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Utilizing a Web-Based Career Development Workshop to Address  
Career Decision-Making Difficulty

Among Community College Distance Learners

by

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A Dissertation Submitted to the Faculty of  
Old Dominion University in Partial Fulfillment of the  
Requirement for the Degree of

DOCTOR OF PHILOSOPHY  
COMMUNITY COLLEGE LEADERSHIP  
OLD DOMINION UNIVERSITY  
March 2011

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## ABSTRACT

Career decision making difficulty, as it relates to undecided college students and career indecision, has been a concern for counselors and academic advisors for decades (Gordon, 2006; Mau, 2004). Individuals struggling with career indecision often seek assistance via career counseling, self-help tools, and/or computer-assisted career guidance systems (Gati, Gadassi, & Shemesh, 2005). The past decade has brought a large increase in the development of a number of web-based career guidance systems (CGS) (Bobek, Robbins, Gore, Harris-Bowlsbey, Lapan, Dahir, & Jepsen, 2005). Despite the rapid growth in the type and use of computer-assisted CGS, little empirical research has been conducted on the effectiveness of the systems as career decision making tools (Bloch, 2006; Fowkes & McWhirter, 2007; Gati, Kleinam, Saka, & Zakai, 2003; Mau, 1999). The purpose of this preliminary quantitative study was to assess the effectiveness of a web-based career development workshop to change career decision making difficulty of undecided community college distance learners. The results of this study will be used to determine the feasibility of incorporating the workshop into academic advising, career advising, and the curriculum of a College Success Course (CSC).

A pretest/posttest, between groups comparison design was used to assess change in career decision making difficulty. The Career Decision making Difficulties Questionnaire (CDDQ) (Gati, Krausz, & Osipow, 1996) was used to measure change in mean pretest and posttests scores on each of three variables: 1) lack of readiness, 2) lack of information, and 3) inconsistent information. The revealed *t* tests change in career decision making difficulty for each variable were not statistically significant. However, participants who completed the web-based career development workshop reported a reduction in difficulty for more variables than participants who completed a web-based CGS as a stand-alone intervention.

As technology continues to influence distance-learning, it has also influenced various educational and administrative functions of student affairs (Moneta, 1997; Moneta, 2005).

Online student support services allow institutions to meet the needs of the millennial student who has grown up with a computer generation and expects to be able to locate information electronically (Pullan, 2009), as well as the distance-learner, campus-based learner, or hybrid learner who needs to access information outside of traditional office hours. CGS have practical implications for student services support functions such as academic and career advising, and college success courses. Academic or career advising sessions, as well as CSC's, are ideal avenues to introduce students, who may not be aware of their existence or benefit to assist with career decision making, to web-based CGS.

## In Loving Memory

Evelyn “JoJo” Mayo

G. Maxine Beatty, Ed.D.

Jovon and Jahnnna this is for you. I would not have been able to accomplish this task without the support and encouragement of family and friends. Family helped to look out for you and helped you with homework when I needed to focus on my studies. Friends cared enough to frequently check in to keep me on track. C-5 provided unconditional support to one another from the first day we met (Smooches!). The Community College Leadership staff prepared me to write this dissertation, and the best committee in the department guided me through its completion. This is the “village” that helped me to accomplish this task for you. The strength of God and the people He sends you are a blessing to help you accomplish your dreams and follow the path He has set for you. Mommy loves you!

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## **CHAPTER 1**

### **Introduction**

Students choose to attend college for a variety of reasons, but many primarily attend to prepare for a successful career (Astin, 1997; Broekemier, 2002). Students typically choose a college major that strongly relates to a chosen career field. For example, a student interested in a career in health care may choose to major in nursing or pre-medicine. Choosing a major may be one of the most important decisions a college student will make (McJamerson, 1991), yet it is often one of the most difficult. It is not uncommon for some students to begin their college experience undecided or unclear about academic or career choices (Allen, 1999; Gordon, 2006). An estimated 20% to 40% of college freshmen are undecided (Gordon, 2006).

Career decision making difficulty, as it relates to undecided college students and career indecision, has been a concern for counselors and academic advisors for decades (Gordon, 2006; Mau, 2004). Students who struggle with uncertainty for long periods of time are more likely to leave college without completing a degree program (Tinto, 1993). A large number of first-year college students are uncertain about long-term academic and career goals (Tinto, 1993) for a variety of reasons. Some students may be undecided due to a lack of information about personal values, interests, and skills; academic programs; career options; or decision making skills (Gati, 1996; Gordon, 1995). In addition, students may be undecided because they lack readiness to begin the decision making process or because they have received inconsistent information (Gati, Krausz, & Osipow, 1996). Other students may be indecisive rather than undecided (Slaney, 1988), becoming what Gordon (1995) has termed “major-changers,” students who change their minds about academic and career options throughout their college experience. Regardless of the

reason, 75% of students will experience some form of uncertainty regarding major and/or career decision that may increase during the first two years of college (Tinto, 1993).

## **Background**

### **Community College Mission**

The mission of the community college is to provide affordable access to postsecondary education to create and sustain vital communities by:

- Serving all segments of society through an open-access admissions policy that offers equal and fair treatment to all students;
- Providing a comprehensive educational program;
- Serving the community as a community-based institution of higher education;
- Teaching and learning;
- Fostering lifelong learning (Vaughn, 2006, p. 3).

Open-access admission policies create a unique challenge for community colleges to provide quality academic and career advising services for students with diverse needs. Students who enroll in community colleges generally “have lower academic ability and aspirations and are from a lower socioeconomic class” (Cohen & Brawer, 2008). Many have dependent children and are employed (DOE, 2006). Due to comprehensive educational programs available through the community college, students have diverse educational goals to include personal or professional development, vocational and technical education to pursue a certificate or degree, or completion of a transfer-degree program. A successful community college must be able to redesign curriculum and organizational structure to meet the diverse and changing needs of students (Alfred, 1998).

### **Learning from a Distance**

Distance-learning is defined as “the provision of academic courses and entire degree programs when instructor and students are geographically separated” (Schwitzer, Ancis, & Brown, 2001, p. 12). The number of community colleges offering distance-learning courses has increased considerably over the past decade. During the 2006-2007 academic year, 97% of public 2-year institutions surveyed by the National Center of Education Statistics offered distance-learning courses (DOE, 2008). This is a 63% increase from the 1997-1998 academic year.

As technology continues to influence distance-learning, it has also influenced various educational and administrative functions of student affairs (Moneta, 1997; Moneta, 2005). Use of a personal computer among college students has increased 62.3% between 1985 and 2004 (Higher Education Research Institute [HERI], 2005). Post-secondary institutions are taking advantage of web-based technologies to provide career services information, academic advising, online campus tours, and online student orientation (Moneta, 2005). Online student support services provide an ideal venue to meet the needs of the millennial student who has grown up with a computer generation and expects to be able to locate information electronically (Pullan, 2009).

### **Academic Advising**

Academic advisors are in a unique position to help students blend educational experiences with career goals (Gordon, Habley, Grites, & Associates, 2008). Community college academic counselors serve to help students make decisions regarding educational, career, and personal plans. Although academic advising and counseling has a positive impact on student success (Campbell & Nutt, 2008), few community college students take advantage of the services. The results from the 2008 administration of the College Student Report (CSR),

developed by the Community College Student Survey of Engagement (CCSSE), showed that while 90% of students indicated that academic advising is important and 79% indicated that career counseling is important, only 13% of students utilized academic advising services often and 5% utilize career counseling services often (CCSSE, 2009).

Academic and counseling services may be more effective when students are required to participate and the experience is integrated into the educational process (Tinto, 1993). Student development courses are designed to foster student success by providing information on study skills, academic and career planning, and exposure to other campus resources available to assist students. Halasz and Kempton (2000) assert that the identification of a target population is one of the most important steps to designing a career course or workshop. For the purpose of this study, the target population will be community college students enrolled in a distance-learning college success course.

### **College Success Courses**

College Success Courses (CSC), in the context of college transition or orientation, have been defined by Upcraft and Farnsworth (1984) as an effort by an institution to assist first-year students with the transition to college that will enhance their academic success. For example, community college students may transition from high school, employment, and/or parenting. Fullerton and Hays (1993) note that it is difficult to customize the definition of orientation to the community college because of the extreme diversity in student age, life experiences, and responsibilities outside of college.

CSC's particularly target first-year or freshman students as research has shown that the first year is typically the time when a large percentage of drop-out, stop-out (stop attending but later return to the institution) or transfer occurs prior to the start of the second year (Derby &

Smith, 2004; Tinto, 1975; Tinto, 1993). Research further shows that there is a positive relationship between the first-year orientation courses and retention and persistence (Derby & Smith, 2004), and academic performance (Boudreau & Kromrey, 1994). Although Boudreau and Kromrey (1994) found a significant relationship between a CSC and academic performance, the significance was not consistent throughout the longitudinal study (i.e., significance was found for only one the four cohorts studied).

### **Computer-Assisted Career Guidance Systems**

Individuals struggling with career indecision often seek assistance via career counseling, self-help tools, or computer-assisted career guidance systems (Gati, Gadassi, & Shemesh, 2005). Used by a majority of educational facilities (Mau, 1999), computer-assisted career guidance systems (CACGS) are interactive software programs designed to provide self-assessment and career exploration information (Gati, 1996). As self-assessment is a critical component of career planning (Kirk, 2000), most CACGS have been designed as a tool to guide users in learning about personal interests and to explore career options (Mau, 1999). Research has shown CACGS to be effective in addressing components of the career development process to include self-assessment, college and career information, and decision making strategies (Helwig & Snodgres, 1990; Maola & Kane, 1976; Super, 1983).

The past decade has brought a large increase in the development of a number of web-based career guidance systems (CGS) (Bobek, Robbins, Gore, Harris-Bowlsbey, Lapan, Dahir, & Jepsen, 2005). This fifth generation of CACGS (Carson & Cartwright, 1997) has further increased accessibility to career resources via the internet. One advantage of web-based CGS over computer-based software is that they are not under the control of a counseling or advising center and can be accessed at any time (Gati, Kleiman, Saka, & Zakai, 2003). Computer-based

software systems are typically located on a mainframe system that can only be accessed from a central location such as a career center. Web-based CGS can be accessed at anytime from any computer with internet capability. Despite the increase in web-based CGS, many students, or others who could possibly benefit from these tools, are unaware that the resources are available (Gati & Saka, 2001).

### **Statement of the Problem**

Research has shown career guidance systems (CGS) to be effective in decreasing indecision (Gati, Kleiman, Saka, & Zakai, 2003; Gati & Saka, 2001; Jurgens, 2000; Mau, 1999).

Unfortunately, most of this research has been conducted at four-year institutions, focusing on use in career counseling centers (Mau, 1999; Niles & Garis, 1990). More than 40% of undergraduate students in the United States are enrolled in community colleges (Horn & Neville, 2006; Phillippe & Sullivan, 2005). In addition, few community college students (5%) report utilizing career counseling services often (CCSSE, 2009). Academic advisors are in a unique position to help students blend educational experiences with career goals (Gordon, Habley, Grits, & Associates, 2008). Niles and Garis (1990) called for future research to explore how counselors can integrate CGS into curriculum to meet specific needs of students. Due to the aforementioned problems, this study assessed:

1. the effectiveness of a web-based career guidance system; and
2. the effectiveness of a web-based career development workshop; and
3. changes in the level of career decision making difficulty among community college distance learners.

### **Definition of Terms**

*Career Advising* – an integrative part of academic advising focusing on information to help students understand how their interests, skills, and work values may determine academic and career success (Gordon, 2006).

*Career Decision making Difficulty* – a potential problem affecting a person’s ability to make a decision or make optimal decisions (Gati, Krausz, & Osipow, 1996)

*Career Decision making Process* – the process of searching, comparing, and choosing attainable career alternatives (Gati & Asher, 2003).

*Career Indecision* - a problem that occurs during the career decision making process (Germejis & De Boeck, 2003).

*Computer-Assisted Career Guidance System* - interactive software programs designed to provide self-assessment and career exploration information (Brown, 2003: Gati, 1996).

*Developmental Advising* – concerned with developing the whole student, to include addressing academic, personal, and social growth (Chickering, 2006), while encouraging the advisor-student relationship.

*Distance-learning* – “the provision of academic courses and entire degree programs when instructor and students are geographically separated” (Schwitzer, Ancis, & Brown, 2001, p. 12)

*Inconsistent Information* – a category of career decision making difficulty resulting from internal conflicts, external conflicts, or unreliable information (Osipow & Gati, 1998).

*Lack of Information* – a category of career decision making difficulty resulting from a lack of information about self, occupations, ways to obtain information, or the career decision making process (Osipow & Gati, 1998).

*Lack of Readiness* – a category of career decision making difficulty due to a lack of motivation, indecisiveness, or dysfunctional beliefs about the process (Osipow & Gati, 1998).

*Prescriptive Advising* - directive advising which places authority with the advisor to tell students what to do and how to do it, with little freedom for students to make informed decisions (Smith & Allen, 2006).

*Undecided Student* – a student unable or unwilling to make academic or career decisions (Gordon, 1995).

### **Research Questions**

Since its inception in the 1960's, CGS have become an integral component of academic and career advising in most institutions of higher education in United States (Fowkes & McWhirter, 2007). By the mid 1980's, 55% of two-year colleges and 63% of four-year colleges used CGS (Floyd, 1985, Whyte, 1987). The proposed study will explore the perceptions and experiences of community college counselors and students with a web-based CGS provided for the use of academic advisors at a mid-sized, public, community college located in the southeastern U.S. This study attempted to answer the following research questions:

1. After using a web-based career guidance system, to what extent will students' level of career decision making difficulty change in terms of a) lack of readiness (lack of motivation, indecisiveness), b) lack of information (about the process, about self, about occupations, about additional resources, and c) inconsistent information (unreliable information, internal conflicts, external conflict)?
2. After participating in a web-based career development workshop which incorporates a web-based career guidance system, to what extent will students' level of career decision making difficulty change in terms of a) lack of readiness (lack of motivation, indecisiveness), b) lack of information (about the process, about self, about occupations,



about additional resources, and c) inconsistent information (unreliable information, internal conflicts, external conflict)?

3. How will change in career decision making difficulty differ between the two groups in terms of a) lack of readiness (lack of motivation, indecisiveness), b) lack of information (about the process, about self, about occupations, about additional resources, and c) inconsistent information (unreliable information, internal conflicts, external conflict)?

### **Purpose of the Study**

During the 2006-2007 academic year, 97% of public 2-year institutions offered distance-learning courses (DOE, 2008). Within this state community college system, distance-learning enrollment has increased from 3.1% in 1996 to 32% in 2007. The purpose of this preliminary quantitative study was to assess the effectiveness of a web-based career development workshop, which incorporates a web-based CGS, in changing career decision making difficulty of community college distance learners. The results of this study will be used to determine the feasibility of incorporating the workshop into the career development unit of a College Success Course (CSC) curriculum as well as its use as a tool to support academic and career advising. Change in career decision making difficulty was compared between a group of students completing the career development workshop and a group completing a web-based CGS as a stand-alone intervention.

### **Significance of the Study**

Despite the rapid growth in the type and use of CGS, little empirical research has been conducted on the effectiveness of the systems as career decision making tools (Bloch, 2006; Fowkes & McWhirter, 2007; Gati, Kleinam, Saka, & Zakai, 2003; Mau, 1999). Research which has been conducted has focused on the four-year college student (Mau, 1999; Niles & Garis,

1990) rather than the community college student who may have different career goals and experiences. In addition, this limited research does not explore the use of web-based interventions, specifically web-based career development workshops as career advising interventions for distance learners. As the State Education and Career Planning System (SECPS) chosen for this study is a new web-based system, little empirical data exists outside of the pilot survey data which was gathered between January 2009 and February 2009.

### **Relationship to Community College Leadership**

In fall 2006, community colleges enrolled 35% of all postsecondary students in the United States (Provasnik & Planty, 2008). Although community college students comprise a large portion of postsecondary students in the U.S., a large number do not persist to degree completion. Unfortunately, only 14.3% of community college students enrolled for the first time in 2003 attained an associate's degree or certificate within three years (Horn, 2009). During the 2003-2004 academic year, 30% of community college students, compared to only 12% of 4-year college students, identified themselves as undeclared or not in a degree program (DOE, 2005). If 75% of students will experience some form of uncertainty during their first two years of college (Tinto, 1993), and with the enrollment of distance learners continuing to rise, community colleges need to have interventions in place to assist students with academic and career indecision. As internet and multimedia resources continue to expand, CGS will remain an integral part of the career development process to assist college students with decision making (Iaccarino, 2000).

### **Overview of Methodology**

For the purpose of this preliminary study, a pretest/posttest, between groups comparison design was used to assess change in career decision making difficulty among undecided

community college distance learners. The proposed study took place at a mid-sized, urban, multi-campus community college in the southeastern United States. The community college has a combined enrollment of approximately 12,600 students. Participants were community college students enrolled in a college success course. Students enrolled in 14 distance-learning course sections taught during the fall 2010 semester were invited to participate. A majority of the students attended part-time (81%); were female (62%); Caucasian (65.7%); and traditional ages 18 to 25 (45%). All student participants were over the age of 18 years.

### **Instrumentation**

**Career Decision making Difficulties Questionnaire.** This study used the abridged version of the Career Decision making Difficulties Questionnaire (CDDQ) (Gati, Krausz, & Osipow, 1996). The abridged version of the CDDQ contains 30 Likert-type items to address three main categories of career decision making difficulty: 1) lack of readiness, 2) lack of information, and 3) inconsistent information. All student participants were asked to complete an electronic version of the CDDQ as a pretest on the first day of the course to measure initial level of career indecision. After completing the web-based CGS or the web-based career development workshops, all students completed an electronic version of the CDDQ as a posttest during the third week of the course.

**State Education and Career Planning System.** All students participating in the research project completed the State Education and Career Planning System (SECPS) as part of the CSC curriculum. The SECPS was the constant variable for the study. Half of the participants were randomly assigned to the web-based career development workshop. The goal was to compare the levels of career indecision change between two groups of students: (1)

students who completed the SECPS as a stand-alone tool, and (2) students who completed the web-based career development workshop and the SECPS.

During the second unit of the course (weeks three and four), all students independently completed the SECPS assignment. The SECPS was developed as a web-based resource to help secondary and community college students with educational, career, and four-year college transfer planning. Students randomly assigned to Group 2 completed the career development workshop modules as a guide to completing the SECPS assignment.

### **Limitations**

Potential limitations to this study should be noted. The small sample size ( $n = 19$ ) from a single community college will limit the generalizability of results to other populations and settings. The use of a new web-based CGS further limits generalizability of results to other web-based systems. Research to gather data to measure reliability of the system has not yet been conducted. In addition, the research design only included two groups rather than a Solomon's (1949) four-group design which controls for the possibility of a pretest changing a subject's perception of an intervention. The lack of four groups increases the potential of confounding variables and extraneous factors to impact results and reduce generalizability of findings.

### **Conclusion**

Community college counselors and administrators continue to seek innovative interventions to address the issue of student academic and career indecision. Individual counseling, group counseling, first-year experience or other student development courses are just a few means used to educate students about academic and career options, campus resources, and decision making skills. With the continued increase in distance-learning enrollment, effective ways to provide student development and career advising services to distance learners need to be

explored. Web-based CGS and web-based career development workshops can be effectively incorporated into individual or group counseling sessions as well as college success courses. As internet and multimedia resources continue to expand, CGS will remain an integral part of the career development process to assist college students with decision making (Iaccarino, 2000). This study explored one application of web-based career development tools in the community college context.

## **CHAPTER 2**

### **Review of the Literature**

Several developmental theories (Chickering and Reisser, 1993; Erickson, 1963; Holland, 1973; Tiedeman & O'Hara, 1963) and career interventions (Gati & Asher, 2001; Gordon, 2006) have been reviewed to explore various interventions suggested to address career indecision among college students. There are contradictory findings as to which, if any, interventions are more effective than others. This review will explore career and developmental theories providing the framework for this study, as well as a synthesis of empirical research addressing the role of web-based career guidance systems (CGS), academic and career advising, career development workshops, and college success courses (CSC) to reduce career indecision among community college students.

### **Career Decision making Difficulty**

The majority of people will have to make career decisions and have career problems to solve (Holland, 1973). Career decision making difficulty is becoming an important construct in understanding the career development of young adults (Mau, 2004) and has been linked to career indecision (Mau, 2004; Osipow & Gati, 1998). Career indecision has been referred to as a problem that occurs during the career decision making process (Germeijs & De Boeck, 2003). Gati and Asher (2001) define career decision making as “the process people go through when they search for viable career alternatives, compare them, and then choose one” (p. 7). Often, the first step to choosing a career begins in college. Students choose to attend college for a variety of reasons, but many attend primarily to prepare for a successful career (Astin, 1997; Broekemier, 2002). Students typically choose a college major that relates to a chosen career field. For example, a student interested in a career in health care may choose to major in nursing or pre-medicine. Choosing a major may be one of the most important decisions a college student will

make as it affects the individual's future course and quality of life (Gati & Asher; Guay, Ratelle, Senécal, Larose, Deschênes, 2006; McJamerson, 1991). However, it is often one of the most difficult decisions to make. It is not uncommon for some students to begin the college experience undecided or unclear about academic or career choices (Allen, 1999; Gordon, 2006). Regardless of whether a student is attending college immediately after high school or later in life, the student may experience some level of anxiety and conflict and will be required to set goals and make independent decisions (Chickering & Reisser, 1993). An estimated 20% to 40% of college freshmen are undecided (Gordon, 2006). These undecided students have been classified as developmentally undecided, major changers, and chronically indecisive.

### **Developmentally Undecided Students**

Undecided college students and career indecision have been a concern for counselors and academic advisors for 70 years (Gordon, 1998; Gordon, 2006). Students who struggle with uncertainty for long periods of time are considered to be more likely to leave college without completing a degree program (Tinto, 1993). A large number of first-year college students are uncertain about long-term academic and career goals (Tinto, 1993) for a variety of reasons. Some students may be developmentally undecided due to a lack of information about personal values, interests, and skills; academic programs; career options; or decision making skills (Gati, 1996; Gordon, 1995). In addition, students may be undecided because they lack the readiness to begin the decision making process, or because they have received inconsistent information (Gati, Krausz, & Osipow, 1996). Regardless of the reason, 75% of students will experience some form of uncertainty that may increase during the first two years of college (Tinto, 1993).

### **Major Changers**

Other students may be able to make decisions, such as choosing a major, but change their minds often (Gordon & Steele, 1992), becoming what Gordon (1995) has termed major-changers. Gordon has identified six types of major-changers: 1) drifter, 2) closet changer, 3) external, 4) up-tighter, 5) expert, and 6) systematic. Drifters are aware that they may not have chosen the best major for them but are reluctant to seek help because they do not know how, do not feel pressured to do so, or may not have the time due to other responsibilities such as work or family. Closet changers mentally change their minds about their major but do not formally request a change through their academic advisors. They do not want to make a commitment to change because it may be against the desires of a parent or they may be unsure of their ability to meet the academic requirements. They end up with a schedule of classes that seem random rather than well planned.

External major changers, in contrast to the closet changers, frequently make formal requests for major changes. They make a decision based upon the advice of anyone who believes something new is better than what they have chosen. The up-tighters are students who have arrived at college with a pre-determined major. Unfortunately, program admissions requirements or a mismatch between abilities and interests may prevent a student from being admitted into or successful in their chosen major. They are initially reluctant to consider alternatives but eventually realize the situation requires a change. Similar to the up-tighters who need to change a major, the experts are the know-it-alls who refuse to seek help and deny the fact that they may be enrolled in an unrealistic major. These are students who have an unrealistic view of their strengths and abilities and continue to enroll in courses they are not prepared to take, and as such, may not be successful in the courses.



Unlike the above major changers who are reluctant to seek help, the systematic major-changer takes advantage of campus academic and career advising services to explore alternatives in an organized, coordinated manner (Gordon, 1995). They gather new information, assess their own strengths and weaknesses, and are prepared to follow a decision with appropriate action. The systematic major-changer is the ideal student to work with. Academic and career advisors need to be aware that not all students come to college with the same developmental skills, and that each student needs to be acknowledged for where he or she is in the process and assisted with appropriate strategies that support his or her individual needs.

### **Chronically Indecisive Students**

Many students experience high levels of generalized anxiety which makes overall decision making very difficult (Gordon, 1998). Chronically indecisive students are unable to make a commitment to an academic or career choice (Gordon, 2006; Gordon, Habley, Grites, & Associates, 2008) and are often unable to make any decisions without difficulty (Appel, Haak, & Witzke, 1970; Goodstein, 1965; Habley, Grites, & Associates, 2008; Slaney, 1988). Multon, Heppner, and Lapan (1995) describe these students as lacking “strong motivation to become more clear about their values and goals because of a general discomfort about making a decision and a tendency to avoid learning more about occupations” (p. 87). A chronically indecisive student may have psychological issues that need to be resolved before career decision making can be addressed (Hartman & Fuqua, 1983). An indecisive student may require counseling beyond the expertise of an academic advisor (Gordon, 1995). According to state data sources, during the fall 2008 semester, 30% of students enrolled in community colleges throughout the state, and 44% of students enrolled within this institution were unclassified students. Unclassified students are defined as students not enrolled in a transfer or technical program area.

### **Community College Student Profile**

Meeting the diverse developmental needs of college students remains a priority for institutions of higher education, particularly at the community college level. Vaughan (2006) makes the following observation regarding community colleges and other higher education institutions: “Rather than turn away people who do not have the prerequisites for college-level work, the community college offers avenues for students to obtain the necessary prerequisites” (p. 5). Four out of 10 undergraduate students in the United States attend a community college (DOE, 2006). Although the population of traditional-aged students attending community colleges is increasing, non-traditional aged students dominate the population at 53% (Horn & Nevill, 2006). Community college students are also more likely to be female, low-income, and employed (Horn & Nevill, 2006). Although not the majority, 40% of community college students are non-Caucasian.

In 2005, U.S. Secretary of Education, Margaret Spellings established The Commission on Higher Education to investigate the current goals and issues concerning higher education. One year later, The Commission published its report titled *A Test of Leadership: Charting the Future of U.S. Higher Education* (DOE, 2006), and found that only 66% of full-time students attending four-year institutions graduated within six years. In comparison, only 14.3% of community college students enrolled for the first time in 2003 attained an associate’s degree or certificate within three years (Horn, 2009). Four out of 10 students among the 14 million undergraduates attended community colleges, with 40% attending part-time. The overall demographic of American college students has changed across all levels of higher education. The line separating the traditional and non-traditional student has become blurred. For example, The Commission

reports that 40% of college students are independent students 24 years of age or older, 33% are employed full-time, and 27% have dependent children (DOE, 2006).

### **Mission and Growth of Community Colleges**

Over 900 community colleges have been established in the United States between 1950 and 2006 (Mello & Heelan, 2008). When branch campuses are included, the approximate total is 1600 public and private community colleges with a common mission to provide accessible, quality education with a commitment to serve the community with open-access admissions, comprehensive educational programs, teaching, and lifelong learning (Vaughn, 2006). Open-access admissions policies create a unique challenge for community colleges to provide quality academic and career advising services for students with diverse needs. In fall 2006, community colleges enrolled 35% of all postsecondary students in the United States (Provasnik & Planty, 2008). During the 2003-2004 academic year, 30% of community college students, compared to only 12% of four-year college students, identified themselves as undeclared or not in a degree program (DOE, 2005).

### **Learning from a Distance**

Distance-learning is defined as “the provision of academic courses and entire degree programs when instructor and students are geographically separated” (Schwitzer, Ancis, & Brown, 2001, p. 12). Learning from a distance is not a new concept. Evidence of the first established post-secondary institution to offer distance-learning courses has been traced back to an advertisement to study composition through postal mail from a Swedish university in 1833 (Holmberg, 2002).

Distance education is defined as the “acquisition of knowledge and skills through mediated information and instruction, encompassing all technologies and other forms of learning

at a distance” (U.S. Distance Learning Association, n.d.). Tremendous technological advancements in distance-learning have been made since the correspondence courses of nearly 200 years ago. Early technological advances included Detroit public schools experiments with teaching by radio in the 1930’s (Schwitzer, 1997) and televised instruction in the 1940’s and 1950’s (Zigarell, 1991). Satellite technology and fiber-optic systems later enhanced distance-learning by allowing two-way live transmission of courses (Simonson, Smaldino, Albright, & Zvacek, 2000). Today’s technology driven and communication centered methods allow greater interaction between faculty and students much like the traditional college course experience (Schwitzer, Ancis, & Brown, 2001). The number of community colleges offering distance-learning courses has increased considerably over the past decade. During the 2006-2007 academic year, 97% of public 2-year institutions surveyed by the National Center of Education Statistics offered distance-learning courses (DOE, 2008). This is a 63% increase from the 1997-1998 academic year. Thirty-two percent of students within the state were enrolled in at least one distance-learning course during the 2007-2008 academic year.

As technology continues to influence distance-learning, it has also influenced various educational and administrative functions of student affairs (Moneta, 1997; Moneta, 2005). Use of a personal computer among college students has increased 62.3% between 1985 and 2004 (Higher Education Research Institute [HERI], 2005). Post-secondary institutions are taking advantage of web-based technologies to provide career services information, academic advising, online campus tours, and online student orientation (Moneta, 2005). Online student support services provide an ideal venue to meet the needs of the millennial student who has grown up with a computer generation and expects to be able to locate information electronically (Pullan, 2009).

### **Career Interventions**

Undecided college students need assistance to assess personal interests, skills, and values as they relate to major or career decision making. A variety of venues are available to assist students with the career decision making process. In an effort to address the needs of undecided students, interventions are available through college success skills or first-year experience courses, career development workshops, academic and career advising, and the use of web-based CGS.

#### **College Success Courses**

College success courses (CSC) focus attention on first-year students and the transition to college. According to Gardner (1986), CSC's (also known as first-year experience courses or freshman seminar courses) were designed to address the deficiencies of underprepared high school graduates attending college. As a majority of student stop-out, drop-out, or withdrawal occurs before the second academic year (Tinto, 1993), CSC's have been shown to have positive effects on the college experience to include retention and persistence (Derby & Smith, 2004), and academic and social integration (Stovall, 2000). Career development is included in typical course content that also addresses campus resources, the college transition, and life management skills (Stovall, 2000).

CSC's are used as a means to improve student retention and persistence in higher education, usually targeting first-year or freshman students. Course content varies among institutions, but typically includes academic and social topics such as study skills, time management, test-taking skills, college policies and procedures, personal goal setting, and educational and career planning (Ryan & Glenn, 2004). Regardless of the content of the course, the goal remains "to help young people acquire the social skills and adopt the social norms of

behavior appropriate to membership in the diverse adult communities of the college” (Tinto, 1993, p. 164-165). Those social norms include gainful employment in the workforce. Although research in the area of CSC’s at the community college has increased, a majority of the literature focuses on four-year institutions, often overlooking significant differences between student profiles. While CSC’s play a significant role at both types of institutions, the needs of the community college student often differ from those of students attending four-year institutions as community college students are often older, employed full-time, and have dependent children (DOE, 2006). CSC’s provide an avenue to assess student needs and provide an awareness of resources to address problems that may occur (Derby & Watson, 2006).

### **Academic and Career Advising**

In order to effectively educate the whole student, colleges must hire staff members with knowledge of student development and how to foster it (Chickering & Reisser, 1993). Academic advisors are in a unique position to help students blend educational experiences with career goals (Gordon, Habley, Grites, & Associates, 2008). Two models of academic advising dominate the literature: prescriptive advising and developmental advising. Prescriptive advising is very directive. Authority is placed with the advisor to tell students what to do and how to do it, with little freedom for students to make informed decisions (Smith & Allen, 2006). In contrast, developmental advising is concerned with developing the whole student, to include addressing academic, personal, and social growth (Chickering, 2006), and encourages the advisor-student relationship (Bland, 2004). Students are guided toward goal setting and goal achievement (Kadar, 2001).

There is some evidence that academic advising is more beneficial for the underprepared college student than for the college-ready student (Bahr, 2008). Although academic advising and

counseling has a positive impact on student success (Campbell & Nutt, 2008), few community college students take advantage of the services. The results from the national 2008 College Student Report (CSR), developed by the Community College Student Survey of Engagement (CCSSE), showed that while 90% of students indicate that academic advising is important and 79% indicate that career counseling is important, only 13% of students utilize academic advising services often and only 5% utilize career counseling services often (CCSSE, 2009). In addition only 24% reported that the community college experience strongly helped them to establish clearer career goals.

### **Career Development Workshops/Career Planning Courses**

Academic and counseling services are more effective when students are required to participate, and the experience is integrated into the educational process (Tinto, 1993). Niles & Garis (1990) incorporated the use of computer-assisted career guidance systems (CACGS) into an existing career planning course and found students obtained lower scores on measures of indecision than students in a control group exposed only to the career planning course. According to Halasz and Kempton (2000), the identification of a target population is one of the most important steps to designing a career course or workshop. For the purpose of this study, a career development workshop will be created for distance learners enrolled in a CSC.

### **Computer-Assisted Career Information and Guidance Systems**

Since its inception in the 1960's, computer-assisted career information (CIS) and guidance systems (CGS) have become an integral component of academic and career advising in most institutions of higher education in the United States (Fowkes & McWhirter, 2007). By the mid 1980's, 55% of two-year colleges and 63% of four-year institutions used CGS (Floyd, 1985; Whyte, 1987). Used by secondary and post-secondary educational facilities, CGS are interactive

software programs designed to provide self-assessment and career exploration information (Brown, 2003; Gati, 1996). As self-assessment is a critical component of career planning (Kirk, 2000), most CGS have been designed as a tool to guide users in learning about personal interests and to explore career options (Mau, 1999). Research has shown CGS to be effective in addressing components of the career development process to include self-assessment, college and career information, and decision making strategies (Helwig & Snodgres, 1990; Maola & Kane, 1976; Super, 1983).

During the past 50 years, the use of computers in career guidance has evolved over five generations (Rayman, 1990). The first generation involved batch-processing systems. Students completed scannable questionnaires that were processed in batches by computers used only as storage devices. Students did not have direct contact with a computer until the development of the second generation of on-line information systems. This second generation was the birth of Computer Information Systems (CIS) that capitalized on three powerful capabilities: 1) interactive and structured interviews, 2) online monitoring system to store user information records, and 3) sophisticated strategies to search files and modify choices made during previous sessions.

The third generation progressed naturally from the second (Rayman, 1990). As computer speeds, telecommunication capabilities, and data storage increased, the third generation saw the birth of computer-assisted career guidance systems (CACGS) as career planning and counseling content, such as online assessments, simulated exercises, and instructional modules were added to CIS. For the first time career development theory was integrated into the creation of CACGS. The fourth generation was sparked by the development of microcomputers. CACGS were marketed for microcomputers rather than for larger mainframe systems.



During the past decade, a large increase in the number of web-based CGS have emerged (Bobek, Robbins, Gore, Harris-Bowlsbey, Lapan, Dahir, & Jepsen, 2005). This fifth generation of CGS (Carson & Cartwright, 1997) has further increased accessibility to career resources and information available via the internet. The continued growth in the use of CGS within higher education shows that it serves to fill a need for alternative individual career counseling approaches (Niles & Garis, 1990). Despite the rapid growth in the type and use of CGS, little empirical research has been conducted to assess the effectiveness of these systems as career decision making tools (Bloch, 2006; Fowkes & McWhirter, 2007; Gati, Kleiman, Saka, & Zakai, 2003; Mau, 1999). Research that has been conducted has focused on the four-year college student (Mau, 1999; Niles & Garis, 1990; Robinson, Meyer, Prince, McLean, & Low, 2000) and user satisfaction (Offer & Sampson, 1999; Peterson, Ryan-Jones, Sampson, Reardon, & Shahnasarian, 1994). This limited research does not explore the use of web-based CGS as academic advising tools.

Individuals struggling with career indecision often seek assistance via career counseling, self-help tools, or computer-assisted career guidance systems (Gati, Gadassi, & Shemesh, 2006). One advantage of web-based CGS over computer-based software is that they are not under the control of counseling or advising centers and can be accessed at any time (Gati, Kleiman, Saka, & Zakai, 2003). Computer-based software is typically located on a mainframe system or microcomputers that can be accessed from a central location such as a career center. Web-based CGS can be accessed at anytime from any computer with internet capability. Despite the increase in web-based CGS, many students, or others who could possibly benefit from these tools, are unaware that the resources are available (Gati & Saki, 2001).

### **Theoretic Framework**

Chartrand, Martin, Robbins, McAuliffe, Pickering, and Calliotte (1994), suggest productive research regarding career indecision concepts will require integration of additional theoretical frameworks other than traditional career development theory. Psychosocial development (Erikson, 1968, Marcia, 1980) and student development theories (Chickering & Reisser, 1993) have been used to characterize various levels of career indecision (Gati & Asher, 1996; Gordon, 1998; Lucas & Epperson, 1988). This section will provide a brief overview of these theories as they relate to the theoretical framework (Gordon, 2006) chosen for this study.

### **Psychosocial Development Theories**

**Identity vs. role confusion.** Erickson (1963) defines eight stages of adolescent development as crises experienced at various stages of the life cycle: 1) basic trust vs. basic mistrust, 2) autonomy vs. shame and doubt, 3) initiative vs. guilt, 4) industry vs. inferiority, 5) identity vs. role confusion, 6) intimacy vs. isolation, 7) generativity vs. stagnation, and 8) ego integrity vs. stagnation. Stage 5, identity vs. role confusion is where adolescents may begin to experience career indecision as they struggle to integrate their perceptions of themselves, the skills and abilities they have developed during the earlier stages, and social roles such as a career (Erikson, 1963).

**Ego-identity status.** Focusing on Erikson's (1963) ego identity and identity diffusion, Marcia (1966) defined four areas of ego identity status to identify levels of identity achievement and identity diffusion: a) identity achievement, b) moratorium, c) foreclosure, and d) identity diffusion. An identity-achievement student has experienced crisis and has made a commitment to a career. The student has made decisions based upon a review of career alternatives and past beliefs. A student experiencing identity diffusions may not be in crisis, but also has not made a commitment to a career choice, and has little concern to do so. A moratorium student is in crisis

and is experiencing difficulty make a commitment. The student focuses on past unresolved issues as he or she tries to balance parents' wishes, demands of society, and his or her own skills and abilities. A foreclosure student has not been in crisis but has made a commitment.

**The sixth vector.** Chickering and Reisser's (1993) seven vectors describe pathways a person may travel as he or she moves towards finding his or her unique place as a person in the world. That pathway is typically a bumpy road for college students as they experience anxiety and conflict that will require goal setting, decision making, and the development of greater autonomy (Chickering & Reisser, 1993). Of the seven vectors (developing competence, managing emotions, moving through autonomy toward interdependence, developing mature interpersonal relationship, establishing identity, developing purpose, and developing integrity) developing purpose is the most relevant to this study. One can think of developing purpose as a stage where a person may be all dressed up with nowhere to go. Many students attend college to prepare for a job that will help them establish a comfortable lifestyle, not necessarily to increase their knowledge or skills (Chickering & Reisser, 1993). A person in the process of developing purpose will assess interests, clarify goals, and make plans and set priorities that incorporate three areas: "1) vocational plans and aspirations, 2) personal interests, and 3) interpersonal and family commitments" (p. 50).

### **Career Development Theories**

**PIC model for career decision making.** Prescreening, In-depth exploration, and Choice ([PIC], Gati & Asher, 2001) is a prescriptive, three-stage model for guiding the career decision making process and reducing uncertainty. The model is intended to assist an individual to find career alternatives compatible with his or her interests and abilities. The three sequential steps of the model include: 1) prescreening, 2) in-depth exploration, and 3) choice.

The goal of the prescreening stage is to develop a small, manageable list of career alternatives by eliminating alternatives that are not compatible with interests, work values, and abilities (Gati & Asher, 2001). An individual works through this stage following three substages: a) preparation, b) sequential elimination, and c) review for missing alternatives. During the preparation substage, individuals begin with an exploration of their work values and abilities and move on to create a ranked listing of preferences. Through sequential elimination, each alternative is compared with the additional preferences, such as level of education required, in order to eliminate alternatives that do not fit their preferences. During the final substage, individuals review the ranked list to make sure possible matching alternatives have not been omitted.

During the in-depth exploration stage, the goal is to guide the individual to gather detailed information about careers in order to identify suitable career options (Gati & Asher, 2001). This stage is a time of research for individuals to learn as much information about their career alternatives in order to further eliminate options that do not fit their preferences.

Individuals should consider an alternative as suitable if it meets each of four criteria:

1. Is this career compatible with my preferences in the most important aspects, i.e., independence, flexible scheduling, length of education, etc.?
2. Is this career compatible with my preferences in the less important, acceptable compromising aspects as well?
3. Based on the information collected about this career, do I meet or am I willing to meet the required core aspect, i.e., extensive travel, or high stress working conditions?

4. Based on my previous skills, educational experience, and academic performance am I able to attain this career? (Gati & Asher, 2001)

The goal of the choice stage is to evaluate information collected during the first two stages to choose the most suitable career and at least one alternative (Gait & Asher, 2001). Advantages and disadvantages of each alternative are compared to choose a suitable career that can be actualized based upon the information gathered during the previous two stages. The choice stage ends with implementation of the decision. Implementation may include completing a high-school diploma if required for chosen career, applying to college or more than one college, changing a major to prepare for the chosen career, or taking additional courses that will increase the likelihood of attaining the chosen career.

**Person-environment fit.** Most CGS link theory and practice (Mau, 1999; Walsh & Savickas, 1996). John Holland has become known as one of the most prominent career development theorists in the field (Brown, Brooks & Associates, 1996). The purpose of Holland's (1966) theory is to help people of all ages make satisfying career choices (Luzzo, 2000). Holland (1966, 1985, 1997) classified personality types and work environments into six categories: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (RIASEC). Each personality type has a work environment. To show the relationship between personality types and environment, Holland organized the types into a hexagonal shape representing his theory of consistency, congruence, differentiation, and identity (Luzzo, 2000). Holland used his theory as a basis to create career interest inventories such as the Vocational Preference Inventory (VPI) and the Self-Directed Search (SDS), and his theory was later incorporated into the Strong Interest Inventory (SII) (Luzzo, 2000).

Research has suggested a relationship between Holland's (1973) personality types used with CGS and preferred career interventions (Lenz, Reardon, & Sampson, 1993). The primary goal of Holland's theory is to explain vocational behavior and practical ideas to help people of all ages to select or change careers and attain career satisfaction (Holland, 1973). Holland characterizes people based on six personality types: realistic, investigative, artistic, social, enterprising, and conventional. Students scoring higher on the social and enterprising personality scales reported that the use of CGS had a lower contribution on their personal and occupational knowledge. These students would be best served by having face-to-face counseling sessions following a CGS intervention.

**Differentiation and integration.** Tiedeman and O'Hara (1963) define career development as the study of the means people choose to achieve a specific end as they identify their place in the world through a continuous process of differentiation and integration. Differentiation is experienced when a person realizes that a problem exists and a decision must be made in order to solve the problem. During this stage a person begins to explore goals, assess pros and cons and assigns values to alternatives, makes a choice to pursue a goal or alternative with varying degrees of certainty, and clarify those goals by taking action. As the person implements his or her choice or makes adjustments, he or she experiences a reality check as he or she is socialized or inducted into the workplace. The individual begins to experience how his or her role relates, or does not relate, to the society's role (i.e., the imagined role of a college student vs. the college's expectation of a college student). The individual is generally receptive to the new roles as long as he or she feels accepted by others, allowing the individual to assimilate into the new environment (i.e., college or workplace).

The individual later begins to identify with the new group, his or her role within the group, and then engages others to excel. The new identity is integrated into the new system and the individual becomes a productive member of the system. In summary:

Career development then is self development viewed in relation with choice, entry, and progress in educational and vocational pursuits. It is an evolving conception of self-in-situation which is occurring over time in man who is capable of anticipation, experience, evaluation, and memory... Hence, career development not only occurs within the context of one decision, career development ordinarily occurs with the context of several decisions. (Tiedeman & O'Hara, 1963, p. 46)

It is not surprising that so many students have difficulty making decisions. They struggle with their place in the world as opposed to the place expected by parents, educators, and society. Decision making may be particularly difficult for college students for whom the consequences of decisions may be delayed until after graduation (i.e., employment). When these outcomes are delayed, doubt is likely to set in after only a short amount of time (Tiedeman & O'Hara, 1963). Therefore,

... the aim of vocational counseling is to enhance the operation of reason in this dynamic process of career development and to free the person for progress in taking and acting upon a particular decision as well as in viewing decisions in relation to those taken and those possible. In this way, the counselor hopes to bring each client for whom the counselor is responsible to view his educational and vocational decisions as a means-end chain; that which is an end at an earlier time is to become a means for a later goal.

Behavior is to become consciously purposeful, evaluation is to become more meaningful, and an elaboration of self is to ensue (Tiedeman & O'Hara, p. 48).

### **Career Advising Framework**

Gordon's (2006) 3-I framework provides a unique plan for academic advisors to integrate the career component into their work with students. Based upon Tiedeman and O'Hara's (1963) planning stage of differentiation, the framework includes three interactive phases a student may pass through as the student explores academic and career options, makes decisions, and plans for implementation of choices: 1) inquire, 2) inform, and 3) integrate. During the inquire stage, students are identifying concerns, clarifying needs, and taking action to collect more academic and career information.

Following inquiry, a student moves into the inform phase. During this phase students review self-assessment information they have gathered regarding 1) personal skills, interests, and values; 2) educational information to relate academic choices to career paths; and 3) occupational information relevant to academic and career goals. Career advising will allow an academic advisor to assist students making the connection between academic and career information. According to Gordon (2006), "one of the goals of career advising is to teach students where to find career information and how to interpret it within the context of their place in the exploration process" (p. 77).

The final phase of the 3-I framework is the integrate stage. Gordon (2006) defines integrate as "coordinating or blending all the student knows into a functioning or unified whole" (p. 79). Through the inquire and inform stages, students have gathered a lot of information about their interests and strengths, as well as academic and career information, but may need help to make connections among each area to make a well informed academic or career decision. Gordon suggests introducing students to career classification systems such as Holland's (1997)



person-environment system to help students integrate the information they have gathered throughout this process.

## CHAPTER 3

### Methodology

The purpose of this preliminary quantitative study was to assess the effectiveness of a web-based career development workshop to change career decision making difficulty of undecided community college distance learners. A pretest/posttest, between groups comparison design was used to assess change in career decision making difficulty. The pretest/posttest design, also referred to as a before-and-after design, is an appropriate measure of the impact of an intervention because it establishes a baseline before an intervention and the potential affects after the intervention (Kumar, 2005). The design best addressed the following research questions:

1. After using a web-based career guidance system, to what extent will students' level of career decision making difficulty change in terms of a) lack of readiness (lack of motivation, indecisiveness), b) lack of information (about the process, about self, about occupations, about additional resources, and c) inconsistent information (unreliable information, internal conflicts, external conflict)?
2. After participating in a web-based career development workshop which incorporates a web-based career guidance system, to what extent will students' level of career decision making difficulty change in terms of a) lack of readiness (lack of motivation, indecisiveness), b) lack of information (about the process, about self, about occupations, about additional resources, and c) inconsistent information (unreliable information, internal conflicts, external conflict)?
3. How will change in career decision making difficulty differ between the two groups in terms of a) lack of readiness (lack of motivation, indecisiveness), b) lack of information

(about the process, about self, about occupations, about additional resources, and c)

inconsistent information (unreliable information, internal conflicts, external conflict)?

The remainder of this chapter will address research variables, participants, instrumentation, and research procedures proposed for the study.

### **Research Variables**

Gati and Asher (2001) define career decision making as “the process people go through when they search for viable career alternatives, compare them, and then choose one” (p. 7). Often a problem occurs during the career decision making process, particularly for college students, creating indecision (Germeijs & De Boeck, 2003). Students may have difficulty making a decision due to a) a lack of readiness, b) a lack of information, or c) inconsistent information (Gati, Krausz, & Osipow, 1996).

#### **Lack of Readiness**

Lack of readiness is the only category of the taxonomy to take place prior to beginning the decision making process (Gati & Osipow, 1996). This category includes three subcategories which may hinder a person’s willingness or readiness to begin the career decision making process: a) lack of motivation to begin the process, b) general indecisiveness regarding all decisions, and c) dysfunctional beliefs or irrational expectations (Nevo, 1987) regarding the process (Gati, Saka, & Krausz, 2001). This study will explore change in mean CDDQ scores of the lack of readiness scale for Group 1, Group 2, and between Groups 1 and 2.

#### **Lack of Information**

Lack of information is an area of difficulty occurring during the career decision making process (Gati & Osipow, 1996). This category includes four subcategories pertaining to lack of information about a) self, b) occupations, c) career alternatives, and d) ways to obtain additional

information about self or occupations (Gati, Saka, & Krausz, 2001). This study will explore change in mean CDDQ scores on the lack of information scale for Group 1, Group 2, and between Groups 1 and 2.

### **Inconsistent information**

Like lack of information, inconsistent information is also an area of difficulty occurring during the career decision making process (Gati & Osipow, 1996). A person may experience difficulty relating to inconsistent information from one of the three subcategories: a) unreliable information, b) internal conflicts, and c) external conflicts (Gati, Saka, & Krausz, 2001). This study will explore change in mean CDDQ scores on the inconsistent information scale for Group 1, Group 2, and between Groups 1 and 2.

## **Participants**

### **Setting**

The study took place at a mid-sized, suburban, multi-campus community college in the southeastern United States. Following the mission of community colleges to offer high-quality, affordable, and accessible higher education to the community, the institution offers freshman and sophomore-level transfer courses, career and technical programs, and lifetime learning courses for professional and personal development. During the 2008-2009 academic year, the community college reported a combined enrollment of approximately 12,600 students. A majority of the students attend part-time (81%); were female (62%); Caucasian (65.7%); and traditional ages 18 to 25 (45%).

## **Instrumentation**

### **Career Decision making Difficulties Questionnaire**

The Career Decision making Difficulties Questionnaire (CDDQ) (Gati, Krausz, & Osipow, 1996) was originally created as a 44-item Likert-type questionnaire based on three

categories of difficulties: 1) lack of readiness, 2) lack of information, and 3) inconsistent information. The questionnaire begins with asking demographic information to identify participant's age, sex, years of education, and level of decision making difficulty (Gati, Saka, & Krausz, 2001). This study used the abridged version of the CDDQ which contains 30 Likert-type questions to identify sources of difficulty within 10 subscales - lack of readiness due to a) lack of motivation, b) indecisiveness, c) dysfunctional myths, or d) lack of knowledge about the decision making process; lack of information about a) self, b) occupations, or c) ways of organizing information; and inconsistent information due to a) unreliable information, b) internal conflicts, or c) external conflicts (Gati, Saka, & Krausz, 2001). The questionnaire asks participants to rate their level of difficulty in each area on a 9-point scale (1 = does not describe me to 9 = describes me well (Gatis, Krausz, & Osipow, 1996). The questionnaire also asks participants to rate their overall severity of career decision-making difficulties on a 9-point scale (1 = not severe at all to 9 = very severe). The questionnaire is scored by calculating mean responses for questions within each main category and within each subscale.

Gauti, Krausz, and Osipow (1996) measured parametric properties of the CDDQ with both Isreali and American samples of military personnel in transition. Both populations showed acceptable variability and correlations among the scales ( $Mdn = .37$  and range = .06-.78 for Isreali sample;  $Mdn = .46$  and range = -.05-.76 for American sample). Reliability of the categories Lack of Readiness, Lack of Information, and Inconsistent Information were .67, .74, and .72 respectively for the Isreali sample, and .63, .95, and .89 respectively for the American sample. Osipow & Gati (1998) found similar results with a U.S. sample of college students with reliability of the categories Lack of Readiness, Lack of Information, and Inconsistent

Information reported as .62, .94, and .86 respectively. Reliability for the entire instrument was reported as .94 (Osipow & Gati, 1998).

### **State Education and Career Planning System**

The web-based CGS used for this study, identified as the State Education and Career Planning System (SECPS), is a new website launched in March 2009, as a tool to help users explore majors and careers, find college and university information, estimate and compare community college and four-year college costs, plan transfer from community college to four-year institutions, apply for college admission, and apply for financial aid. The website also includes a resume builder, interview tips, as well as self-assessments for personal interests, skills, and work values.

The interest assessment included on the website is a Holland-based (1953) tool which provides users with a primary and secondary Holland code. Career options are presented under five tabs based on level of education required: 1) high-school diploma, 2) less than two-year degree, 3) two-year degree, 4) two-year or four-year degree, and 5) four-year degree or higher. Each occupation listed is linked to detailed information about needed employment skills, duties, regional median salary, and neighboring community colleges that offer certificate or degree programs to prepare for the career. A key feature of the SECPS is a label for in-demand fields and a list of local employers who hire persons for the occupation. Usability and content validity of the SECPS was measured during a pilot test and survey completed between January 27, 2009 and February 12, 2009. Surveys were completed by 1,819 students, to include 1,391 (76.9%) community college students and 419 (23.1%) secondary students in grades 7 – 12. Results of the study showed that students rated satisfaction, ease of use, and helpfulness of the SECPS at 90% to 95%.

### **Web-based Career Development Workshop**

To explore the design (Kumar, 2005) of the web-based career development workshop, a pilot study was conducted during the summer 2010 semester. Five students enrolled in an eight-week distance-learning CSC completed a five-module workshop. Pilot test responses were used to refine the workshop to reduce the number of modules to three prior to the fall 2010 data collection.

The final web-based career development workshop consisted of 3 modules based upon Gati's (2001) PIC model of career decision making: 1) Introduction, 2) Career Development (Prescreening, In-depth Exploration and Choice), and 3) Conclusion. The workshop began with the Introduction module which contained an overview of the workshop and an introduction to the career decision making process. This module also contained the Student Information Sheet and the CDDQ pretest for students to complete. These documents were created using Google Documents and embedded into the workshop shell. WimbaVoice tools were used to narrate the introduction and instructions to complete the documents.

The Career Development Module was based on Gati and Asher's (2001) Prescreening, In-depth Exploration, and Choice (PIC) model. The pre-screening section guided participants through SECPS assessments to explore their interests, skills, and work values. Holland's (1953) hexagon was introduced to explain how the primary and secondary codes relate to person-environment fit. A Career Assessment Profile was included in this section for participants to record results from each assessment. Based upon occupations identified from the assessments, participants next conducted an in-depth exploration of a minimum of six occupations to include information regarding educational requirements, salary, demand of the career, salary, and local employers. Information learned from the in-depth exploration was recorded on the Career

Exploration Worksheet. After exploring various occupations, participants were asked to narrow career alternatives to two choices and record those choices and an explanation of how the research led to those choices on the Choice Worksheet. The workshop ended with the Conclusion module which contained the CDDQ posttest and the web-based career development workshop evaluation.

### **Demographic Data Sheet**

A demographic data sheet was created for use in this study. The purpose of the data sheet was to provide demographic information regarding participants, to include age, ethnicity, sex, enrollment status, employment status, degree plans, and distance-learning history. These variables were further explored during data analysis to identify student characteristics that may contribute to the effectiveness of the SECPS and change in career decision making difficulty.

### **Research Procedure**

Data collection took place during the fall 2010 semester. During the first week of class, students enrolled in 14 distance-learning course sections ( $N = 420$ ) were asked to voluntarily participate in the study. All student participants were 18 years of age or older. Efforts were made to have a diverse pool of participants to mirror the demographics of the institution. As an incentive to participate, participants were eligible to enter a lottery drawing to win one of two \$175.00 gift cards to the college bookstore.

The researcher emailed an invitation to participate in the study to each student's college email account (see Appendix B). Each instructor also sent a follow-up email to encourage student participation. The email invitation contained a link to an online informed consent form created by Google Documents (see Appendix C). Students acknowledged receipt and understanding of the requirements for participation in the research project. A statement of



confidentiality was included in the electronic informed consent document. Names of student participants were not released in any publication of research findings.

Students who submitted their consent to participate in the research project were randomly assigned to one of two groups (see Appendix H for random numbers table). Group assignments were randomized to ensure each group was comparable in all aspects except the treatment (Kumar, 2005). Group 1 participants completed the SECPS as a stand-alone career intervention. Group 2 participants were enrolled into the three-module web-based Career Development Workshop which incorporated the SECPS. Both groups completed the Career Decision making Difficulties Questionnaire (CDDQ) as pretest and posttest assessments.

During the first week of the course, students received an overview of the study, completed a demographic information sheet, and completed an electronic version of the CDDQ as a pretest. Permission was granted by Itamar Gati to adapt the CDDQ to the Blackboard environment (see Appendix A). Assessment results were scored and entered into SPSS 15.0 for analysis. During the third week of the course, all students were introduced to the SECPS as part of the standard career planning unit of the freshman seminar course. During this same unit, students assigned to Group 2 completed the modules of the web-based Career Development Workshop via Blackboard. The SECPS was used to complete career assessments and to conduct career specific research during the workshop. During the fifth week of the course, all students completed an electronic version of the CDDQ as a posttest. To avoid interference from unrelated course content, the posttest was administered during the fifth week of class rather than waiting until the end of the course at week sixteen.

### **Data Analysis**

The purpose of this study was to explore change in career decision making difficulty in terms of lack of readiness, lack of information, and inconsistent information (Gati, Krausz, & Osipow, 1996). The *t*-test is a useful tool to identify significant differences between mean scores (Flahert, 2007) when two or more groups are measured on the same dependent variable (Somekh & Lewin, 2005). *T*-tests were used to analyze differences in mean CDDQ scores between the pretest and posttest measures. Research questions 1 and 2 were analyzed using a paired samples *t*-test. The paired samples *t*-test is most commonly used when the same sample is measured at two different times, such as with a pretest/posttest design (Flahert, 2007). Each participant was compared to himself or herself at different times (Levin & Fox, 2005). For research question 1, mean CDDQ scores were compared for Group 1 before and after participants utilized the SECPS. For research question 2, mean CDDQ scores were compared for Group 2 before and after participants completed the web-based Career Development Workshop which incorporated the SECPS.

An independent samples *t*-test was used to analyze research question 3. Independent samples *t*-tests compare mean scores for different groups measured using the same research instrument (Flahert, 2007). This analysis is used to evaluate “whether the mean value of the test variable for one group differs significantly from the mean value of the test variable for the second group” (Green & Salkind, 2008, p. 175). For this study, mean CDDQ score differences for Group 1 and Group 2 were compared to explore significant differences between groups.

### **Ethical Protection of Participants**

Efforts were implemented to ensure the privacy of study participants and their responses to all instruments. Names of respondents or other identifiable information were not included in this study. The researcher was the only person to have access to the Blackboard workshop

environment used in the study. Responses to the instruments hosted by Google documents were downloaded into a secure spreadsheet located within the researcher's private Google email and documents account provided by the State Community College System. The documents containing responses were not published for public viewing. After five years data stored on the Google account and any hard-copies of data will be destroyed.

### **Conclusion**

Community college counselors and administrators continue to seek innovative interventions to address the issue of career decision making difficulty as it relates to academic and career indecision. The purpose of this preliminary quantitative study was to assess the effectiveness of a web-based career development workshop to change career decision making difficulty of undecided community college distance learners. A pretest/posttest design was used to assess change in three dependent variables: a) lack of readiness, b) lack of information, c) and inconsistent information. The CDDQ (Gati & Osipow, 1996) was used to measure levels of change in the dependent variables for Group 1 after exposure to the web-based career development workshop, for Group 2 after exposure to the SECPS as a stand-alone intervention, as well as change in mean scores between Groups 1 and 2.

## **CHAPTER 4**

### **RESULTS**

The purpose of this preliminary study was to assess the effectiveness of a web-based career development workshop, which incorporated a web-based career guidance system (CGS), in changing career decision making difficulty of community college distance learners. Change in career decision making difficulty was compared between a group of students who completed the web-based CGS as a stand-alone intervention and a group of students who completed the career development workshop. The results of this study will determine the feasibility of incorporating the workshop into academic advising, career advising, and the curriculum of a College Success Course (CSC). This chapter provides an overview of methodology, demographic characteristics of the sample, and results of the statistical analysis of specific research questions.

#### **Review of Data Collection Methodology**

A pretest/posttest, between groups comparison design was used to assess change in career decision making difficulty among undecided community college distance learners. Participants were community college students enrolled in a college success course. Students enrolled in 14 distance-learning sections of the course ( $N = 420$ ) during the fall 2010 semester were invited to participate via email (Appendix B). Each participant completed an electronic consent form prior to the start of the study (Appendix C). Students who submitted their consent to participate in the research project were randomly assigned to one of two groups. A random numbers table (Appendix H) was generated to assign participants to one of the two groups. Participants were assigned to their groups using a separate random numbers table for females and males to ensure an equal distribution of gender among each group.

Group assignments were randomized to ensure each group was comparable in all aspects except the treatment (Kumar, 2005).

Group 1 completed the State Education and Career Planning System (SECPS) as a stand-alone career intervention. Group 2 was enrolled into the three-module web-based Career Development Workshop, which incorporated the SECPS. The three-module web-based intervention was hosted by Blackboard. Both groups completed the Career Decision making Difficulties Questionnaire (CDDQ) as pretest and posttest assessments. All statistical analyses were computed using the Statistical Package for the Social Sciences (SPSS) 15.

### **Demographic Characteristics of the Sample**

This study took place at a mid-sized, suburban, multi-campus community college in southeastern United States. The initial sample consisted of 29 participants randomly assigned to one of two experimental conditions, Group 1 (the SECPS as a stand-alone intervention) and Group 2 (the web-based career development workshop intervention which incorporated the SECPS). Fourteen participants were randomly assigned to Group 1 and 15 participants were randomly assigned to Group 2. Five participants from Group 1 and five participants from Group 2 did not complete the entire study from pretest to posttest. The final sample consisted of 19 participants (15 female, 4 male), with nine participants remaining in Group 1 and 10 participants remaining in Group 2 (see Table 1). Ages ranged from 18 to 50 years, with a mean age of 29.14 years. Seventy-eight percent of students were Caucasian ( $n = 22$ ), nineteen percent African-American ( $n = 5$ ), and four percent Hispanic ( $n = 1$ ). Prior to enrolling at the community college, 89% ( $n = 16$ ) of the participants earned a high school diploma.

Table 1

## Demographic Data for Participants in Each Experimental Group

Groups	Age ( <i>M</i> )	Sex		Race		High School	
		Male	Female	African-American	Caucasian	Diploma	GED
1 – SECPS only	28.22	<i>n</i> = 3	<i>n</i> = 6	<i>n</i> = 2	<i>n</i> = 7	<i>n</i> = 8	<i>n</i> = 1
2 – Workshop with SECPS	30.10	<i>n</i> = 1	<i>N</i> = 9	<i>n</i> = 1	<i>n</i> = 9	<i>n</i> = 8	<i>n</i> = 2
Total		<i>n</i> = 4	<i>n</i> = 15	<i>n</i> = 3	<i>n</i> = 16	<i>n</i> = 16	<i>n</i> = 3

Each participant completed a Student Information Data Sheet (Appendix D) to provide additional demographic information regarding relationship status, employment status, current academic pursuit, number of academic credits completed, online course enrollment history, and self-reported rating of computer skills. Forty-four percent (*n* = 8) of the participants were married, 39% (*n* = 7) were single, and 17% (*n* = 3) were divorced. Two-thirds of the participants were employed either full-time or part-time (*n* = 6 respectively). Eighty-nine percent (*n* = 16) planned to complete a degree or certificate program. Although only half of the participants had prior experience with online courses, 72% (*n* = 13) chose to enroll in the CSS course because of scheduling flexibility. When asked to rate their computer skills, 67% of the participants rated their skills very high (*n* = 4) or high (*n* = 8).

### Statistical Analyses of Specific Research Questions

Statistical analyses were conducted to address the following research questions:

1. After using a web-based career guidance system, to what extent will students' level of career decision making difficulty change in terms of a) lack of readiness (lack of motivation, indecisiveness), b) lack of information (about the process, about self, about

occupations, about additional resources, and c) inconsistent information (unreliable information, internal conflicts, external conflict)?

2. After participating in a web-based career development workshop which incorporates a web-based career guidance system, to what extent will students' level of career decision making difficulty change in terms of a) lack of readiness (lack of motivation, indecisiveness), b) lack of information (about the process, about self, about occupations, about additional resources, and c) inconsistent information (unreliable information, internal conflicts, external conflict)?
3. How will change in career decision making difficulty differ between the two groups in terms of a) lack of readiness (lack of motivation, indecisiveness), b) lack of information (about the process, about self, about occupations, about additional resources, and c) inconsistent information (unreliable information, internal conflicts, external conflict)?

*T*-tests were used to analyze differences in mean CDDQ scores between the pretest and posttest measures. Research questions 1 and 2 were analyzed using a paired samples *t*-test (Table 1). The paired samples *t*-test is most commonly used when the same sample is measured at two different times, such as with a pretest/posttest design (Flahert, 2007). For research question 1, mean CDDQ scores were compared for Group 1 before and after participants utilized the SECPS. For research question 2, mean CDDQ scores were compared for Group 2 before and after participants completed the web-based Career Development Workshop.

An independent samples *t*-test was used to analyze research question 3. Independent samples *t*-tests compare mean scores for different groups measured using the same research instrument (Flahert, 2007). This analysis is used to evaluate “whether the mean value of the test variable for one group differs significantly from the mean value of the test variable for the

second group” (Green & Salkind, 2008, p. 175). For this study, mean CDDQ score differences for Group 1 and Group 2 were compared to explore significant posttest differences between groups.

The low response rate did not allow for the establishment of a moderate sample size of 30 pairs of scores; therefore, reducing the power of the *t* test and resulting *p* values (Green & Salkind, 2008). Due to this limitation, effect size, Cohen’s *d*, was reported to provide insight into the usefulness of results showing change in career decision-making difficulty (Vacha-Haase, 2001). Appropriate formulas were used to compute Cohen’s *d* for the paired-samples *t* tests and the independent samples *t* test (Green & Salkind, 2008).

### **Change in Career-Decision Making Difficulty after SECPS**

A paired-samples *t*-test was conducted to evaluate change in level of career decision making difficulty after using a web-based CGS (the SECPS). Specifically, change in mean scores for lack of readiness, lack of information, and lack of inconsistent information were explored (see Table 2). The results indicated that career decision making difficulty increased for the categories of lack of readiness ( $D = .09$ ,  $SD = .90$ ) and lack of information ( $D = .05$ ,  $SD = 1.78$ ), while a minimal decrease was shown for the category of inconsistent information ( $D = -.01$ ,  $SD = 1.17$ ). Although minimal change was shown for each category, no significant difference from pretest to posttest was found for lack of readiness ( $t(8) = -.32$ ,  $p > .05$ ), lack of information ( $t(8) = -.85$ ,  $p > .05$ ), or inconsistent information ( $t(8) = .01$ ,  $p > .05$ ). A paired-samples *t*-test was subsequently conducted to evaluate change in mean scores for each of the 10 subscales. The results for one readiness subscale, lack of motivation, indicated an increase in level of career decision making difficulty between pretest and posttest score ( $D = .85$ ,  $SD = 1.09$ )



which was statistically significant  $t(8) = -2.33, p < .05$ . The standardized effect size index,  $d$ , was  $-.78$ .

### **Change in Career Decision Making Difficulty after web-based career development Workshop**

A paired-samples  $t$ -test was conducted to evaluate change in level of career decision making difficulty after completing the web-based Career Development Workshop, which incorporated the SECPS. Specifically, change in mean scores of lack of readiness, lack of information, and lack of inconsistent information were explored (see Table 3). The results indicated that level of career decision making difficulty decreased for the categories of lack of readiness ( $D = -.46, SD = .87$ ) and lack of information ( $D = -.48, SD = 1.38$ ), but increased for the category inconsistent information ( $D = .27, SD = .88$ ). Although minimal change was shown for each category, no significant difference from pretest to posttest was found for lack of readiness ( $t(9) = 1.69, p > .05$ ), lack of information ( $t(9) = 1.10, p > .05$ ), or inconsistent information ( $t(9) = -.96, p > .05$ ). A paired-samples  $t$ -test was subsequently conducted to evaluate change in mean scores for each of the 10 subscales. The results for one lack of information subscale, lack of information about the process, indicated that the mean level of career decision making difficulty decreased between the pretest and posttest score ( $D = -1.17, SD = 1.54$ ) was statistically significant  $t(9) = 2.39, p < .05$ . The standardized effect size index,  $d$ , was  $.76$ .

### **Change in Career-Decision Making Difficulty between Groups**

An independent samples  $t$ -test was conducted to evaluate change in level of career decision making difficulty between each group. Specifically, change in mean scores for lack of readiness, lack of information, and lack of inconsistent information were explored (see Table 4).

Although not statistically significant, the results indicated participants who completed the web-based career development workshop reported greater change in levels of career decision making difficulty than participants who completed the SECPS as a stand-alone intervention. Difficulty levels for participants completing the career development workshop, which incorporated the SECPS, decreased for the categories of lack of readiness ( $D = -.46$ ,  $SD = .87$ ) and lack of information ( $D = -.53$ ,  $SD = .73$ ), but increased for the category of inconsistent information ( $D = .27$ ,  $SD = .48$ ). An independent samples  $t$ -test was subsequently conducted to evaluate change in mean scores for each of the 10 subscales. The results for one lack of readiness subscale, lack of motivation, indicated the decrease in level of career decision making difficulty for Group 2 ( $D = 1.22$ ,  $SD = .51$ ) as compared to Group 1 was statistically significant  $t(17) = 2.37$ ,  $p < .05$ . The standardized effect size index,  $d$ , was 1.09. Figure 1 displays an error bar graph which shows the mean and standard deviations of the change in lack of motivation between groups.

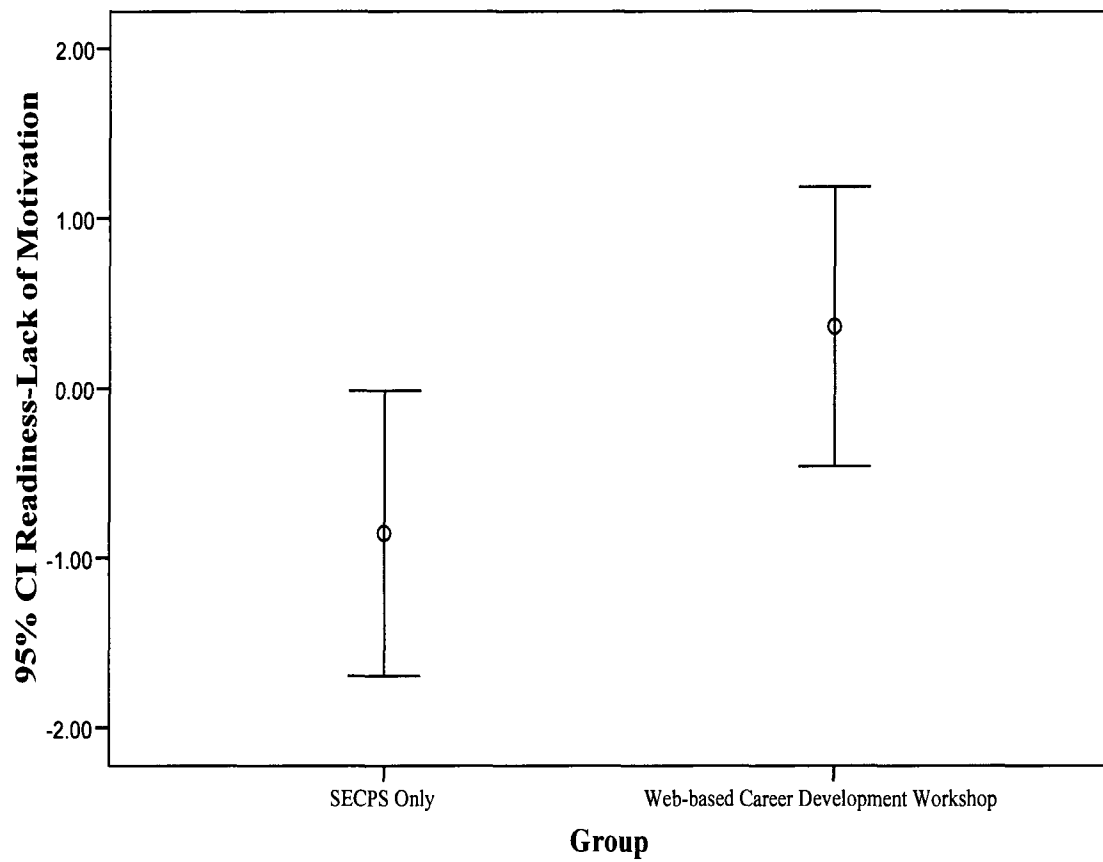


Figure 1. Error bars (two standard deviations above and below the mean) for change in mean lack of motivation scores for each group.

Table 2.

Means, standard deviations of the difficulties and the effect size ( $d$ ) and  $t$  statistic for the difference between the CDDQ before and after SECPS only intervention ( $N = 9$ )

Scale	Before		After		Difference	
	Mean	sd	Mean	sd	$d$	$t(8)$
<b><i>Lack of Readiness</i></b>	4.06	1.12	4.15	1.14	-.11	-.32
Lack of motivation	2.00	1.07	2.85	1.63	-.78	-2.33
Indecisiveness	6.00	2.61	4.96	2.71	.60	1.81
Dysfunctional beliefs	4.17	1.21	4.64	1.96	-.26	-.79
<b><i>Lack of Information</i></b>	3.24	2.32	3.29	2.21	-.14	-.09
About the process	4.10	3.06	3.89	3.04	.11	.32
About self	2.53	1.99	2.50	1.49	.01	.04
About occupations	3.33	2.66	3.67	2.56	-.12	-.37
About additional resources	3.00	2.12	3.11	2.67	-.05	-.15
<b><i>Inconsistent Information</i></b>	2.54	1.63	2.53	1.53	.00	.01
Unreliable information	3.52	3.02	2.93	2.06	.43	1.29
Internal conflicts	2.87	1.84	2.78	1.78	.06	.18
External conflicts	1.22	.44	1.89	1.47	-.44	-1.32
<b><i>Total CDDQ</i></b>	3.29	1.53	3.32	1.52	-.02	-.09
<b><i>Subjective difficulty</i></b>	4.89	3.95	4.00	2.40	.28	.83

Table 3.

Means, standard deviations of the difficulties and the effect size ( $d$ ), and  $t$  statistic for the difference between the CDDQ before and after workshop ( $N = 10$ )

Scale	Before		After		Difference	
	Mean	sd	Mean	sd	$d$	$t(9)$
<b><i>Lack of Readiness</i></b>	3.78	.89	3.32	1.07	.53	1.69
Lack of motivation	2.67	2.02	2.30	1.44	.32	1.01
Indecisiveness	3.60	1.82	3.40	2.13	.18	.56
Dysfunctional beliefs	5.08	1.53	4.25	1.48	.61	1.92
<b><i>Lack of Information</i></b>	2.59	1.62	2.11	.69	.35	1.10
About the process	2.90	1.87	1.73	.72	.76	2.39
About self	2.48	1.56	2.08	.72	.26	.83
About occupations	2.57	1.47	2.77	1.16	-.18	-.56
About additional resources	2.40	1.85	1.85	.97	.29	.91
<b><i>Inconsistent Information</i></b>	2.22	.79	2.49	.91	-.30	-.96
Unreliable information	2.47	1.25	2.77	1.17	-.38	-1.21
Internal conflicts	2.80	1.07	2.80	1.35	0.00	.00
External conflicts	1.40	.88	1.90	1.10	-.344	-1.08
<b><i>Total CDDQ</i></b>	2.83	.73	2.58	.67	.36	1.12
<b><i>Subjective difficulty</i></b>	3.20	1.69	2.60	1.17	.62	1.96

Table 4

Means, standard deviations of the difficulties and the effect size ( $d$ ), and  $t$  statistic for the difference in change in CDDQ mean scores between groups ( $N = 19$ )

Scale	SECPS Only		Bb Workshop		Difference	
	Mean	sd	Mean	sd	$d$	$t(17)$
<b><i>Lack of Readiness</i></b>	.10	.90	-.46	.87	.63	1.38
Lack of motivation	.85	1.09	-.37	1.15	1.09	2.37
Indecisiveness	-1.04	1.72	-.20	1.12	-.57	-1.24
Dysfunctional beliefs	.47	1.80	-.83	1.36	.52	1.76
<b><i>Lack of Information</i></b>	-.05	1.78	.48	1.37	.33	.72
About the process	-.22	2.05	-1.17	1.54	.52	1.13
About self	-.03	2.17	-.40	1.52	.20	.43
About occupations	.33	2.72	.20	1.13	.06	.14
About additional resources	.11	2.17	-.55	1.91	.41	.70
<b><i>Inconsistent Information</i></b>	.00	1.17	.27	.88	-.26	-.57
Unreliable information	-.59	1.38	.30	.79	-.79	-1.71
Internal conflicts	-.09	1.47	.00	1.14	-.07	-.15
External conflicts	.67	1.52	.50	1.45	.11	.24
<b><i>Total CDDQ</i></b>	.03	1.20	-.25	.71	.28	.62
<b><i>Subjective difficulty</i></b>	-.89	3.21	-.60	.967	-.12	-.26

### **Interpretation of Individual Responses**

Due to the overwhelming lack of statistically significant differences in change in mean CDDQ scores between groups, further review of individual responses was conducted in accordance with Amir, Gati, and Kleiman's (2008) procedure to locate career decision making difficulties. The four stage process 1) explores credibility of responses; 2) assesses differentiation among each of the 10 specific difficulty scales; 3) identifies salient, moderate, and negligible categories; and 4) determines degree of confidence in responses (Amir, Gati, & Kleiman, 2008; Gati & Amir, 2010).

#### **Credibility of Responses**

The CDDQ contains two validity questions to determine the credibility of responses: "I like to do things my own way" and "I always do what I am told to do, even if it is against my will" (Amir, Gati, & Kleiman, 2008). Ratings of 5 and above or 5 and below respectively are considered credible responses. Overall responses are considered credible when responses to both questions are credible, or one response is credible and the other questionable. All other variations of responses are considered doubtful. At pretest, 22% ( $n = 2$ ) of respondents who completed the SECPS were considered doubtful. Only one of the two respondents maintained the doubtful status at posttest. For participants who completed the web-based career development workshop, 20% ( $n = 2$ ) respondents were considered doubtful at pretest. At posttest 20% ( $n = 2$ ) of respondents were also considered doubtful. However, the two doubtful respondents at pretest were considered credible at posttest.

#### **Differentiation of Response Pattern**

Differentiation of responses is determined by examining the standard deviation of responses to the 10 specific difficulty scale scores (Kleiman & Gati, 2004). Responses are

considered to be differentiated if the standard deviation is greater than or equal to 1, undifferentiated is less than 0.75, and partially differentiated if between 0.75 and 1. At pretest, responses for participants who completed the SECPS, only one profile was considered undifferentiated ( $sd = .67$ ). All other profiles were differentiated. At posttest, the one undifferentiated profile remained undifferentiated ( $sd = .68$ ), one profile was partially differentiated ( $sd = .78$ ), and seven profiles were differentiated ( $sd \geq 1$ ). Responses for participants who completed the web-based career development workshop at pretest were either partially differentiated ( $n = 1$ ) or differentiated ( $n = 8$ ). At posttest only one participant's responses was considered undifferentiated. Differences between the two groups were not statistically significant.

### **Salience of Career Decision-Making Difficulties**

Based on Amir, Gati, and Kleiman's (2008) process, mean scale scores of the 10 specific difficulty categories are explored to interpret salience of career decision making difficulty. Mean scores of 5 and above are considered salient, mean scores ranging between 3 and 4 are moderate, and mean scores ranging between 1 and 2 are negligible. At pretest, only two profiles of participants who completed the SECPS were considered salient. At posttest three participants profiles were considered salient. For students who completed the web-based career development workshop, profiles were either moderate or negligible for both pretest and posttest. No profiles were considered salient.

### **Confidence in Responses**

Confidence in responses is determined by examining the outcome of the first three stages of the process (Amir, Gati, & Kleiman, 2008). Reservations are assigned to the profiles if one or two of the following criteria exists: a) credibility is doubtful, b) differentiation is partial, or c)



salience is low (Amir & Gati, 2010). If all three criteria exist the interpretability of profiles is considered questionable and should be eliminated from the dataset. Although salience was low, the researched was confident in responses due to established credibility and differentiation.

### **Analysis of Workshop Evaluations**

Participants were asked to evaluate each treatment condition in order to provide additional information regarding the benefit of each intervention to change levels of career decision making difficulty. There were separate evaluation forms for the SECPS intervention (Appendix F) and the workshop intervention (Appendix G). The SECPS evaluation was obtained from the State Community College System (SCCS) as the evaluation currently used to explore ease of use, helpfulness, and user satisfaction. In order to relate the SECPS evaluation to the Workshop evaluation, additional questions were added to explore helpfulness of the site to address career decision making: 1) The [SECPS] was helpful in assisting me with my career decision making, and 2) I am more decided on a major and/or career as a result of the [SECPS]. Evaluation forms were Likert-type utilizing a scale of 1 (strongly disagree) to 5 (strongly agree) for the common questions. Open-ended questions were also available to allow participants to provide additional comments on both evaluations.

Descriptive statistics for the two common questions between the two evaluations (“The [SECPS or Workshop] was helpful in assisting me with my career decision making” and “I am more decided on a major and/or career as a result of the [SECPS or Workshop]” were explored. Overall, Group 2 participants found the workshop, which incorporated the SECPS, more helpful in assisting with career decision making ( $M = 3.77$ ) than Group 1 participants who completed the SECPS only ( $M = 2.81$ ). Both groups were satisfied with the interventions with Group 1 reporting mean satisfaction with the SECPS content as 4.25, and Group 2 providing an overall

rating of the research project at 4.21 (1 = poor to 5 = excellent). When asked to provide additional information about the project, Group 2 provided positive feedback such as, “I found this project extremely enlightening and helpful for me personally. I believe it helped me on many levels to make numerous decisions beginning next semester and doing more in depth investigating for a definite career choice.” Another participant responded, “I am so grateful to have been offered this opportunity because otherwise I believe I would have taken my sweet time if I had never used the Wizard to assist me in my Career choice. I am so glad I did this! I truly learned so much valuable information.” Only one student provided feedback from Group 1 and indicated he/she had already chosen a career.

### **Conclusion**

This preliminary study assessed the effectiveness of a web-based career development workshop, which incorporated a web-based career guidance system (CGS), in changing career decision making difficulty of community college distance learners. Change in career decision making difficulty was compared between a group of students who completed a web-based career development workshop and a group of students who completed the web-based CGS as a stand-alone intervention. The study included 19 participants, with nine participants randomly assigned to Group 1 and 10 participants randomly assigned to Group 2.

Paired-samples *t* tests were conducted to evaluate change in level of career decision making difficulty after using a web-based CGS (the SECPS) and after completing the web-based career development workshop. Change in career decision making difficulty after completing the interventions was not statistically significant. An independent samples *t* test was conducted to evaluate change in level of career decision making difficulty between the group of participants who completed the SECPS and the group of participants who completed the web-based career

development workshop. Change in career decision making difficulty between groups was not statistically significant.

## CHAPTER 5

### DISCUSSION

Choosing a college major or career may be one of the most important decisions a college student will make (McJamerson, 1991), yet it is often one of the most difficult. It is not uncommon for some students to begin their college experience undecided or unclear about academic or career choices (Allen, 1999; Gordon, 2006). An estimated 20% to 40% of college freshmen are undecided (Gordon, 2006). A large number of first-year college students are uncertain about long-term academic and career goals (Tinto, 1993) for a variety of reasons. Some students may be undecided due to a lack of information about personal values, interests, and skills; academic programs; career options; or decision making skills (Gati, 1996; Gordon, 1995). In addition, students may be undecided because they lack readiness to begin the decision making process or because they have received inconsistent information (Gati, Krausz, & Osipow, 1996). Other students may be indecisive rather than undecided (Slaney, 1988), becoming what Gordon has termed “major-changers,” students who change their minds about academic and career options throughout their college experience. Regardless of the reason, 75% of students will experience some form of uncertainty regarding major and/or career decision that may increase during the first two years of college (Tinto, 1993).

Research has shown web-based career guidance systems (CGS) to be effective in decreasing indecision (Gati, Kleiman, Saka, & Zakai, 2003; Gati & Saka, 2001; Jurgens, 2000; Mau, 1999). Unfortunately, most of this research has been conducted at four-year institutions, focusing on use in career counseling centers (Mau, 1999; Niles & Garis, 1990). More than 40% of undergraduate students in the United States are enrolled in community colleges (Horn & Neville, 2006; Phillipe & Sullivan, 2005). In addition, few community college students (5%) report utilizing career counseling services often (CCSSE, 2009). Academic advisors are in a

unique position to help students blend educational experiences with career goals (Gordon, Habley, Grits, & Associates, 2008) either during individual sessions or within a College Success Course (CSC).

### **Purpose of the Study**

Niles and Garis (1990) called for future research to explore how counselors can integrate CGS into curriculum to meet specific needs of students. The purpose of this preliminary study was to assess the effectiveness of a web-based career development workshop, which incorporated a web-based career guidance system (CGS), in changing career decision making difficulty of community college distance learners. The results of this study will be used to determine the feasibility of incorporating the workshop into academic and career advising services and the career development unit of a CSC curriculum. This study addressed the following research questions:

1. After using a web-based career guidance system, to what extent will students' level of career decision making difficulty change in terms of a) lack of readiness (lack of motivation, indecisiveness), b) lack of information (about the process, about self, about occupations, about additional resources, and c) inconsistent information (unreliable information, internal conflicts, external conflict)?
2. After participating in a web-based career development workshop which incorporates a web-based career guidance system, to what extent will students' level of career decision making difficulty change in terms of a) lack of readiness (lack of motivation, indecisiveness), b) lack of information (about the process, about self, about occupations, about additional resources, and c) inconsistent information (unreliable information, internal conflicts, external conflict)?

3. How will change in career decision making difficulty differ between the two groups in terms of a) lack of readiness (lack of motivation, indecisiveness), b) lack of information (about the process, about self, about occupations, about additional resources, and c) inconsistent information (unreliable information, internal conflicts, external conflict)?

## **Method**

### **Setting**

The study took place at a mid-sized, sub-urban, multi-campus community college in the southeastern United States. Following the mission of community colleges to offer high-quality, affordable, and accessible higher education to the community, the institution offers freshman and sophomore-level transfer courses, career and technical programs, and lifetime learning courses for professional and personal development. During the 2008-2009 academic year, the community college reported a combined enrollment of approximately 12,600 students. A majority of the students attend part-time (81%); are female (62%); Caucasian (65.7%); and traditional ages 18 to 25 (45%).

### **Instrumentation**

**Career Decision making Difficulties Questionnaire.** The Career Decision making Difficulties Questionnaire (CDDQ) (Gati, Krausz, & Osipow, 1996) was originally created as a 44-item Likert-type questionnaire based on three categories of difficulties: 1) lack of readiness, 2) lack of information, and 3) inconsistent information. The questionnaire begins with asking demographic information to identify participant's age, sex, years of education, and level of decision making difficulty (Gati, Saka, & Krausz, 2001). This study used the abridged version of the CDDQ which contains 30 questions to identify sources of difficulty within 10 additional categories: 1) lack of readiness due to lack of motivation, indecisiveness, dysfunctional myths, or lack of knowledge about the decision making process; 2) lack of information about self,

occupations, or ways of organizing information; and 3) inconsistent information due to unreliable information, internal conflicts, or external conflicts (Gati, Saka, & Krausz, 2001).

Gauti, Krausz, & Osipow (1996) measured parametric properties of the CDDQ with both Israeli and American samples of military personnel in transition. Both populations showed acceptable variability and correlations among the scales ( $Mdn = .37$  and range = .06-.78 for Israeli sample;  $Mdn = .46$  and range = -.05-.76 for American sample). Reliability of the categories Lack of Readiness, Lack of Information, and Inconsistent Information were .67, .74, and .72 respectively for the Israeli sample, and .63, .95, and .89 respectively for the American sample. Osipow & Gati (1998) found similar results with a U.S. sample of college students with reliability of the categories Lack of Readiness, Lack of Information, and Inconsistent Information reported as .62, .94, and .86 respectively. Reliability for the entire instrument was reported as .94 (Osipow & Gati, 1998).

**State Education and Career Planning System.** The web-based CGS used for this study, identified as the State Education and Career Planning System (SECPS), is a new system launched in March 2009, as a tool to help users explore majors and careers, find college and university information, estimate and compare community college and four-year college costs, plan transfer from community college to four-year institutions, apply for college admission, and apply for financial aid. The system now includes a resume builder and interview tips, as well as assessments for personal interests, skills, and work values.

The interest assessment is a Holland-based (1953) tool which provides users with a primary and secondary Holland code. Career options are presented under five tabs based on level of education required: high-school diploma, less than two-year degree, two-year degree, two-year or four-year degree, and four-year degree or higher. Each occupation listed is linked to

detailed information about needed employment skills, duties, regional median salary, and neighboring community colleges that offer certificate or degree programs to prepare for the career. A key feature of the SECPS is a label for in-demand fields and a list of local employers who hire persons for the occupation. Usability and content validity of the SECPS was measured by the State Community College System during a pilot-test and survey completed between January 27, 2009 and February 12, 2009. Surveys were completed by 1,819 students, to include 1,391 (76.9%) community college students and 419 (23.1%) secondary students in grades 7 – 12. Results of the study showed that students rated satisfaction, ease of use, and helpfulness of the SECPS at 90% to 95%.

**Web-based career development workshop.** The web-based career development workshop consisted of 3 modules based upon Gati's (2001) PIC model of career decision making: 1) Introduction (Pre-screening, 2) Career Development (In-depth Exploration and Choice) and 3) Recap. The workshop began with an introduction to the purpose of the workshop and objectives to be completed. Participants were introduced to the career decision making process and the difficulties students often face when making career choices. The pre-screening module guided participants through SECPS assessments to explore their interests, skills, and work values. Holland's (1953) hexagon was introduced to explain how the primary and secondary codes relate to person-environment fit. Based upon occupations identified from the assessments, participants next conducted an in-depth exploration of a minimum of six occupations to include information regarding educational requirements, salary, demand of the career, salary, and local employers. After exploring various occupations, participants narrowed career options to two choices.



**Demographic data sheet.** The author created a demographic data sheet to be used for this study. The purpose of the data sheet was to provide demographic information regarding participants, to include age, ethnicity, sex, enrollment status, employment status, degree plans, and distance-learning history. These variables were further explored during data analysis to identify student characteristics that may contribute to the effectiveness of the SECPS and change in career decision making difficulty.

### **Research Procedure**

Data collection took place during the fall 2010 semester. Participants consisted of 19 community college students enrolled in a 16-week distance-learning CSC. During the first week of class, students enrolled in 14 distance-learning course sections ( $N = 420$ ) were asked to voluntarily participate in the study. All student participants were 18 years of age or older. Efforts were made to have a diverse pool of participants to mirror the demographics of the institution. As an incentive to participate, participants were eligible to enter a lottery drawing to win one of two \$175.00 gift cards to the college bookstore.

The researcher emailed an invitation to participate in the study to each student's college email account. Each instructor also sent a follow-up email to encourage student participation. The email invitation contained a link to an online informed consent form created by Google Documents. Students who submitted their consent to participate in the research project were randomly assigned to one of two groups. Group assignments were randomized to ensure each group was comparable in all aspects except the treatment (Kumar, 2005). Group 1 completed the SECPS as a stand-alone intervention. Group 2 completed the three-module web-based Career Development Workshop, which incorporated the SECPS. Both groups completed the Career Decision making Difficulties Questionnaire (CDDQ) as pretest and posttest assessments.

During the first week of the course, students received an overview of the study, completed a demographic information sheet, and completed an electronic version of the CDDQ as a pretest. Permission was granted by Itamar Gati to adapt the CDDQ to the Blackboard environment. Assessment results were reported in an Excel spreadsheet and imported into SPSS 15.0 for analysis. During the third week of the course, all students were introduced to the SECPS as part of the standard career planning unit of the freshman seminar course. During this same unit, students assigned to Group 2 completed the modules of the web-based Career Development Workshop via Blackboard. During the fifth week of the course, all students completed an electronic version of the CDDQ as a posttest. To avoid interference from unrelated course content, the posttest was administered during the fifth week of class rather than waiting until the end of course at week sixteen.

### **Results**

A pretest/posttest, between groups comparison design was used to assess change in career decision making difficulty among undecided community college distance learners. *T*-tests were used to analyze difference in mean Career Decision making Difficulty (CDDQ) scores between the pretest and posttest measures. The paired-samples *t* test was used to analyze data for research questions 1 and 2, while the independent-samples *t* test was used to analyze data for research question 3. CDDQ scores were initially evaluated to explore change in mean scores for the three major clusters describing career decision making difficulty due to 1) lack of readiness, 2) lack of information, and 3) inconsistent information. Follow-up analyses were conducted to explore each of the 10 specific difficulty categories of the CDDQ: lack of motivation, general indecisiveness, dysfunctional beliefs; lack of information about the stages of the career decision

making process, self, occupations, or ways of obtaining additional information; and unreliable information, internal conflicts, and external conflicts.

**State Education and Career Planning System.** Results of the paired-samples *t*-test indicated change in career decision making difficulty from pretest to posttest among the three main clusters was not statistically significant for participants who completed the SECPS as a stand-alone intervention. Career decision making difficulty reportedly decreased in one cluster inconsistent information. According to Gati, Saka and Krausz (2001) inconsistent information may arise from one of three subcategories: a) unreliable information, b) internal conflicts, and c) external conflicts. The SECPS may be helpful to clarify unreliable information by providing, accurate, current, local educational and career information relevant to the community college students' current situation.

**Web-based Career Development Workshop.** Results of the paired-samples *t*-test indicated change in career decision making difficulty from pretest to posttest among the three main clusters was not statistically significant for participants who completed the web-based career development workshop. Career decision making difficulty reportedly decreased in two clusters, lack of readiness and lack of information. Whiston, Brecheisen, and Stephens (2003) found workshops and structured career groups to be more than non-structured groups. The career development workshop used in this study provided a discussion regarding the career-decision making process equivalent to information which could be received during a career advising appointment. This information is lacking in the SECPS and the assignment provided to students who complete the SECPS as a CSC requirement is often provided with little structure.

**Between Groups Comparison.** An independent samples *t*-test was conducted to evaluate change in level of career decision making difficulty between each group. Results

indicated difference of change in mean scores between groups was not statistically significant on each of the three main categories. The results for one lack of readiness cluster, lack of motivation, revealed students who completed the career development workshop reported a statistically significant reduction in career decision making difficulty than participants who completed the SECPS as a stand-alone intervention. Participants who use CGS supplemented by academic or career advising have better outcomes than participants who use a CGS as a stand-alone intervention (Whiston, Brecheisen, & Stephens, 2003). The workshop includes information about the career decision making process that could be obtained through career advising.

### **Limitations**

Several limitations to this study should be noted to include sample size from a single institution, credibility of responses to the CDDQ, and technical difficulties. A minimum of 15 participants for each group would have been ideal to yield more accurate statistical analysis (Green & Salkind, 2008; Creswell, 2008). For this reason, effect size statistics, Cohen's *d*, which were reported as *p* values could not be trusted (Green & Salkind, 2008). Generalization to other community colleges is not possible due to the insufficient sample size from a single institution.

Although the researcher expected to find a reduction in CDDQ scores for each group, increase in CDDQ scores were unexpected. Further review of individual responses was conducted to explore credibility; differentiation among each of the 10 specific difficulty scales; identify salient, moderate, and negligible categories; and determine degree of confidence in responses (Gati and Amir, 2010; Amir, Gati, and Kleiman, 2008). Based on the findings from

the interpretation, several participant profiles from each group have been identified as questionable and may have further impacted the results of this study.

Technical difficulties may have lead to some of the attrition during the project. At the time the study was implemented, the State Community College System had recently completed an upgrade of the Blackboard course management system. As a result of the upgrade, statewide complications were experienced, to include inability to access instructional materials and slow response times. Participants reported issues such as not being able to open documents or not being able to submit completed documents. As a result, three students emailed the researcher regarding their choice to withdraw from the project due to technical difficulty. It is important to be prepared for technical difficulties as they arise, particularly when using course management systems and college network servers whose functionality are often outside of the control of the researcher. The following suggestions may be helpful to consider when using course management systems or other web-based systems:

1. Make sure participants are aware of technical systems requirements at the beginning of the project. For example, the recent upgrade of the Blackboard course management system required an upgrade or new installation of Java script and also recommended the use of the Mozilla Firefox browser as an alternative to Internet Explorer. Some difficulties were overcome when students made the necessary software upgrades to their personal computers.
2. Electronic documents should be available in alternate formats if students are not able to access documents through the course management system. Documents were posted to the career development workshop Blackboard shell using Google documents to allow responses to worksheets and evaluations to be recorded into a

spreadsheet. Alternate printable documents were not made available at the time.

In a few cases the researcher was able to overcome difficulties by emailing students direct links to the Google worksheets and evaluations allowing participants to complete the project.

3. Collaborate with the institutions technical support staff before launching a web-based service or project. Technical support staff will be able to inform you of current software specifications on campus computers that may support or hinder the ability for students to use campus resources to participate in the project. If funds are available and requests are made within a reasonable amount of time prior to the launch of the project, software upgrades may be purchased to support technical needs.

### **Implications for Student Services**

As technology continues to influence distance-learning, it has also influenced various educational and administrative functions of student affairs (Moneta, 1997; Moneta, 2005). Acknowledging the 62.3% increase of personal computer usage among college students between 1985 and 2004 (Higher Education Research Institute [HERI], 2005), post-secondary institutions are taking advantage of web-based technologies to provide career services information, academic advising, online campus tours, and online student orientation (Moneta, 2005). Online student support services provide an ideal venue to meet the needs of the millennial student who has grown up with a computer generation and expects to be able to locate information electronically (Pullen, 2010), as well as the distance-learner, campus-based learner, or hybrid learner who needs to access information outside of traditional office hours. CGS have practical implications

for student services support functions such as academic and career advising, and college success courses.

### **Academic Advising**

Academic advisors are in a unique position to help students blend educational experiences with career goals (Gordon, Habley, Grites, & Associates, 2008). Through effective academic advising, students are able to synthesize and contextualize their educational experiences within the scheme of their goals and abilities in order to extend learning beyond the classroom (National Academic Advising Association (NACADA), 2006). One core value established by NACADA (2005) specifies that academic advisors are responsible for their advisees. This core value allows for the use of technology to assist the advisement process:

Regular student contact through in-person appointments, mail, telephone, E-mail, or other computer-mediated systems helps advisors gain meaningful insights into students' diverse academic, social, and personal experiences and needs. Advisors use these insights to assist students as they transition to new academic and social communities, develop sound academic and career goals, and ultimately, become successful learners. (NACADA, 2005).

The incorporation of CGS into academic advising adheres to the core values of NACADA. The desire is to provide web-based tools to supplement face-to-face interactions and not to replace the human support advisors and professional counselors provide (Gati, 1996). Literature suggests CGS are most effective when used in conjunction with individual or group academic and career advising (Fowkes & McWhirter, 2007; Gati, 1996; Whiston, Brechsisen, & Stephens, 2003).

Niles and Garis (1990) support counselor integration of CGS into curriculum to meet specific needs of students. However, before integration can take place professional development must be required. According to Bobek et al. (2005), “counselors today need to understand the capabilities, benefits, and shortcomings of CGS systems as well as how to effectively use these systems for their clients” (p. 2). Once training has taken place counselors and advisors need to continue to familiarize themselves with the systems. Pfautz (2010) found that counselors did not regularly use the SECPS to support academic advising and rarely referenced the site during individual advising sessions as encouraged by the State Community College System. Staff training on the use and benefits of the SECPS and other CGS is strongly recommended. A great hindrance to the effective use of CGS is inadequately trained staff (Johnson & Sampson, 1985).

### **Career Advising.**

The continued growth in the use of CGS within higher education shows that it seems to fill a need for alternative individual career counseling approaches (Niles & Garis, 1990). Despite the increase in web-based CGS, many students, or others who could possibly benefit from these tools, are unaware that the resources are available (Gati & Saki, 2001). Pfautz (2010) found many students interviewed at State Community College were not aware the SECPS existed and suggested students should be introduced to the website by advisors, prior to enrolling in college courses.

Career advising allows an academic advisor to assist students with making the connection between academic and career information. According to Gordon (2006) one of the goals of career advising is to teach students where to find career information and how to interpret it within the context of their place in the career exploration process. CGS, designed to provide self-assessment and career exploration information (Brown, 2003; Gati, 1996), have become an



integral component of academic and career advising in most institutions of higher education in the United States (Fowkes & McWhirter, 2007). Research has shown CGS to be effective in addressing components of the career development process to include self-assessment, college and career information, and decision making strategies (Helwig & Snodgre, 1990; Maola & Kane, 1976; Super, 1983).

CGS have been categorized as a direct use of technology as students interact directly with the computer system for guidance (Sampson, 1982; Reardon, Shahnasarian, Maddox, & Sampson, 1985). Direct applications of CGS include:

1. Helping students specify and organize personal information needed in the decision making process;
2. Providing students with external information needed to identify potential options;
3. Helping students to evaluate the desirability of various alternatives under consideration by providing a model for effective decision making;
4. Helping students formulate realistic plan to implement their decision by developing an academic program of study that relates to a tentative primary and secondary choice. (Reardon, Shahnasarian, Maddox, & Sampson, 1985, p. 180).

The web-based career development workshop used in this study provides an introduction to the career decision making process that is lacking in the SECPS. Combining the workshop with the career exploration resources of the SECPS creates a more comprehensive direct use of technology to incorporate into effective career advising.

Gati and Asher (2001) support incorporating the use of web-based CGS into traditional career services, particularly in assisting individuals using the PIC model. Web-based CGS are helpful during the prescreening stage to identify and narrow career alternatives, while also being

helpful during the in-depth exploration stage to research characteristics and requirements of viable alternatives. However, Gati and Asher believe the choice stage should be conducted during traditional face-to-face advising sessions rather than using a web-based CGS only intervention to guide students more effectively through the process.

### **College Success Courses**

The content of CSC's vary among institutions, but typically include academic and social topics such as study skills, time management, test taking skills, and educational and career planning (Ryan & Glenn, 2004). CSC's provide an avenue to assess student needs and provide an awareness of resources to address problems that may occur (Derby & Watson, 2006). As academic and counseling services are more effective when the experience is integrated into the educational process (Tinto, 1993), CSC's provide an ideal opportunity to incorporate a web-based career development workshop into its curriculum. One participant's response from this study supports this assumption, "I am so grateful to have been offered this opportunity because otherwise I would have taken my sweet time if I had never used the [SECPS] to assist me in my career choice."

Incorporating the use of CGS into a CSC curriculum is not suggested to replace interactions with academic advisors. The goal is to encourage students to seek academic or career advising to discuss assessment results received during a CGS lesson. The CGS lesson could potentially include a requirement for students to review their assessments with an advisor. It is important to note that all instructors of CSC's are not always employed as academic advisors at an institution; therefore, it is important to differentiate the role of the instructor from that of an advisor. McBeth, Richardson, Cregler, and Meyer (2000) found students were satisfied with a CSC which combined academic advising and were more likely to take advantage of academic

advising services as a result of engaging in the course. CSC's are ideal venues to introduce students to CGS in a manner which provides guided, relevant instruction and encourages an advisor-student relationship such as the web-based career development workshop.

### **Course Management Systems**

Course management systems are becoming a popular means to provide private, password-protected access to information in support of student services functions. One State Community College uses the Blackboard course management system for faculty advising. All advisees are enrolled into a Blackboard shell assigned to their specific advisor. The shell contains information specific to the advisees major such as degree requirements, planning forms, registration information, and a frequently asked questions section. Advisees are also able to schedule appointments, send email communications, or participate with the advisor via the virtual chat room within Blackboard.

Ullmann (2009) utilized a course management system to provide advising support to students enrolled in the Purdue University School of Nursing. The project was the result of a needs assessment in which distance learning students complained about not being able to access advising information, forms, or announcements as readily as campus-based students. To address this need for distance learners several support courses were created to provide academic program information and updates, email communications between advisors and advisees, financial aid and scholarship information, and links to academic tutoring. The largest obstacle to efficient use and implementation of the course management systems was the advisor lack of familiarity with the systems, further supporting the need to professional development regarding effective use and benefits of web-based support tools.

### **Future Research**

Future research is warranted to explore the effectiveness of the new SECPS. Current feedback from student users focuses on satisfaction and user-friendliness of the system. How students are using the system (i.e. four-year college transfer planning, career assessments, career research), frequency of use, and motivation for use (i.e. course assignment, self-directed career planning, advisor referral for career exploration) need to be explored.

In addition, how the SECPS is incorporated by faculty and staff for student use warrants review. The State Community College System is encouraging campus wide use of the SECPS, particularly with the CSC's. How many CSC instructors are using the SECPS as part of the curriculum? If instructors are using the SECPS, how guided are the instructional units? Are academic advisors referring students to the SECPS for career exploration and providing follow-up sessions to discuss their findings? Further, professional development opportunities need to be made available to train advisors, faculty and staff how to effectively use and promote SECPS use among students in CSC's and individual or group advising sessions.

Research regarding the use of the SECPS within the State Community College System will add to the growing literature supporting the use of technology to deliver student services functions. The web-based career development workshop used in this study provides an instructional tool for advisors, faculty, staff and students. The workshop incorporated the SECPS as recommended by the State Community College System. Advisors, faculty and staff can complete the workshop to learn about the SECPS as well as how to effectively introduce the system to students. Faculty teaching CSC's will have a full career development unit to use for instructional purposes.

## **Conclusion**

Individuals struggling with career indecision often seek assistance via career counseling, self-help tools, or computer-assisted career guidance systems (Gati, Gadassi, & Shemesh, 2006). Despite the increase in web-based CGS, many students, or others who could possibly benefit from these tools, are unaware that the resources are available (Gati & Saki, 2001). Research has shown CACGS to be effective in addressing components of the career development process to include self-assessment, college and career information, and decision making strategies (Helwig & Snodgres, 1990; Maola & Kane, 1976; Super, 1983). Niles and Garis (1990) called for future research to explore how counselors can integrate CGS into curriculum to meet specific needs of students. This preliminary study served to fill this gap.

Post-secondary institutions are taking advantage of web-based technologies to provide career services information, academic advising, and online student orientation (Moneta, 2005). Online student support services provide an ideal venue to meet the needs of the millennial student who has grown up with a computer generation and expects to be able to locate information electronically (Pullan, 2009), as well as the distance-learner, campus-based learner, or hybrid learner who needs to access information outside of traditional office hours. Although statistical analysis did not find statistically significant change in mean CDDQ score for participants who completed the SECPS as a stand-alone intervention, the web-based career development workshop, or between the two groups, there are practical implications for the use of the web-based career development workshop in academic or career advising and CSC's. The goal of the workshop is not to replace face-to-face interaction, but to provide a web-based tool to assist advisors with career assessment and exploration. Academic or career advising sessions, as well as CSC's, are ideal avenues to introduce students to web-based CGS who may not be aware of their existence or benefit to assist with career decision making.

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## Appendix A

CDDQ34-per doc

**Itamar Gati, Ph D**  
**School of Education, Hebrew University, Jerusalem, ISRAEL**

e-mail itamar.gati@huji.ac.il

Fax (+972)-2-5882084

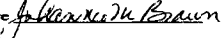
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- 3 I will share the results of my research with Gati and Osipow and provide specific data for secondary analysis with the understanding that appropriate credit will be cited.
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I agree to the above conditions

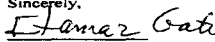
Name Johanna M. Brown Date April 20, 2010 e-mail jmayo003@odu.edu  
imbrown@odu.edu

Signature  Fax 757-683-4413 Tel 757-325-5030

Address 334 Hampton Roads Ave. Hampton, VA 23661

Old Dominion University, Darden College of Education 132A, Norfolk, VA 23529

Sincerely,

  
 Itamar Gati, Ph D

Permission is not granted without the signature of Itamar Gati in this space

telcddq per doc

## Appendix B

## Email Invitation to Participate

Greetings SDV 100 Student,

My name is Johanna Brown, a Student Development instructor for the community college and a doctoral student attending Old Dominion University. You are cordially invited to participate in my research project regarding career development for online SDV 100 students. This research project is designed for students 18 years of age or older who would like the opportunity to explore career options. To show appreciation for your participation, each student will be entered into a drawing to win one of two \$175.00 gift cards to the Community College Bookstore.

Your participation will allow the community college staff to review effective web-based tools to assist online students with career development. The research project will take place within the first four weeks of the SDV 100 course, August 23, 2010 – September 19, 2010. The time commitment to complete the entire project will not exceed two (2) hours within the four week time period. Your participation is completely voluntary and you may withdraw from the project at any time without penalty.

As a part of this project, you will be asked to complete one or more of the following during the first four weeks of the SDV course:

- Student Information Sheet
- Career Decision making Difficulties Questionnaire
- Career assessments using the State Education and Career Planning Website
- Career Development Workshop through Blackboard

If you are interested in participating, please hold down the control key and click on the "Consent to Participate" link below to read and complete the Consent for Research Participation form. To

protect your identity and to ensure that only authorized users have access to the form, your username will be recorded and used only to maintain record of subsequent forms completed by you for this project. Once the consent forms have been received you will receive further instructions on how to complete the project.

**Consent to Participate**

Thank you for your time and participation.

Sincerely,

Johanna M Brown

## Appendix C

## Informed Consent Form

Hello, my name is Johanna Brown. I am a faculty member of \_\_\_\_\_, and a doctoral candidate enrolled at Old Dominion University. As a part of my dissertation research, I am interested in exploring the effectiveness of web-based career guidance systems to assist undecided students enrolled in online courses. The web-based system used will be the state community college's website you will review as a part of your College Success Skills course. In addition, you may be asked to complete one or more of the following:

- 1) Demographic Information Sheet
- 2) Career Decision making Difficulties Questionnaire
- 3) Career Development Workshop via Blackboard.

This research study will take place within the timeframe of the College Success Skills course August 23, 2010 – September 19, 2010. Your participation is completely voluntary and you may withdraw from the study at any time you choose, without penalty. Each student completing the study will be entered into a drawing to win a \$175 gift card to the Community College Bookstore.

If you are interested in participating in the study, please click on the link below to read and complete the Consent for Research Participation form. This form will provide information regarding confidentiality and your rights as a participant.

Thank you for your time.

I am interested in participating in the study.                      Yes      No

I am 18 years of age or older.                      Yes      No

Emplid # \_\_\_\_\_

[continue]

---

***Consent for Research Participation***

I hereby consent to participate in a research project entitled "Utilization of a Web-Based Career Guidance System to Reduce Career Indecision among Undecided Community College Distance Learners" conducted by Johanna M. Brown of Old Dominion University. I can contact the project director at 757-325-5030 or by email (jmayo003@odu.edu). This project is being supervised by Dr. Dana Burnett, who may be contacted at 757-683-3287, or by email (dburnett@odu.edu). I am aware that I MUST BE 18 YEARS OR OLDER TO PARTICIPATE IN THIS RESEARCH PROJECT. This project has been formally approved by the Institutional Review Board (responsible for the ethical treatment of human subjects) of Old Dominion University, located at 411 Monarch Way, Suite 203, Norfolk, VA 23529.

I understand that I will complete one or more of the following items as a participant: 1) a survey regarding career decision making at the beginning and end of the course, 2) a student information survey, 3) participate in a web-based career development workshop. I understand that my participation is completely voluntary, and that I am free to withdraw from the study at any time I choose, without penalty. I understand that this project is not expected to involve risks of harm any greater than those ordinarily encountered in daily life. I also understand that it is not possible to identify all potential risks in any procedure, but that all reasonable safeguards have been taken to minimize the potential risks. I understand that the results of this project will be coded in such a



way that my identity will not be physically attached to the final manuscript produced. I understand that the results of this research may be published or reported to government agencies, funding agencies, or scientific groups, but that my name will not be associated in any way with any published results.

By clicking submit below, I acknowledge that I have read, understand, and agree to the above statements and agree to participate in this research study.

« Back	Submit
--------	--------

## Appendix D

## Student Information Data Sheet

Directions: Please take a few moments to complete the demographic survey. Responses will be confidential and used only to enhance data analysis at the ended of this research projects. The survey will take approximately five (5) minutes to complete.

1. Student Identification Number (Emplid): \_\_\_\_\_
2. Age: \_\_\_\_\_
3. Sex:           (1) Female           (2) Male
4. Marital Status:   (1) Single                   (2) Not single
5. Ethnicity:   (1) White           (2) African-American (3) Hispanic  
(4) Asian   (5) Native American   (6) Other \_\_\_\_\_
6. Employment Status:           (1) full-time           (2) part-time  
(3) Unemployed
7. Present academic pursuit:   (1) transfer degree (AA/AS)  
(2) non-transfer degree (AAA/AAS)  
(3) certificate completion  
(4) transfer without completing a degree or certificate  
(5) do not plan to complete a degree or certificate
8. Highest level of education completed:  
(1) less than high school           (2) high-school diploma           (3) GED

9. Number of academic credits completed:

(1) 0-15      (2) 16-30      (3) 31-45      (4) 46-60      (5) more than 60

10. Number of online courses previously completed: \_\_\_\_\_

11. Number of online courses currently enrolled in: \_\_\_\_\_

## Appendix E

## Career Development Workshop Evaluation

Thank you once again for your time in completing the workshop as a part of this research project. I would like to get your feedback regarding the workshop. Please answer the questions below and add any additional comments at the end you feel will help to improve this project for other students. Choose the appropriate response from 1 to 5 (1 = Strongly Disagree, 5 = Strongly Agree).

1. The web-based Career Development Workshop was helpful in assisting me with my career decision making:

Strongly Disagree    1       2       3       4       5       Strongly Agree

2. The Blackboard format was convenient for this type of workshop:

Strongly Disagree    1       2       3       4       5       Strongly Agree

3. I am more decided in a major and/or career as a result of this research project:

Strongly Disagree    1       2       3       4       5       Strongly Agree

4. The length of this workshop was appropriate:

Strongly Disagree    1       2       3       4       5       Strongly Agree

5. The amount of material covered in this workshop was appropriate:

Strongly Disagree    1       2       3       4       5       Strongly Agree

6. The exercises included in this workshop could be completed within the amount of time specified:

Strongly Disagree    1       2       3       4       5       Strongly Agree

7. My overall rating of this research project would be:

Poor    1       2       3       4       5       Excellent

8. What did you like most about this workshop?

9. What did you like least about this workshop?

10. Please add additional comments and/or suggestions for improvement regarding this research project.

## APPENDIX F

## State Education and Career Planning System Evaluation

The four tables below each contain a question about your use of the SECPS. The first seeks your feedback on helpfulness; the second seeks your feedback on ease of use; the third seeks feedback on satisfaction; and the fourth seeks your feedback regarding the helpfulness of the SECPS with your career decision making. Each one also provides you the opportunity to add comments.

**Based on your use of the SECPS, how well did the system help you in performing the following tasks?**

	Very Well	Above Average	Average	Below Average	N/A – did not use this tool
Assess your career interests					
Help you find information on careers					
Determine the right college major that leads to your desired career					
Estimate and compare the cost of attending colleges and universities throughout the state					
Find and apply for financial aid and scholarships					
Transfer from a community college to a four-year university					

Additional comments regarding the helpfulness of the above tasks:

**Based on your use of the SECPS, how easy was it to perform the following tasks?**

	Very Easy	Above Average	Average	Below Average	N/A – did not use this tool
Assess your career interests					
Help you find information on careers					
Determine the right college major that leads to your desired career					
Estimate and compare the cost of attending colleges and universities throughout the state					
Find and apply for financial aid and scholarships					
Transfer from a community college to a four-year university					

Additional comments regarding the easiness of the above tasks:

**Please rate your satisfaction with the SECPS on the following factors:**

	Dissatisfied	Somewhat Dissatisfied	Neutral	Somewhat Satisfied	Satisfied
Overall layout					
Career information					
Community college programs and majors information					
Paying for college information					
Transfer information					
Overall content					
Overall look					
Ease of navigation					

Additional comments regarding your satisfaction with the above tasks:

## APPENDIX G

The screenshot displays the Blackboard Learn web interface. At the top, the navigation bar includes the Blackboard Learn logo, user links (My Places, Home, Help, Logout), and a search bar. Below this is a secondary navigation bar with the Thomas Nelson Community College logo and various menu items (JTCC, RCC, TACC, Learn, Teach, My Files, Student Connect, College Connect, Research, Help). The main content area shows the breadcrumb trail: "JTCC > Career Development Workshop > Contacts > Faculty Information". On the left sidebar, there is a "COURSE MANAGEMENT" section with links to "Control Panel", "Course Tools", and "Course Links". The main content area is titled "Faculty Information" and contains two buttons: "Create Folder" and "Create Contact". Below these buttons, a list of faculty members is shown, with "Instructor Johanna Brown" selected, displaying her email address "jbrown@tccc.edu".

Blackboard Learn

My Places Home Help Logout learn.vccs.edu

Thomas Nelson  
COMMUNITY COLLEGE

JTCC RCC TACC Learn Teach My Files Student Connect College Connect Research Help

JTCC > Career Development Workshop > Contacts > Faculty Information Edit Mode ON

Faculty Information

Create Folder Create Contact

Instructor Johanna Brown  
Email [jbrown@tccc.edu](mailto:jbrown@tccc.edu)

COURSE MANAGEMENT

Control Panel  
Course Tools  
Course Links



APPENDIX H

Random Numbers Table

18	24
6	2
4	27
20	9
4	29
5	15
13	12
16	12
20	27
16	27
9	15
17	6
4	21
16	10
15	

## APPENDIX I

**Career Decision-Making Difficulties Questionnaire**

This questionnaire's aim is to locate possible difficulties and problems related to making career decisions.

Please begin by filling in the following information:

Age: \_\_\_\_\_

Number of years of education: \_\_\_\_\_

Sex: *Female / Male*

Have you considered what field you would like to major in or what occupation you would like to choose?

*Yes / No*

If so, to what extent are you confident of your choice?

*Not confident at all* 1 2 3 4 5 6 7 8 9 *Very confident*

Next, you will be presented with a list of statements concerning the career decision-making process. Please rate the degree to which each statement applies to you on the following scale:

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

Circle 1 if the statement does not describe you and 9 if it describes you well. Of course, you may also circle any of the intermediate levels.

Please do not skip any question.

**For each statement, please circle the number which best describes you.**

1. I know that I have to choose a career, but I don't have the motivation to make the decision now ("I don't feel like it").

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

2. Work is not the most important thing in one's life and therefore the issue of choosing a career doesn't worry me much.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

3. I believe that I do not have to choose a career now because time will lead me to the "right" career choice.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

4. It is usually difficult for me to make decisions.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

5. I usually feel that I need confirmation and support for my decisions from a professional person or somebody else I trust.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

6. I am usually afraid of failure.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

7. I like to do things my own way.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

8. I expect that entering the career I choose will also solve my personal problems.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

9. I believe there is only one career that suits me.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

10. I expect that through the career I choose I will fulfill all my aspirations.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

11. I believe that a career choice is a one-time choice and a life-long commitment.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

12. I **always** do what I am told to do, even if it goes against my own will.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

13. I find it difficult to make a career decision because I do not know what steps I have to take.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

14. I find it difficult to make a career decision because I do not know what factors to take into consideration.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

15. I find it difficult to make a career decision because I don't know how to combine the information I have about myself with the information I have about the different careers.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

16. I find it difficult to make a career decision because I still do not know which occupations interest me.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

17. I find it difficult to make a career decision because I am not sure about my career preferences yet (for example, what kind of a relationship I want with people, which working environment I prefer).

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

18. I find it difficult to make a career decision because I do not have enough information about my competencies (for example, numerical ability, verbal skills) and/or about my personality traits (for example, persistence, initiative, patience).

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

19. I find it difficult to make a career decision because I do not know what my abilities and/or personality traits will be like in the future.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

20. I find it difficult to make a career decision because I do not have enough information about the variety of occupations or training programs that exist.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

21. I find it difficult to make a career decision because I do not have enough information about the characteristics of the occupations and/or training programs that interest me (for example, the market demand, typical income, possibilities of advancement, or a training program's prerequisites).

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

22. I find it difficult to make a career decision because I don't know what careers will look like in the future.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

23. I find it difficult to make a career decision because I do not know how to obtain additional information about myself (for example, about my abilities or my personality traits).

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

24. I find it difficult to make a career decision because I do not know how to obtain accurate and updated information about the existing occupations and training programs, or about their characteristics.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

25. I find it difficult to make a career decision because I constantly change my career preferences (for example, sometimes I want to be self-employed and sometimes I want to be an employee).

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

26. I find it difficult to make a career decision because I have contradictory data about my abilities and/or personality traits (for example, I believe I am patient with other people but others say I am impatient).

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

27. I find it difficult to make a career decision because I have contradictory data about the existence or the characteristics of a particular occupation or training program.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

28. I find it difficult to make a career decision because I'm equally attracted by a number of careers and it is difficult for me to choose among them.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

29. I find it difficult to make a career decision because I do not like any of the occupation or training programs to which I can be admitted.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

30. I find it difficult to make a career decision because the occupation I am interested in involves a certain characteristic that bothers me (for example, I am interested in medicine, but I do not want to study for so many years).

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

31. I find it difficult to make a career decision because my preferences can not be combined in one career, and I do not want to give any of them up (e.g., I'd like to work as a free-lancer, but I also wish to have a steady income).

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

32. I find it difficult to make a career decision because my skills and abilities do not match those required by the occupation I am interested in.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

33. I find it difficult to make a career decision because people who are important to me (such as parents or friends) do not agree with the career options I am considering and/or the career characteristics I desire.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

34. I find it difficult to make a career decision because there are contradictions between the recommendations made by different people who are important to me about the career that suits me or about what career characteristics should guide my decisions.

*Does not describe me* 1 2 3 4 5 6 7 8 9 *Describes me well*

Finally, how would you rate the degree of your difficulty in making a career decision?

*Low* 1 2 3 4 5 6 7 8 9 *High*

## VITA

**Johanna M. Brown**

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**ACADEMIC PREPARATION**

Ph. D.      **Community College Leadership**      May, 2011  
Old Dominion University  
Norfolk, Virginia

**Dissertation Topic:** *Utilizing a Web-based Career Development Workshop to Assist Undecided Community College Distance Learners*

M. Ed.      **Agency Counseling**      August, 1997  
The College of William and Mary  
Williamsburg, Virginia

B. S.      **Psychology/Sociology**      December, 1992  
The College of William and Mary  
Williamsburg, Virginia

**Additional Professional Preparation**

Teaching Online Programs (TOPS)      2009  
Thomas Nelson Community College, Hampton, VA

Diversity and Inclusion Institute      2010  
Thomas Nelson Community College, Hampton, VA

Instructional Design for Online Learning (IDOL)      2010  
Rappahannock Community College, Rappahannock, VA

## RELATED PROFESSIONAL EXPERIENCE

### **Durham Technical Community College, Durham, NC**

*Admissions Counselor* (January 2011 – present)

- Provide enrollment and admissions counseling for students who need information or have questions about the admission process or need help deciding which programs or plans of study offered at Durham Technical Community College are best suited to their goals.
- Evaluate documents submitted by students which are required for admissions
- Maintain excellent communication and meet regularly with the academic program directors, discipline chair, deans, and program review committees to provide updates on students admitted and maintain accurate knowledge of the admissions and academic requirements for assigned degree, diploma, and certificate programs.
- Assist with recruiting events and outreach as needed.
- Use the Colleague student information system and other technology to efficiently and effectively support and improve the delivery of admissions waitlists, correspondence, and tracking of admissions documents.

### **Thomas Nelson Community College, Hampton, VA**

*Extern, TRIO/Student Support Services* (September, 2010 – November, 2010)

- Provide academic counseling to prospective program participants as needed.
- Create and maintain virtual community via Blackboard to contain information to assist students with career exploration, financial literacy, and study skills.
- Shadow program director to learn day-to-day operations of the program to include recruiting, assessment, budget management, and grant writing.

### **John Tyler Community College, Chester, VA**

*Adjunct Faculty, Office of Student Services* (2008 to present)

- Facilitate online classroom instruction for SDV 100 – College Success Skills course using Blackboard.
- Use blackboard tools to communicate with students from a distance.
- Evaluate and report student performance.

### **Old Dominion University, Norfolk, VA**

*Student Recruitment Coordinator, Department of Education and Foundational Leadership, Community College Leadership* (2008 to 2010).

- Responded to inquiries regarding the Community College Leadership PhD program.
- Facilitated information sessions to recruit prospective community college faculty and staff throughout the Commonwealth of Virginia.
- Assisted prospective students with the application process.

*Graduate Teaching Assistant, Department of Education and Foundational Leadership* (Spring 2010)

- Facilitated an asynchronous section of CCL 820 – Community College Leadership hybrid course.



- Coordinated curriculum development and instructional materials with instructor of record to supplement traditional, teletechnet, and videostreamed instruction.
- Used blackboard tools to communicate with students from a distance. Evaluate and report student performance.

**Thomas Nelson Community College, Williamsburg, VA**

*Professional Counselor*, Office of Student Development (2006 to present)

- Provide counseling/academic advising services for new and continuing students.
- Counsel students regarding career and transfer options, to include articulation and guaranteed admission agreements with four-year institutions.
- Process high school dual enrollment applications and course registration.
- Provide information regarding FAFSA and the applying for financial aid.
- Administer and interpret COMPASS placement tests.
- Collaborate with academic divisions to provide accurate information to students regarding program requirements and policies.
- Facilitate Student Success Seminars on topics to include Note-Taking Strategies, Time Management, Test-Taking Strategies, and Anger Management.

**Thomas Nelson Community College, Hampton, VA**

*Adjunct Faculty*, Office of Student Development (2005 to present)

- Facilitate classroom instruction for SDV 100 – College Success Skills course.
- Update course curriculum materials as needed.
- Collaborate with academic divisions and support services to provide accurate information to students regarding program requirements, campus learning resources, and policies.
- Utilize Blackboard tools to complement instructions.
- Evaluate and report student performance.

### **Additional Professional Experience**

**Hampton City Schools, Hampton, VA**

*Professional School Counselor*, C. Alton Lindsay Middle School (1999 to 2006)

Provided individual, small and large group counseling regarding career planning; testing; goal setting; organization; study skills; personal and educational concerns. Consulted and collaborated with school staff, parents, and community agencies to ensure student needs were met. Monitored, administered and maintained security of tests of the Virginia Testing Program, to include SOL's, Stanford 9, and Differential Aptitude Test with Career Interest Inventory

**Newport News Public Schools, Newport News, VA**

*College/Career Advisor*, Heritage High School (1998 – 1999)

Provided individual, small and large group advising sessions regarding college and career planning. Administered career interventions from computer programs such as Choices and Expan, as well as pencil/paper inventories such as SDS and CDM-R. Coordinated recruiting visits from college and military representatives. Scheduled and proctored yearly ASVAB testing.

**The George Washington University, Washington D.C.**

*Career Information Coordinator*, Office of Career Services (1997)

Managed the centers Career Resource Room containing over 700 text and video resources covering a wide variety of career development and job search topics. Assisted and advised students and alumni with resources related to various levels of the career development process. Facilitated workshops for students on researching organizations, researching internships, and on the Internet job search.

**Technical Reports**

“Historic Triangle Student Survey, Fall 2008”. Executive Summary. Thomas Nelson Community College, Williamsburg, VA. 2009, March.

**Professional Presentation**

”Preparing Future Leaders for Community Colleges” (with Mitchell Williams and Molly Duggan). Presentation at the New Horizons Annual Conference, Roanoke, VA, 2010, April

”Preparing Future Leaders for Community Colleges” (with Mitchell Williams and Molly Duggan). Presentation at the New Horizons Annual Conference, Roanoke, VA, 2009, April

“Web-based Career Development Workshop.” Presentation at the New Horizons Annual Conference, Roanoke, VA, 2011, April

**Community Service**

Zeta Phi Beta Sorority, Inc

A Nights Winter Welcome Homeless Shelter Program

**Professional Memberships**

Council for the Study of Community Colleges

National Career Development Association

National Academic Advising Association

## References

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