that gender and ethnicity accounted for .2% and .1% of the variance (Sampson et al., 1999). Each self-statement chosen was designed to be free of gender or ethnic bias (Sampson et al., 1996b). This analysis suggests that there is little relationship between gender and/or ethnicity with respect to CTI total scores; therefore, no separate norms are needed for either gender or ethnicity.

Internal consistency (alpha) coefficients for the CTI total score were high and ranged from .93 to .97. Similar alpha coefficients were found for DMC (α = .90-.94). Alpha coefficients for the other two construct scales ranged from .91 to .74 (Sampson et al., 1999; Sampson et al., 1996b). The EC construct scale possessed the lowest internal consistency, possibly due to the small number of items (n = 5).

In order to measure the stability of the total score and construct scales, 73 volunteer college students and 48 volunteer high school students completed the CTI twice over a four-week interval (Sampson et al., 1999). The college student sample resulted in a high (r = .86) test-retest stability coefficient for the CTI total score, indicating little change in responses for the entire assessment over a four-week period. The stability coefficients for the construct
scales ranged from .74 to .82, similar to the internal consistency coefficients, with lower correlations for scales with fewer items, such as the EC scale. Analogous results were obtained for the high school student sample, with the CTI total score at \( r = .69 \), and the construct scales ranging from .52 to .72 (Sampson et al., 1996b).

The CTI was created by the theorists in the development of the cognitive information theory and is believed to have strong content validity. The CTI’s content validity examines the relationship of individual CTI items, the CIP content elements, and construct scales with the instrument’s theoretical basis. The individual items and construct scales are directly linked to CIP theory through the content elements (Sampson et al., 1999). Individual CTI items correspond to eight different content elements or dimensions, which can be used in conjunction with the CTI Workbook as a method of identifying problem areas in career decision making (Sampson et al., 1996b).

The CTI’s construct validity was measured through factor analysis. The three constructs of DMC, CA, and EC were identified in two different samples during the development of the CTI, and were replicated again for adults, college students, and upper level high school students based on normative data (Sampson et al., 1999). The CTI total score is the most highly correlated with the DMC construct for all groups \(( r = .89 \) to \(.94 \)). The CTI total score is less related to the EC and CA scales, indicating that these two constructs are somewhat less indicative of general dysfunctional thinking than DMC.

Convergent validity for the CTI was measured by comparing the assessment with other similar measures related to career decision making, perceived career decision-making characteristics, and general personality characteristics thought to contribute in the decision making process. The following measures were used: My Vocational Situation (MVS; Holland, Daiger, & Power, 1980); Career Decision Scale (CDS; Osipow, Carney, Winer, Yanico, & Koschier, 1987); and, the Career Decision Profile (CDP; Jones, 1988); Revised NEO Personality Inventory (NEO PI-R; Costa & McCrae, 1992). Volunteers from each norm group (adults, college students, and high school students) completed the five assessments and demographic information. The four CTI scales, the total score and three construct scales, were correlated in the hypothesized direction for each of the 18 convergent variables; constructs of a positive nature were inversely correlated with negative career thoughts and
vice versa. Also notable was the direct correlation between the CTI total score and the constructs of neuroticism and vulnerability (Sampson et al., 1996b).

The CTI has also been compared to other measures. For example, the Career Decision-Making Difficulties Questionnaire (CDDQ; Gati, 2007) was compared to the CTI, and both were compared to a person’s level of decidedness pertaining to career plans. Total scores on the two measures were found to be significantly correlated ($r = .82$), and both the CTI and the CDDQ were found to distinguish between decided and undecided individuals enrolled in a university career development course (Kleiman et al., 2004).

Criterion validity for the CTI examined the extent to which the measure discriminated between individuals seeking career services and those who are not. The CTI was administered to 199 clients and 149 non-clients at two different universities. Analysis of the data demonstrated significant differences between clients and non-clients in both groups (Sampson et al., 1999; Sampson et al, 1996b).

**Performance Contracts**

The performance contract lists individual assignments for the course and the possible points allotted for each of the assignments (see Appendix E). In order to achieve an “A” in the class, students needed to earn a point total ranging from 588 to 653, which was 90% of the possible points for three credits. Examples of course assignments and requirements included completion of an occupational research paper, occupational information interviews, and a career autobiography; use of computer-assisted career guidance (CACG) systems, the Career Thoughts Inventory, the Self-Directed Search; and class participation and attendance. Certain assignments in the course contributed more heavily to course grades. Specifically, the occupational research paper was worth approximately 30% of the total points available, attendance and participation accounted for approximately 13% of the points, and two other papers accounted for another 23% of the total points. Performance was measured by the point total on the completed student performance contract as determined by the instructor. The course performance contract was designed to make performance required for various grades transparent, and to increase students’ motivation to engage in the career planning process and complete related course activities.
Procedures

Approval for this proposed study and its incorporation of human participants was obtained from the university’s institutional review board. A copy of the informed consent statement is provided in Appendix C. Students were recruited to participate on a voluntary basis during the first week of classes by the course lead instructor. Two weeks prior to each semester, the researcher met with instructors and provided them with an outline of the data collection, management procedures, and scripts. A confederate read from a script detailing the instructions for the study. Five sections of the course were offered per semester, each with a typical enrollment of 25-32 students. Each section was taught by a team of four instructors, including the lead instructor. Each of the four instructors led a small group of typically 8-10 students, and they were responsible for grading and recording their small group’s assignments.

On the first day of class, students contracted to take the course for one, two, or three credits and three corresponding units (I, II, and III). Students electing to take the course for three credits completed all assignments for each of the three units. Students electing to take the course for less than three credits chose the units they wished to complete. A course timeline with descriptions of assignments is provided in Appendix F. In order to study performance and earned extra credit, only students enrolled in all three units were included for this study.

Originally, 355 folders were distributed to students, and those who dropped the course, were not enrolled for all three sections, or did not complete all of the forms were excluded from the study. Therefore, 258 participants were included in the final study. Missing data were not substituted.

Numbered folders containing the GIS, the CTI, a student data sheet with the OAQ, Satisfaction with Choice Question, CTS, and consent forms were passed out to each student. Students participating in the study were given an incentive of 5 points extra credit added on to the total of class points (equal to less than 1% of the final grade); however, for those students who elected not to participate, alternative options for extra credit were provided. The confidentiality statement was included in the consent form, and students interested in learning more about the study were provided with the principal investigator’s contact information.
debriefing summary was provided to the students on the final day of the course after all data was collected.

The lead instructor of each course section administered the assessment folders during regular class time in order to help control for experimenter bias. The script read by the instructor explained that the purpose of the study was to assess personal characteristics, thoughts, and vocational interests with respect to career decision making in order to learn more about the process. General terms were used to describe the purpose in order to help control for demand characteristics. Students were asked to read over the consent form, which identified risks and benefits of participating in the research.

Completion of the materials in the research folders took an estimated 30 to 45 minutes. The order in which the instruments were arranged in the assessment folders was randomly alternated using a random numbers table to control for possible order effects. Confidentiality remained intact as the folders were stored in a locked filing cabinet in a locked room in the university career center. All identifying information was eventually connected to a unique number and stored in a password protected spreadsheet. Folders of students who dropped the class were destroyed, and students who added the class later in the week were completed the instruments in the folder on the day they began the class. After the research folders were completed, the lead instructors provided the students with copies of the course syllabus. Included in the course syllabus was a copy of the performance contract, allowing students to see a detailed list of the assignments in the semester and the value of each individual assignment.

Throughout the semester, the instructors updated the students' performance contracts as assignments were completed. After the last day of class, the principal investigator obtained information from the completed performance contracts in order to measure the behavior of the students in the course. Information on the total amount of points obtained by each participant and the amount of extra credit points awarded was taken from the completed performance contracts.

**Research Design and Statistical Analyses**

A co-relational study was used to examine the relationships among the variables. This design was used due to the limited and unclear relationships documented in the literature.
between goal instability, career thoughts, career decision state, and performance in a career development course.

Participant demographics, including sex, age, ethnicity, and year in school were recorded. Mean scores and standard deviations for each of the measures, as well as skew and kurtosis, were examined to determine normality. This will be discussed further in the next chapter. Internal consistency for each of the research instruments was determined using Cronbach’s alpha coefficient.

**Analysis for the Relationship between Goal Instability and Career Thoughts.**

With reference to hypotheses 1, 2, 3, and 4, it was hypothesized that there would be a negative relationship between goal instability and career thoughts. In other words, as goal instability scores decrease (i.e., more goal instability), dysfunctional thinking will increase. A correlation was used to measure the relationship between goal instability and the CTI Total Score in order to obtain a Pearson correlation coefficient. A hierarchical multiple regression was utilized in order to examine the relationship between DMC, CA, and EC scale scores with GIS scores. The hierarchical method was incorporated in order to specify the order in which the variables were entered into the model according to cognitive information processing theory. GIS was regressed on the three CTI subscales.

**Analysis for the Relationship between Goal Instability and Career Decision State**

With respect to hypotheses 5, 6, and 7, it was hypothesized that there would be a negative relationship between goal instability and the three measures of career decision state. As goal instability scores decrease (indicating more goal instability), scores on the three measures of career decision state will increase (indicating greater levels of career indecision, dissatisfaction, and tension). Higher scores on the three measures of career decision state indicate lower levels of career decidedness, satisfaction, and tension. The OAQ, Satisfaction with Choice Question, and CTS score were classified as interval data for the purpose of this study. The OAQ consists of a score ranging from 1 to 4, with 1 indicating a more decided career profile. The Satisfaction with Choice Question consists of a score ranging from 1 to 6 with 1 indicating a greater satisfaction with career choice. The CTS score ranges from 7 to 49 with higher scores indicating greater career tension. A hierarchical multiple regression, using all three measures of career decision state to predict goal instability scores was used. GIS scores were regressed on the three measures of career decision state.
Analysis for the Relationship between Goal Instability and Course Performance

With respect to hypotheses 8, 9, and 10, it was hypothesized that there would be a positive relationship between goal instability and performance in a career development course. In other words, as scores on the GIS decrease (indicating more goal instability), performance in the course will decrease. A correlation was used to examine the relationship between goal instability as measured by the GIS and total points obtained in the course (minus the number of extra credit points earned) as measured by the completed performance contracts. Another correlation was used to measure the relationship between goal instability and total number of extra credit points obtained. Finally, a correlation was used to measure the relationship between earned grade in the course and goal instability. Grades were assigned a score according to a 12-point scale, with a grade of “A” assigned to 12, “A-” assigned an 11, and so on. For these three analyses, goal instability was considered the predictor variable while performance in the course (i.e., total points obtained, amount of extra credit obtained, and earned grade) were independently considered criterion variables.

After the preliminary correlations were obtained, it was observed that the variable of sex (1 = male, 2 = female) was also significantly correlated with the three performance variables. Therefore, a hierarchical regression was used to examine the relationships between sex and goal instability with respect to the three performance variables of total points earned, amount of extra credit points obtained, and grade in the course.
CHAPTER IV

RESULTS

This chapter describes the demographic characteristics of the sample. Statistical methods used to measure the hypotheses presented in Chapter 3 are also described, and statistical comparisons and results related to the respective hypotheses are presented.

Sample Demographic Data

The sample included 355 undergraduate students who were recruited and agreed to participate in the study. Participants who did not complete each of the questionnaires, who dropped the course, and who were not enrolled for three credits were excluded from the study. Missing data were not substituted, leaving a final sample of 258 participants.

Demographic data were obtained from a self-report student data sheet included in the research folders distributed during the first week of class. Participants provided information regarding ethnicity, age, sex, year in school, major course of study, and objectives for taking the course. Students most often reported enrolling in the course in order to find career opportunities after graduation (n = 90) and learn practical strategies and skills needed to find a job (n = 71). Other objectives reported included finding assistance in choosing a major or minor, learn more about the process of career development, and meeting a course requirement. Descriptive statistics demonstrated no significant relationship between participants' objectives for taking the course and primary research variables (goal instability, career thoughts, career decision state, and performance).

Participants’ ages ranged from 18-28 (M = 20.72), with the vast majority (approximately 90%) being traditional-aged college students ranging from 18-22 years of age. Table 1 summarizes information in regard to age, sex, ethnicity, and university classification. The study participants included slightly more males than females, with 147 males (57.0%) and 111 females (43.0%). Ethnic distribution varied: Caucasian, 163 (63.2%); African American, 59 (22.9%); Hispanic American, 18 (7%); Asian American, 3 (1.2%); American Indian, 1 (.4%); Other, 10 (3.9%); and Prefer Not to Respond, 4 (1.6%). University classification ranged from freshman to graduate student, with freshman, 24 (9.3%); sophomore, 48 (18.6%); junior, 58 (22.5%); senior, 126 (48.8%); graduate student, 1 (.4%); and other, 1 (.4%). Participants
identified being in a variety of different majors. The 10 most frequently endorsed majors included business, 66 (25.6%); social sciences, 33 (12.8%); undecided, 22 (8.5%); economics, 18 (7.0%); political science, 17 (6.6%); sociology, 17 (6.6%); criminology, 13 (5.0%); international affairs, 12 (4.7%); communications, 11 (4.3%); and psychology, 11 (4.3%).
### Table 1

**Demographic Statistics of Sample**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Respondents</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(N = 258)</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Age

<table>
<thead>
<tr>
<th></th>
<th>Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>24</td>
<td>9.3</td>
</tr>
<tr>
<td>19</td>
<td>45</td>
<td>17.4</td>
</tr>
<tr>
<td>20</td>
<td>45</td>
<td>17.4</td>
</tr>
<tr>
<td>21</td>
<td>68</td>
<td>26.4</td>
</tr>
<tr>
<td>22</td>
<td>50</td>
<td>19.4</td>
</tr>
<tr>
<td>23</td>
<td>12</td>
<td>4.7</td>
</tr>
<tr>
<td>24-28</td>
<td>15</td>
<td>5.5</td>
</tr>
</tbody>
</table>

#### Sex

<table>
<thead>
<tr>
<th></th>
<th>Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>147</td>
<td>57.0</td>
</tr>
<tr>
<td>Female</td>
<td>111</td>
<td>43.0</td>
</tr>
</tbody>
</table>

#### Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Asian American</td>
<td>3</td>
<td>1.2</td>
</tr>
<tr>
<td>African American</td>
<td>59</td>
<td>22.9</td>
</tr>
<tr>
<td>Hispanic American</td>
<td>18</td>
<td>7.0</td>
</tr>
<tr>
<td>Caucasian</td>
<td>163</td>
<td>63.2</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>3.9</td>
</tr>
<tr>
<td>Prefer not to respond</td>
<td>4</td>
<td>1.6</td>
</tr>
</tbody>
</table>

#### School Classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>24</td>
<td>9.3</td>
</tr>
<tr>
<td>Sophomore</td>
<td>48</td>
<td>18.6</td>
</tr>
<tr>
<td>Junior</td>
<td>58</td>
<td>22.5</td>
</tr>
<tr>
<td>Senior</td>
<td>126</td>
<td>48.8</td>
</tr>
<tr>
<td>Graduate Student</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0.4</td>
</tr>
</tbody>
</table>
The participants provided information about their career decision state, including information regarding career decidedness and satisfaction with career choice (see Table 2). The students’ scores on the Occupational Alternatives Question (OAQ; Zener & Schnuelle, 1972; modified by Slaney, 1980), a measure of career decidedness, ranged from 1-4, with a mean of 2.42 ($SD = .796$). Regarding career choice, the majority (45.7%) indicated having a first choice with other potential options. Only 10.5% endorsed having one choice with no other options. Almost a third of participants (32.9%) indicated that they were satisfied with their career choice, while 26% indicated that they were satisfied with a few doubts. While less than 1% of students indicated that they were dissatisfied with their career choice, much of the sample (40.7%) endorsed feeling undecided or unsure about their satisfaction.

Table 2
Participants’ Career Decidedness and Career Choice Satisfaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>Respondents (n = 258)</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Career Decidedness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have first choice/no options</td>
<td>27</td>
<td>10.5</td>
</tr>
<tr>
<td>Have first choice and options</td>
<td>118</td>
<td>45.7</td>
</tr>
<tr>
<td>Have options/no first choice</td>
<td>90</td>
<td>34.9</td>
</tr>
<tr>
<td>Undecided</td>
<td>23</td>
<td>8.9</td>
</tr>
<tr>
<td><strong>Satisfaction with Choice</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well satisfied</td>
<td>85</td>
<td>32.9</td>
</tr>
<tr>
<td>Satisfied, with doubts</td>
<td>67</td>
<td>26.0</td>
</tr>
<tr>
<td>Not sure</td>
<td>36</td>
<td>14.0</td>
</tr>
<tr>
<td>Dissatisfied/intend to remain</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Very dissatisfied/intend to change</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Undecided about career</td>
<td>69</td>
<td>26.7</td>
</tr>
</tbody>
</table>
Also pertaining to career decision state, students indicated their level of career tension, endorsing items about experiencing worry, nervousness, sleeplessness and impact on physical health using the Career Tension Scale (CTS; Reed, 2005). Participant scores ranged from a low of 7 to a high of 49, with a mean of 21.64, and a standard deviation of 9.274. Table 3 provides item response means and standard deviations for the seven items on the CTS. Students reported agreeing the most with item number seven, “I often think about my career even when I am doing other things,” while reporting the least agreement with item number four, “If I did not worry about my career, my health would probably improve.” Overall, students reported a trend of agreeing more about experiencing the stress and anxiety related to career decisions, rather than experiencing physical symptoms of career stress. Table 4 includes sample means, standard deviations, skewness and kurtosis for relevant variables. A score of 20 or below on the CTS was obtained by 50.8% of students indicating an overall endorsement of disagree-to-neutral on items indicating career tension.

Table 3
*Item Response Data for the Career Tension Scale (N = 258)*

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Decisions about my career tend to directly affect my health.</td>
<td>2.70</td>
<td>1.888</td>
</tr>
<tr>
<td>2. Decisions about my career create a great deal of tension.</td>
<td>3.89</td>
<td>1.905</td>
</tr>
<tr>
<td>3. I have felt fidgety or nervous as a result of having to make career decisions.</td>
<td>3.59</td>
<td>1.923</td>
</tr>
<tr>
<td>4. If I did not worry about my career, my health would probably improve.</td>
<td>2.28</td>
<td>1.626</td>
</tr>
<tr>
<td>5. Problems associated with my career decisions have kept me awake at night.</td>
<td>2.64</td>
<td>1.926</td>
</tr>
<tr>
<td>6. I have felt nervous before attending classes that made me think about my career.</td>
<td>2.42</td>
<td>1.841</td>
</tr>
<tr>
<td>7. I often think about my career even when I am doing other things.</td>
<td>4.12</td>
<td>2.091</td>
</tr>
</tbody>
</table>
Table 4

*Means, Standard Deviations, Skewness, and Kurtosis of Variables (N = 258)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$M$</th>
<th>$SD$</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIS</td>
<td>45.60</td>
<td>9.128</td>
<td>-.700</td>
<td>.505</td>
</tr>
<tr>
<td>CTI Total</td>
<td>47.94</td>
<td>23.755</td>
<td>.428</td>
<td>.828</td>
</tr>
<tr>
<td>DMC</td>
<td>10.60</td>
<td>8.252</td>
<td>.719</td>
<td>.301</td>
</tr>
<tr>
<td>CA</td>
<td>13.33</td>
<td>6.046</td>
<td>-.233</td>
<td>-.230</td>
</tr>
<tr>
<td>EC</td>
<td>4.40</td>
<td>3.128</td>
<td>.621</td>
<td>.041</td>
</tr>
<tr>
<td>OAQ</td>
<td>2.42</td>
<td>.796</td>
<td>.163</td>
<td>-.392</td>
</tr>
<tr>
<td>Satisfaction Item</td>
<td>2.89</td>
<td>2.001</td>
<td>.714</td>
<td>-1.149</td>
</tr>
<tr>
<td>CTS</td>
<td>21.64</td>
<td>9.274</td>
<td>.549</td>
<td>-.309</td>
</tr>
<tr>
<td>Total Points</td>
<td>567.50</td>
<td>61.193</td>
<td>-2.425</td>
<td>9.057</td>
</tr>
<tr>
<td>Extra Credit Points</td>
<td>16.81</td>
<td>7.968</td>
<td>-.361</td>
<td>-1.375</td>
</tr>
<tr>
<td>Grade</td>
<td>10.30</td>
<td>2.377</td>
<td>-1.873</td>
<td>3.589</td>
</tr>
</tbody>
</table>

**Instrumentation**

Reliability and validity of instruments were examined and presented in the previous chapter. Further analyses of reliability for this sample were conducted for each instrument with continuous total scale scores. Means and standard deviations for specific GIS items are included in Table 5. Level of goal instability, as measured by the GIS, produced a participant coefficient alpha reliability estimate of .87. Negative career thoughts measured by the CTI total score produced a participant coefficient alpha of .96. The CTI’s three construct scales, DMC, CA, and EC, produced participant coefficient alphas of .94, .87, and .78, respectively. The relationship between career decisions and health concerns as measured by the CTS produced a coefficient alpha reliability estimate of .82.
Table 5

*Item Response Data for the Goal Instability Scale (N = 258)*

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. It's hard to find a reason for working.</td>
<td>5.31</td>
<td>1.005</td>
</tr>
<tr>
<td>2. I don’t seem to make decisions by myself.</td>
<td>4.79</td>
<td>1.202</td>
</tr>
<tr>
<td>3. I have confusion about who I am.</td>
<td>4.91</td>
<td>1.280</td>
</tr>
<tr>
<td>4. I have more ideas than energy.</td>
<td>4.15</td>
<td>1.415</td>
</tr>
<tr>
<td>5. I lose sense of my direction.</td>
<td>4.48</td>
<td>1.362</td>
</tr>
<tr>
<td>6. It’s easier for me to start than to finish projects.</td>
<td>4.36</td>
<td>1.433</td>
</tr>
<tr>
<td>7. I don’t seem to get going on anything important.</td>
<td>4.83</td>
<td>1.246</td>
</tr>
<tr>
<td>8. I wonder where my life is headed.</td>
<td>3.15</td>
<td>1.745</td>
</tr>
<tr>
<td>9. I don’t seem to have the drive to get my work done.</td>
<td>4.79</td>
<td>1.304</td>
</tr>
<tr>
<td>10. After a while I lose sight of my goals.</td>
<td>4.84</td>
<td>1.283</td>
</tr>
</tbody>
</table>

**Data Analysis**

The computer system, Statistical Package for the Social Sciences (SPSS), was used in completing the statistical analysis of the data. The program used was the SPSS for Windows, Release 11.0.1 version from Chicago: SPSS, Inc.

**Normalizing the Data**

Descriptive statistics were obtained to examine the assumptions of normality for the following variables: Goal Instability Scale (GIS); Career Thoughts Inventory (CTI) and the three construct scales of DMC, CA, and EC; Occupational Alternatives Question (OAQ); Satisfaction with Choice Question; Career Tension Scale (CTS); total points earned less the amount of extra credit points earned; extra credit points obtained; and earned grade in the course on a 12 point scale. The mean, standard deviation, skewness, and kurtosis were analyzed to determine normality (Table 4). These tests indicated that the variables conceptualized as performance in a career development course (total points earned in the course less the amount of extra credit points, extra credit points obtained, and earned grade in the course) were not normally distributed. Though these variables violate the assumption of normality, no manipulation was conducted due to the bimodal nature of these variables.
Goal Instability and Career Thoughts

The first research question asked "What is the relationship between goal instability and career thoughts?" To help focus the analysis, the larger research question was conceptualized as four component hypotheses, which are presented with each segment of the analysis.

H1: There is a negative relationship between goal instability and total negative career thoughts. As scores on the GIS decrease (indicating more goal instability), total scores on the CTI will increase (indicating more negative career thoughts).

A bivariate correlation was used to investigate the first hypothesis (see Table 6). Both variables are continuous in nature, and the results demonstrated a significant negative correlation ($r = -.662$, $p < .001$) between goal instability and negative career thoughts. As scores on the GIS decreased (indicating more goal instability), scores on the total score of the CTI increased (indicating more negative career thoughts).

H2: There is a negative relationship between goal instability and decision making confusion (DMC). As scores on the GIS decrease (indicating more goal instability), scores on the DMC scale will increase (indicating more decision making confusion).

H3: There is a negative relationship between goal instability and commitment anxiety (CA). As scores on the GIS decrease (indicating more goal instability), scores on the CA scale will increase (indicating more commitment anxiety).

H4: There is a negative relationship between goal instability and external conflict (EC). As scores on the GIS decrease (indicating more goal instability), scores on the EC scale will increase (indicating more external conflict).

A multiple regression, using the hierarchical method, was used to examine the relationship between DMC, CA, and EC scale scores and goal instability (see Table 7). Decision making confusion, commitment anxiety, and external conflict were all found to be negatively related to goal instability, supporting hypotheses 2, 3, and 4. Decision making confusion accounted for 40.9% of the variance in goal instability, $F (1, 256) = 179.025$, $p < .001$. When external conflict was added into the second model, the variance explained decreased slightly to 40.8%, $F (2, 255) = 89.705$, $p < .001$. However, when commitment anxiety was added into the third model, the variance explained rose slightly to 41.6%, $F (3, 254) = 61.907$, $p < .001$. Upon examination of the individual contributions of each variable of
dysfunctional career thoughts, the slope was statistically significant in the third model for both decision making confusion ($\beta = -0.531$), $t = -7.259$, $p = .000$ and commitment anxiety ($\beta = -0.131$), $t = -2.039$, $p = .043$, but not external conflict. Decision making confusion, therefore, contributed the most to the variance of goal instability ($sr^2 = .171$), while external conflict did not contribute at all, having a squared semipartial correlation of only .001.

Table 6

*Bivariate Correlations (n = 258)*

<table>
<thead>
<tr>
<th>Scale Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. GIS</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. CTI Total</td>
<td>-.662**</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. DMC</td>
<td>-.642**</td>
<td>.931**</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. CA</td>
<td>-.505**</td>
<td>.813**</td>
<td>.670**</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. EC</td>
<td>-.442**</td>
<td>.750**</td>
<td>.643**</td>
<td>.500**</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. OAQ</td>
<td>-.083</td>
<td>.190**</td>
<td>.216**</td>
<td>.222**</td>
<td>.005</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Satisfaction Item</td>
<td>-.225**</td>
<td>.272**</td>
<td>.319**</td>
<td>.286**</td>
<td>.036</td>
<td>.600**</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. CTS</td>
<td>-.371**</td>
<td>.483**</td>
<td>.403**</td>
<td>.389**</td>
<td>.391**</td>
<td>.059</td>
<td>.013</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Total points</td>
<td>.131*</td>
<td>-.169**</td>
<td>-.174**</td>
<td>-.046</td>
<td>-.195**</td>
<td>.003</td>
<td>.001</td>
<td>.057</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Extra credit</td>
<td>.199**</td>
<td>-.101</td>
<td>-.114</td>
<td>-.064</td>
<td>-.084</td>
<td>.077</td>
<td>-.022</td>
<td>.032</td>
<td>.292**</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>11. Grade</td>
<td>.131*</td>
<td>-.140*</td>
<td>-.150*</td>
<td>-.046</td>
<td>-.160**</td>
<td>.005</td>
<td>-.015</td>
<td>.054</td>
<td>.939**</td>
<td>.377**</td>
<td>---</td>
</tr>
</tbody>
</table>

* $p < .05$

** $p < .01$
Table 7
Hierarchical Regression Analyses for Career Thoughts Predicting Goal Instability

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>St. Error</th>
<th>β</th>
<th>t</th>
<th>F</th>
<th>R²</th>
<th>Adjusted R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td></td>
<td>179.025***</td>
<td>.412***</td>
<td>.409***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DMC&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.710</td>
<td>.053</td>
<td>-.642</td>
<td>-13.380***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 2</td>
<td></td>
<td>89.705***</td>
<td>.413***</td>
<td>.408***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DMC&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.674</td>
<td>.069</td>
<td>-.609</td>
<td>-9.730***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.146</td>
<td>.183</td>
<td>-.050</td>
<td>-.799</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 3</td>
<td></td>
<td>61.907***</td>
<td>.422***</td>
<td>.416***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DMC&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.588</td>
<td>.081</td>
<td>-.531</td>
<td>-7.259***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.101</td>
<td>.183</td>
<td>-.035</td>
<td>-.551</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CA&lt;sup&gt;c&lt;/sup&gt;</td>
<td>-.198</td>
<td>.098</td>
<td>-.131</td>
<td>-2.029*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
*** p < .001
<sup>a</sup>decision-making confusion. <sup>b</sup>external conflict. <sup>c</sup>commitment anxiety.

Goal Instability and Career Decision State

The second research question asked “What is the relationship between goal instability and career thoughts?” To help focus the analysis, the larger research question was conceptualized as three component hypotheses, presented below.

**H5:** There is a negative relationship between goal instability and career decidedness. As scores on the GIS decrease (indicating more goal instability), scores on the OAQ will increase (indicating less career decidedness).

**H6:** There is a negative relationship between goal instability and occupational satisfaction. As scores on the GIS decrease (indicating more goal instability), scores on the Satisfaction with Choice Question will increase (indicating more dissatisfaction with career choice).
H7: There is a negative relationship between goal instability and career tension. As scores on the GIS decrease (indicating more goal instability), scores on the CTS will increase (indicating more career tension).

A multiple regression, using the hierarchical method, was conducted to examine the relationship between goal instability and the three measures of career decision state (Table 8). Occupational decidedness (measured by the OAQ) was not found to be related to goal instability in the first model, and only accounted for 0.3% of the variance in goal instability, \( F(1, 256) = 1.786, p = 1.83 \). The addition of satisfaction with choice was statistically significant and accounted for an additional 4.5% of the variance explained, \( F(2, 255) = 7.430, p = .001 \). When career tension was added to the model, a total of 18.5% of the variance in goal instability was explained, \( F(3, 254) = 20.424, p = .000 \). Both satisfaction with career choice and career tension were found to be negatively related to goal instability. Therefore, hypothesis 5 was rejected for the null, while hypotheses 6 and 7 were supported and accepted.
Table 8

Hierarchical Regression Analyses for Career Decision State Predicting Goal Instability

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>St. Error</th>
<th>β</th>
<th>t</th>
<th>F</th>
<th>R²</th>
<th>Adjusted R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.786</td>
<td>.007</td>
<td>.003</td>
</tr>
<tr>
<td>OAQ&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-.954</td>
<td>.714</td>
<td>-.083</td>
<td>-1.336</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.430**</td>
<td>.055**</td>
<td>.048**</td>
</tr>
<tr>
<td>OAQ&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.934</td>
<td>.873</td>
<td>.081</td>
<td>1.070</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-1.252</td>
<td>.347</td>
<td>-.274</td>
<td>-3.604***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20.424***</td>
<td>.194***</td>
<td>.185***</td>
</tr>
<tr>
<td>OAQ&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.277</td>
<td>.809</td>
<td>.111</td>
<td>1.578</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-1.311</td>
<td>.321</td>
<td>-.287</td>
<td>-4.078***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CTS&lt;sup&gt;c&lt;/sup&gt;</td>
<td>-.368</td>
<td>.056</td>
<td>-.374</td>
<td>-6.627***</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
*** p < .001

<sup>a</sup>Occupational Alternatives Question.  <sup>b</sup>Satisfaction with Choice Item.  <sup>c</sup>Career Tension Scale.

Goal Instability and Performance

The third research question asked, “What is the relationship between goal instability and performance in a career development course?” To help focus the analysis, the larger research question was conceptualized as three component hypotheses, presented below.

**H8:** There is a positive relationship between goal instability and total points earned in the career development course (minus the number of extra credit points). As scores on the GIS decrease (indicating more goal instability), total points earned in the course will decrease (indicating poorer performance in the course).

**H9:** There is a positive relationship between goal instability and amount of extra credit points obtained in the career development course. As scores on the GIS decrease (indicating more goal instability), the number of extra credit points obtained will decrease (indicating less participation in external career exploration).
H10: There is a positive relationship between goal instability and grade earned in the career development course. As scores on the GIS decrease (indicating more goal instability), grade earned will decrease (indicating poorer performance in the course).

In order to examine the relationships between goal instability and the three performance variables (total points, amount of extra credit points earned, and earned grade in the course), Pearson correlations were run (see Table 6). For Hypothesis 8, total points earned in the course was significantly correlated with goal instability ($r = .131, p < .05$). Therefore, hypothesis 8 was accepted. For Hypothesis 9, the number of extra credit points obtained had the strongest correlation with goal instability ($r = .199, p < .01$), indicating that as scores on the goal instability scale decreased the number of extra credit points also decreased. Therefore, hypothesis 9 was accepted. For Hypothesis 10, the earned grade in the course, rated on a 12 point scale, was also significantly correlated with goal instability ($r = .131, p < .05$). Therefore, hypothesis 10 was accepted.

After the preliminary correlations were obtained, it was observed that the variable of sex ($1 = \text{male}, 2 = \text{female}$) was also significantly correlated with the three different performance variables related to goal instability. Therefore, a hierarchical regression was used to examine the relationships between sex and goal instability with respect to the three performance variables of total points earned, amount of extra credit points obtained, and grade in the course. Goal instability scores alone accounted for 1.3% of the variance, but when sex was added into the model, the amount of variance explained rose to 10.1%, $F (2, 255) = 15.408, p = .000$ (Table 9).

Scores on the GIS explained 3.9% of the variance in the amount of extra credit points obtained, $F (1, 256) = 10.517, p = .001$. When sex was added into the model, 7.2% of the variance in amount of extra credit points obtained was accounted for, $F (2, 255) = 9.962, p = .000$ (Table 8). While GIS scores accounted for 1.3% of the variance in earned grade, 10.7% of the variance was explained when sex was added, $F (2, 255) = 16.470, p = .000$ (Table 11). Sex, and specifically females, therefore, was a predictor for the three performance variables.
### Table 9

Total Points Regressed on Sex and GIS (N = 258)

<table>
<thead>
<tr>
<th>Variable</th>
<th>$r$</th>
<th>B</th>
<th>St. Error</th>
<th>$\beta$</th>
<th>$t$</th>
<th>F</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIS</td>
<td>.131*</td>
<td>.860</td>
<td>.397</td>
<td>.128</td>
<td>2.169*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.328***</td>
<td>37.131</td>
<td>7.297</td>
<td>.301</td>
<td>5.089***</td>
<td>15.408***</td>
<td>.108***</td>
<td>.101***</td>
</tr>
</tbody>
</table>

* $p < .05$
** $p < .01$
*** $p < .001$

### Table 10

Extra Credit Points Regressed on Sex and GIS (N = 258)

<table>
<thead>
<tr>
<th>Variable</th>
<th>$r$</th>
<th>B</th>
<th>St. Error</th>
<th>$\beta$</th>
<th>$t$</th>
<th>F</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIS</td>
<td>.199**</td>
<td>.172</td>
<td>.053</td>
<td>.197</td>
<td>3.264***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.184**</td>
<td>2.918</td>
<td>.969</td>
<td>.182</td>
<td>3.012**</td>
<td>9.962***</td>
<td>.072***</td>
<td>.065***</td>
</tr>
</tbody>
</table>

* $p < .05$
** $p < .01$
*** $p < .001$

### Table 11

Earned Grade Regressed on Sex and GIS (N = 258)

<table>
<thead>
<tr>
<th>Variable</th>
<th>$r$</th>
<th>B</th>
<th>St. Error</th>
<th>$\beta$</th>
<th>$t$</th>
<th>F</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIS</td>
<td>.131**</td>
<td>.033</td>
<td>.015</td>
<td>.128</td>
<td>2.172*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>.313**</td>
<td>1.494</td>
<td>.282</td>
<td>.312</td>
<td>5.291***</td>
<td>16.470***</td>
<td>.114***</td>
<td>.107***</td>
</tr>
</tbody>
</table>

* $p < .05$
** $p < .01$
*** $p < .001$
CHAPTER V

DISCUSSION

In this chapter, results are presented and discussed in relation to the hypotheses and research questions. Limitations of this study are presented, and recommendations for future research are suggested. Finally, implications for practice and overall conclusions are shared.

Summary of Results

The purpose of this study was to examine the relationships among goal instability, career thoughts, career decision state, and performance in a career development course. This was achieved using a co-relational design through the use of several instruments. The construct of goal instability was measured using the Goal Instability Scale (GIS; Robbins & Patton, 1985). Dysfunctional career thoughts in career problem solving and decision making were measured using the Career Thoughts Inventory (CTI; Sampson et al., 1998). Career decisiveness was measured using the Occupational Alternatives Question (OAQ; Zener & Schnuelle, 1972; modified by Slaney, 1980); career satisfaction was measured using the Satisfaction with Choice Question (Zener & Schnuelle, 1972; modified by Holland, Gottfredson, & Nafziger, 1975); and career tension was measured by the Career Tension Scale (CTS; Reed, 2005). Finally, performance in a career development course was measured using the completed student performance contracts.

In order to examine the relationships between goal instability and career thoughts, career decision state, and performance in a career development course, the following research questions were posited: In the context of career problem solving and decision making, what are the relationships among goal instability and (a) career thoughts, (b) career decision state, and (c) performance in a career development course? A series of correlations and multiple regressions were utilized to examine these relationships. Multiple hypotheses were offered to provide a deeper conceptualization of the relationships among these concepts. A discussion of results is provided within the parameters of the research questions and hypotheses.

**Question 1.** What is the relationship between goal instability and career thoughts?

The first question was examined by comparing scores on measures of goal instability and total scores for dysfunctional career thoughts (H1). A bivariate correlation was used to
explore the relationship between total GIS scores and total CTI scores. The results of the correlation supported a relationship between goal instability and dysfunctional career thoughts. Specifically, greater goal instability was significantly related to greater dysfunctional career thoughts ($r = -0.662, p < 0.001$).

A hierarchical multiple regression analysis provided additional information about the relationships between goal instability and career thoughts, specifically utilizing the three construct scales on the CTI (decision making confusion, commitment anxiety, and external conflict). The results from the hierarchical multiple regression analysis demonstrated that DMC, CA, and EC were all negatively related to goal instability, supporting hypotheses 2, 3, and 4. However, upon examination of the individual contributions of each construct of dysfunctional career thoughts, decision making confusion accounted for most of the variance (40.8%), while external conflict did not contribute at all.

**Question 2.** What is the relationship between goal instability and career decision state?

The second question was examined by comparing scores on measures of goal instability and scores on the Occupational Alternatives Question (OAQ), Satisfaction with Choice Question, and Career Tension Scale (CTS).

Hierarchical multiple regression analysis demonstrated that occupational decidedness, as measured by the OAQ, was not related to goal instability and explained 0.3% of the variance. Therefore, hypothesis 5 was rejected in favor of the null. However, both satisfaction with career choice and career tension were found to be significantly related to goal instability, together accounting for 18.2% of the variance and supporting hypotheses 6 and 7.

**Question 3.** What is the relationship between goal instability and performance in a career planning course?

The third question was examined by comparing scores on measures of goal instability and three performance scores (total points earned in the course, number of extra credit points earned, and earned grade).

Bivariate correlations obtained demonstrated that total points earned in the course, number of extra credit points earned, and earned grade were all significantly related to goal instability. Hypotheses 8, 9, and 10 were all accepted. A hierarchical multiple regression was used to further examine the relationships between sex and goal instability with respect to the
three performance variables. Sex, specifically females, was found to be a predictor for the three performance variables.

Discussion of Results

The findings summarized in this section are organized into three categories: the relationship between goal instability and career thoughts; the relationship between goal instability and career decision state; and the relationship between goal instability and performance in a career development course.

Goal Instability and Career Thoughts

Career problem solving is defined as “a series of thought processes in which information about a problem is used to arrive at a plan of action necessary to remove the gap between an existing and a desired state of affairs” (Sampson et al., 2004, p. 5). Career decision making is defined as “a process that not only encompasses career choice, but involves making a commitment to carrying out the actions necessary to implement the choice” (Peterson et al., 2002, p. 316). Making a career decision and engaging in the career decision-making and problem-solving process are major challenges faced by many college students. An earlier review of the literature found that a variety of factors, including motivation, goal instability, and career thoughts can influence career decision making and problem solving (Cote & Levine, 1997; Dennis, Phinney, & Chauteco, 2005; Robbins, 1989).

Cognitive information processing theory (CIP) is a theoretical approach intended to assist individuals who are trying to solve career problems and make career decisions that emphasizes the importance of thoughts on behaviors (Sampson et al., 2004). Dysfunctional career thoughts can increase students’ uncertainty by making career problem-solving tasks more difficult (Sampson et al., 1996a). CIP utilizes the CASVE cycle as a way to assist individuals in creating a decision-making and problem-solving schema that can be applied to any career decision.

Goal instability is defined as difficulty in the areas of self-direction, setting goals and keeping direction, maintaining the persistence to accomplish goals, and initiating action (Robbins & Patton, 1985). In order to measure goal instability, the Goal Instability Scale (GIS; Appendix B) was created. The items on the GIS assess energy and drive, project completion, losing goal related focus, and confusion about the self (Casillas et al., 2006). Individuals with higher levels of goal instability typically possess a weak sense of goals and values, as well as
lower levels of self-esteem, social community, and career decidedness (Robbins, 1989; Robbins & Patton, 1985). Because motivation is difficult to outwardly observe, studying one's goals is a good way to measure an individual's purpose and motivation to achieve. Due to the lack of research examining motivation and goal instability in the context of career problem solving and decision making, these relationships were explored in the present study.

The overarching research question for this study was, “In the context of career problem solving and decision making, what are the relationships among goal instability and career thoughts, career decision state, and performance in a career development course?” The results of the analyses supported an overall relationship between goal instability and the variables of career thoughts, career decision state, and performance. These results seem particularly salient because large effect sizes were found despite the fact that this was an exploratory study. For example, decision-making confusion, external conflict, and commitment anxiety accounted for 41.6% of the variance in goal instability.

Decision-making confusion had the most significant relationship with goal instability accounting for 40.9% of the variance. The DMC scale assesses individuals' overall emotions regarding career decisions and overall sense of confusion about the decision-making process. Individuals with elevated DMC scores often demonstrate a lack of understanding and/or an inability to engage in the decision-making process. Dysfunctional career thoughts might lead individuals to avoid or engage in misinformed career decision making and problem solving (Sampson et al., 1996b). Individuals with high levels of goal instability have difficulty independently creating career objectives and energetically engaging in the career development process. It is not surprising, then, that this scale accounts for such a large percentage of the variance in goal instability. Without a clear identified set of goals, and with the presence of dysfunctional career thoughts, individuals might find it difficult to initiate and engage in the career decision-making process. Individuals with high goal instability might have low persistence in obtaining their career goals, and might give up early in the career development process. Practitioners working with these individuals need to work slowly in developing learning plans that incorporate goals unique to these individuals and create successful goal attainment experiences.

Commitment anxiety (CA) characterizes individuals experiencing generalized anxiety about the consequences of their career decisions. Such persons are often unable to commit to
a specific career choice as a result of this anxiety. Individuals with high goal instability may experience affective symptoms such as anxiety and nervousness regarding their career decision making. External conflict (EC) characterizes individuals who have a difficult time balancing the relevance and importance of their own self-perceptions and opinions with those of significant others, which leads to hesitations in assuming responsibility for their decision making (Sampson et al., 1996b). Individuals with high goal instability and high external conflict may have little experience developing their own goals. For example, parents who are overly involved in their children’s lives may have chosen the fields of study for their children without consulting with them first. Allowing these individuals to develop their own career objectives without the interference of others might serve to decrease their negative thinking regarding their career decision making.

While the bivariate correlations between the CA and EC construct scales on the CTI and the GIS were statistically significant and quite large, the multiple regression analysis demonstrated that these two scales accounted for only an additional 0.8% of the variance in goal instability. Appendix G demonstrates that the CA and EC scales on the CTI highly correlate with the DMC scale. This explains the strong correlations between the GIS and all three construct scales, while the regression analysis provides insight into the strong relationship between GIS and DMC.

**Goal Instability and Career Decision State**

In examining the relationships between goal instability and career decision state, both satisfaction with career choice and career tension were significantly related to goal instability. Occupational decidedness (measured by the OAQ) was not found to be related to goal instability. Table 2 revealed that 32.9% of the sample indicated feeling well satisfied with their occupational choice. However, 26.7% of the sample indicated feeling undecided about their first career choice on the Satisfaction with Choice Question. Only 8.9% of participants indicated feeling undecided about their career options on the OAQ. This may explain why satisfaction explained more of the variance than did decidedness.

As previously mentioned, the OAQ is a two part question, where individuals are asked to list all the occupations they are considering at the moment, and to identify which occupation is their first choice. Instructions also indicate that if individuals are undecided, they can write “undecided.” Fewer participants identified being undecided on the OAQ than on the
satisfaction with choice question. This may be because no affect or emotions are involved on the OAQ, while the satisfaction question asks individuals to identify whether they are satisfied or experiencing doubt and uncertainty about their career choices.

Participants reported agreeing the most with item number 7 on the CTS (Table 4), “I often think about my career even while I am doing other things.” Overall, students tended to agree more with experiencing affective symptoms of stress and anxiety related to career choice rather than physical symptoms. These feelings of undecidenedness, dissatisfaction, and anxiety explain 18.5% of the variance in goal instability. Teaching individuals with high goal instability how to pay attention to the internal and external cues they are experiencing while engaging in the career decision-making and problem-solving process might serve to decrease some of the negative symptoms and increase feelings of competence and success. Having a clear model to follow, such as the CASVE cycle (Sampson et al., 2004), could help students effectively navigate the sometimes confusing process of making a career choice.

**Goal Instability and Performance**

Bivariate correlations demonstrated that goal instability was significantly related to the three course performance variables of total points, amount of extra credit points earned, and earned grade. The amount of extra credit points obtained had the strongest correlation with GIS. In order to gain extra credit points, students had to complete activities outside of regular course activities that related to career decision making and problem solving. Students with low goal instability may have more energy and motivation to engage in career learning and goal related activities.

Sex was also a predictor of performance when combined with goal instability. Although there were fewer women than men enrolled in the course (43% women), women significantly outperformed men on the three performance variables. When examining the distributions of each variable, two of the performance variables (total points earned and extra credit points earned) were not normally distributed and slightly skewed. This is due in part to the relatively small number of poor grades. The mean total points earned in the course equaled 567.5, which is an average earned grade of B+. No transformations were made for these variables, but caution is recommended when interpreting the results related to the relationship between goal instability and performance.
Study Limitations

There are several limitations relevant to this study that could affect internal and external validity. These limitations are related to the sample population and instrumentation.

Data were collected from a criterion sample of students in a large Southeastern university in the United States. These students were enrolled in an introductory career development class and were primarily Caucasian upperclassmen, which may limit the generalizability of this sample to other ethnic groups and to underclassmen. Although this ethnic distribution might limit the generalizability, a review of the Fall 2009 enrollment data for this university demonstrated that the ethnic distribution of the course was similar to the ethnic distribution of the university as a whole. For example, 63.2% of participants identified themselves as Caucasian, while 71.3% of enrolled students in the university identified themselves as Caucasian.

Participants were not randomly selected; therefore, the results of this study may only be generalizable to individuals who enroll in career development courses. Inherent differences may exist between students who elect to enroll in a career development course with those who do not. The majority of participants (n = 90) reported enrolling in the course in order to find career opportunities after graduation and learn practical strategies and skills needed to find a job (n = 71). Other objectives reported included finding assistance in choosing a field of study, learning more about the process of career development, and meeting a course requirement. Given these self-identified objectives, study participants were likely more aware of their need for assistance in career decision making and problem solving. Therefore, they may have responded and behaved differently than students not enrolled in a career development course.

As previously mentioned, data were collected at a research university. Students enrolled in a research university may be asked to participate in a number of research studies throughout their academic life. This, in turn, may lead to boredom and fatigue in the data collection process, which can result in impulsive answering. This course in particular is often involved in multiple research studies, and students were asked to participate in another study during the data collection for this study. This effect was controlled for by reducing the amount of time and effort needed for participation in both studies with the instructors and the other researcher. Measures were distributed during the first week of classes and participants were given time in class to complete them. An incentive of five additional extra credit points was
offered to students who agreed to participate, which was intended to decrease the mortality rate.

The purpose of the study was explained in general terms to the instructors and participants to help control for demand characteristics. Measures were placed in research folders using a random numbers table in order to control for order effects. Instrumentation was standardized to the degree that there was a fixed script used with each section of the course.

Although the psychometric properties of the measures used in this study are adequate overall, some of the instrument characteristics may have threatened the internal and external validity of the results. Specifically, the CTI has strong internal consistency, stability, construct validity and content validity. The GIS has been found to have high stability and high internal consistency. A few studies have demonstrated convergent validity with scales on the Millon Clinical Multiaxial Inventory (Robbins, 1989) and measures of career-planning confidence, such as readiness to make a career decision, generating options, and information-seeking confidence (McAuliffe et al., 2006). More research concerning the validity of the GIS would be useful in this regard.

The three measures of career decision state are psychometrically limited. Test-retest reliability of a questionnaire that included the OAQ was .93 (Redmond, 1973) and Slaney (1978) found stability of OAQ responses over a 6-week time period, but other reliability and validity reports are limited. The OAQ did not demonstrate the strength of correlation or overall explained variance in relation to the GIS, and it is suspected that it may be limited in its research utility due to the four-item format. The Satisfaction with Choice Question is demonstrated to have average correlations of .43, .53, and .44 with other measures of career decidedness (Russell, 1981), but more recent reports of reliability and validity have not been found. Finally, the CTS has reported correlations of .37, .28, and .36 with the three CTI content scales of DMC, CA, and EC (Bullock et al., in press), but more research is needed on the internal consistency and validity of this measure.

In general, self-report measures have inherent limitations because it is difficult to verify whether individuals are truthful. Further analyses of reliability for each measure with continuous scale scores were conducted for the present study. Internal consistency for the GIS was high (.87). This was also true for the CTI total score (.96) and the three construct scales (DMC = .94; CA = .87; and EC -.78). The CTI produced a strong coefficient alpha of
In this study, there were no sophisticated validity scales given to participants to guard against problematic response sets.

**Implications for Practice**

The present study examined the relationship between goal instability and career thoughts, career decision state, and performance in a career development course. The statistical analyses demonstrated that high goal instability was significantly related to more dysfunctional career thoughts, specifically greater decision making confusion. High goal instability was also related to greater dissatisfaction with career choice and elevated levels of career tension. Finally, higher levels of goal instability were related to lower earned grades and extra credit points obtained in the course. The overall findings of this study indicate that goal instability is a salient factor in dysfunctional career thoughts, career decision state, and performance in a career development course.

The Goal Instability Scale (GIS; Robbins & Patton, 1985) measures an aspect of the self pertaining to personal goals. Individuals with low goal instability are expected to independently create career objectives and energetically engage in the career development process. Conversely, individuals with high goal instability require the support and encouragement of others to pursue the career development process. Goal-setting theory has been used to conceptualize the difficult construct of motivation (Locke, 1996). This theory assumes that action is purposeful, and studying one’s goals and goal attainment is a good way to measure an individual’s purpose and motivation to achieve. Intrinsic life goals are associated with greater health, performance, and well-being (Blustein, 2006; Ryan & Deci, 2000).

Career service practitioners could use the GIS to create interventions that encourage students to develop and strengthen intrinsic goals pertaining to such things as personal growth and health, which might generalize to greater satisfaction in their career decision making. One of the strengths of the GIS is that it is a brief assessment which can be used as a screening device to determine if individuals are having difficulty identifying orienting life goals. Examining the specific GIS items individuals endorse might be useful for practitioners in developing treatment plans and interventions for clients. Knowing that high goal instability is related specifically to high decision-making confusion indicates that practitioners need to be clear and
supportive in explaining the decision-making and problem-solving process and assisting clients with it.

A previous review of the literature revealed that goal instability has been used to examine topics relating to formats of career advising workshops (Robbins & Tucker, 1986) and adjustment to college life (Robbins et al., 1993). Individuals with higher goal instability benefit more from the use of interactional workshops that include personal interaction with practitioners, and benefit less from the use of computer-based counseling systems (Kivlighan et al., 1994). These findings suggest that staff should be supportive and involved when working with individuals who have higher goal instability.

Economic downturns have reduced funding for career services in many places. One way to overcome this obstacle is through the use of group counseling and teaching formats. Specifically, career courses have been found to increase students’ career decision-making self-efficacy and career decidedness, and reduce dysfunctional career thoughts (Folsom et al., 2001; Folsom & Reardon, 2003; Johnson & Smouse, 1993; Reed et al., 2001; Reese & Miller, 2006). Providing career services to individuals in a group format might serve to decrease levels of goal instability and increase self-efficacy in the career decision-making and problem-solving process. Also, career interventions that incorporate both cognitive and behavioral activities, with opportunities to learn and receive feedback from others, assist in fostering goal setting and motivation.

A review of the item responses on the GIS indicated that participants reported strongest agreement with item 8 on the GIS, “I wonder where my life is headed” (Table 5). A similar item can be found on the My Vocational Situation (MVS; Holland et al., 1980), “I am not sure of myself in many areas of life.” Reardon and Lenz (1998) posit that clients who endorse this item on the MVS often need more one-on-one individual assistance over longer periods of time. This indicates that participants in the study endorsing this item lack a purposeful direction in their life, and might need assistance creating both proximal and distal life and career goals. These individuals may be anxious, worried, reserved, and cautious. For these students, practitioners could start at the very beginning of the career decision-making and problem-solving process, the Communication phase of the CASVE cycle, and work slowly throughout the cycle.
Due to the strong relationship between goal instability and career thoughts, it is also important for career service practitioners to assess negative career thoughts for those individuals with elevated levels of goal instability. As previously mentioned, the Career Thoughts Inventory (CTI; Sampson et al., 1996b) can be used as a screening measure and a needs assessment. Research on the CTI has shown that adults with high CTI total scores tended to perceive more barriers in their career choice, be more anxious and less decided, and have a greater need for information. Similarly, college students with high CTI total scores were found to be less decisive and more depressed (Sampson et al., 1998). Incorporating the CTI workbook in assisting individuals with high levels of goal instability would assist practitioners and clients in developing individualized learning plans with specific learning objectives and goals, while simultaneously assisting clients in identifying and challenging their negative thoughts.

Included in the readiness model of CIP is a three-step service delivery model which incorporates self-help services, brief staff-assisted services, and individual case-managed services (Sampson et al., 2004). Self-help services are designated for individuals who have high readiness for career decision making. These individuals are capable of engaging in self-directed assessments, information seeking, and instructional resources. Brief staff-assisted services are appropriate for individuals with moderate readiness. Minimal assistance is provided to individuals to guide them in their career decision making and problem solving. Often, an Individual Learning Plan (ILP) is created collaboratively between client and practitioner to formulate goals and resources with related outcomes (Sampson et al., 2004). Brief staff-assisted services include self-directed career decision making guided by a practitioner, career courses with group interaction, short-term group counseling, and workshops. Individual case-managed services are used with individuals who have low readiness for career choice. This involves one-on-one, small group career course interaction, or long-term group counseling, where career and mental health issues are integrated and addressed.

Individuals experiencing more dysfunctional thinking as indicated on the CTI are appropriate for individual case-managed services. Because the GIS is highly correlated with the CTI, individuals possessing more goal instability might benefit greatly by engaging in individual case-managed services. The GIS might serve as a useful screening tool in
combination with the CTI to determine a client’s readiness to engage in the career decision-making and problem-solving process. Here, these individuals can work at a slower pace with practitioners to determine factors that might be contributing to the low readiness. A supportive and collaborative relationship can be developed as the individuals move throughout the decision making process.

**Recommendations for Future Research**

This study examined the relationship between goal instability and career thoughts, career decision state, and performance in a career development course. This study was conducted because of a lack of research examining motivation in the context of career problem solving and decision making. The construct of goal instability was utilized as a way to conceptualize and measure motivation. The findings of this study led to additional questions that could be addressed by future research studies.

This study was the first to examine the relationship between goal instability, career thoughts, career decision state, and performance in the context of career decision making and problem solving. Given the study’s exploratory nature, it should be replicated to see if the results are sustained. Future studies might use samples varying in age, setting, socioeconomic class, and ethnicity in order to increase generalizability.

It might be important to expand this study to examine the role the career development course might play in decreasing students’ goal instability and dysfunctional career thoughts over the course of the semester. Using a pre-post design and participants from another course as a control group, the participants in the career development course could be conceptualized as a treatment group. One previous study examining a university career course based on cognitive information processing theory found that students’ negative career thoughts decreased from the beginning of the semester to the end of the semester (Reed et al., 2001). It would be interesting to see if the course could also serve in decreasing student’s goal instability, thereby increasing students’ motivation.

Vocational interests have been used as a way to study motivation for career decision making. Specifically, Holland’s (1997) RIASEC theory has been used to study career choice readiness and career decisions (Hirschi & Lage, 2008; Tracey, 2008). One earlier study found that students with creative interests, such as strong Artistic codes, seemed to demonstrate high levels of career indecision (Holland & Nichols, 1964). Holland, Gottfredson, and Power
(1980) found that individuals with Conventional and Realistic types obtained low scores on the Vocational Identity scale of the MVS, and, therefore, might be less effective in career decision making. It would be interesting to examine the relationships among goal instability and Holland codes. Further research could include the personality variables of Holland’s typology of vocational personalities and work environments as they relate to motivation and goal instability.

Research on the relationships between GIS scores and the various secondary construct scales on the SDS might also be important. For example, more goal instability might be associated with low congruence between an individual’s summary code and daydream code. High congruence is associated with more satisfaction and persistence of an aspiration over time (Reardon & Lenz, 1998). Further research could examine the relationships between goal instability and congruence, coherence, consistency, profile elevation, and differentiation.

Due to the lack of psychometric research pertaining to the three measures of career decision state (Occupational Alternatives Question, Satisfaction with Choice Question, and Career Tension Scale), it might be useful to incorporate other, more psychometrically sound, measures of career decision state. For example, the Career Decision Scale (CDS; Osipow et al., 1987) is a measure used to identify the causes of indecision, and the Career Decision-Making Difficulties Questionnaire (CDDQ; Gati, 2007) addresses level of career undecidenedness, satisfaction with decision status, and confidence in current choice.

The My Vocational Situation (MVS) form (Holland et al., 1980) was developed out of research on career decision making and measures vocational identity, need for occupational information, and barriers in decision making. This brief screening instrument can be completed in 10 minutes or less, and assists practitioners in identifying clients who may need more assistance in the career decision-making and problem-solving process than others (Reardon & Lenz, 1998). Research on the MVS with Australian clients seeking educational and career counseling services found individuals with higher vocational identity were more decided about their career plans (Taylor, 1986). This study also found that individuals with low vocational identity eventually developed higher levels after experiencing career counseling, suggesting that career counseling is a successful intervention at increasing positive self-concept ratings (Reardon & Lenz, 1998). The Career Thoughts Inventory (CTI) has demonstrated convergent validity with the three scales on the MVS (Sampson et al., 1996b;
This study demonstrated that the CTI is correlated with the GIS. Therefore, it is likely that the GIS is related to the MVS also. Using the GIS in conjunction with the MVS would allow practitioners to pinpoint which three areas of decision making (Vocational Identity, Occupational Information, and Barriers) clients were experiencing difficulty with, and how to develop intrinsic goals with these clients.

Self-efficacy research has demonstrated that goal-setting and self-efficacy play a part in performance effort (Bandura & Cervone, 1983; Zimmerman et al., 1992). Bandura’s self-efficacy research suggests that persons who approach tasks with a sense of confidence and competence will be more apt to have adequate amounts of motivation to engage in related behaviors (Bandura, 1982; Blustein, 1989; Deci & Ryan, 1985). The Career Decision Making Self-Efficacy Scale – Short Form (CDES-SF; Betz, Klein, & Taylor, 1996) is designed to measure confidence to perform decision-making tasks in five competency areas. Future studies could examine the relationship between goal instability and the domain specific career decision-making self-efficacy.

**Conclusions**

This exploratory study examined the relationship between goal instability, career thoughts, career decision state, and performance in a career development course. Correlation and regression analyses demonstrated that goal instability was significantly related to career thoughts, career decision state, and course performance variables. These statistically significant findings contribute to the research literature in numerous ways. The results suggest practical interventions for career service practitioners, as well as the importance of conducting future research in this area.
SDS 3340 STUDENT DATA SHEET

Name___________________________________________________Date__________________

Expected Graduation Date __________

FOR QUESTIONS 14-15 AND 18-25, PLACE THE NUMBER IN THE SPACE IN THE RIGHT MARGIN WHERE INDICATED:

1. Major (print major or “undecided”)………1. __________________________________________________________________

2. Advisor (Name)………2. __________________________________________________________

3. Campus Address….. __________________________________________________________

4. Local Telephone…__ _________________________________________________________

5. E-mail Address…… __________________________________________________________

6. Permanent Address….. _______________________________________________________

7. Are you active in campus organizations? Which? ___________________________________

8. Outline your previous employment or work experience. ________________________________________________

9. How did you learn of this course? ______________________________________________

10. What are your objectives in taking this course? _________________________________________

11. Number of Hours This Semester…………………………………11. __________

12. Age (in years)………………………………………………………….12. __________

13. Sex (1=Male  2=Female)…………………………………………………..13. ________

14. Ethnic Group (write in number)…………………………………………………14. ________

   5. Caucasian  6. Other__________  7. Prefer not to respond

15. Year in school (write in number)………………………………………………15. ________

   6. Other__________

16. List all the occupations you are considering right now.
17. Which occupation is your first choice? (If undecided, write “undecided.”)

__________________________________

18. How well satisfied are you with your first choice? (write in number) ........18.__________

1. Well satisfied with choice
2. Satisfied, but have a few doubts
3. Not sure
4. Dissatisfied and intend to remain
5. Very dissatisfied and intend to change
6. Undecided about my future career

Mark a rating number from 1 (Strongly Disagree) to 7 (Strongly Agree) that best responds to items 19-25.

19. Decisions about my career tend to directly affect my health………………………_________
20. Decisions about my career create a great deal of tension……………………………_________
21. I have felt fidgety or nervous as a result of having to make career decisions........_________
22. If I did not worry about my career, my health would probably improve................_________
23. Problems associated with my career decisions have kept me awake at night.............._________
24. I have felt nervous before attending classes that made me think about my career_________
25. I often think about my career even when I am doing other things........................._________
APPENDIX B

GOAL INSTABILITY SCALE
THE GIS
Robbins & Patton, 1985

Directions: Following are a number of statements that reflect various ways in which we can describe ourselves. After reading each statement, one at a time, circle a number along the scale which ranges from 1, Strongly Agree, to 6, Strongly Disagree. There are no right or wrong answers so please just make your best judgment. Simply try to rate the extent to which you agree with each statement. Do not spend too much time with any one statement. Circle the number which best fits for each statement and do not leave any unanswered.

Please Circle A Number For Each Statement, Along:

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Moderately Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Moderately Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

1. It’s hard to find a reason for working. Agree: 1 2 3 4 Disagree: 5 6
2. I don’t seem to make decisions by myself. Agree: 1 2 3 4 Disagree: 5 6
3. I have confusion about who I am. Agree: 1 2 3 4 Disagree: 5 6
4. I have more ideas than energy. Agree: 1 2 3 4 Disagree: 5 6
5. I lose my sense of direction. Agree: 1 2 3 4 Disagree: 5 6
6. It’s easier for me to start than to finish projects. Agree: 1 2 3 4 Disagree: 5 6
7. I don’t seem to get going on anything important. Agree: 1 2 3 4 Disagree: 5 6
8. I wonder where my life is headed. Agree: 1 2 3 4 Disagree: 5 6
9. I don’t seem to have the drive to get my work done. Agree: 1 2 3 4 Disagree: 5 6
10. After a while I lose sight of my goals. Agree: 1 2 3 4 Disagree: 5 6
APPENDIX C

INFORMED CONSENT AND APPROVAL LETTER
Informed Consent

Relationships among vocational interests, career thoughts, motivation, personality characteristics and performance of college students enrolled in a career development course.

Dear SDS 3340 Student,

I am a doctoral student under the direction of Professor Robert Reardon and Professor Janet Lenz in the Department of Educational Psychology and Learning Systems in the College of Education at Florida State University. I am conducting a research study to examine the relationships among personal characteristics, career thoughts, and vocational interests.

Your participation today will involve completing three different paper-based assessments about personal characteristics. Completion of all three of these forms should take about 25 minutes. The name field on each assessment will be blocked out and each form will be identified with a number only. Also, information from class demographic forms and the Self Directed Search which you will complete later in the semester, will be matched to these assessments by the researchers using the number provided. The demographic forms, Self Directed Search data, and these consent forms will be stored separately from the questionnaires. Finally, you will be asked to complete a follow-up questionnaire at the end of the semester.

Information obtained from you during the course of this study will remain confidential, to the extent allowed by law. Your responses to the questionnaires, demographic form, and consent form will be stored in locked cabinets, out of public view and under the control of the principal investigators and/or faculty advisors. Data collected from this study will be retained in a secure manner until December 30, 2015, after which time it will be destroyed. The results of the research study may be published, but your name will not be used, and the results will be presented in group format only. You will not be offered individual feedback from the assessments you take today.

Your participation in this study is voluntary. You will not be paid for your participation. If you choose not to participate or to withdraw from the study at any time, there will be no penalty; it will not reduce your grade in SDS 3340. Participants in the study will receive 5 points extra credit added to their total points earned in the course. Other opportunities for extra credit will also be available throughout the semester. The results of the research study may be published, but your name will not be used.

The discomfort and risk reasonably expected by your participation in this project is that you may become more aware of personal characteristics that relate to career decision making. This awareness may engender mild sadness, anxiety, or thoughts and feelings of depression. If you experience such a reaction after participating in this study, please contact the Career Center (850-644-6431) or the University Counseling Center (850-644-2003) to discuss your situation.

Although there may be no direct benefit to you, a possible benefit of your participation is that you may gain a better understanding of factors influencing you career decision making. This information also has the potential to improve the ability of counselors and advisors to address issues that may interfere with career problem solving and decision making. It may also help future SDS 3340 students and instructors improve their skills and knowledge in this area.

If you have any questions concerning this research study, please call Sara Bertoch, Robert Reardon, Ph.D., or Janet Lenz, Ph.D., at (850) 644-6431. If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Vice President for the Office of Research at (850) 644-8633.

Sincerely,

Sara Bertoch, M.S., Ed.S.

I give my consent to participate in the above study.

_______________________________ _______________________
(signature)     (date)

(Print Your Name Here)

Date: 8/22/2008

To: Sara Bertoch [sarabertoch@gmail.com]

Address: 2490 Mailing Code, FSU Career Center
Dept.: EDUCATIONAL PSYCHOLOGY AND LEARNING SYSTEMS

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research
Relationships among vocational interests, career thoughts, motivation, personality characteristics and performance of college students enrolled in a career development course.

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR § 46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 8/21/2009 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: Janet Lenz, Advisor [jlenz@admin.fsu.edu]
HSC No. 2008.1604
APPENDIX D

DATA COLLECTION SCRIPT
DATA COLLECTION SCRIPT

1. Hello, I am (principal investigator’s name here). As a part of this SDS 3340 class, we are conducting a research study of students’ personal characteristics, thoughts, and vocational interests with respect to their career decisions. We believe this project will help us obtain a better understanding of the career-decision making process.

2. Participation involves reading and signing the Consent Form, and then completing four questionnaires using the papers provided in the order they are presented in your folder. When I give you your folder please leave them closed on your desk.

3. **Pass out folders to participants, making sure each folder is given to the correct student.**

4. Please open your folder and read the Informed Consent Form with me.

5. **Read informed consent form.**

6. **Ask the following questions and provide appropriate feedback to participant responses.**
   
   a. What are the risks of participating in this research?
   b. What are the benefits of participating in this research?
   c. Who can you contact if you have further questions or concerns?

7. If you choose to participate in the study, please sign the informed consent form and print your name below the signature.

8. Now please complete the assessments in the order they are presented in your folder. Please read the directions for each instrument carefully. Notice that each assessment has your unique code number. Make sure the code written on the label of your folder and the code on each answer sheet matches. Do not fill in any other identifying information on the answer sheets other than your answers.

9. Please begin. Once you have completed the survey forms, return your folder to me. Leave the signed copy of your informed consent in the folder and take your copy with you.

10. As participants leave check that
   
   a. Informed Consent is signed and dated
   b. Instruments are complete
APPENDIX E

PERFORMANCE CONTRACT
Performance Contract Summary

Name: ____________________________________

Unit I: Career Concepts and Applications, One Hour Credit (251 points)
- Participation in class activities for Unit I (10)
- Attendance (26)
- Chapter 1 Quiz (10)
- Career Field Analysis (100)
- Autobiography (20)
- Self-Directed Search Interpretive Report (10)
- FSU Portfolio Skills Assessment Activity (10)
- SIGI® or eDiscover Computer Guidance Program (10)
- Choices Planner Computer Guidance Program (10)
- Career Thoughts Inventory (CTI) Profile (10)
- Individual Action Plan (IAP) (10)
- Performance Test, Unit I (25)

<table>
<thead>
<tr>
<th></th>
<th>Unit I Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in class activities for Unit I</td>
<td>10</td>
</tr>
<tr>
<td>Attendance</td>
<td>26</td>
</tr>
<tr>
<td>Chapter 1 Quiz</td>
<td>10</td>
</tr>
<tr>
<td>Career Field Analysis</td>
<td>100</td>
</tr>
<tr>
<td>Autobiography</td>
<td>20</td>
</tr>
<tr>
<td>Self-Directed Search Interpretive Report</td>
<td>10</td>
</tr>
<tr>
<td>FSU Portfolio Skills Assessment Activity</td>
<td>10</td>
</tr>
<tr>
<td>SIGI® or eDiscover Computer Guidance Program</td>
<td>10</td>
</tr>
<tr>
<td>Choices Planner Computer Guidance Program</td>
<td>10</td>
</tr>
<tr>
<td>Career Thoughts Inventory (CTI) Profile</td>
<td>10</td>
</tr>
<tr>
<td>Individual Action Plan (IAP)</td>
<td>10</td>
</tr>
<tr>
<td>Performance Test, Unit I</td>
<td>25</td>
</tr>
</tbody>
</table>

Unit II: Social Conditions Affecting Career Development, One Hour Credit (187 points)
- Participation in class activities for Unit II (10)
- Attendance (12)
- * Career Field Analysis (100)
- * Autobiography (20)
- Two Information Interviews (20)
- Performance Test, Unit II (25)

<table>
<thead>
<tr>
<th></th>
<th>Unit II Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in class activities for Unit II</td>
<td>10</td>
</tr>
<tr>
<td>Attendance</td>
<td>12</td>
</tr>
<tr>
<td>* Career Field Analysis</td>
<td>100</td>
</tr>
<tr>
<td>* Autobiography</td>
<td>20</td>
</tr>
<tr>
<td>Two Information Interviews</td>
<td>20</td>
</tr>
<tr>
<td>Performance Test, Unit II</td>
<td>25</td>
</tr>
</tbody>
</table>

Unit III: Implementing a Strategic Career Plan, One Hour Credit (215 points)
- Participation in Unit III class activities (10)
- Attendance (20)
- * Autobiography (20)
- Strategic Academic/Career Plan Project (100)
- Write Resume (15) and Cover Letter (5)
- * Two Information Interviews* (20)
- Performance Test, Unit III (25)

<table>
<thead>
<tr>
<th></th>
<th>Unit III Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in Unit III class activities</td>
<td>10</td>
</tr>
<tr>
<td>Attendance</td>
<td>20</td>
</tr>
<tr>
<td>* Autobiography</td>
<td>20</td>
</tr>
<tr>
<td>Strategic Academic/Career Plan Project</td>
<td>100</td>
</tr>
<tr>
<td>Write Resume (15) and Cover Letter</td>
<td>20</td>
</tr>
<tr>
<td>* Two Information Interviews*</td>
<td>20</td>
</tr>
<tr>
<td>Performance Test, Unit III</td>
<td>25</td>
</tr>
</tbody>
</table>

Optional Course Activity:
- Research Participation (variable points)
- FSU Career Portfolio Extra Credit Option (15 points)
- Career Learning Activity (5 Points; Instructor specify: _____________________)

<table>
<thead>
<tr>
<th>Total Extra Credit Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>__________________________</td>
</tr>
</tbody>
</table>

*Learning activity assigned in a previous unit.

<table>
<thead>
<tr>
<th>Total points:</th>
<th>Final grade:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

86
APPENDIX F

SYLLABUS FOR CAREER DEVELOPMENT COURSE
# SDS 3340  INTRODUCTION TO CAREER DEVELOPMENT  M/W

## Schedule of Activities & Assignments

**UNIT I, Career Concepts and Applications**  
(8/25/08-10/08/08)

### INTRODUCTION TO THE COURSE

#### Class 1. MONDAY  8/25/08  Orientation and Course Management Procedures

**Assignments:**
- Read Syllabus and get familiar with course schedule by 8/27/08
- Complete the Performance Contract by 8/27/08
- Purchase Text by 8/27/08
- Read Text Ch. 1 by 8/27/08; review Chapter Study Guide to prepare; see Appendix B

#### Class 2. WEDNESDAY  8/27/08  Group Process and Personal Goals

**Due Today:**
- Completed Performance Contract
- Text purchased

**Assignments:**
- Start writing your Autobiography (Due 9/17/08); see Appendix C
- Read Text Ch. 2 on values by 9/3/08; review Chapter Study Guide to prepare
- Prepare for Quiz on Text Chapter 1 by 9/3/08

#### No Class  MONDAY  9/1/08  LABOR DAY--No Class!!

### SELF KNOWLEDGE DOMAIN

#### Class 3. WEDNESDAY  9/3/08  Values Clarification

**Due Today:**
- Quiz on Ch. 1

**Assignments:**
- Read Text Ch. 2 on interests by 9/8/08; review Chapter Study Guide to prepare

#### Class 4. MONDAY  9/8/08  Exploring Interests

**Assignments:**
- Complete the Self-Directed Search (SDS) Assessment Booklet by 9/10/08
- Read Text Ch. 2 on skills by 9/10/08; review Chapter Study Guide to prepare

#### Class 5. WEDNESDAY  9/10/08  Skills Identification

**Due Today:**
- Completed SDS Assessment Booklet

**Assignments:**
- Read Text Ch. 3 by 9/15/08; review Chapter Study Guide to prepare
- Complete the Skills Assessment Activity in the online FSU Career Portfolio by 10/22/08
OCCUPATIONAL KNOWLEDGE DOMAIN

Class 6. MONDAY 9/15/08

Due Today:
Completed reading Text Ch. 3

Assignments:
Career Field Analysis (CFA) Assignment, paper due 10/27/08 see Appendix E
Complete draft CFA Worksheet, due at the time of the scheduled instructor conference
Use 2 Computer-Assisted Career Guidance Systems (SIGI OR eDiscover, AND Choices Planner) and complete Computer Feedback Forms (see Appendix M) by 10/15/08

Class 7. WEDNESDAY 9/17/08

Due Today:
Autobiography

Assignments:
Read Text Ch. 4 by 9/24/08; review Chapter Study Guide to prepare
Complete and score the CTI by 9/22/08

Class 8. MONDAY 9/22/08

Due Today:
Completed CTI Profile

Assignments:
Read Text Ch. 4 by 9/24/08 review Chapter Study Guide to prepare

DECISION SKILLS DOMAIN

Class 9. WEDNESDAY 9/24/08

Due at Instructor Conference:
Completed Reading of SDS: Interpretive Report
CFA Worksheet
Review Skills Assessment Activity progress
Draft IAP

Assignments:
Review example of an Individual Action Plan (IAP) in the text; see Appendix G
Work on a draft (pencil) IAP for use in your Instructor Conference

Class 10. MONDAY 9/29/08

Due at Instructor Conference:
Completed Reading of SDS: Interpretive Report
CFA Worksheet
Review Skills Assessment Activity progress
Draft IAP

Assignments:
Read Text Ch. 5 by 10/6/08; review Chapter Study Guide to prepare

Class 11. WEDNESDAY 10/1/08

Due at Instructor Conference:
Completed Reading of SDS: Interpretive Report
CFA Worksheet
Review Skills Assessment Activity progress
Draft IAP

Assignments:
<table>
<thead>
<tr>
<th>Class 12. MONDAY 10/6/08</th>
<th>Exploring Metacognitions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Due Today:</strong></td>
<td>Final Version of Individual Action Plan</td>
</tr>
<tr>
<td><strong>Assignments:</strong></td>
<td>Prepare for Unit I Quiz on Text Chs. 1-5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class 13. WEDNESDAY 10/08/08</th>
<th>Quiz on Unit I</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assignments:</strong></td>
<td>Read Text Ch. 6 by 10/13/08; review Chapter Study Guide to prepare</td>
</tr>
</tbody>
</table>

**UNIT II, Social Conditions Affecting Career Development** (10/13/08-10/29/08)

<table>
<thead>
<tr>
<th>Class 14. MONDAY 10/13/08</th>
<th>Careering in a Changing World</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assignments:</strong></td>
<td>2 Information Interviews (due 11/12/08); see Appendix I.</td>
</tr>
<tr>
<td></td>
<td>Read Ch. 7 by 10/15/08; review Chapter Study Guide to prepare</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class 15. WEDNESDAY 10/15/08</th>
<th>Working in the New Global Economy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Due Today:</strong></td>
<td>2 Computer Feedback Forms (SIGI³ OR eDiscover, AND Choices Planner)</td>
</tr>
<tr>
<td><strong>Assignments:</strong></td>
<td>Read Ch. 8 by 10/20/08; review Chapter Study Guide to prepare</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class 16. MONDAY 10/20/08</th>
<th>Organizational Culture and Effective Work</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assignments:</strong></td>
<td>Read Ch. 9 by 10/22/08; review Chapter Study Guide to prepare</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class 17. WEDNESDAY 10/22/08</th>
<th>Alternative Ways to Work</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Due Today:</strong></td>
<td>Skills Assessment Activity from Career Portfolio</td>
</tr>
<tr>
<td><strong>Assignments:</strong></td>
<td>Read Ch. 10 by 10/27/08; review Chapter Study Guide to prepare</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class 18. MONDAY 10/27/08</th>
<th>Career and Family Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Due Today:</strong></td>
<td>Career Field Analysis paper</td>
</tr>
<tr>
<td><strong>Assignments:</strong></td>
<td>Prepare for Unit II Quiz on Text Chs. 6-10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class 19. WEDNESDAY 10/29/08</th>
<th>Quiz on Unit II</th>
</tr>
</thead>
</table>
Assignments:
- Read Strategic Academic/Career Plan Project assignment in text by 11/3/08
- Strategic Academic/Career Plan Project (Due 12/3/08)
- Read Ch. 11 by 11/3/08; review Chapter Study Guide to prepare

**Unit III, Implementing a Strategic Career Plan (11/3/08-12/3/08)**

Class 20. MONDAY 11/3/08                      Launching an Employment Campaign

Assignments:
- Strategic Academic/Career Plan Project (Due 12/3/08); see Appendix J
- Read Ch. 12 by 11/5/08; review Chapter Study Guide to prepare

Class 21. WEDNESDAY 11/5/08                  Resumes and Cover Letters in Job Hunting

Assignments:
- Write Resume and Cover Letter Rough Drafts (Due 11/17/08); see Appendix K
- Review section on Job Searching on the Internet in Ch. 12 by 11/10/08

Class 22. MONDAY 11/10/08                               Job Hunting on the Internet

Class 23. WEDNESDAY 11/12/08                  Employer Panel

Due:
- Two Information Interview Reports

Assignments:
- Read Ch. 13 by 11/19/08; review Chapter Study Guide to prepare

Class 24. MONDAY 11/17/08                          Interpersonal Communications in Job Hunting

Assignments:
- View Career Library video tapes/CD-Roms on interviewing (Optional)

Class 25. WEDNESDAY 11/19/08                 Critiquing Resumes and Cover Letters

Due:
- Resume/Cover Letter rough drafts

Assignments:
- Final version of Resume/Cover Letter due last day of class, 12/3/08
- Read Ch. 14 by 11/24/08 On Negotiating; review Chapter Study Guide to prepare

Class 26. MONDAY 11/24/08                          Negotiating

Assignments:
- Read Ch. 14 by 11/26/08 On Evaluating; review Chapter Study Guide to prepare

Class 26. WEDNESDAY 11/26/08                   Evaluating Employment Offers

Assignments:
- Read Ch. 15 by 12/01/08; review Chapter Study Guide to prepare

Class 27. MONDAY 12/01/08                                      Starting a New Job

91
Assignments:
Prepare for Unit III Quiz on Text Chs. 11-15 by 12/3/08

Class 28. Wednesday DAY 12/3/08 Quiz on Unit III ALL ASSIGNMENTS DUE

Due Today:
Strategic Academic/Career Plan Project
Resume/Cover Letter final versions
All other course materials due

L:\SDS 3340\Fall 2007\Fall 08 MW Schedule.doc
<table>
<thead>
<tr>
<th>Scale Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Semester</td>
<td>.130</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Sex</td>
<td>-.046</td>
<td>-.008</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Ethnic Grp</td>
<td>.141*</td>
<td>.183**</td>
<td>.097</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Year in school</td>
<td>.731**</td>
<td>.236**</td>
<td>.075</td>
<td>.126*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Objective</td>
<td>.318**</td>
<td>.100</td>
<td>-.053</td>
<td>.045</td>
<td>.357**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. OAQ</td>
<td>-.150*</td>
<td>-.123*</td>
<td>.011</td>
<td>-.145*</td>
<td>-.210**</td>
<td>-.166**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Satisfaction</td>
<td>-.096</td>
<td>.006</td>
<td>.090</td>
<td>-.082</td>
<td>-.118</td>
<td>-.153*</td>
<td>.600**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. CTS</td>
<td>.031</td>
<td>.027</td>
<td>.018</td>
<td>.013</td>
<td>.066</td>
<td>.134*</td>
<td>.059</td>
<td>.013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. GIS</td>
<td>.082</td>
<td>-.037</td>
<td>.010</td>
<td>-.021</td>
<td>.095</td>
<td>.151*</td>
<td>-.083</td>
<td>-.225**</td>
<td>-.371**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. CTI Total</td>
<td>-.006</td>
<td>-.048</td>
<td>-.042</td>
<td>-.016</td>
<td>-.089</td>
<td>-.077</td>
<td>.190**</td>
<td>.272**</td>
<td>.483**</td>
<td>-.662**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. DMC</td>
<td>.008</td>
<td>-.078</td>
<td>-.029</td>
<td>-.045</td>
<td>-.100</td>
<td>-.097</td>
<td>.216**</td>
<td>.319**</td>
<td>.403**</td>
<td>-.642**</td>
<td>.931**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. CA</td>
<td>-.063</td>
<td>-.039</td>
<td>.004</td>
<td>-.008</td>
<td>-.123*</td>
<td>-.119</td>
<td>.222**</td>
<td>.286**</td>
<td>.389**</td>
<td>-.505**</td>
<td>.813**</td>
<td>.670**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. EC</td>
<td>.001</td>
<td>-.061</td>
<td>-.100</td>
<td>-.060</td>
<td>-.026</td>
<td>.015</td>
<td>.005</td>
<td>.036</td>
<td>.391**</td>
<td>-.442**</td>
<td>.750**</td>
<td>.643**</td>
<td>.500**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Extra Credit</td>
<td>.034</td>
<td>-.124*</td>
<td>.184**</td>
<td>-.085</td>
<td>.097</td>
<td>.060</td>
<td>.077</td>
<td>-.022</td>
<td>.032</td>
<td>.199**</td>
<td>-.101</td>
<td>-.114</td>
<td>-.064</td>
<td>-.084</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Total Points</td>
<td>.077</td>
<td>-.091</td>
<td>.302**</td>
<td>.146*</td>
<td>.155*</td>
<td>.085</td>
<td>.003</td>
<td>.001</td>
<td>.057</td>
<td>.131*</td>
<td>-.169**</td>
<td>-.174**</td>
<td>-.046</td>
<td>-.195**</td>
<td>.292**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Grade</td>
<td>.083</td>
<td>-.106</td>
<td>.313**</td>
<td>.162**</td>
<td>.183**</td>
<td>.075</td>
<td>.005</td>
<td>-.015</td>
<td>.054</td>
<td>.131*</td>
<td>-.140*</td>
<td>-.150*</td>
<td>-.046</td>
<td>-.160**</td>
<td>.377**</td>
<td>.939**</td>
<td></td>
</tr>
</tbody>
</table>

* p < .05
** p < .005
REFERENCES


*Journal of Career Assessment, 11,* 421-450.


BIOGRAPHICAL SKETCH

Sara C. Bertoch

Sara Bertoch is a doctoral candidate in the combined degree program for Counseling Psychology and School Psychology. She received her Bachelor’s degree in Psychology from the College of Charleston in Charleston, South Carolina, where she graduated cum laude. She received her Master’s degree in Counseling and Human Systems, and her Specialist in Education in Career Counseling from Florida State University in Tallahassee, Florida.

Mrs. Bertoch has served as a crisis hotline counselor, learning disabilities tutor, and career advisor for the Florida State University Career Center. She has taught an undergraduate career planning course for several years. Mrs. Bertoch has co-authored a chapter, with Dr. Robert Reardon, Career Resource Centers, in the Encyclopedia of Counseling. She has also co-authored several technical reports and has made several presentations at professional conferences, including APA and NCDA. She is currently working on her pre-doctoral internship at the Veteran’s Affairs Medical Center in North Chicago.